A PHENOMENOLOGICAL STUDY OF THE SELF-PERCEPTIONS OF
HIGH SCHOOL STUDENTS WITH ADHD

by

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DEDICATION

This work is dedicated to my parents and my son.

I considered not going to college, and was sure I would make it big in the business world with just a high school diploma. My dad convinced me that I was too smart not to go to college, and once I went, I couldn’t stop going. My mom, who suffered from Alzheimer’s, would get so excited each time I told her of my doctoral studies, as if each time was the first time she was hearing the news. Neither of my parents lived to see me receive my doctorate, but I know how very proud they would be.

My son Connor inspires me to do my best every single day. I had hoped that through my advanced studies, I would inspire him to find a passion for lifelong learning, but he has taught me more lessons than any university ever could. Thank you, love.
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Thank you to my tribe. I know you have always “got my back.”

Most importantly, thank you to my students, who are the reason I do what I do – every day.
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ABSTRACT

ANNE M. MEIROW
A PHENOMENOLOGICAL STUDY OF THE SELF-PERCEPTIONS OF HIGH SCHOOL STUDENTS WITH ADHD
Under the direction of SYBIL A. KEESBURY, Ed.D.

This qualitative study examined the lived experiences of five high school students with ADHD, particularly the ways in which the disorder affected them academically. Through the lens of Self-Determination Theory (Deci & Ryan, 1985), this study also explored these students’ development of autonomy, relatedness, and competency, which are three essential needs required for intrinsic motivation.

No published research was discovered on high school students with ADHD within the framework of Self-Determination Theory (SDT). I was interested in describing the effect ADHD had on students’ development of autonomy, competence, and relatedness, along with students’ academic self-perception. A qualitative phenomenological methodology was used to gain a deeper understanding of the lived experiences of the research participants.

Data were collected via interviews with the students, as well as student and researcher reflective journals. Five participants took part in the study, and although random sampling was used, all five students were relatively academically homogeneous.
Data were coded and analyzed by five themes: autonomy, relatedness, competency, academic self-perception, and acceptance of diagnosis. Students in the study felt in control of their lives (autonomous), although the female students preferred for others to make decisions for them. With regard to relatedness, all participants had good relationships with their families, but the female participants reported having a difficult time making and keeping friends, when compared to the male participants. The females attributed their difficulties with peer relationships to ADHD. All participants had diagnoses of ADHD for significant periods of time, and no participant expressed difficulty accepting their ADHD diagnosis.

The difference in responses between male and female participants was intriguing and would be a possible future research subject. Since the research participants in this study were rather academically homogeneous, it would also be interesting to examine the responses of a more academically diverse group, as well as with students from different socioeconomic situations, regions, and cultures.
CHAPTER ONE

INTRODUCTION TO THE STUDY

The gods did not reveal, from the beginning,
All things to us, but in the course of time
Through seeking we may learn and know things better.
But as for certain truth, no man has known it,
Nor shall he know it, neither of the gods
Nor yet of all the things of which I speak.
For even if by chance he were to utter
The final truth, he would himself not know it:
For all is but a woven web of guesses.

- Xenophanes

Personal Statement

As a classroom teacher and learning consultant at the high school level, I had first-hand experience with secondary students with attention-deficit/hyperactivity disorder (ADHD). When I was a high school science teacher, I was often frustrated with my perceived inability to assist the few students in each class with ADHD, due to the large number of students in the class. I wanted to help but felt I did not have the time, and at that point, I did not feel I had the experience or resources. After becoming a learning consultant, I was responsible for assisting academically struggling general education students, many of whom were students with ADHD, and I witnessed the struggles from the students’ viewpoint. My duties as a learning consultant included monitoring the progress of struggling students, planning interventions, and communicating with students and parents. I also was responsible for coordinating the 504
process in the building. A section 504 plan is a blueprint to assist students with disabilities by providing accommodations to minimize the effects of their disability. Common behaviors for the students I served with ADHD included failure to complete and/or submit homework (even if completed), failure to attend to tasks in the classroom, inability to meet due dates and deadlines, as well as poor working memory and inadequate studying for tests and exams.

Working closely with students with ADHD allowed me to gain a different perspective than I had as a classroom teacher. I wanted to be more effective in helping my students with ADHD and all students with ADHD, but I needed to understand the disability through the students’ eyes in order to help them. I was interested in learning how the disorder affected students’ self-perceptions, their self-esteem, and their academic confidence, as well as how this disorder affected their outlook. What messages were they hearing along the way from parents, peers, teachers, doctors, and media? How did these messages affect them?

Much research has been conducted on student self-esteem and perceptions (Hattie, 1992), but none has been found to date that addresses specifically the academic self-perceptions of students with ADHD. The phenomenon of positive illusory bias has been researched (Swanson, Owens, & Hinshaw, 2012; Wiener, Malone, Varma, Bionic, Tannock, & Humphries, 2012), in which students with ADHD can have an inflated and inaccurate perception of their performance in school, but an in-depth qualitative analysis of the self-perception of high school students with ADHD has yet to be conducted. Much of the published research surrounding ADHD has been of a quantitative and clinical
nature, often looking at biochemical and bioneurological factors as well as clinical, pharmacological, and psychological interventions on the disorder. The practical information that is available is often presented in a semi-anecdotal fashion, directed at teachers and families for immediate application.

Research on high school students with ADHD is limited. DuPaul and Jimerson (2014) concede that “a significant gap remains between research and practice in most school settings” (p. 380), when it comes to research regarding ADHD. This information is often gathered from examining the traits of successful students and then determining how students with ADHD can mimic those behaviors. I wanted to analyze the converse in order to discover the perceptions of high school students with ADHD, and then use that information to determine the best way for them to learn within their individual frameworks.

Studies have been conducted on students with ADHD at the elementary and university level (Barkley, 2015a & b; DuPaul & Stoner, 2014), with a bit less at the middle school level, but a scant amount of research involving high school students with ADHD exists. For the purpose of this study’s review of literature, searches were conducted through library databases, primarily ERIC and ProQuest, using the keywords ADHD, High School, Academic Success, Self-Perception, Motivation, in many combinations and with various synonyms. Very few studies were found that addressed these issues at the high school level, and none were found that actually discussed the self-perceptions of high school students with ADHD and how that may impact academic success. This study’s literature review contains background information that will help the
reader understand some of the challenges faced by students with ADHD, including behavioral and academic issues.

Rationale and Personal Significance

ADHD is a psychological disorder that affects the learning of 6.4 million K-12 students in the United States (Centers for Disease Control and Prevention, 2015). If students with ADHD experience a reduction or absence of feelings of autonomy, relatedness, and competence, their intrinsic motivation to learn may be diminished. This reduction or lack of intrinsic motivation could possibly affect how students perform academically. By the time these students reach high school, they frequently experience difficulties in completing assignments, studying for tests, and taking notes in class, which may lead teachers and parents to perceive these students as lazy. In actuality, they could be missing the key components required for intrinsic motivation, which makes students want to learn for the sake of learning itself (DuPaul & Langberg, 2015). Due to behavior issues related to ADHD, they may have difficulty making and keeping friends, thus reducing their feelings of relatedness (DuPaul & Stoner, 2014). After years of trying to fit the standard social and academic model, they may feel less than competent. Muraven, Rosman and Gagné (2007) showed a connection between the level of controlled behavior and depletion of future self-control. Travell and Visser (2006) note that the students they studied did not feel included in the ADHD diagnosis process or in the decision to medicate. This may lead students with ADHD ultimately feeling as if they have no control over their own lives, thereby experiencing a lack of autonomy.
Many of the symptoms of ADHD that affect students in elementary, middle, and high school can continue into adulthood. Students may learn coping strategies throughout their K-12 academic period, either on their own or with the assistance of education staff or outside counselors and coaches. These coping mechanisms may serve the student well in higher education and into adulthood. Barkley (2015a) notes that fewer students with ADHD graduate from college than students without ADHD. He also found that in an occupational setting, compared to others without a diagnosis of ADHD, adults with the disorder have more difficulties cooperating with coworkers, have more behavior issues, more disciplinary actions taken upon them, more incidence of quitting the job due to boredom, and being fired. Barkley (2015a) notes the following:

…ADHD in adults is associated with a number of adverse outcomes and more impaired functioning in their educational and occupational histories than is the case for adults without ADHD or those diagnosed with other clinical disorders. Being diagnosed as ADHD in childhood has an even more adverse effect on one’s educational career, eventual job status, and workplace adjustment problems (firings and disciplinary actions) than when ADHD is diagnosed in self-referred adults. (p. 337)

Barkley (2015a) suggests that the persistence of ADHD from childhood into adulthood has a greater negative effect on one’s life outcomes than a diagnosis identified only in adulthood. Identifying the degree to which high school students with ADHD feel competent, autonomous, and related may assist in developing a more supportive
educational environment for those students with ADHD, perhaps hoping to mollify the effects of ADHD in college and the workforce.

Statement of the Problem

Much of the research on ADHD is focused on the clinical and pharmaceutical aspects of ADHD, but not on students’ experiences and perceptions. Through understanding how having a diagnosis of ADHD affects a student’s perception of competence, relatedness, and autonomy (Deci & Ryan, 1985), educators may be better able to assist students with ADHD in becoming more successful. If general ideas of how the diagnosis affects the student from the inside out, rather than strictly from the external manifestations, perhaps different strategies can be developed to help students with ADHD achieve academic success. Mental health professionals as well as educators could use such information. Rather than having these students try to fit the external mold of a typical-learning student, more individualized approaches can be designed to better suit the thought processes of students with ADHD.

Research Objectives

By working with high school students with ADHD, I wished to gain and share a greater perspective on how those students perceive the impact ADHD has on their lives. Deci and Ryan’s (1985) Self-Determination Theory (SDT) explains that humans have three needs that must be met in order to develop intrinsic motivation: relatedness, competence, and autonomy. For high school students with a disability, some of these needs may be diminished or missing altogether. I was interested in exploring the ways in which ADHD impacts the ability to develop these needs, and if the length of time from
first diagnosis of ADHD affects the attainment of these characteristics. If students with ADHD have a reduced sense of competence, relatedness, and/or autonomy (Deci & Ryan, 1985), educators should provide conditions that could lead to increased levels of these characteristics.

Research Questions

This study addressed the following research questions: 1) How does a diagnosis of ADHD affect a high school student’s perception of competence, autonomy, and relatedness within the framework of self-determination theory?; 2) How does a diagnosis of ADHD affect how high school students perceive themselves, particularly academically?; 3) How does the length of time from ADHD diagnosis affect secondary students’ academic self-perception and feelings of competence, autonomy and relatedness?

Research Design

A phenomenological qualitative study was conducted, in which high school students were interviewed extensively and asked to journal reflectively following each interview session. An interview and reflection format was chosen to gather data to most accurately capture the essence of the students’ experiences with ADHD. A survey would have been too impersonal, and would not have garnered the depth of response that can be accomplished by forming a relationship with a participant and eliciting authentic responses. The interviews were recorded using computer software, and transcribed manually. Asking the students to complete reflective journals following each interview
allowed them to harness any other thoughts that they forgot to discuss during the interview, or that perhaps they were too inhibited to discuss in person.

The interview questions were semi-structured, so that students were asked a similar framework of questions, but students were encouraged to explore topics of conversation related to ADHD, self-perceptions, or feelings of competence, autonomy, and relatedness that were not part of the original interview protocol. The researcher also journaled after each interview in order to capture details of each student’s responses. Data were analyzed and coded to identify common themes among the students’ responses. NVivo software was used to help extract common themes from the transcribed interviews. Chapter Three includes a detailed description of the study’s design.

Theoretical Framework

The theoretical framework of this study was Self Determination Theory (Deci & Ryan, 1985), within a broad overarching framework of social constructivism. I was interested in how the messages that students with ADHD heard throughout their lives from parents, peers, media, and teachers affected their self-perceptions. Bandura (1997) posits that interactions between people lead to the formation of knowledge. In this study, I sought to gain new knowledge through interactions with the student participants, and hoped they would gain insight into themselves through their participation and reflection.

My research was specifically grounded in Self Determination Theory (SDT), posited by Deci and Ryan (1985). They suggested that three needs have to be fulfilled in order to develop intrinsic motivation: autonomy, relatedness, and competence. I
wondered if having their ADHD diagnoses caused the student participants to experience decreased feelings of autonomy, relatedness, and competence.

A decrease in feelings of autonomy, relatedness, and competence could arise from high school students having a lack of control over certain areas of their lives (Deci & Ryan, 1985), including a lack of autonomy in medical and/or psychological treatment, medication use, or educational choices. Studies have shown ADHD can negatively impact peer and family relationships (DuPaul & Power, 2008; Sibley, Pelham, Molina, Gnagy, Washbusch, Garefino, Kuriyan, Babinski, & Karch, 2012). Foley-Nicpon, Rickels, Assouline, & Richards (2012) found that students with ADHD often compared themselves to their peers, and their negative self-perceptions led to lowered self-esteem.

Much research has been conducted on ADHD, but mostly from a psychological or pharmacological view rather than from the students’ viewpoints. This study sought to explore the ways in which a diagnosis of ADHD affected high school students’ feelings of competence, autonomy, and relatedness. No research was found on the self-perceptions of high school students with ADHD; therefore, I attempted to contribute to the literature by studying factors surrounding self-perception and self-determination related to SDT, such as self-esteem, competency, relatedness, and autonomy.

Limitations

Every attempt was made not to interrupt the participants’ instructional time during the school day, so students were interviewed after school or during their lunch periods. Consequently, one limitation is that students may have rushed through the interviews in order to attend after school events or to simply go home.
Another limitation is the generalizability of the study. This study involved five high school students in an upper-middle-class affluent community; therefore, findings may not be transferable to students in differing socioeconomic groups. The transferability to different student age groups is unknown as well. However, the purpose of this study was to examine the perceptions of five specific students, and the researcher does not assume generalizability of findings.

Delimitations

Every attempt was made to ensure high quality research controls in this study. I intended to select students who had a pure diagnosis of ADHD, without comorbid diagnoses such as depression, anxiety, or bipolar disorder. Unfortunately, this proved unrealistic for my study; three of the five student participants had additional identified diagnoses beyond ADHD. I chose to include high school sophomores and juniors in order to avoid any transitional issues that may occur with incoming freshmen or seniors.

The study took place in a medium-sized Midwestern community where approximately 15,000 students were enrolled in the K-12 public school district. The socioeconomic status of the community ranged from upper middle class to affluent. The neighborhoods feeding the school in which the study was conducted ranged from homes with thousands of square feet of space to mobile homes. The majority of the students at the high school in this study were Caucasian.

Definition of Key Terms

Attention-Deficit/Hyperactivity Disorder (ADHD): Psychological disorder affecting children and adults characterized by difficulties in executive function-related
tasks, inattention, and sometimes hyperactivity and impulsivity. In a school setting this can result in poor peer relationships and difficulty in completing assignments, leading to poor grades (Pfiffner & DuPaul, 2015).

*Autonomy*: With respect to learning, autonomy refers to how much input students have in the learning process; it also refers to the measure of control an individual has in a given scenario. Autonomy is one of three universal needs proposed in Deci and Ryan’s Self-Determination Theory (1985).

*Competence*: Students’ perceptions of their ability to master course material and the level of challenge they find in academic tasks; Grolnick and Ryan (1989) broaden this definition to include the ability to interact effectively with the environment. Competence is required in order to possess intrinsic motivation (Deci & Ryan, 1985).

*Epoche*: Husserl’s concept of “bracketing” one’s prior experiences in order to more fully understand the lived experiences of the research participants (Kockelmans, 1994).

*Executive Function*: Area of cognitive function that is frequently affected in students with ADHD. Cognitive functions often impaired with ADHD include time management, organization, working memory, and reasoning (DuPaul & Langberg, 2015; Adler & Alperin, 2015).

*Extrinsic Motivation*: Completion of tasks dependent on external factors or rewards. Academically, these rewards or factors may take the form of grades, praise, or the risk of punishment from parents if acceptable progress is not made (Deci, Koestner, & Ryan, 2001).
Intrinsic Motivation: The desire to complete a task for the enjoyment of doing it, without external influences. In an academic setting, the pursuit of learning for the sake of learning itself (Deci & Ryan, 1985)

Phenomenology: A methodological framework in which the researcher’s goal is to understand the research participant’s lived experiences, setting aside their prior knowledge and experiences in order to do so (Moustakis, 1994).

Relatedness: Relatedness is one of three innate needs associated with intrinsic motivation (Deci & Ryan, 1985). Within an academic setting, relatedness may be described as a student’s feeling of belongingness with their classroom peers and/or the perceived level of care by their teacher.

Self-concept: The perception that one has of oneself; how a person feels they are perceived by others (Hattie, 1992).

Self-Determination Theory: Motivation theory published by Edward Deci and Richard Ryan in 1985, outlining three essential needs (competence, relatedness, and autonomy) that must be met in humans in order for them to be intrinsically motivated with relation to some situation or task.

Self-efficacy: Bandura (1997) defines perceived self-efficacy as “beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments” (p. 3).

Summary

ADHD is a psychological disorder affecting millions of students each year. At the high school level, students may be newly diagnosed or have had the diagnosis since
Pre-K. The disorder can impact a student’s ability to succeed in school, both academically and socially, depending on the areas affected most in that student. (DuPaul & Langberg, 2015; McQuade & Hoza, 2015). Using the framework of Self-Determination Theory, the intent of this research was to determine the ways in which a diagnosis of ADHD affects high school students’ feelings of competence, relatedness, and autonomy, as these factors may affect students’ intrinsic motivation to learn. I was also interested in exploring how the length of time from diagnosis affects students’ self-perceptions, given that with a longer amount of time with the diagnosed disorder, a student has more time to develop coping strategies and overcome negative aspects of the disorder. Little to no research was found describing the academic self-perceptions of high school students with ADHD. My hope is that through this research, educators and practitioners will gain a stronger grasp of the internal struggles that exist for high school students with ADHD, and will be able to develop individualized strategies to assist these students in becoming more academically successful. Perhaps in the future, students with ADHD will become more academically successful as more educators and administrators gain a deeper understanding of the academic experiences and self-perceptions of these students.
CHAPTER TWO
REVIEW OF LITERATURE

Most of the research conducted on ADHD has been from the clinical and pharmacological aspect, with comparatively little research focused on high school students’ experiences. A review of the research literature showed little to no information on the connection between ADHD and high school students’ self-perceptions of factors that contribute to academic success. Using Deci and Ryan’s (1985) Self-Determination Theory (SDT) as a framework, this study sought to examine the ways in which a diagnosis of ADHD impacts high school students’ development of the three factors that Deci and Ryan (1985) describe as essential for intrinsic motivation: relatedness, competence, and autonomy. If educators understand students’ perceptions of how ADHD affects their lives, perhaps they will be better able to differentiate the classroom environment to meet the needs of their students with ADHD.

ADHD Diagnosis

Attention Deficit/Hyperactivity Disorder (ADHD) affects roughly five percent of American students in grades K-12 (Centers for Disease Control and Prevention, 2015). It can affect each student differently, but common symptoms include lack of focus, behavior control issues, and impulsivity. According to Langberg, Molina, Arnold, Epstein, Altaye, Hinshaw, Swanson, Wigal, and Hechtman (2011), ADHD can contribute to students earning lower grades in school, scoring lower than typically-learning students
on standardized tests, and being held back or dropping out of school at a higher rate than their peers. Three subtypes of ADHD are identified by the American Psychiatric Association (2013b): predominantly hyperactive-impulsive, predominantly inattentive, and combined type. With the publication of the fifth edition of the American Psychiatric Association’s (APA) Diagnostic and Statistical Manual of Mental Disorders (DSM-V) in 2013, slight changes were made in the way ADHD is diagnosed in children and adults.

Two categories are used in evaluating for ADHD: inattentiveness criteria and hyperactivity/impulsivity criteria, with 18 different behavioral symptoms possible. Children must exhibit a total of at least six symptoms from either (or a combination of both) category in order to be diagnosed with ADHD. The symptoms need to have been present before the age of twelve and must occur in two or more settings, such as at home and in school (American Psychiatric Association, 2013a). DuPaul and Stoner (2014) note that “there are at least 7,056 possible combinations of 12 out of 18 symptoms that could result in a diagnosis of ADHD” (p. 9).

Per the American Psychological Association (2013b) diagnostic guidelines, a diagnosis of ADHD should not be made if any other disorders such as depression, anxiety, and bipolar disorder can produce similar symptoms. Unfortunately, these comorbid diagnoses are often present in students with ADHD, leading one to wonder if the ADHD triggers anxiety and/or depression, or if the student has anxiety and/or depression that are mimicking the symptoms of ADHD. An attempt was made to recruit study participants who had pure diagnoses of ADHD (without comorbid diagnoses of anxiety, depression, or bipolar disorder, which may share the same symptoms of ADHD),
but that was not possible. Out of the five study participants, three had comorbid diagnoses.

Challenges for Students with ADHD

The term Attention Deficit Disorder made its debut in the DSM-III in 1980 (Lange, Reichl, Lange, Tucha, & Tucha, 2010). Currently, Attention Deficit/Hyperactivity Disorder (ADHD) is the accepted term, as opposed to variations such as ADD (Centers for Disease Control and Prevention, 2015). With changes in diagnostic criteria, increased awareness of the disorder, as well as possible improper diagnoses, the percentage of children diagnosed with ADHD in the United States has increased from 7.8% in 2003 to 11.0% in 2011, with boys more than twice as likely to be diagnosed with ADHD as girls (Centers for Disease Control and Prevention, 2015). DuPaul and Jimerson (2014) note that ADHD affects boys at a higher frequency than girls, possibly because boys are more apt to display more aggressive or defiant behavior than girls, which could trigger testing for ADHD. Babinski, Pelham, Molina, Gnagy, Waschbusch, Yu, MacLean, Wymbs, Sibley, Biswas, Robb, and Karch (2011) noted that girls with ADHD had fewer friends than girls who did not have ADHD, and interactions with parents were more negative.

Symptoms may change over time, and students may exhibit features of a different subtype at different stages of their lives. For example, older students tend not to exhibit the hyperactive behavior with the frequency of younger children (Owens, Cardoos, & Hinshaw, 2015). ADHD frequently extends into adulthood, although the statistics vary on the frequency of continuance (Barkley, 2015a). Martin (2014) conducted a study
showing that when removing personal factors such as sociodemographic, personality, and
specific learning disabilities, a diagnosis of ADHD predicted four academic adversities:
schoolwork non-completion, school suspension, school expulsion, and changing schools.

In a secondary educational setting, ADHD frequently presents as difficulties with executive functioning, lack of focus, and impulsivity (DuPaul & Langberg, 2015). Executive function incorporates those mental functions associated with tasks such as organizing and planning ahead, transitioning from one activity to the next, self-starting, completing homework, and working memory and recall (Adler & Alperin, 2015). With impairments in these areas, many secondary students with ADHD may struggle. Personally, I have overheard a teacher label a student with ADHD as “lazy” more than once. These factors may inhibit academic success in school and impact the child’s self-esteem and feelings of competence (DuPaul & Langberg, 2015).

Management of ADHD

ADHD is frequently managed through pharmacological interventions, with central nervous system stimulant medication most commonly prescribed (Connor, 2015). Stimulant medications work with neurochemicals to help improve focus and attention (Connor, 2015). Some common side effects of these medications include upset stomach, lack of appetite, and irritability (Connor, 2015).

Non-stimulants have also been used with students in the treatment of ADHD when students show an intolerance to stimulants (Connor, 2015). Hattie (2009) notes that although pharmacological intervention appeared to be effective for behavior issues, as reported by teachers and parents, the same positive effects were not seen with academic
achievement. DuPaul and Stoner (2014) reveal that over the long term, ADHD medications have minimal effect on the academic performance of students. Barkley (2015b) found behavioral-based treatments, while having some short-term effects, were not effective long-term. Hale, Reddy, Semrud-Clikeman, Hain, Whitaker, Morley, Lawrence, Smith, and Jones (2011) found that dosage with methylphenidate differs depending on the response desired. The dosage of methylphenidate that assists in controlling impulsive behaviors exceeds the dosage which assists in improving cognitive functioning. Therefore, even if students are medicated to control behavior, their executive function and working memory may continue to be an issue. DuPaul and Stoner (2014) relate that a combination of stimulant therapy and behavior modification provide the strongest effects on behavior and achievement compared to either in isolation. Hattie (2009) elaborates, “It seems there is a syllogism in play here: drugs reduce behavior problems; when problem behaviors are reduced students are more likely to be attentive; when a student is attentive they may learn” (p. 54).

Accommodations and Interventions

Classroom accommodations may be put in place for students with ADHD through a Section 504 accommodation plan or an Individualized Education Program (Gordon, Lewandowski, & Lovett, 2015). Section 504 plans are available to students receiving general education, and IEPs service students receiving special education through the school (Pfiiffer & DuPaul, 2015). Some common accommodations that can be put in place for students with ADHD include extended time for testing, extended due dates on
lengthy assignments, copies of classroom notes, and teacher cues or redirection (Gordon, Lewandowski, & Lovett, 2015).

Interventions can be put in place both at home and at school. Outside individual and/or family counseling can be useful to help students and families verbalize and sort out feelings, perceived expectations, and emotions (Chacko, Allan, Uderman, Cornwell, Anderson, & Chimiklis, 2015). In my experience, additional tutoring beyond the school day can assist some students with grasping concepts, study skills, and completion of homework. General education teachers could be more extensively trained on some of the individual needs of the student with ADHD; greater awareness would also help teachers make a perception shift to attributing the symptoms to the disorder, rather than to the student.

Academic Impact of ADHD

For high school students, impulsive behavior in the classroom may cause excessive physical activity, blurtling out in class, and excessive social activity during instruction (Weyandt & Gudmundsdottir, 2015). Students with inattention issues in class may daydream and miss instruction and directions, causing them to miss information and deadlines (Weyandt & Gudmundsdottir, 2015). Kent, Pelham, Molina, Sibley, Waschbusch, Yu, Gnagy, Biswas, Babinski, and Karch (2011) studied academic experiences of male high school students with ADHD and reported males with ADHD had “lower overall and main academic subject grade point averages (GPA), lower levels of class placement (e.g. remedial vs. honors), and higher rates of course failures” (p. 451). This same study revealed teachers reporting that students were less likely to turn in
assignments and appeared to be working below their potential. Johnson and Reid (2011) conducted an experiment in which students with ADHD were clearly asked to plan out and write an essay, and then were cued to plan their essay; 100% of these students began to write their essays without planning. Students with ADHD had more tardies and absences during the academic year and had a much greater incidence of school dropout than their peers without ADHD (Kent et al., 2011).

Student Success

The top influences on student achievement related to student attitudes as noted by Hattie (2009) include motivation and concentration/persistence/engagement (both with an effect size of d=0.48), self-concept and reduction in anxiety. Hattie (2009) defines self-concept as “prescriptions, expectations, and/or descriptions that we attribute to ourselves” (p. 46). Many of these attitudes can be intertwined. Using Hattie’s (2009) research, one can logically posit that if students have a positive self-concept, they will have more confidence. If they have more confidence, they expect some degree of success. If students are expecting success, they have reduced anxiety as well as increased motivation to attend to the task. This expectation of success may also lead to improved engagement and follow-through. With regard to concentration, persistence, and engagement, Hattie (2009) notes, “It seems achievement plus effort plus engagement are keys to success in school” (p. 49). Engagement in the classroom can be witnessed as a student asking and answering questions, interacting positively and constructively with peers, and exhibiting a high degree of on-task behavior.
Some of the factors involved in promoting motivation in students include autonomy, student competence, goal setting, and feedback and affirmation from others (Hattie, 2009). Hattie notes, “In particular, a sense of confidence is the most powerful precursor and outcome of schooling” (p. 47). Pink (2009) remarks, “autonomous motivation promotes greater conceptual understanding, better grades, enhanced persistence at school and in sporting activities, higher productivity, less burnout, and greater levels of psychological well-being” (p. 89). At times schools and parents may reduce or eliminate the autonomy of a student with ADHD in what they perceive to be students’ best interest (Travell & Visser, 2006). Especially at the high school level, as students are preparing for the transition into college or career, autonomy should be encouraged and developed. Autonomy is an essential need outlined in Deci and Ryan’s (1985) Self-Determination Theory.

For students with ADHD, rather than setting general goals, Martin (2013) recommends that students set “personal best goals,” which encourages students to set goals against their previous efforts, and strive for specific, targeted improvement, rather than competing with their peers, most of whom do not have a diagnosis of ADHD. This may help students with ADHD feel they have a greater degree of autonomy in their lives. Deci and Ryan’s (1985) Self-Determination Theory postulates that three essentials needs must be met in order for individuals to be motivated: autonomy, relatedness, and competence. As alluded to above, Hattie’s (2009) meta-analytical research shows this to be a valid theory.
Prior achievement has a high correlation with success. “Prior school grades are the best individual predictor for academic success” (Hattie, 2009, p. 41). This factor is of particular interest when discussing students with ADHD, and ties into Deci and Ryan’s (1985) theorized need for competence. Unfortunately for these students, their prior school grades may not have been exemplary. By the time they get to high school, they may experience many years of academic struggles, or gaps in their learning and comprehension from not understanding a foundational concept. Once the failure mindset has set in, it may be difficult for a student to overcome that mentality (Hochanadel & Finamore, 2015).

Self-Esteem

Adolescence can be a tumultuous time, considering factors such as growth spurts, hormonal changes, identity issues, academic challenges, and sometimes family structure changes (Tonkin, 2001). Students frequently feel they are the only ones who are experiencing, or have ever experienced such things, and they may also be worried about what others know and think about them (Hattie, 1992). Hattie (1992) notes that “the characteristic ‘self-consciousness’ of the adolescent results from the very fact that the young person is now very much concerned with how others react to him” (p. 134). Teens begin to seek out more independence and seek out increasing support from peer groups. Hattie (1992) explains, “Without such support there can be decreases in self-concept” (p. 135). For adolescents who do not have a strong self-concept to begin with, the comparison of themselves to others, or any negative feedback that they receive from other students may be detrimental. Hattie (1992) notes that “high self-concept is
associated with internal rather than external locus of control” (p. 190). If students look to others for reassurance of their self-concept, it can result in a negative self-image. Due to a higher incidence of rejection by their peers, students with ADHD may experience an increase in emotional issues when compared to their peers (McQuade & Hoza, 2015).

Hattie (1992) conducted a meta-analysis of 128 studies related to self-concept and performance/achievement. The results were muddied with different variants within the definition of self-concept, but overall, Hattie found the link between self-concept and performance/achievement to be negligible. Scheirer and Kraut (1979) explain, “The overwhelming negative evidence reviewed here for a causal connection between self-concept and academic achievement should create caution among both educators and theorists who have heretofore assumed that enhancing a person’s feelings about himself would lead to academic achievement” (p. 145). This statement implies that a uniform understanding of “self-concept” or self-esteem would need to be reached among study participants when conducting this research in order to ensure that results gathered are not invalidated by the participants’ varied understandings of the concept. Deci, Nezlek, and Sheinman (1981) found that students in autonomy supportive classrooms had higher self-esteem and more intrinsic motivation than students from more controlling classrooms. One of the aims of this dissertation study is to examine the ways in which a diagnosis of ADHD affects the self-esteem of high school students.

Social Constructivism and Self-Determination Theory

My intent was to frame my research on ADHD first through a social constructivist lens, to gain an understanding of students’ experiences with ADHD, and then more
specifically situate the research within Self-Determination Theory. This study explored how students with ADHD formed self-perceptions, mostly centering on academics while also exploring how they incorporate social and familial perceptions. I ask the reader to step outside of pedagogical applications and instead focus on how the participants in the study described their unique experiences with ADHD. In this way, I also positioned myself as a learner, as I constructed new knowledge about what it is like to live life with ADHD. That construction occurred through the exchange of language, both written and verbal. I was also interested in the socio-cultural aspect of how students perceive themselves based on the messages they have received from others, such as parents, society, teachers, media and peers, thus understanding the knowledge they have formed about themselves based on their social interactions, and how that affects their self-perception. Speaking on constructivism, Costantino (2008) commented, “This research paradigm represents a change from the focus on explaining phenomena (Erklärung) typical in the natural sciences to an emphasis on understanding (Verstehen), which is deemed more appropriate for investigating phenomena in the human sciences” (p. 116).

The tenet of social constructivism is that individuals construct knowledge through social interaction with others (Costantino, 2008). Conducting research through a social constructivist lens involves direct interaction with research participants. Since the nature of constructivism involves interaction between researcher and participant, most if not all constructivist research is qualitative or mixed methods. Quantitative research is objective by nature, and the researcher keeps a distance from their subjects; this methodology does not generally suit the purposes of a social constructivist qualitative study (Creswell,
Depending on the study being conducted, due to the level of interaction between the researcher and the research subject, the qualitative researcher may actually adjust their study design during the course of research based on the data being received (Lincoln & Guba, 1985; Creswell, 2014). A qualitative researcher may also interact and receive feedback from the research subject to ensure they are recording their responses and thoughts accurately (Lincoln & Guba, 1985; Creswell, 2014).

The early trails of constructivism were laid in the late 1800’s, as intellectuals increasingly understood the difference between the capacity of human thought and animal thought (Costantino, 2008). This departure from natural science to the social sciences led to a new world of thought, and much of it centered on language and communication. Costantino (2008) states that philosophers of that time “saw the need for a science that would investigate the world created by humans—the built environment, social institutions, language, culture, belief systems, and so on—and the meanings humans ascribed to their experience in this social world” (p. 116).

Historical Background

The roots of constructivism continued to grow through the work of Piaget and Vygotsky (Schunk, 2012). Jean Piaget (1896-1980) is often referred to as the father of constructivism. Piaget used his background in psychology and biology to develop theories in cognitive development. He called his cognitive development theory “genetic epistemology” and the skills and knowledge that were developed by individual’s “schemas” (Dimitriadis & Kamberelis, 2006).
Piaget (1970) theorized that children advance their learning through stages, through which they construct new knowledge individually based on previous learned experiences. Piaget (1970) felt these developmental stages had fairly definitive boundaries and could be tracked as a child matures. Students did not move onto the next stage until they were developmentally ready. Brainerd (2003) used the analogy of a butterfly, explaining, “No matter how much practice it receives, a butterfly cannot learn to fly while it is still a caterpillar because the necessary wing structures have not yet developed” (p. 260). Later in his life, Piaget remarked that constructivism was his most notable intellectual contribution (Brainerd, 2003). Piaget’s interpretation of “constructivism” was slightly different than what is popularly defined today.

Brainerd (2003) notes, “Piaget thought that children literally create their knowledge as their biological predispositions interact with their experience. Construction, or creative invention, then, is the mechanism of interaction between heredity and experience that produces knowledge” (p. 271). Piaget did not take into account the social aspect of learning, but rather theorized that learning occurred as a self-regulated response to the external environment (Dimitriadis & Kamberelis, 2006). Repeated research has devalued Piaget’s emphasis on developmental constraints in children’s learning, although his enormous impact on education remains (Brainard, 2003).

Although Vygotsky (1978) did not use Piaget’s work as a foundation, his development of theory followed a similar path and was rooted in psychology and philosophy. Vygotsky (1978) did not subscribe to the biological basis of development as
posited by Piaget, but rather his sociocultural theory postulated that the higher-order
cognitive processes were developed through a child’s interaction with their social
environment (Dimitriadis & Kamberelis, 2006). Vygotsky is thus known as the father of
social constructivism. Schunk (2012) remarked, “Vygotsky considered the social
environment critical for learning and thought that social interactions transformed learning
experiences” (p. 242). Vygotsky (1978) saw learning as a two-step process – first
occurring through interaction with “More Knowledgeable Others” (MKO), those with
more exposure and experience with the topic at hand, be it peers or teachers, and then
through “internalization,” in which the learner constructs personal meaning and becomes
independent (Dimitriadis & Kamberelis, 2006). The crux of the social interaction is
through “semiotic mediation” – using semiotic tools such as language to form meaning
(Dimitriadis & Kamberelis, 2006). Schunk (2012) considered Vygotsky’s emphasis on
the interaction between individuals and their environments to be a type of “dialectical
(cognitive) constructivism” (p. 242). Dimitriadis & Kamberelis (2006) stated:

Vygotsky’s privileging of linguistic signs seems to be related to his belief that, of
all the semiotic systems, only language is capable of being reflexive, classifying
reality, construing communicable human experience, and articulating the many
voices of a culture with equal facility. (p. 194)

Vygotsky (1978) contended that once language, counting, and writing was mastered in a
child, the self-regulation of thoughts and actions was able to emerge.

Vygotsky is best known for his theory of the Zone of Proximal Development
(ZPD). The ZPD refers to that level of learner development in which a concept that is
just outside the learner’s level of understanding is brought to a level of internalization through interaction with “more capable peers” (Vygotsky, 1978, p. 86). That boundary is continuously moved to just outside understanding but is within reach, so that the learner is consistently moving forward in learning (Vygotsky, 1978).

Tudge and Scrimsher (2003) take issue with common misunderstanding of the ZPD. They contend that the ZPD is not a clear-cut space that is waiting to be conquered by the learner with the right amount of assistance, but rather the ZPD is created through collaboration with another. Vygotsky (1978) used the concept of collaboration to discuss externalization and internalization. Tudge and Scrimsher (2003) note, Vygotsky “defined the word ‘social’ as everything cultural, in the broadest sense of the word” (p. 215). As children make their own meaning from this external information, their experiences, and their existing knowledge, they are able to internalize this information and become independent (Vygotsky, 1978). This concept relates to the role of others in Deci and Ryan’s (1985) Self-Determination Theory; relatedness is one of three universal needs that must be met in order for internal motivation to be developed. The concept of using others to help students make meaning was termed “scaffolding” by Jerome Bruner (1990). Scaffolding is a process in which support is provided for the student and then is removed gradually as the learner progresses until independence is achieved (Bruner, 1990). Scaffolding is also used in Bandura’s participant modeling technique (Schunk, 2012).

Lutkehaus and Greenfield (2003) credit Jerome Bruner with bringing Piaget’s concepts to the United States and for recognizing education as a sociocultural endeavor. Dimitriadis and Kamberelis (2006) state that Bruner “advocates emphasis on the situated,
meaning-laden ways mind works in context. The goal of education, for Bruner, is to make individuals self-reflexive in this regard. The construction of valued selves is key” (p. 78). Upon discussing cultural meaning-making, Bruner (1990) stated, “This method of negotiating and renegotiating meanings by the mediation of narrative interpretation is, it seems to me, one of the crowning achievements of human development in the ontogenetic, cultural, and phylogenetic senses of that expression” (p. 67). Bruner (1990) posits a view on “Self” that directly pertains to this study:

Is not Self a transactional relationship between a speaker and an Other, indeed, a Generalized Other? Is it not a way of framing one’s consciousness, one’s position, one’s identity, one’s commitment with respect to another? Self, in this dispensation, becomes ‘dialogue dependent,’ designed as much for the recipient of our discourse as for intrapsychic purposes. (p. 101)

Bruner’s (1990) view of “Self” encapsulates the nature of the social constructivist aspect of my research. In analyzing the self-perceptions of students with ADHD, I examined how the messages they have received regarding ADHD have framed “one’s consciousness, one’s position, one’s identity” (Bruner, 1990, p. 101). I wanted to learn more about students’ feelings of relatedness, competence, and autonomy. These self-perceptions were described and relayed to me by the student participants through a “transactional” relationship (Bruner, 1990, p. 105) through a course of interviews and reflective journals. Expanding on this concept of the formation of Self, Bruner (1990) articulated:
It seems to me that a cultural psychology imposes two closely related requirements on the study of Self. One of them is that such studies must focus upon the meanings in terms of which Self is defined both by the individuals and by the culture in which he or she participates. But this does not suffice if we are to understand how a “Self” is negotiated, for Self is not simply the resultant of contemplative reflection. The second requirement, then, is to attend to the practices in which the “meanings of Self” are achieved and put to use. These, in effect, provide us with a more “distributed” view of Self. (p. 116)

Social cognitive psychologist Albert Bandura (1997) is credited with Social Cognitive Theory (SCT). SCT essentially states that through experiences and interacting with others, individuals can acquire knowledge (Bandura, 1997). Bandura (1997) began to narrow his focus of research on self-regulatory processes and renamed his theory social cognitive (from social learning), because he felt it had expanded beyond learning (Zimmerman and Schunk, 2003). Bandura was not exactly a constructivist, as he did not rely as heavily on the social interaction as a component of understanding and meaning-making, but his theory incorporates some of the characteristics of constructivism. Bandura (1997) states:

…personal agency operates within a broad network of sociostructural influences. In agentic transactions, people are both producers and products of social systems. Social structures – which are devised to organize, guide, and regulate human affairs in given domains by authorized rules and sanctions – do not arise by immaculate conception; they are created by human activity. (p. 6)
During the evolution of his theories, Bandura criticized the developmental model postulated by Piaget, in that the theory did not take into account the role of social and cultural influences on the development of children (Zimmerman and Schunk, 2003).

Of Bandura’s Social Efficacy Theory, Deci and Ryan (1985) stated, “people will not generally engage in a behavior they expect to yield desired reinforcement if they do not expect that there is a good chance of their succeeding at the behavior (i.e., of their being efficacious)” (pp. 223-224). This nods to the need for competence, which is one of the universal needs presented in Self-Determination Theory (Deci & Ryan, 1985).

Bandura saw this self-efficacy as a necessary step for attaining reinforcements, not specifically as a form of intrinsic motivation (Ryan & Deci, 1985). With regard to input students receive in a school setting, Bandura (1997) notes:

Many social factors apart from the formal instruction – such as peer modeling of cognitive skills, social comparison with the performance of other students, and instructors’ interpretations of children’s successes and failures in ways that reflect favorably or unfavorably on their ability – also affect children’s judgments of their intellectual efficacy. (p. 174)

Bandura states, “A strong sense of efficacy fosters a high level of motivation, academic accomplishments, and development of intrinsic interest in academic subject matter” (p. 174). This statement alludes to the needs of competence and relatedness in Self-Determination Theory. Ryan and Deci (2000a) tied these two concepts together by explaining, “Thus, people must not only experience perceived competence (or self-efficacy), they must also experience their behavior to be self-determined if intrinsic
motivation is to be maintained or enhanced” (p. 58). Within this study, I intended to
discover if the high school student participants experienced perceived competence, and
how that ultimately impacted their intrinsic motivation.

Self-Determination Theory

Self-Determination Theory (SDT) was developed by Richard Ryan and Edward
Deci at the University of Rochester, New York. The theory seeks to explore the origin of
human motivation and more specifically examine the factors that enhance intrinsic
motivation. Wehmeyer (2015) states:

Self-determination is a “dispositional characteristic manifested as acting as the
causal agent in one’s life. Self-determined people (i.e. causal agents) act in
service to freely chosen goals. Self-determined actions function to enable a person
to be the causal agent in his or her life. (Shogren, et al., in press).” p. 20

Deci and Ryan (2002) explain, “Intrinsically motivated behaviors are those whose
motivation is based on the inherent satisfactions of the behaviors per se, rather than in
contingencies or reinforcements that are operationally separable from those activities” (p.
10). Deci and Ryan (2002) also define intrinsic motivation as that which is encouraged
by internal satisfaction in the task at hand, whereas extrinsic motivation occurs when
satisfaction with a task is gained from an external source, separate from the action itself.
Multiple studies were conducted in which intrinsic motivation was diminished when
tangible rewards were expected and participation in the task was required to receive the
reward (Deci, 1971; Deci, 1972). SDT centers on three universal human needs that must
be met in order for motivation to develop and for learning to take place: relatedness,
competence, and autonomy. Abraham Maslow (1962/2011) defines something as a basic need if:

1. its absence breeds illness,
2. its presence prevents illness,
3. its restoration cures illness,
4. under certain (very complex) free choice situations, it is preferred by the deprived person over other satisfactions,
5. it is found to be inactive, at a low ebb, or functionally absent in the healthy person. (p. 20)

Since its publication in 1985, Self-Determination Theory has become a meta-theory, with six mini-theories beneath it: Cognitive Evaluation Theory, Organismic Integration Theory, Causality Orientations Theory, Basic Psychological Needs Theory, Goal Contents Theory, and Relationship Motivation Theory (SDT Group, 2017). CET is most relevant to students with ADHD, and is discussed briefly below, but for the purpose of this study, the three main essential needs of competence, relatedness, and autonomy were used within the framework (Deci & Ryan, 1985).

Cognitive Evaluation Theory

According to Deci and Ryan (1985), “Cognitive evaluation theory describes the effects of events that initiate or regulate behavior on motivation and motivationally relevant processes” (p. 62). Ryan, Williams, Patrick, and Deci (2009) note that CET describes the “social psychology of intrinsic motivation” (p. 110) in that it examines the effect of social input on one’s intrinsic motivation. CET consists of four propositions
(Deci & Ryan, 1985). The first proposition relates the perception of the source of causality as it affects intrinsic motivation. If a person perceives a more external locus of causality, then intrinsic motivation may be undermined for that person (Ryan, et al., 2009). Deci and Ryan (1985) theorize an external locus of causality to support controlling behavior.

The second proposition relates to people’s needs to feel competent and challenged. This perceived competence increases when a challenging task is mastered, but perceived competence decreases when a task is determined to be unattainable by the person undertaking it, with regard to their level of control. The third proposition states that informational, controlling, and amotivational aspects affect the initiation and regulation of behavior, and these three aspects affect perceived causality and competence. Factors such as choice and positive feedback are more informational, rewards, due dates, and monitoring are controlling, and negative feedback is amotivational (Deci & Ryan, 1985). The fourth proposition evaluates the effect internal information and internal control has on intrinsic motivation. Just as external information and control can increase or decrease one’s motivation, control and information from the inside can affect intrinsic motivation as well (Deci & Ryan, 1985). This mini-theory could be related to all students with regard to locus of control, whether internal or external, as this may differ from student to student.

**Relatedness**

In the framework of Self-Determination Theory (SDT), relatedness is one of three innate needs associated with intrinsic motivation (Deci & Ryan, 2002). Within an
academic setting, relatedness may be described as a student’s feeling of belongingness with their classroom peers and/or the level of perceived care by their teacher. Deci and Ryan (2002) explain that relatedness “concerns the psychological sense of being with others in secure communion or unity” (p. 7). It is through these relationships between teacher and peers that SDT can be tied to Vygotsky’s (1978) work in social constructivism. Just as Vygotsky (1978) saw the need for others to assist in making meaning in learning, Deci and Ryan (2002) theorize that students must possess a feeling of relatedness to others in order to cultivate intrinsic motivation for learning. This social interaction with others is a necessary component to learning. Ryan and Deci (2000b) hypothesize “that a similar dynamic occurs in interpersonal settings over the life span, with intrinsic motivation more likely to flourish in contexts characterized by a sense of security and relatedness” (p. 71), and research cited by Ryan and Deci (2002) indeed shows this is the case.

ADHD and Impact on Relationships

Characteristics of ADHD frequently include disruptive behavior (especially with hyperactive-impulsive type), difficulty in establishing and maintaining peer relationships and peaceful family relationships, and academic underachievement (Sibley, Pelham, Molina, Gnagy, Washbusch, Garefino, Kuriyan, Babinski, and Karch, 2012). DuPaul and Power (2008) concur, stating that some of the primary problems in ADHD include suboptimal relationships with teachers and peers and difficulties with behavior control. Some research connects ADHD to social stigma. Wiener, Malone, Varma, Biondic, Tannock, and Humphries (2012) state that “The core symptoms of ADHD are
bothersome to parents, teachers, and peers” (p. 218). Wright, Sheldon, and Wright (2009) suggest that besides affecting organizational and academic realms, ADHD’s effect on executive function can also affect “social problem solving” (p. 204) due to students’ inability to adjust ineffective strategies during a situation. A growing body of evidence suggests parents of students with ADHD and their children are hesitant in disclosing a confirmed diagnosis of ADHD out of fear of social rejection from peers and teachers (Wiener et al., 2012). Wiener et al. (2012) describe one such study:

DosReis et al. interviewed 48 parents of 6-18-year-old children who had been newly diagnosed with ADHD about their experiences leading to the diagnosis. Approximately 77% reported feelings of stigmatization; 44% expressed concerns about their children being labeled as a problem child or bad kid; 40% were concerned that their children would be rejected or isolated; 27% were concerned that society and key people in society such as teachers dismissed the seriousness of the problem and held negative views of them and their children; and 20% expressed concerns about negative media perceptions of ADHD. Teachers also indicated concerns that children with ADHD are stigmatized, with special education teachers indicating more often than general education teachers that children with ADHD are reluctant to disclose to others that they have the disorder, have a negative self-image and are concerned about the public attitudes with regard to ADHD. (p. 222)

This perception may be grounded in truth: Wiener et al. (2012) cite studies in which “children stigmatize ADHD as a disorder and the behaviors associated with it” (p.
Through either perceived fear of rejection or historical experience with rejection, some students with ADHD may seek out detrimental peer relationships in an attempt to protect their self-esteem. Peixoto and Almeida (2010) state that students with ADHD can become “socially creative” and reframe failure as a positive attribute or seek out social groups in which their comparisons to others permits a “positive differentiation” (p. 158). Hattie (1992) confirms this idea, stating, “Individuals will try to choose settings and circumstances that maximize the chances of confirmation and provide opportunities for explaining away disconfirmations” (p. 50). Vansteenkinste, Lens, and Deci (2001) state, “It is out of the desire to be related to others, to be part of a family, group, or social order, that individuals are inclined to take on the values, beliefs, and behaviors that are endorsed by those others” (p. 21). This difficulty in forming relationships with others inhibits the development of motivation through relatedness for students with ADHD, or this lack of relatedness may strengthen intrinsic motivation in an undesirable direction, depending on how the student experiences relatedness. DuPaul and Power (2008) suggest that “the key to school success for students with ADHD is the implementation of the right strategies in the context of the right relationships” (p. 519). Deci and Ryan (2000) illustrate what relatedness can look like in a classroom situation in the context of a reciprocal relationship: “this means that students’ feeling respected and cared for by the teacher is essential for their willingness to accept the preferred classroom values” (p. 64).

Competence

Within an academic setting, competence can be viewed as students’ perceptions of their ability to master the course material and the level of challenge they find in academic
tasks (Young-Jones, Cara, & LeVesque-Bristol, 2014). Grolnick and Ryan (1989) offer, “Competence is a broad term that refers to a person’s capacity to interact effectively with the environment” (p. 145). Deci and Ryan (2002) clarify that “Competence is not, then, an attained skill or capability, but rather is a felt sense of confidence and effectance in action” (p. 7). In the SDT framework, competence is one of the three universal needs needed in order to foster intrinsic motivation in learning and is a key component in self-determination (Deci & Ryan, 2002). Grolnick and Ryan (1989) note that in an academic setting, “The sense of competence in school is reflected in the child’s knowledge concerning control over academic outcomes and in the internalized belief that one is able to effect such outcomes” (p.143). Grolnick and Ryan (1989) explain “Harter’s (1982) domain-specific theory identifies academic perceived competence as a major input to successful outcomes in school, whereas Connell (1985) has focused on the importance of children’s knowledge of how successful school-related outcomes are attained (i.e. control understanding)” (p. 145).

Competence has a social component as well, similar to relatedness. Teachers can provide opportunities for self-determination in the classroom, including choices and positive feedback related to competence, rather than performance (Stefanou, Perencevich, DiCintio, & Turner, 2004). Ryan and Deci (2000a) note:

…interpersonal events and structures (e.g. rewards, communications, feedback) that conduce toward feelings of competence during action can enhance intrinsic motivation for that action because they allow satisfaction of the basic need for competence. Accordingly, for example, optimal challenges, effectance promoting
feedback, and freedom from demeaning evaluations are all predicted to facilitate intrinsic motivation. (p. 58)

A student’s feelings of competence can come from feedback from others, both academically and socially (Grolnick & Ryan, 1989). Travell and Visser (2006) note:

It was apparent that for some young people, their experiences of the ‘symptoms’ of ADHD also adversely affected their self-esteem, leading them to consider themselves ‘naughty’ or ‘stupid,’ although such views might have been engendered by adult interpretations of their behaviours and the subsequent diagnosis that they had a ‘disorder.’ (p. 207)

For a student with ADHD, that feedback may leave them feeling less than competent, when compared to their peers, or when failing to make academic or social progress. Ryan and Deci (2000a) state, “Students will more likely adopt and internalize a goal if they understand it and have the relevant skills to succeed at it” (p. 64). If students with ADHD feel (based on previous history of insufficient progress) that a goal is unreachable, they may be less likely to continue to attempt to reach that goal.

For students with ADHD, this feeling of competence may extend beyond academics and into behavioral components. According to Foley-Nicpon, Rickels, Assouline, and Richards (2012), “Adolescents with ADHD compare their social competence to their peers without diagnoses which results in negative self-concept development” (p. 222). Due to a frequent inability to control behaviors, some students with ADHD may be stigmatized or excluded from social circles. Wiener et al. (2012) state, “Stigmatizing beliefs often result from false assumptions that people in the
stigmatized group are incapable, may cause harm, and therefore should be excluded” (p. 221).

Bandura (1997) notes that while performance cannot be predicted by self-efficacy beliefs, beliefs in self-efficacy can lead to a greater degree of persistence and grit and fosters a success orientation, stating “beliefs of personal efficacy are active contributors to, rather than mere inert predictors of, human attainments” (p. 39). Bandura (1997) feels beliefs of self-efficacy arise from four sources of information:

- enactive mastery experiences that serve as indicators of capability;
- vicarious experiences that alter efficacy beliefs through transmission of competencies and comparison with the attainments of others;
- verbal persuasion and allied types of social influences that one possesses certain capabilities;
- and physiological and affective states from which people partly judge their capableness, strength, and vulnerability to dysfunction. (p. 79)

Schommer (1993) noted that, epistemologically, students who believe in quick learning tend to have poor comprehension and metacomprehension. Those students who did not believe learning was a quick process tended to be more academically successful. For students with ADHD, when impulsivity is a common symptom, may lack the patience to persist in a lengthy learning process. These factors may be affected in a student with ADHD, possibly leading to a reduced sense of self-efficacy.

Each of the three needs described by SDT (relatedness, competence, and autonomy) are necessary in order for students to feel intrinsically motivated to apply themselves academically (Ryan & Deci, 2000a). While each need may hold a different
level of importance, each need interacts with the others to provide optimal levels of intrinsic motivation. Grolnick and Ryan (1989) explain, “Through effective and independent action there is a growth of understanding about who or what controls the outcomes and confidence in oneself to produce success” (p. 145). This speaks to autonomy’s role in competence. Ryan and Deci (2000a) state, “Others showed that perceived competence mediated these effects, and still others supported the hypothesis that increases in perceived competence must be accompanied by a sense of autonomy in order for the enhanced feelings of competence to result in increased intrinsic motivation” (p. 59).

**Autonomy**

In the SDT framework, autonomy is the third need theorized as essential for the development of intrinsic motivation. Deci and Ryan (1987) define autonomous action as an action that is chosen by the individual and an “action for which one is responsible” (p. 1025), and can be expanded to include how much ownership in the educational process a student feels they have. Stefanou et al. (2004) note that “autonomy has been found to promote more persistence on tasks and increase self-regulation for learning” (p. 98). Deci and Ryan (2002) further explain, “When autonomous, individuals experience their behavior as an expression of the self, such that, even when actions are influenced by outside sources, the actors concur with those influences, feeling both initiative and value with regard to them” (p. 8). Stefanou et al. (2004) describe five categories that promote engagement in academics as “external regulation, introjected regulation, identified regulation, integrated regulation, and internal regulation (intrinsic motivation)” (p. 98).
In addition to internal motivation, these categories all represent varying degrees of external motivations (Young-Jones et al., 2014). Integrated and identification are the most self-determined of the external motivating factors (Young-Jones, et al., 2014).

External regulation produces the least amount of autonomy and occurs when a person completes a task solely for the attainment of a reward (Ryan & Deci, 2002). In the case of a high school student, this may take the form of a student who truly does not enjoy school but participates because his parents offer rewards, such as money for good grades. Introjected regulation relies on external rewards that have been internalized, and without completion of the activity, guilt or shame are experienced (Ryan & Deci, 2002).

Ryan and Deci (2002) also describe this type of regulation as “based in contingent self-esteem” (p. 17). This can be exhibited in the student who feels guilty and punishes himself when he doesn’t get “good” grades, based on societal or familial expectations. Identified regulation occurs when a person places value on a behavioral goal (Ryan & Deci, 2002). An example of this may be for a student who identifies herself as a “good” student and, therefore, strives to get good grades. Rather than feeling guilty when her grades aren’t where she feels they should be, she is further motivated to try harder.

Integrated regulation is the most autonomous form of extrinsic motivation (Ryan & Deci, 2002). It occurs when one identification is in line with other goals and values. For a student, this may manifest as hard work in school in order to earn good grades and maintain his social status, gain entrance into a reputable university, and earn academic scholarships in order to reduce the financial burden on his family.
There may be a loss of autonomy within American classrooms where teachers tend to be controlling (Ryan & Deci, 2000a). Some aspects of a controlling classroom include certain evaluation types, deadlines, and threats (Deci & Ryan, 1987). Stefanou et al. note, “A considerable body of research shows strong evidence that controlling environments contribute to low achievement, anxiety, preference for easy work, and dependence on others to evaluate their work (e.g., Boggiano & Katz, 1991)” (p. 99). Bandura (1997) notes that some aspects of education can result in inefficacy, including “lock-step sequences of instruction, sorting student into ability groupings, and socially competitive grading practices” (p. 175).

A loss of autonomy in students with ADHD seems probable when one considers that many well-meaning parents and teachers may make decisions for students without their input or consent (Travell & Visser, 2006). Through the use of 504 accommodation plans, IEPs, doctors’ appointments, therapies and medications, some students with ADHD may feel that they have little control over their own lives, especially at the high school level, when students are craving more independence and are close to becoming legal adults (Travell & Visser, 2006). Another factor that may affect students with ADHD is what Deci and Ryan (1985) call amotivation. Amotivation may occur when:

The individual feels unable to regulate his or her behavior in a way that will yield desirable results, so the person tends to lose control to the unmanageable forces. Amotivation is particularly evident and widely studied as personal helplessness (Abramson, et al., 1978), which results from environmental forces that are neither predictable nor controllable. (p. 150)
Given the nature of ADHD with regard to unreliable behavior regulation and uncontrolled environmental forces that affect many students with ADHD, it is quite possible these students may experience amotivation. Legault, Green-Demers, and Pelletier (2006) note four different reasons why students may be unmotivated in school: their belief in their ability, their belief in effort, how much value they place on academic tasks, and the characteristics of the academic tasks at hand. Given the nature of ADHD symptomology and students’ self-efficacy beliefs, it is believable that students with ADHD may experience amotivation. Ryan and Deci (2000a) note, “Students who are overly controlled not only lose initiative but learn less well, especially when learning is complex or requires conceptual, creative processing” (p. 59). Wiener et al. (2012) discovered that female students with ADHD more often reported an “external locus of control than typically developing female adolescents and males with ADHD” (p. 220).

On the contrary, autonomy-supportive classrooms can help to increase intrinsic motivation toward learning among students, including students with ADHD. Ryan and Deci (2000a) state, “Several studies have shown that an autonomy-supportive classroom (in contrast to controlling) teachers catalyze their students’ greater intrinsic motivation, curiosity, and the desire for a challenge” (p. 59). Autonomy-supportive classrooms tend to be more democratic, with students having more input in assignments, grading procedures, and classroom procedures. Young-Jones et al. (2014) note that:

In comparison with students with controlling teachers, research has shown those with autonomy-supportive teachers have increased levels of competence (Black and Deci 2000), engagement (Reeve, 2012), intrinsic motivation (Noels, Clément,
& Pelletier 1999), academic performance (Boggiano et al., 1993), achievement
(Flink et al., 1992), and conceptual understanding (Boggiano et al; Grolnick and
Ryan 1987), in addition to lower dropout rates (Vallerand, Fortier, and Guay
1997).” (p. 499)

Young-Jones et al. (2014) allude to autonomy as the most important of the three factors
in the SDT framework to promote self-determined motivations, although they note that
all three factors are important. Bandura (1997) notes that transitional periods for
adolescents can be difficult, especially moving up from lower level schools. Bandura
(1997) states, “Under these new social structural arrangements, they have to reestablish
their sense of efficacy, social connectedness, and status within an enlarged heterogeneous
network of new peers and with multiple teachers in rotating class sessions” (p. 178). For
students without disabilities, these periods of transition are difficult, so for the student
with ADHD, who may have difficulty in establishing or maintaining peer relationships,
connecting with teachers, and handling frequent changes, adolescence and high school
may be especially challenging.

Phenomenological Research Methodology

This research was conducted as a phenomenological study. The concepts of
phenomenology and hermeneutics have evolved since the 1800’s. Creswell (2013)
expresses the concept of “lived experiences” (p. 76) to describe how research participants
experience the phenomenon being studied. Van Manen (1990) explains that lived
experience is both the beginning and the end of phenomenological research, stating,
“Lived experience is the breathing of meaning” (p. 36).
Phenomenological study takes on a unique framework. In trying to capture the lived experience of the research participants, the researcher immerses herself in the consciousness of the participant, and then tries to express that experience to the reader (Van Manen, 1990). Through the nature of phenomenological research, one does not emerge from the research with explanations to distinct questions, but rather with insight that leads us to a deeper understanding (Van Manen, 1990). Van Manen (1990) clarifies:

The aim of phenomenology is to transform lived experience into a textual expression of its essence – in such a way that the effect of the text is at once a reflexive re-living and a reflective appropriation of something meaningful: a notion by which a reader is powerfully animated in his or her own lived experience. (p. 36)

Van Manen (1990) asserts conducting phenomenological research is attempting the impossible; to capture lived experience, all the while understanding there is no way to completely capture lived experience. Phenomenological studies are always based on previously lived experiences, not current events, as once one reflects on something currently happening, it may have changed or ceased (Van Manen, 1990). There are six methodological themes in phenomenological research:

(1) turning to a phenomenon which seriously interests us and commits us to the world;
(2) investigating experience as we live it rather than as we conceptualize it;
(3) reflecting on the essential themes which characterize the phenomenon;
(4) describing the phenomenon through the art of writing and rewriting;
(5) maintaining a strong and oriented pedagogical relation to the phenomenon;
(6) balancing the research concepts by considering parts and whole. (Van Manen, 1990, pp. 30-31)

Creswell (2013) provides guiding questions for phenomenological study design:

- Does the author convey an understanding of the philosophical tenets of phenomenology?
- Does the author have a clear “phenomenon” to study that is articulated in a concise way?
- Does the author use procedures of data analysis in phenomenology, such as the procedures recommended by Moustakas (1994) or Van Manen (1990)?
- Does the author convey the overall essence of the experience of the participants?
- Does this essence include a description of the experience and the context in which it occurred?
- Is the author reflexive throughout the study? (p. 260)

Creswell (2013) explains that the philosophical perspectives in phenomenology go back to the traditional Greek concept of philosophy as the search for wisdom. In this view, reality is defined by the person’s experience. Consequently, researchers must suspend presuppositions when conducting research in order to maintain an “intentionality of consciousness” (Creswell, 2013, p. 77). Van Manen (1990) describes a good phenomenological study as one that leads readers to recognize they have been, or could have been, in that particular experience. In this research study, each student had his or
her own subjective experiences with ADHD, and they also shared this phenomenon in common with the other participants in the study.

Van Manen (1990) explains that phenomenological research fits well within education when compared to educational research framed in other methodologies, stating, “Much of educational research tends to pulverize life into minute abstracted fragments and particles that are of little use to practitioners” (p. 7). Phenomenological research in education allows the researcher and readers to understand the phenomenon as a whole, and through this knowledge, allows the educator to apply this knowledge to their pedagogy (Van Manen, 1990). Phenomenological research has been equated with poetry:

As in poetry, it is inappropriate to ask for a conclusion or summary of a phenomenological study. To summarize a poem in order to present the result would destroy the result because the poem itself is the result. The poem is the thing. So phenomenology, not unlike poetry, is a poetizing project; it tries an incantative, evocative speaking, a primal telling, wherein we aim to involve the voice in an original singing of the world (Merleau-Ponty, 1973). (Van Manen, 1990, p. 13)

My goal for conducting this study was to more fully understand the experiences of students with ADHD and how their self-determination is affected by ADHD, in order to inform practitioners of the importance of supporting self-determination factors among students with ADHD; therefore, I employed a phenomenological approach.
History and Application of Phenomenology

According to Matarrese (2010), Georg Wilhelm Friedrich Hegel (1770-1831) was a predecessor of many schools of modern philosophy, including postmodernism, critical theory, Marxism, existentialism, phenomenology, pragmatism, and communitarianism. Leitch et al. (2010) suggest that Immanuel Kant and G. W. F. Hegel “are the Aristotle and Plato of modern Continental philosophy, the two dominant figures from whom everything else flows” (p. 536). Leitch et al. (2010) discussed Hegel’s association with the dialectic, viewing a thesis with its counterpart (antithesis) and merging the two through aufgehoben (overcoming), creating a dynamic system of constant movement and change. Moustakas (1994) notes “For Hegel, phenomenology referred to knowledge as it appeared to consciousness, the science of describing what one perceives, senses, and knows in one’s immediate awareness and experience” (p. 26).

In researching Hegel, one comes across the words hermeneutics and phenomenology. Hegel’s perspective on hermeneutics is what Matarresse (2010) calls “speculative hermeneutics,” which he said “attempts to reveal ‘the rational in the real,’ which is a shorthand reference to Hegel’s assertion that ‘what is rational is actual; and what is actual is rational’; and he wants this to be construed as broadly as possible” (p. 15). The role of personal history was important in Hegel’s philosophy. In his view, history is always present, and our history will contribute to our understanding of matters (Matarresse, 2010).

In his book Phenomenology of Spirit, first published in 1807, Hegel questions how humans come to the understanding of themselves as “self,” and posits, “Self-
consciousness exists in and for itself when, and by the fact that, it so exists for another; that is, it exists only in being acknowledged” (as cited by Leitch et al., 2010, p. 537). The concept of “self” connects to this study in that the researcher sought to understand the self-perceptions of each student participant while attempting to suspend any prejudices or preconceptions throughout the research process.

Wilhelm Dilthey (1833-1911) was one of the earliest forefathers of constructivist thought (Makkreel, 2012). His thinking had three distinct phases, as his focus of understanding changed over time. During the third phase, he sought to interpret understanding. He postulated that mere experience does not lead to understanding, but beyond that, how we express ourselves combined with our history leads to self-understanding (Makkreel, 2012). Costatino (2008) clarifies, “The aim of the human sciences is to understand the meaning humans give to their experience. This interpretive understanding, *Verstehen*, is a kind of knowledge that is constructed in the exchange between researcher and participant” (p.116). Dilthey wished to model a critique of reason in human sciences, much as Kant had critiqued pure reason in the natural sciences (Palmer, 1969).

Dilthey was one of the pioneers of hermeneutics, which is defined by Makkreel (2012) as “The theory of interpretation that relates to all human objectifications – that is, not only speech and writing, but also visual artistic expressions, more casual physical gestures as well as observable actions or deeds” (section 2.3). Dilthey viewed hermeneutics as a cornerstone for *Geisteswissenschaften*, which Palmer (1969) defines as “all disciplines focused on understanding man’s art, actions, and writings” (p.41).
Dilthey’s work led to the concept of the hermeneutic circle (or loop), meaning that in the process of interpretation, a constant back-and-forth action occurs between parts and the whole (Makreel, 2012). Usually this concept is specifically applied to text, but it has been expanded to relate to overall meaning and understanding (Costantini, 2008). There is no beginning or end to this process; meaning evolves constantly and is created throughout the process of interpretation (Costantini, 2008). One needs the parts to understand the whole, but without the whole, they cannot understand the context of the parts.

Edmund Husserl (1859-1938) influenced Dilthey, although they were relative contemporaries. Husserl is known as the father of transcendental phenomenology, which is a way of developing an unprejudiced view of the world and exploring the interconnectedness (Beyer, 2015). Phenomenology in and of itself is the study of experience through reflection and is a contemporary methodological framework for constructivist research (Costantini, 2008). The recognition of the phenomenon was termed *Anshauung* by Husserl, meaning “the realization of insight” (Costantino, 2008, p. 116). Moustakas (1994) notes that “Husserl was concerned with the discovery of meanings and essences in knowledge” (p. 27). Abraham Maslow (1962/2011) had an insightful outlook on phenomenology when comparing American philosophy to European philosophy:

> The European phenomenologists with their excruciatingly careful and laborious demonstrations, can reteach us that the best way of understanding another human being, or at least a way necessary for some purposes, is to get into his Weltanshauung and be able to see his world through his eyes. (p. 13)
Kockelmans (1994) describes Husserl’s “reductions,” which I interpreted to be akin to deconstructions. One of these is eidetic reduction, in which the researcher seeks to understand the basic nature of the phenomena being studied. Husserl postulated the phenomenological *epoche*, which is the process of bracketing prior knowledge to more fully understand that from which one is seeking to make meaning. I understood this to be with respect to the phenomena itself, but Husserl suggests that the researcher suspend *all* prior knowledge (Kockelmans, 1994). From this perspective, any phenomenological description should be performed in the first-person point of view in order to ensure that the item under discussion is described exactly as intended by the subject (Beyer, 2015).

Martin Heidegger (1889-1976) studied Dilthey’s work, and became an assistant of Husserl; consequently, these two philosophers had a great influence on him (Polt, 1999). With regard to this influence, Polt (1999) notes “Heidegger unites the systematic rigor of Husserl with Dilthey’s sensitivity to concrete existence in order to develop a phenomenology of historical life” (p. 16). Rather than extending his theories, as Husserl had hoped, Heidegger departed from Husserl’s views, adopting a more Aristotelian outlook to influence his theories (Wheeler, 2014). *Being and Time* (1927) was Heidegger’s most famous contribution, written fairly early in his academic career. The core of this work involves the concept of *Dasein*, of there-being, of existence (Leitch et al., 2010). Noddings (2005) interpreted *Dasein* as care, explaining “From his perspective, we are immersed in care; it is the ultimate reality in life” (p. 15).

According to Wheeler (2014), humans are the only beings on Earth that can ponder the question of what it is to be. Wheeler (2014) posits that Heidegger’s view on
phenomenology mirrors Husserl’s in that phenomenology should be experienced in the first-person, not merely observing the phenomenon at hand, but rather experiencing it personally. However, here Heidegger departed slightly from Husserl and brought in Dilthey’s concept of hermeneutics: with every interpretation comes a history that affects that person’s understanding of the experience (Wheeler, 2014).

Heidegger’s (1993) work is notoriously difficult to understand due to his tendency to invent new words, as he felt the existing words could not envelop the essence of his understanding. These invented words were in German; therefore, English translations may lose some of Heidegger’s original intent (Wheeler, 2014).

Transcendental Phenomenology

As a methodological framework, the concept of phenomenology borders on its own philosophy, in that researchers are asked to suspend all prior knowledge and rely solely on their participants’ perceptions in order to understand their reality (Creswell, 2013). Moustakas (1994) describes two characteristics of transcendental phenomenology: intentionality and intuition, explaining, “Intentionality refers to consciousness, to the internal experience of being conscious of something; thus the act of consciousness and the object of consciousness are intentionally related” (p. 28). He also defines the concepts of noema and noesis. Noema is the phenomenon of the object; not the reality of the object itself, but rather the perception of the object (Moustakas, 1994). Noema can be described using the example of a tree:

From whatever angle as one views an object, from front, side, or back, the synthesis of perceptions, for example, means that a tree will continue to present
itself as the same real tree. The tree is out there present in time and space while the perception of the tree is in consciousness. Regardless of when or how, regardless of which components or what perception, memory, wish, or judgment, the synthesis of noemata (perceived meanings) enable the experiencing person to continue to see the tree as just this tree and no other. (Moustakas, 1994, p. 29)

The participants in this study each had a perception of life with ADHD that may be difficult (possibly impossible) to extract and understand without being able to actually experience their consciousness. The use of reflective journals by the participants allowed them to further express any experiences and perceptions that they may not have been able to verbally express during the interview sessions. The participants were encouraged to express themselves in whatever way they could best do so, whether it was a narrative, an illustration, a song, or a poem. Rather than bind them to a rigid framework of feedback that may not have allowed them to best express themselves, participants were encouraged to make their reflections most personal to them. The writing process may have been restrictive to some students; therefore, the option to record an audio journal was also available. Member checking allowed for the most authentic representation of the participants’ experiences. To ensure the researcher’s biases did not influence the information presented, participants were consulted at several points during the research process to confirm their perceptions and experiences.

Moustakas (1994) comments, “For every noema there is a noesis; for every noesis there is a noema” (p. 30). Noesis, as described by Moustakas (1994) is a clarification of the noema; a way of examining from where these perceptions come. Noesis is the
structural dimensions of the phenomena being studied, whereas the noema is the texture of the phenomenon. Moustakas (1994) summarizes this aspect of intentionality as the integration of noema and noesis into the “meanings and essences of experience” (p. 32).

The second characteristic of transcendental phenomenology that Moustakas (1994) discusses is intuition. This intuition is the consciousness of the phenomenon. Moustakas (1994) states:

All things become clear and evident through an intuitive-reflective process, through a transformation of what is seen; first intuitively in the common appearance, in the manner in which something is presented and then in the fullness and clarity of an intuitive-reflective process. (p. 32)

I anticipated through this research that the participants might be changed, with regard to their perceptions of an ADHD diagnosis, and possibly their own self-perceptions. Perhaps before this study, these students may have never reflected on ADHD as a component of their identity and considered how it has affected their lives. Consequently, differences between the first interviews and students’ journal reflections were compared to the second interview and reflections in order to note any changes in their perceptions.

Summary

This study was framed generally in social constructivism and situated specifically in Self-Determination Theory (Deci & Ryan, 2002), which was developed through years of research on motivation. Given the difficulty many students with ADHD have with school, I was interested to examine the self-perceptions and academic experiences of high school students with ADHD, especially as they related to autonomy, relatedness, and
competency. I designed this study using a qualitative phenomenological methodology, which was described in this literature review and is further described in Chapter Three.
CHAPTER 3
METHODOLOGY

High school students with ADHD often struggle to complete assignments, study for tests, and take notes in class, and they may be missing key components needed for intrinsic motivation (DuPaul & Langberg, 2015). No published studies have addressed the self-perceptions of high school students with ADHD and the ways in which self-perception may impact their academic success. I wanted to gain a better understanding of the self-perceptions of high school students with ADHD. Interviews, student reflective journals, and researcher reflective journals helped me gain rich insight into the lived experiences of five high school students with ADHD. This study was grounded in Ryan and Deci’s (1985) self-determination theory (SDT). While Ryan and Deci’s (1985) research in SDT was quantitative (R. Ryan, personal communication; August 1, 2015), I employed a qualitative approach in order to explore the students’ experiences with ADHD from their perspectives.

Purpose of the Study

The purpose of this qualitative phenomenological study was to understand the self-perceptions of high school students with ADHD. Deci and Ryan’s (1985) self-determination theory provided a framework for the study to further identify to what degree high school students with ADHD feel competent, related, and autonomous.
Competence, relatedness, and autonomy are required for the development of intrinsic motivation, and intrinsic motivation is critical to academic success (Deci & Ryan, 2002). Much of the research conducted on ADHD is of a clinical nature, with little done at the classroom level, and there was no research found that addresses the self-perceptions of high school students with ADHD. My goal was to expand the growing research base in self-determination theory and share insight with educators who work with high school students with ADHD. With a better understanding of these students’ feelings of self-determination, educators and practitioners can better approach students and develop classroom strategies that will more appropriately meet the needs of the high school student with ADHD.

Research Questions

This study addressed three research questions:

1. How does a diagnosis of ADHD affect a high school student’s perception of competence, autonomy, and relatedness within the framework of self-determination theory?

2. How does a diagnosis of ADHD affect how high school students perceive themselves, particularly academically?

3. How does the length of time from ADHD diagnosis affect secondary students’ academic self-perception?

Researcher’s Role

In quantitative research, different tools such as surveys and questionnaires may be used to collect data; however, in qualitative research, the researcher is the primary
research instrument (Creswell, 2014; Mertens, 2015). Concerns with the researcher as instrument include the values and biases researchers bring to their research, including history, culture, socio-economic status, and in this study’s case, the researcher’s past experience with ADHD (Mertens, 2015). My teaching career began at the middle school level, and moved quickly to the high school level. I taught various science classes for several years before becoming a learning consultant, working with academically at-risk general education students. A large percentage of the students I worked with have a diagnosis of ADHD. As my interest in studying ADHD and my awareness of the disorder increased, I became more aware of the people around me who have the disorder. One of my siblings admitted to me that he had been recently diagnosed with ADHD as a middle-aged adult.

Having worked with students with ADHD for many years, I realize the disorder affects students differently, and they may have comorbid diagnoses that may change the presentation of the ADHD. I did not have predetermined expectations of my research participants, as I understood the uniqueness of the disorder for each person. I am a graduate of the school district in which I conducted the research (although not the same high school), so I was familiar with the community and the culture. I chose to conduct the research at a different site other than the building in which I worked, so as not to compromise my research with any pre-existing relationships with students or parents.

Qualitative Approach

The nature of my research, the information I sought to gather, lent itself best to a qualitative methodology. Creswell (2014) defines qualitative research as “an approach
for exploring and understanding the meaning individuals or groups ascribe to a social or human problem” (p. 4). Within a social constructivist framework, I sought to understand how high school students with ADHD develop meanings through their diagnoses of ADHD. One characteristic of constructivist research, as noted by Mertens (2015), is the concept of emergence, the changing/evolution of the research based on the participants’ constructs. Lincoln and Guba (1985) describe how, when conducting naturalistic (constructivist) research, the research questions may change over the course of the study, new theory may emerge over the course of the study, and as any new theory emerges, this may change the methodology used for the research.

Lincoln and Guba (1985) describe the results of trying to fit naturalist (constructivist) research into a mold: “The design specifications of a conventional paradigm form a procrustean bed of such a nature as to make it impossible for the naturalist to lie in it – not only uncomfortably, but at all” (p. 225). Creswell (2014) also discusses emergent design in qualitative research, with the researcher entering the study with a loose plan that may change completely over the course of the study, with the main focus of the research being the participants themselves.

According to Lincoln and Guba (1985), qualitative research does not always seem to garner as much respect as quantitative research; they claim, “The naturalistic inquirer soon becomes accustomed to hearing charges that naturalistic studies are undisciplined; that he or she is guilty of ‘sloppy’ research, engaging in ‘merely subjective’ observations, responding indiscriminately to the ‘loudest bangs or brightest lights’” (p. 289). To combat this perception and ensure high quality studies, Lincoln and Guba (1985) identity
four criteria for addressing the rigor of qualitative research: internal validity, external validity, reliability, and objectivity.

Internal Validity

There are two classifications of validity: internal validity and external validity (Lincoln & Guba, 1985; Mertens, 2015). Internal validity refers to the extent to which the dependent variable is influenced by the independent variable, such that a causal connection can be assumed, and no other variables affect the dependent variable (Lincoln & Guba, 1985; Mertens, 2015).

Creswell (2014) notes that validity is a strength of qualitative research and describes three criteria for qualitative research: trustworthiness, authenticity, and credibility. Creswell (2013) feels value and accuracy in qualitative research is enhanced by the long exposure of the researchers to the participants and the relationship they are able to build, as well as the thick description that is provided. Lincoln and Guba (1985) describe the tenet of trustworthiness:

How can an inquirer persuade his or her audiences (including self) that the findings of an inquiry are worth paying attention to, worth taking account of? What arguments can be mounted, what criteria invoked, what questions asked, that would be persuasive on this issues? (p. 290)

Mertens (2015) and Lincoln and Guba (1985) identify eight threats to internal validity, based on research by Campbell and Stanley (1963):

1. History: in which an event may happen during the course of the research, which may affect the results;
2. Maturation: any biological or psychological changes that occur amongst the study participants during the course of the study

3. Testing: the ability of the research participants to anticipate similar test answers in pre- and post-test instruments;

4. Instrumentation: almost the opposite consideration of the testing threat, in which the pre- and post-test are significantly different so that one may be calibrated differently than the other, threatening the validity of the research;

5. Statistical regression: which occurs when the researcher chooses participants at extreme ends of a curve, which may result in a greater gain among students on the lower end of the curve, due to their statistical regression, rather than the treatment in the research;

6. Differential selection: anomalies in results that occur due to differences among the group participants, rather than the research treatment;

7. Experimental mortality: when participants drop out mid-study, possibly skewing results;

8. Selection-maturation interaction: Maturation differences in research participants, which may result in differences due to age differences, rather than abilities.

This study’s research methodology was designed to ensure internal validity. Any historical event that might have occurred during the study would have been out of my control, but none occurred. To combat the threat of maturation, the interviews were conducted fairly close together; no significant age progression took place. Biologically, with my population, I needed to be mindful of any medication changes that took place
with my participants during the course of the study, including changes in ADHD medications, or those which may be used to treat depression or anxiety, as such changes could have impacted participants’ self-perceptions. Testing and instrumentation threats were minimally applicable, as there were not any pre- or post-tests, although there was always the risk of participants anticipating what they think the researcher wanted them to say, rather than being completely honest. Statistical regression was not applicable in that no treatments were applied to the participants, although their self-perceptions may have been affected by or reflected in their academic performance. Students were not intentionally chosen from extreme ends of academic performance, but an academically heterogeneous participant group was sought. Differential selection could have played a part in threatening validity, due to possible differences in comorbid diagnoses among the research participants. I had no control over experimental mortality, but hoped that by scheduling the interviews relatively close together, resulting in a study completed over a shorter time period, participants would be less likely to drop out. I attempted to avoid selection-maturation issues by selecting students in similar age ranges and high school experience levels, with a target study group of tenth and eleventh graders. Other threats to validity were attempted to be controlled by maintaining anonymity of the research participants; although, in a high school setting, one cannot prevent students from talking and sharing information. I encouraged participants to keep their experiences to themselves, at least during the course of the study.
External Validity

External validity can also be called generalizability or transferability (Mertens, 2015), in that the results can be generalized across or transferred to other situations. External validity and internal validity share a relatively inverse relationship, in that if the researcher works to control the internal validity of the study and increase the specificity to their study or population, it reduces the generalizability to other studies (Lincoln & Guba, 1985). Lincoln and Guba (1985) identify four threats to external validity:

1. Selection effects: this refers to the specific selection of study participants, which may reduce the ability to transfer to other studies;
2. Setting effects: a specific setting may reduce generalizability to other studies;
3. History effects: if something occurs during the study that impacts the results, reducing the generalizability to other studies;
4. Construct effects – specific constructs that may not be applicable to other studies.

My initial goal was for my study to be widely generalized, across all high school students with ADHD. However, due to the nature of the study, even within the participant group, students’ self-perceptions with regard to their ADHD were shaped by their background and experiences. As with most phenomenological studies, generalizability is difficult, due to its personal nature (Van Manen, 1990).

On a broader scale, this study may be transferable to populations and communities similar to that in which the study was conducted. Research from different geographical areas and cultures may be needed to determine if the self-perceptions of high school students with ADHD are universally generalizable. Creswell (2013) suggests
that “thick, rich descriptions” (p. 252) better allow for transferability, as readers can
develop a deeper understanding of the culture, setting, and context of the research setting
and participants. Thick, rich description of this study’s data collection and data analysis is
provided in Chapter Four in order to support the external validity of this work.

Reliability

Mertens (2015) notes that in quantitative research, reliability refers to how stable
the research stands over time. In constructivist research, however, change is expected
due to the emergent design of qualitative methodologies, so qualitative researchers should
note such changes over the course of the research in order to ensure reliability (Creswell,
2013; Mertens, 2015). Creswell (2013) discusses intercoder agreement checks, in which
multiple coders are used, in order to seek commonalities among codes and themes. This
method also allows for more objectivity, as there is more than one input into the
interpretation. I used coding software to eliminate my subjectivity as the researcher.

Objectivity

In the pursuit of a deeper understanding of the experiences of students with
ADHD, this study employed a phenomenological and hermeneutical design. As the
researcher, I was required to suspend my prior experiences in order to better understand
the experiences of the research participants and gather information from multiple
perspectives (Mertens, 2015). I employed peer debriefing to help maintain the objectivity
of my research. Lincoln and Guba (1985) maintain that a tightly-designed methodology
will help increase the objectivity of a constructivist study.
One way to ensure this is through the design of the questions asked of the participants; these questions should be open-ended and the participants must not be led in any particular direction (Lincoln & Guba, 1985). While I designed an overarching direction for interview questions so that participants could discuss their experiences with ADHD mostly within an academic context as well as in relation to Self-Determination Theory, each student interview was personalized to each participant, and additional questions emerged based on where their experiences and perceptions led the discussion.

Ensuring Credibility

Lincoln and Guba (1985) suggest several activities that encourage the production of credible research: prolonged engagement, triangulation, persistent observation, external checks on inquiry, refining/revising hypotheses during the course of research, checking preliminary results against previous data, and member checking. They describe prolonged engagement as sufficient time to gain the trust of the research participants, and to understand the culture in which one is researching. Having worked in a high school setting for 11 years, and specifically with students with ADHD for seven years, I had a strong understanding of the general population of students that I was researching.

I did not feel one interview session would be adequate to gain the trust of the research participants; consequently, I met with each participant twice, for a period of approximately 30 minutes each. If this time did not seem sufficient time to understand a student, or if the student did not seem comfortable near the end of the second interview, I would have extended to a third interview.
Lincoln and Guba (1985) describe the concept of prolonged engagement as providing the scope of the research, and persistent observation as providing the depth in the research. The purpose of persistent observation, per Lincoln and Guba (1985), is to focus on the details of the characteristics of the phenomenon. In conjunction with prolonged engagement, persistent engagement involves adequate length of observation time such that themes begin to repeat, so that a clear picture of the environment is possible (Mertens, 2015). In this study, I looked for commonalities among the student participants. While understanding each student as an individual, with unique experiences, I searched for things they shared as a result of their shared experience with the phenomenon of ADHD. Triangulation is the process of using multiple methods of data collection in order to establish consistency of evidence or to confirm factual information (Mertens, 2015). Lincoln and Guba (1985) take some issue with triangulation, in that in attempting to find consistency across many sources, one may go against the crux of constructivist research as there may be many realities (Mertens, 2015). However, triangulation is recommended in order to confirm factual information (Lincoln & Guba, 1985; Mertens, 2015). In this study, I used multiple methods of data collection, including interviews, participant reflective journals, researcher reflective journals, and demographic data collection, including grade information.

External checks on inquiry may include methods such as member checks and peer debriefing (Mertens, 2015). I used member checks with my student participants during the course of the interviews. I also checked in with them at the conclusion of each interview session in order to build trust, so they could be assured that their information
was being reported accurately. Peer debriefing is the process of involving a peer to review transcripts, methodology, and general procedures of the data collection process (Mertens, 2015).

Institutional Review Board (IRB) Process

The Institutional Review Board (IRB) at Mercer University oversaw the ethical considerations and procedures of this research study. The purpose of an IRB is to protect the rights of human research participants, particularly those participants from vulnerable populations such as minor children, individuals with physical or mental health impairments, and pregnant women (Mertens, 2015). Since my study participants were high school students with ADHD, they deserve to be protected as minors with disabilities.

Permission to conduct this study was granted by the participating school district, as well as the participating high school. Informed assent to participate in the study was obtained from the student participants, and informed content was obtained from their parents. The student participants were given the opportunity to withdraw from the study at any point during or after the conclusion of the study. Five students were selected for participation at a high school within the district in which I was employed, but not at the school in which I worked. I selected student participants which whom I had no prior relationships in order to alleviate issues of power or influence (Mertens, 2015).

Setting

This study was conducted at a Midwest high school (9-12th grade) in a moderately sized, relatively affluent suburb. The school district in which the high school resides
services over 14,000 students in grades pre-K-12. The high school that the participants were gathered has a student population of over 1,700 students, with a graduation rate of over attended enrolled over 1,700 students, with a graduation rate of over 95%. The students were interviewed in their school, either during their lunch period or immediately after school. The lunch interviews were conducted in a private area in the media center, and the interviews after school were conducted in a private student support room.

Participants

Five high school students who were enrolled in tenth and eleventh grade were purposefully selected (Creswell, 2013, 2014) for this study. Within phenomenological research, Creswell (2013) suggests criterion sampling to ensure all participants experience the phenomenon being studied. In this study, all the students chosen to participate had been diagnosed with ADHD by a medical or psychological doctor. The request for participants was for students who were medicated and unmedicated for ADHD, however all final participants happened to be medicated for ADHD. An even gender mix was attempted.

An attempt was made to eliminate comorbid diagnoses, such as anxiety and depression, so as not to compromise pure effects of ADHD on student perception. A participant pool was gathered from a solicitation in which parents of students with ADHD were asked to participate in a research study related to ADHD. From these interested and self-identified candidates, participants were chosen using the abovementioned criteria. As recommended by Moustakas (1994), once the initial screening was completed, students were interviewed to identify their contributions to the
research. Those students chosen were interested in participating in the study, willing to interact with the researcher, and willing to provide feedback on the research process.

Data Collection

In order to ensure triangulation and ensure rich description, data were collected through five different sources: student interviews, student reflection journals, researcher reflection journals, parent questionnaires, and academic records.

Student Interviews

As recommended by Van Manen (1990), the main research questions were used as a guide through which the interviews were conducted. He recommends using the research questions to determine the methodology as opposed to using the methodology to determine the research question (Van Manen, 1990). Per Creswell’s (2013, 2014) and Lincoln and Guba’s (1985) recommendations, open-ended questions were asked to ensure more objectivity in the results and to better allow the participants to express themselves on their own terms. If the participants veered off track during the interviews, I used the research questions to help guide them back on track to the relevant discussion. Based on Creswell’s (2013) recommendations for designing qualitative interview protocols, I focused on two main questions: 1) What have been your experiences with regard to ADHD? 2) What scenarios have affected your experiences of ADHD? Creswell (2013) states that foundational questions allow for a textural and structural description of the experiences, and lead to a better understanding of common experiences of the research participants. A list of interview questions can be found in Appendix A.
Originally, I intended to take notes on the interviews, so as not to inhibit the students from being more open and avoid any concerns they may have had with the recording of their interviews; however, in researching phenomenological methodology, I realized that through taking notes only, I might miss important pauses and silences, that may connote meanings that cannot be captured through writing. Consequently, I used a digital voice recorder, with students’ permission, in order to gather richer data. Interviews were conducted with the students’ academic schedules in mind, so as to minimize the disruption to their learning processes. As recommended by Moustakas (1994), I engaged in the *epoche* process prior to each student interview, to help clear away any biases or preconceptions.

Student Reflection Journals

I encouraged students to reflect after each interview, either on the interview process itself, or on what was discussed during the interview. I hoped that when students had time to reflect on what was discussed, they would be able to capture more of the essence of their shared experiences with the ADHD phenomenon. If students were at a loss for what to write, I suggested the following prompts:

- Tell me about ADHD
- Tell me about you

If a student was resistant to narrative journaling, I encouraged him or her to record an audio journal or use a more creative format, possibly in the form of a poem, song, or illustration. I wanted the student participants to be able to best capture what they were feeling and experiencing.
Researcher Reflection Journals

Van Manen (1990) discusses the use of journals, particularly by the researcher, as an important component in phenomenological research:

Researchers, too, have found that keeping a journal, diary, or log can be very helpful for keeping a record of insights gained, for discerning patterns of the work in progress, for reflecting on previous reflections, for making the activities of research themselves topics for study, and so forth. (p. 73)

I journaled at the conclusion of each interview in order to help guide the next interview and to ensure that I was addressing the core questions with each student. I also journaled on the overall research process to ensure that I was meeting the goals of the study.

Parent Questionnaire and Academic Records

Demographic information was collected from a parent questionnaire prior to interviewing the student participants. The parent questionnaire can be found in Appendix B. Participants were solicited by a request within the principal’s weekly email blast, as well as from email blasts put out by the school Parent Teacher Student Association (PTSA). Parents completed a questionnaire regarding diagnoses, medication(s), grades, and signed a release of information for the researcher to access academic information from the school (see Appendix C).

Data Analysis

I used word-processing software to transcribe the interview audio recordings into text, and then used NVivo qualitative data analysis software to assist with thematic coding. Van Manen (1990) describes phenomenological themes as “structures of
experience” (p. 79); he explains that themes get to the heart of a phenomenon, thereby uncovering the meaning. Van Manen (1990) further describes phenomenological themes as “knots in the webs of our experiences, around which certain lived experiences are spun and thus lived as meaningful wholes. Themes are the stars that make up the universes of meaning we live through” (p. 90).

Once the data are coded thematically, Moustakas (1994) suggests textural descriptions can be developed, leading to structural descriptions. Following this process allowed me to capture the essences of the phenomenon at hand, these high school students’ experiences with ADHD.

Summary

This social constructivist qualitative study was conducted using a phenomenological methodological framework. Phenomenological methodology involves capturing the essences of the participants’ lived experiences with the shared phenomenon, in this case, ADHD. Five tenth and eleventh grade students with ADHD from an upper middle class Midwestern high school were selected to participate in this study.

Data were collected using face-to-face interviews, student reflections, and researcher reflections, as well as demographic and academic information, such as grades. Every effort was made to maintain participants’ confidentiality at all stages of the process. Interview questions were designed to allow students to address the research questions from multiple points. Transcription software was used to transcribe audio recordings of the interviews, and qualitative analysis software was used to assist in extracting thematic codes from the data.
It was the hope of this researcher that through the extraction of common themes and identification of emerging patterns, insight could be gained concerning the impact of ADHD on these students’ feelings of competence, relatedness, and autonomy (Deci & Ryan, 1985). Also, identifying patterns related to the length of time from the diagnosis of ADHD may indicate whether a longer length of time has helped the students improve their academic self-perceptions. The goal of this research was to best represent the lived experiences of these students with ADHD, and to share their experiences with educators and practitioners in order to better understand and apply this knowledge to the educational experiences of high school students with ADHD.
CHAPTER 4

RESULTS

The purpose of this qualitative study was to understand the self-perceptions of high school students with ADHD. Previous chapters have discussed the physiology and treatment of ADHD and the ways in which ADHD can impact students in academic settings, as well as the framework of Self-Determination Theory and how autonomy, competence, and relatedness can influence intrinsic motivation (Deci & Ryan, 1985). This chapter presents the results from the analysis of data collected regarding five high school students’ self-perceptions of their lived experiences with ADHD. Scarce research has been published regarding the perspective of high school students with ADHD. Using a phenomenological approach, I sought to uncover the essence of five high school students’ experiences of life with ADHD.

Upon multiple readings of the transcribed interviews and multiple reviews of the collected reflection journals, I grouped commonalities amongst the students’ responses to build themes. Data were analyzed and organized into themes in an attempt to answer the following research questions:

1. How does a diagnosis of ADHD affect a high school student’s perception of competence, autonomy, and relatedness within the framework of Self-Determination Theory?
2. How does a diagnosis of ADHD affect how high school students perceive themselves, particularly academically?

3. How does the length of time from ADHD diagnosis affect secondary students’ academic self-perception?

Research Participants

Five participants for this study were selected from a high school in the Midwest. The community is fairly affluent, and the school district in which the high school resides services over 14,000 pre-K through twelfth grade students. The high school which the participants attended enrolled over 1,700 students, with a graduation rate of over 95%. Participants were solicited by a request within the principal’s weekly email blast, as well as from email blasts put out by the school Parent Teacher Student Association (PTSA). In line with the Mercer University Institutional Review Board guidelines, parent consent and student assent was obtained before any interviews were conducted. The study design and ethical implications were approved by the Mercer University IRB committee. Before student interviews were conducted, parents completed a questionnaire regarding diagnoses, medication(s), and grades, and signed a release of information for the researcher to access academic information from the school (see Appendix C). Every effort was made to maintain participants’ confidentiality at all stages of the process.

I attempted to gather participants who had pure diagnoses of ADHD, but was unsuccessful. Three of the students had additional diagnoses, including anxiety, dyslexia, depression, and one of these participants was on the autism spectrum. Two participants had ADHD with no other comorbid diagnoses. Of the five student participants, three
were male and two were female. Their ages ranged from 15 to 16. A summary of student demographic information is presented in Table 1.

Table 1

*Student Participant Demographics*

<table>
<thead>
<tr>
<th>Participant Pseudonym and Gender</th>
<th>Age</th>
<th>Grade</th>
<th>Diagnoses</th>
<th>Age at ADHD Diagnosis</th>
<th>Medication</th>
<th>GPA</th>
<th>Current Outside Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>O female</td>
<td>16</td>
<td>11</td>
<td>ADHD – Combined type, Anxiety, Depression</td>
<td>6 / 14*</td>
<td>Adderall XR</td>
<td>N/A</td>
<td>None</td>
</tr>
<tr>
<td>W male</td>
<td>16</td>
<td>11</td>
<td>ADHD – Inattentive type</td>
<td>5</td>
<td>Ritalin LA</td>
<td>3.3</td>
<td>None</td>
</tr>
<tr>
<td>B male</td>
<td>15</td>
<td>10</td>
<td>ADHD – type unknown</td>
<td>9</td>
<td>Ritalin – SA, Zantac, Singulair</td>
<td>3.3</td>
<td>None</td>
</tr>
<tr>
<td>H female</td>
<td>16</td>
<td>10</td>
<td>ADHD – Combined type, Anxiety, Dyslexia</td>
<td>4</td>
<td>Straterra and Adderall</td>
<td>3.3</td>
<td>Counseling and Tutoring</td>
</tr>
<tr>
<td>T male</td>
<td>16</td>
<td>10</td>
<td>ADHD-Combined type, Autism Spectrum Disorder</td>
<td>3</td>
<td>Vyvanse</td>
<td>2.7</td>
<td>None</td>
</tr>
</tbody>
</table>

*Note: O was diagnosed informally at age six, diagnosed professionally at age 14.*
Interview Questions

Interview questions were designed to address the study’s research questions and to better understand the participants’ experiences. My intent was to address various aspects of the research questions in different ways in an attempt to fully understand the students’ feelings. The entirety of the student interview questions can be found in Appendix A. Several of the interview questions were directly designed to ascertain students’ feelings regarding competence, autonomy, and relatedness (Deci & Ryan, 1985). Other questions were designed to gauge the students’ overall experiences with ADHD. Diversion from the scripted questions was allowed, and participants were free to discuss whatever they liked; however, I refocused conversations back to the interview questions if the conversation strayed off track. Excerpts of these students’ voices are presented in this chapter verbatim. Occasionally, students’ comments did not follow in a linear line of thinking; however, these verbatim excerpts illustrate the thought process of high school students with ADHD. Their exact words describe their thoughts and feelings, and I wanted to share rich descriptions of the students as authentically as possible.

Interview and Journal Processes

Two face-to-face interview sessions were conducted with each student, averaging approximately 30 minutes each session. The students were interviewed in their school, either during their lunch period or immediately after school. The lunch interviews were conducted in a private area in the media center, and the interviews after school were conducted in a private room used to support students. With student permission, the
interviews were audio recorded. A laptop with the Audacity audio software program was used to record the interviews, along with an external microphone to help improve clarity. The audio for the first interview with O was mostly inaudible, due to loud background noise overpowering the audio, and that first interview was redone with O’s permission. Other audio interviews were conducted without incident. Interviews were then transcribed by the researcher into a Word document, before using coding software. I used NVivo software to assist with data analysis. I loaded the verbatim transcriptions into the program and used the program to sort and organize the data. The program allowed me to develop nodes from which to gather common information. I used three nodes: autonomy, competency, and relatedness, and as I grouped the information, two addition areas of commonalities emerged: acceptance of diagnosis and academic self-perception. I used these nodes as my themes.

Students were also asked to complete a reflective journal entry following each interview. Students could record anything they wanted, but if they needed an idea, they were provided with two prompts: “Tell me about ADHD,” and “Tell me about you.” All students used the prompts, with most choosing to submit written responses and one submitting two video responses. Although I explained the purpose of the reflection journals, to the participants, many of the participants’ reflections were written in a format similar to a book report or research paper. For example, one student cited statistics on the incidence of ADHD in the United States. I did not include excerpts from these report-type reflections in this chapter, as they did not describe the students’ thoughts.
As the researcher, I also completed journal entries following each interview, focusing on interpretations from each interview, as well as ideas to improve each session from a research standpoint. My interpretations of the students’ experiences, based on their interviews and presentation, are presented in the following sections as part of the structural descriptions of the students.

To increase validity and credibility I conducted member checks with the students following their interviews. The participants were emailed the written transcripts and asked to review them, to ensure they felt they were being represented accurately. I transcribed the recorded interviews verbatim, to capture speech patterns as well as pauses in thought. No student made any changes or corrections to their transcripts. One participant commented via email, “It’s so weird to see my speech patterns written out like that, haha.”

Data Analysis

Interviews were conducted and recorded using the Audacity program. I transcribed each interview into a Word document, along with transcriptions of the reflection journals. NVivo (version 11) was used to assist in organizing data. The transcriptions and reflections from the interviews, along with the reflection journal entries, were uploaded from Word documents into the NVivo program, and nodes were created based on the themes to help organize the qualitative data. Four nodes were developed: autonomy, competency, relatedness, and acceptance of diagnosis. Academic self-perception was added as a sub-node of competency. I completed an initial review to code the material based on the needs identified in the Self-Determination Theory.
framework (Deci & Ryan, 1985), bringing forth autonomy, relatedness, and competency. I then conducted a secondary review to locate any other themes that were common among the study participants and identified one emergent theme (acceptance of diagnosis) and one subtheme (academic self-perception), which was organized underneath the competency theme.

Individual Participant Textural Structural Descriptions

Five high school students with ADHD participated in this study. The following sections include personal, individual descriptions of each of these students.

Student Participant “O”

O is a female student in 11th grade that has a diagnosis of ADHD – combined type, first diagnosed by her mother (who is a psychologist) at age six, then professionally by a psychiatrist at age fourteen. She takes Adderall XR daily. O also has diagnoses of anxiety and depression. She has received tutoring and counseling on occasion, but is currently not receiving either. Her mother feels that O is a “very bright and gifted person” and is “creative.” Her mother states that O usually is a straight A student, with the exception of math, in which she is a B/C student. She has frequent absences at school due to chronic illness. Following the interviews, O went to homebound schooling, so a complete record of her academic history was not obtainable.

Meeting with O made me feel sad. She presented herself as lonely and disconnected from society. She made minimal eye contact and was fidgety. She mentioned that she was a lesbian, and her parents were very religious, so they didn’t accept her orientation. She feels close to her father, who she said also had ADHD. O
self-described using words such as “weird” and “obsessive.” She reported that she does not have any personal, close friends; she has one friend who lives in another state, and one who lives in Ireland, neither of whom she has met in person. O does not associate with any friends outside of school. She got very animated when discussing her current favorite cartoon. Her favorite teachers are those with whom she feels a connection. Our last interview finished early, so she could go back to lunch, but she asked if I could stay with her until the end of lunch, because she didn’t have anywhere else to go.

In her reflective journal, O described how her identity is wrapped up with ADHD:

It's weird to think of what my life would be like without ADHD. I mean, assuming all the other mental things I deal with don't directly correlate with having ADHD, I would still deal with those, but I would probably be able to seem more "normal" without it. I wouldn't be so obsessive, I would be able to remember things, I would be able to pay attention in class easily... I would probably be much better at school with a lot less work. I wouldn't get sudden rushes of energy anymore. I wouldn't compulsively word-vomit about the topics I'm hyperfocused on. I would generally probably blend into society more and find it easier to make friends. It brings up something entirely different, though; what is "normal" to someone who doesn't have ADHD, and how different is it from my "normal"? The things I accept as common and mundane are probably much different than someone who doesn't deal with the same things I do. My perception of the world and how I experience it is likely wildly different than someone without any mental illnesses or disorders. My idea of "normal" is
inherently flawed because my brain and thus how I perceive and experience reality is inherently abnormal. And what would I be like without ADHD? I've had it all my life; I genuinely don't know where the disorder ends and "I" begin. I don't know what traits of mine are from having ADHD and what traits of mine are "me". My personality and identity, it seems, are so heavily intertwined with ADHD and my other mental issues that I have so little left over I don't have an identity of my own. I don't know who "me" is. But that probably has very little to do with ADHD and a lot to do with everything else.

Student Participant “W”

W is an 11th grade male student who was diagnosed with ADHD – inattentive type at age five by his pediatrician. He takes Ritalin LA once daily. He does not have any additional diagnoses, and does not receive any outside tutoring or counseling. His mother feels he is academically successful, and W receives grades of A’s and B’s.

I met with W after school. W presented himself as self-assured and comfortable with his diagnosis. He seems to remember instruction better when there is a real-world connection for him. He was cooperative and engaged during the interviews. W plays hockey and wants to make movies when he graduates college, and he submitted his reflection pieces via video.

With regard to living life with ADHD, W said, “My whole life is an experience” [with ADHD]. It’s like I’m constantly in the experience. I don’t have a lot of experiences with ADHD, because not a lot of people know I have it…therefore I don’t have many interactions because of it.” W believes that life with ADHD can be a positive thing:
To me, ADHD isn’t really a bad thing, I kind of like it. Sometimes it slows me down, but other times, I guess you could say it helps me. I don’t consider it to be a bad thing. For example, a couple good advantages it gives me is for hockey – I am more aware of my surroundings, I guess, I know where everything is, and that’s the beauty of it – I’m not focused on one thing – I know, I can see everything around me. I guess another advantage would be that I’m always thinking – I can’t stay focused on one thing. I’m always thinking about the next thing. To me, specific advantages for me would be for making short films. I like making movies, I want to grow up to make T.V. shows or potentially feature films, and I think that having this kind of mindset allows me to visualize in different ways how something should look (gestures)...or how something should look and the feel of the scene or the overall look of a short film.

Student Participant “B”

B is a male in 10th grade that was diagnosed with ADHD at age nine by a neurologist. His mother is unsure of the type of ADHD he has. He does not have any additional diagnoses beyond ADHD, and takes short-acting Adderall in the morning and during school. He goes to the main office at lunchtime to take a dose of Adderall. He does not currently receive any counseling or tutoring services, but he has in the past. His mother feels B is academically successful, but feels he struggles with math. She reports that his grades are a mixture of A’s and B’s.

I met with B after school. B was expressive and engaging. It was very easy to go off-track with him during interviews, as he traveled down many conversational avenues.
B’s interviews lasted longer than the other students, as he put a lot more detail into each answer. He was good at itemizing events and responding to each question thoroughly.

For example, when I asked the question, “Tell me about your classes. You don’t need to go class by class by class, but in general, like it, hate them, how do you feel about it?”

B’s response was:

I know you said don’t, but it’s just easier for me to go through all my classes. My classes, I like all of them, I guess I like some more than others. I guess the ones I like the least definitely math - I mean, it’s geometry, so I like it better, at least so far, than I did algebra, but I’m just not good at math to begin with, so I don’t really like it. And then this year, I like, I guess, the whole main idea of it. I love science, but I don’t like biology. I like it because it deals with living things, and that’s more complex. I like it better than I like chemistry, that’s for sure. But I liked physics a lot. I like the class, and all my teachers, so that’s not really a factor, just the class itself. I like both of them. Band, yeah, I like that, it’s easy. History - I love history, I’m really good at it. It’s US History, I guess maybe not passionate about it, but I take an interest to it, I like it, I like learning about it. Language Arts, I like Language Arts, but I’m not that good of a writer, I don’t have good handwriting, and I’m not very creative, so it doesn’t really help for that, and I know I’m not, or at least I see it that way that I’m not, and it doesn’t really help language arts, but I do like my teacher - I’ve had him before - I had him last year for history. Otherwise, of course, it’s language arts and it’s a lot of
reading and writing. I’m good at reading, but not really writing, so that class is
kind of whatever, okay.

Student Participant “H”

H is a female in 10th grade and was diagnosed with ADHD – combined type by a
psychologist when she was four years old. She takes Strattera and Adderall. H also has a
diagnosis of anxiety and dyslexia. She receives outside therapy and tutoring. She misses
school frequently due to this diagnosis. Her mother feels she is academically successful
and she normally receives a mix of A’s and B’s. H decreased her schedule in the second
semester due to her anxiety.

H was engaging and excited to participate in the interview. She freely provided
answers and elaborated on situations within the questions. She has additional diagnoses
(anxiety and dyslexia) that also can impact her academically. The anxiety often causes
her to miss school, arrive late, or leave early. This year she is falling behind in her
classes due to her inability to stay caught up with her peers because of absences. H wrote
about ADHD in her reflection journal:

ADHD makes every day a lil [little] harder for me. It's harder to be serious and
listen/pay attention. I was diagnosed with ADHD when I was 7. I have been on
lots of different meds and right now I'm on Aderall [sic], it works well for me.

Student Participant “T”

T is a male in 10th grade with a diagnosis of ADHD – combined type, which he
received at age three by a psychiatrist. T is also on the autism spectrum. He is currently
taking Vyvanse, and is not currently receiving any outside counseling or tutoring. His
mother feels that the spectrum disorder causes “rigid thinking” and “limits his efforts.” She feels he is academically successful but is not working to his “full potential.”

T and I met in the media center during lunches. It took T a while to warm up to the interview process. As T is on the autism spectrum, many of his answers were short and direct, with many “yes” and “no” answers. As T got to know me, he became more expressive and began to elaborate on his answers. He finds joy in being the class clown, and trying to make others (especially his teachers) laugh. Upon reflection, when I asked T to tell me about himself, he responded with the following journal entry:

I never totally get tired and love to make jokes and puns and make people laugh. I can be rude and make intrusions and random outburst both in and out of school. I can get on people’s nerve’s [sic] if I push a little too far to try and be funny. I am focused and on-task when I need to and do not leave work unattended.

Themes

Deci and Ryan’s (1985) Self-Determination Theory (SDT) provided the framework for this study. The heart of this framework posits that there are three needs that have to be met in order for intrinsic motivation to develop: autonomy, relatedness, and competence. Since the study is framed within Self-Determination Theory (SDT), I felt that it was important to use these three needs as the main themes for my analysis and determine the ways in which these students felt autonomous, competent, and related to those around them. Questions were designed to gauge each student’s level of autonomy, relatedness, and competence, and this structure provided three automatic themes. On the second pass of the transcripts, I identified acceptance of diagnosis and a sub-theme of
academic self-perception, and organized it underneath the competency theme. I identified 98 total phrases and statements that I felt were significant to the study, and winnowed these statements down to the four themes and one sub-theme.

Autonomy

Autonomy, in this study, relates to how much control a student feels over their lives, particularly as it relates to the treatment and impact of ADHD. Questions were designed to gather information on how autonomous the research participants felt about having ADHD and managing the disorder.

Students had varying responses to their feeling of autonomy with regard to their ADHD. For those students who were diagnosed later in life, most reported that they felt part of the diagnostic process. For those diagnosed in early childhood, the process was parent-driven. B, who was diagnosed in 3rd or 4th grade, recalled, “It was kind of a combination of all of us. I knew that I couldn’t focus. I told my teacher ‘I know there’s something, I just can’t focus for some reason.’” With regard to the continued feeling of control that they have over their lives, it is interesting to note that while the male participants expressed feeling in control, the two female participants seemed to be okay with allowing others to direct their lives. H stated:

I feel like I can direct my life if I try, but sometimes it is easier, like “Oh, no, mom – can you just figure this out for me? Like, can you figure out the plans?” because when I have all these things it just becomes so much, so like, I don’t know – someone else figure it out – which can be frustrating sometimes, but other times, I’m like “no – I want to figure it out.”
O stated, “I don’t know, I don’t really try to change – I just kind of go with what other people choose for me…a lot of the time, because I am very indecisive.”

None of the study participants minded taking medication for ADHD daily, and they seemed to view it as a necessary component of their day. Those that mentioned forgetting to take their medication on occasion noticed the effects, which made them realize they had forgotten. B noted:

It does feel like a pain, it IS kind of a pain in the butt, but like I said, it DOES give me order and it does help out tremendously with the symptoms, you know - not being able to focus, fidgeting, talking a lot or over talking things or overthinking - it helps with that.

H recalled an incident from elementary school when she forgot to take her medication:

But let’s say sometimes, I remember in elementary school, when I wouldn’t want to take my meds – and my mom would make me – now I know there was a reason why she wanted me to – because I would go crazy – literally I could not control myself – I would literally throw myself and push other people down slides – I have perfect memories of this right now – and I couldn’t like – it was like watching a drunk person – I couldn’t control myself at all – I would just fall over and laugh.

Competence

Grolnick and Ryan (1989) describe competence as how effectively an individual interacts with their environment. Within this study, competency can describe how each student is performing academically, and the sense they feel in regard to their academic
performance, as well as how competent they feel about managing their ADHD. When the participants were asked if they felt academically competent, all participants stated they did. Four out of the five participants reported difficulties in math, and one reported difficulties in Language Arts. A commonality amongst difficulties noted by the participants seemed to be the actual process, whether it was following steps to complete a research paper or missing simple steps in a math problem, and participants attributed a lack of focus on being able to follow through all steps of a process. W explained:

…usually Language Arts is a little bit harder because we have to…in reading a book, we have to read a couple of chapters every night and that’s like, a lot to read without getting distracted and then, um, like now we are doing a research paper, so during class we’ll do typing and looking over stuff and just making sure I am staying on schedule is kinda hard, but I make do with it.

Speaking about math, O said:

It’s always been hard to me, and sometimes I make, like, little mistakes that I don’t notice – I think that might have to do with ADHD. I don’t remember what part of it, but I remember I really didn’t do it a couple of years ago.

Relatedness

Deci and Ryan (2002) discuss relatedness in terms of how secure a person feels in a community; relatedness is the sense of psychological well-being individuals get from feeling connected to others. Participants were asked about relationships in their lives, in particular with their siblings, parents, teachers, and friends. All of the student participants report getting along well with their siblings, save for typical bickering here and there. All
students reported getting along well with their parents, although two male participants used the word “annoying” to describe their mothers, insinuating that their mothers meddled and fussed over them.

When I asked the students about their friendships and how easy it is to make and keep friends, the boys reported having an easy time making friends, while the girls stated they had a difficult time making friends. There was an even mixture of close and casual friends. O reported difficulty in making friends, especially earlier in her life. She feels that behaviorally, she was “different.” She related that she had trouble understanding how to behave:

I would repeat myself a lot. I would, I don’t know, I was very one-track minded, I was very obsessive, um, now I’m, it’s like I had to teach myself how to be a human, kind of, and like social skills, so I would observe other people and imitate what they were doing, but naturally I have no idea.

H reports difficulty in maintaining friendships and being a good friend, as a result of her ADHD:

Oh, that can actually be really hard. I’ve actually been thinking about that, like to be a good friend is so hard. Like it actually takes so much work out of someone to like – I don’t know if this sounds weird – I was talking about this with someone else the other day – to like actually care for another human being as it were like yourself or to help them takes a lot out of you and I have really good friends who do that for me so now I’m trying more and more to do that for them but like, with everything else going on sometimes it becomes like so much and I realize that I’m
telling them all my problems and placing all of my stress on them, and then they help me figure out what to do but like, when they ask me something, I’m like “oh, give me 5 minutes, I’ll call you,” and I don’t – or something like that – It’s bad [laughing].

When speaking of teachers, and the relationships they have with them, many participants commented that they felt closest to teachers who were “nice” or “fun.” A couple of the students commented on conversations they had with teachers while out in the hallway. The commonality seemed to be teachers who took extra care to form relationships with their students, especially beyond the bounds of the classroom. When O talked about her favorite teacher, she said:

And he, like, tries to get to know the students and everything. Like, he’ll just come up to me in the hallway. One time he showed me pictures of his dog and stuff like that, so he treats us like we’re friends, not just students, you know. And he’s really nice to us.

H says about her favorite teacher: “…it’s not just about what grade we’re going to get, it’s more about like, what we learned...”

Two of the participants noted a seeming lack of understanding regarding ADHD from their teachers, and that there were times they felt they were punished for their disorder. H said:

…and some of them don’t understand all the problems and like I’ve had teachers in the past who more think of me as like a bad kid, or someone who just can’t pay
attention rather than someone who has like actual problems and tries to help, so that can be hard…

B described an incident from elementary school before he was diagnosed with ADHD, “I would basically, from the rest of the class, go and sit at my own desk and everything and that just made me feel like ‘okay, now I can’t be with my friends’ and it made it almost worse…”

When asked if that treatment felt like a punishment, B said, “Yeah. That’s what it felt like. I mean, to the third or fourth grade me, that’s what it felt like.”

Acceptance of Diagnosis

When addressing the issue of the length of time between diagnosis and interview, and how that time affected participants’ feelings of having ADHD, most participants seem to have adjusted well to the diagnosis. Participants were diagnosed in a range of two to thirteen years prior to the interview. W relayed, “I read that having ADHD is good for survival – it’s an evolution thing.” He also described having ADHD as a positive thing in his video reflection.

O described ADHD as an accepted part of her identity, “I don’t know – it’s just like a part of me, like having green eyes – I don’t know.” In her video reflection, O explained that she wouldn’t know who she would be without ADHD, stating, “My personality and identity, it seems, are so heavily intertwined with ADHD and my other mental issues that I have so little left over I don't have an identity of my own.” T stated that having ADHD doesn’t affect his life at all, “I feel like it doesn’t really matter.” B,
who was diagnosed at age nine, seemed to indicate that the first few years after his diagnosis was a rough period. He stated:

...if you had asked me this like 6th or 7th grade, I might say that it's complete chaos and why do I still have this? Why me? And stuff. But right now, it definitely impacts my life, but I kind of have a control on it.

Academic Self-Perception

All participants reported feeling academically competent, both in their classes and in their school. A diagnosis of ADHD did not seem to impact how they felt about their ability to perform well in school. Self- and parent-reports, as well as a review of academic records acknowledged that all students in the study performed at a high level (three of the participants had GPAs of 3.3). The student participants also all had a long amount of time between their diagnosis of ADHD and the interviews for the study. One participant (B), expressed having a difficult time initially when he was first diagnosed.

Summary

As a result of data analysis, five themes were identified: autonomy, competence, relatedness, and acceptance of diagnosis, and academic self-perception. The first three themes are directly tied to the framework of this study, Self-Determination Theory, and align with the needs Deci and Ryan (1985) theorized as requirements in order for intrinsic motivation to be present for any activity (including learning). Study participants related their experiences of living with ADHD as a high school student, touching on issues such as relationships with friends, siblings, parents, and teachers, the level of control in their lives they feel, and how competent they feel academically. Discussing the participants’
acceptance of their diagnosis was related to the research question regarding length of time between the diagnosis of ADHD and the interview. All participants downplayed the role of ADHD in their lives, but one participant said that initially, the diagnosis was difficult to handle. “Academic self-perceptions” was identified as a theme to address the feelings students had with regard to their academic ability, and was connected into the theme of competency.
CHAPTER 5

DISCUSSION, IMPLICATIONS, AND RECOMMENDATIONS

The focus of this qualitative study was high school students with ADHD. My goals were to understand their experiences with the disorder and to give them a voice through which they could share their perceptions. As an educator who works closely with many students with ADHD, I see first-hand the struggles some of my students endure, as well as the frequently negative perceptions other classroom teachers have towards students with ADHD. Most of ADHD research comes from a clinical or pharmacological perspective, but little research exists that examines the first-person experiences of high school students with ADHD. This phenomenological study situated the research in a way that allowed me to better understand the lived experiences of those students.

Researcher’s Experience with ADHD

I started my teaching career at the middle school level and then taught science at the high school level. Early in my career, I did not feel prepared to “deal with” the handful of students in my class of 30 who were acting out and clowning around. Most likely, I didn’t notice those students with ADHD who were “zoning out” and because of this lack of awareness, they may have fallen through the cracks. When I became a Learning Consultant working with academically at-risk high school students, I began to more intimately understand some of the struggles they experienced. Many students with
ADHD succeeded academically, but others struggled with things such as completing homework, turning in completed homework, absenteeism, poor test grades, poor in-class performance, and struggles at home. Medication worked wonders for some students, not at all for others, and for some, the medications worked, but the side effects were intolerable. As a former classroom teacher, I understand the frustration of having a very large class, yet having a small group of students who needed individualized attention to be successful; they often needed attention that I could not provide. As a Learning Consultant, I see the frustration of my colleagues who do not have a deep understanding of ADHD, and many of these teachers see these students as unmotivated, troublemakers, and “lazy.” My goal in this study was to understand the students’ perspectives of their lives with ADHD in order to gain a greater understanding of their experiences, and then share that insight with other educators.

This study was framed under a large umbrella of social constructivism, and then situated specifically with Deci and Ryan’s (1985) Self-Determination Theory (SDT). In social constructivism, individuals construct knowledge through interacting with others socially (Costantino, 2008). The social constructivist perspective was applied in order to gauge how participants formed self-perceptions based on the messages they received from parents, teachers, siblings, friends, etc., and to gauge how the research itself was conducted, with the researcher forming new knowledge through the interaction with the research participants. This study allowed me to interact with the research participants at various stages of the research process, and in different ways.
Connection to the Theoretical Framework

Self-Determination Theory (SDT) provided a framework in which some degree of academic motivation could be determined based on the students’ feelings of competence, relatedness, and autonomy. Deci and Ryan (1985) theorized that these three needs are essential in order to cultivate intrinsic motivation. They posited that external rewards, such as grades in an academic setting, had limited and short effects on motivation, but when motivation was intrinsic, persistence with the task at hand was increased (Deci & Ryan, 1985). One goal of this study was to determine to what level high school students with ADHD felt competent, related, and autonomous. Competency, relatedness, and autonomy were chosen as themes for this study, as they were central to SDT, and interview questions were designed to address these three needs.

Within the context of Self-Determination Theory, the feeling of competence related to academics for the research participants may be related to how they feel about themselves academically when they compare themselves to their peers or siblings. Relatedness in an academic setting may manifest as how connected students feel to their peers and teachers in their school setting. Autonomy for a student with ADHD may relate to how “in control” of their lives they feel, as a result of their disorder. This may be impacted by the diagnosis process itself, or the daily level of control they feel in their own lives related to their schedule and medication usage. I hoped to examine the ways in which these students with ADHD felt autonomous, related, and competent, and to uncover the ways in which these motivational factors affected their academic performance and self-perception.
Overview of the Research Process

Research participants were recruited purposefully from a Midwestern high school, through advertisement in the principal’s weekly email blast as well as with the Parent Teacher Student Association (PTSA) email blast. Five student participants were selected based on the study’s criteria. Originally, I attempted to gather ten participants for the study. I tried recruiting near the beginning of the school year, and manned a table during registration to solicit volunteers, to no avail. Only when school was in session, and parents were paying attention to the weekly principal and PTSA email blasts did I start to get a small amount of interest in the study. I continued to recruit for approximately one month, but only obtained five participants. These students were all in tenth and eleventh grades, and as a group they were academically homogeneous with regards to GPA. Tenth and eleventh graders were chosen, as ninth and twelfth graders were considered to be in transitional years, which might have influenced the data collected. With regard to potential threats to the validity of the study, no participant mentioned knowing anyone else who was participating in the study. No external events occurred during the course of the interviews that may have influenced student input.

Data were collected through parent questionnaires, academic records, student interviews, student reflection journals, and the researcher’s reflection journal. Interviews with each participant occurred approximately one week apart. I feel ample time was provided to reach a point of prolonged engagement with the research participants, and each student seemed to be comfortable with me by the end of the first interview. Each
interview lasted approximately 30 minutes in length. Interviews and journal entries were transcribed and analyzed thematically.

Themes

Data analysis resulted in five major themes: Autonomy, Competence, Relatedness, Acceptance of Diagnosis, and Academic Self-Perception. The first three themes, Autonomy, Competence, and Relatedness, are connected to the study’s theoretical framework as they are three essential needs to cultivate intrinsic motivation, as theorized by Deci and Ryan (1985). The fourth and fifth themes, Acceptance of Diagnosis and Academic Self-Perception, emerged during data analysis. The following sections present a brief overview of each theme.

Autonomy

In this study, autonomy was defined as the amount of control that students felt they had over their own lives. When asked questions related to autonomy, the research participants’ responses varied. The students who were diagnosed with ADHD later in life felt that they had played a role in their diagnostic process. For those student diagnosed at a young age, the process was controlled by the adults in their lives. When asked about the level of control they felt in their lives currently, the responses were split by gender. The male participants expressed feeling in control of their own lives and able to make their own decisions. The female participants, while feeling able to make their own decisions in their lives, both stated that it was acceptable if other people made life decisions for them, and that at times they preferred other people, such as their parents, to make decisions for them. The differences in responses by gender with this theme cannot
be generalized. It is impossible to determine if difference is related to ADHD or gender, as it simply may be an individual preference of these two specific female participants.

Competition

Within this study, competency was defined as the feelings students have regarding their academic performance, as well as how capable they feel in managing their ADHD. Possibly due to the random academic homogeneity of the study group, all participants stated they felt academically competent. Out of the five participants, three had a GPA average of 3.3, one had a GPA of 2.7, and one GPA was unable to be obtained but the parent of that student stated that the student earned good grades. Of the five participants, four reported difficulties in Math and one reported difficulty in Language Arts. Difficulty was attributed to following through on the process, whether it was making all sure all steps were taken in a math problem, or completing all the steps for a research paper assignment. Participants attributed this inability to follow through on assignments to their ADHD. In spite of their difficulties, these students did not view ADHD as a hindrance to their academic progress; in fact, two participants stated they saw ADHD as an academic advantage.

Relatedness

In this study, relatedness describes how connected a person feels in a community setting, such as a school, classroom, peer group, or family. Sibley, et al. (2012) cited difficulties in maintaining peaceful family relationships as a frequent characteristic of ADHD, and DuPaul and Power (2008) concur with this observation regarding family relationships. However, these student research participants in this study seemed to escape
this characteristic. All five student participants reported good relationships within their families with both their siblings and their parents.

As with the autonomy theme, there appeared to be a gender split concerning relatedness. When asked about the ease in which the research participants had in making and keeping friends, the male participants reported an easy time making friends, while the female participants reported a difficult time making friends. The females reported the difficulty in friend relationships was due to behavioral differences related to ADHD. O attributed the difficulty more toward feeling “different” behaviorally, and shared that she did not know how to comfortably initiate conversations with her peers. H suggested that her ADHD made it difficult to persist in maintaining friendships, as she feels she is unable to maintain the focus and attention needed to be present consistently for her friends in the way that they are for her.

Relationships with their teachers also appeared to be important to these participants, who frequently described their favorite teachers as “nice” and “fun”. One common factor in close teacher-student relationships seemed to be a conscious attempt of the teacher to form relationships with their students, when teachers deliberately attempted to get to know students beyond the classroom walls. The participants reported good relationships with teachers who asked them about their lives outside of school and spoke with them outside of the classroom. Some of the participants had negative experiences in the classroom as a result of their ADHD diagnosis. They felt that rather than recognizing their ADHD disorder as the cause of undesirable behavior, some of their teachers
considered them to be “bad” children. This negative perception made it difficult for these students to build relationships with those teachers.

Acceptance of Diagnosis

All of the participants were aware they had ADHD for most of their lives, and had adjusted well to the diagnosis. Two participants viewed having ADHD as an advantage; one cited ADHD as being “good for survival,” and another stated that because of the ADHD, he was forced into having a regular routine that helped him stay organized in his life. Other participants stated having ADHD made no difference in their lives, with one participant equating ADHD simply as a physical attribute, like the color of her eyes.

Academic Self-Perception

The theme of Academic Self-Perception ties into the Competency theme. Academic self-perception specifically describes how the research participants felt about themselves through an academic lens. In my work with academically at-risk students, many of whom have ADHD, I have observed that many have a poor academic self-perception, and many of these students and their parents attribute their academic struggles to ADHD. In this particular research group, though, the student participants had average to high grade point averages, and they all seemed to be pleased with their academic progress. However, they did report difficulties in particular classes, particularly math and language arts.

Discussion of Findings

Findings emerged from analysis of qualitative data collected through student interviews, student reflection journals, the researcher’s reflection journal, parent
questionnaires, and the students’ academic records. Data were coded thematically and then interpreted based on the study’s framework of Self-Determination Theory (Deci and Ryan, 1985). A discussion of findings for each of the study’s research questions follows.

Addressing Research Questions One and Two

The study’s first two research questions were: 1) How does a diagnosis of ADHD affect a high school student’s perception of competence, autonomy, and relatedness within the framework of Self-Determination Theory? 2) How does a diagnosis of ADHD affect how high school students perceive themselves, particularly academically?

These research questions were addressed through a series of interview questions and journal prompts specifically aimed to gauge students’ feelings of relatedness, competence, and autonomy, and these terms were explained to students to ensure understanding. One of the interview questions was, “Do you feel academically competent in your classes?” Other questions were asked to assess levels of autonomy and relatedness. The students I worked with had average to above-average GPAs, and felt confident about their academic abilities. They indicated that ADHD did not overly affect their academics, although four of the five participants reported difficulty with math. One student felt that having ADHD helped him stay more organized, as if an awareness of the difficulties with executive function associated with ADHD made him extra conscious to manage his time more efficiently.

With regard to relatedness, the male participants reported no difficulties in making or keeping friends, but the female participants expressed that friendships were difficult due to their ADHD. This aligned with findings from Babinski et al. (2011), who
found that girls with ADHD had fewer friends than those girls without ADHD. All participants reported good relationships with their families, with the occasional normal disagreements. “Fun” and “nice” teachers tended to be the favorite teachers of the participants, especially if the teachers went out of their way to build relationships with their students outside of regular class times.

The male participants felt autonomous and in control of their lives. The female participants, while they felt they were able to direct their lives, preferred to allow others to make decisions for them. They preferred a passive position in the direction of their lives. It would be difficult to ascertain if these responses from this study’s participants is typical for high school students with ADHD, although some of these students attributed some of their difficulties directly to ADHD.

Addressing Research Question Three

The study’s third research question was: How does the length of time from ADHD diagnosis affect secondary students’ academic self-perception?

Most of the participants had a diagnosis of ADHD early on in life. One student was not professionally diagnosed with ADHD until she was in ninth grade, but was diagnosed by her mother (who is a psychologist) at the age of six. One participant admitted that the first couple of years after his diagnosis at age nine were difficult, and he had a hard time accepting his diagnosis. He was thankful that he had time to process through those feelings long before he started high school.

Barkley (2015) suggests that a diagnosis of ADHD in childhood persisting into adulthood had negative effects compared to a new diagnosis in adulthood. This study
seemed to show that the longer the period of time students had with a diagnosis of ADHD, the more time they had to develop coping strategies and become situated with helpful routines within their lives. Given that the participants had a long length of time between ADHD diagnosis and the study interview, and considering that it can take often take a long period of time for students to find the right ADHD treatment options or combinations, it seems the longer the length of time from diagnosis, the more accepting these particular participants were of their diagnosis. It is not possible to generalize this idea to other high school students with ADHD given the individualized, qualitative nature of this study, but time from diagnosis and academic self-perception could be an interesting avenue for future research.

Connection to the Literature

While there was a noticeable gap in research regarding high school students with ADHD, particularly concerning studies from students’ perspectives, I gathered research connected to the surrounding areas of this study, including ADHD, self-perception, social constructivism, and Self-Determination Theory. It is against this backdrop that I situate the findings of my research.

The study had a broad theoretical framework of social constructivism for two reasons: I was interested in how the research participants received messages from peers, teachers, and family, and I was interested in personally learning from the research participants. The messages these students received throughout their lives with regard to ADHD helped them create new knowledge about themselves and could have had an effect on their self-perceptions. I suspended my prior knowledge of ADHD and
positioned myself as a learner within my research, eager to learn about the way the research participants perceived themselves.

The more specific framework in which my research was situated was in Deci and Ryan’s (1985) Self-Determination Theory. This theory posits that three needs are essential for the development of intrinsic motivation: relatedness, autonomy, and competence. I was interested in examining whether high school students with ADHD experienced a reduction in any of these characteristics as a result of their diagnosis, and if so, how the experiences informed their academic performance or attitude toward school.

Relatedness was one of my themes, and one of the essential needs posited by Deci and Ryan (1985) to cultivate intrinsic motivation. Deci and Ryan theorized that a feeling of relatedness to others is essential for develop intrinsic motivation for learning. Ryan and Deci (2000b) note “that a similar dynamic occurs in interpersonal settings over the life span, with intrinsic motivation more likely to flourish in contexts characterized by a sense of security and relatedness” (p. 71). Ideal conditions for the development of intrinsic motivation is one in which a person feels secure and related to others. Despite research regarding the social stigma that students with ADHD (and parents of students with ADHD) feel as a result of having the diagnosis, I did not directly ask any questions that addressed social stigma. I asked questions that could subtly gather information about whether students felt stigmatized because of their diagnoses. Three participants described feeling at times that they were perceived by teachers as being “bad,” or that they were punished unnecessarily because of their behavior related to ADHD. The students’ comments about appreciating a teacher who goes out of their way to form a personal
relationship with their students aligned with earlier research by Deci and Ryan (2000a) in which they describe reciprocal relationships in a classroom: “this means that students’ feeling respected and cared for by the teacher is essential for their willingness to accept the preferred classroom values” (p. 64).

Competency is another one of the three needs required to develop intrinsic motivation. Bandura (1997) states, “A strong sense of efficacy fosters a high level of motivation, academic accomplishments, and development of intrinsic interest in academic subject matter” (p. 174). Ryan and Deci (2000b) posited that students need to have a feeling of competence and the behavior associated with that in order to build intrinsic motivation. If a student has not experienced competence, would he or she attempt to engage in learning? Despite the challenges of their ADHD, the students in this study all felt academically competent, and they had average to above average grades. In my experience as a teacher and learning coach, this is not true of all high school students with ADHD.

Autonomy is the third theme and the last of Deci and Ryan’s (1985) needs for intrinsic motivation as described in the Self-Determination Theory framework. Within this study, autonomy referred to how “in control” of their lives the participants felt, given their diagnosis of ADHD. Many students with ADHD face difficulties with executive functioning, which make organization, time management, and day-to-day living difficult. All student participants felt in control of their lives, although the female participants preferred to allow others to make decisions for them. This seemed to contradict Travell
and Visser’s (2006) research, which indicated that students did not feel included in the ADHD diagnosis process or in the decision to medicate.

Much of the literature cited in this study describes research that was conducted using a quantitative methodology (Grolnick & Ryan, 1989; Vansteenkinste, Lens, & Deci, 2001; Wehmeyer, 2015). In contrast, this study employed a qualitative phenomenological approach, which required a small number of participants. In order for me to gain a deeper understanding of the research participants, I focused on only five participants, and spent time conducting multiple interviews with them. Due to this small sample size and the nature of this study’s phenomenological approach, it is not possible to transfer this study’s findings to a broader population of high school students with ADHD. However, one of the goals of this study was to share the voices of students and to provide a forum for descriptions of their firsthand experiences in navigating high school with ADHD. Thanks to the five students who generously participated in this study, that research goal was accomplished.

Implications for Practice

One goal for this study was to inform educators about helpful ways to work with students with ADHD. I intended to extrude the participants’ feelings and perceptions from their academic experiences to gain a better understanding of their life from their words. Some of the participants expressed that they felt as they were looked upon as “bad” kids, or were punished because of the symptoms of their disorder. Student participants expressed that an important component of the student-teacher relationship for them was the amount of effort their teachers put into developing authentic relationships
with their students. This may be true for all students, and not necessarily for those students with ADHD. However, some of the negative feelings expressed by the participants including feeling “weird,” or different from their peers. Students who feel this way may need additional effort on the part of their teachers to help bridge that gap and address the students’ needs for relatedness. Teachers may benefit from being informed of those students in their classes who have ADHD, and may consciously strive to develop a stronger relationship with those students in order to help them feel a stronger sense of relatedness, which could support the development of academic competency.

Teachers can also encourage and support students’ autonomy. Deci and Ryan’s (2000b) research demonstrates that when students are in autonomy-supportive classrooms, they perform better. Deci, Nezlek, and Sheinman (1981) report that autonomy-supportive classroom environments boost students’ self-esteem and increase intrinsic motivation more than classrooms with controlling environments. If teachers employ strategies to actively cultivate a classroom community in which relatedness, competency, and autonomy are highly valued, students with ADHD could benefit.

I used my research, while it was evolving, to provide the staff at my school with professional development on working with their students with ADHD. I will continue to look for opportunities to educate teachers in my district based on results from this study.

Recommendations for Further Research

Very little research is currently available on how students feel about having and living with ADHD, especially within the high school age group. More research could be
conducted at the high school level with students with ADHD, including studies that showcase students’ voices and describe their lived experiences.

I found some of the differences between genders interesting, especially when discussing the amount of control this study’s participants felt in their lives and the difficulty that participants reported in developing and maintaining friendships. It may be worth exploring in the future whether these differences are a result of age and/or gender, or if these are somehow tied to an ADHD diagnosis.

I would also be interested to learn how the experiences of this study’s participants compare with the experiences of other high school students around the United States as well as globally. The student participants in the study were academically successful. Would other high school students with ADHD who were not as academically successful report the same types of positive academic experiences? Do different cultures and their management of ADHD affect how students feel about having the disorder? Do students with ADHD in other countries hear similar messages as students in the United States?

Conclusion

Before beginning this research, I could find no published studies that examined the self-perceptions of high school students with ADHD. I was interested in exploring how high school students felt about life with ADHD and how it affected them academically, particularly in the development of feelings of autonomy, competence, and relatedness, three needs Deci and Ryan (1985) describe as essential for the development of intrinsic motivation. My research questions set to explore how ADHD affected high school students’ development of these three needs, and how the length of time from
diagnosis affected a student’s academic self-perception. To enrich the depth of my research, I examined studies on ADHD, Self-Determination Theory, and student self-perceptions. I employed a qualitative phenomenological methodology to gain a deep understanding of the lived experiences of my research participants. One key factor in enriching these students’ academic experience seemed to be the relationships they had with their teachers. Having a teacher who went above and beyond the classroom setting and who attempted to get to know the students seemed to connect these students more strongly to their academics. The students who felt these connections seemed to take more interest in that particular class. This aligns with the need of relatedness within SDT. I hope this study will contribute to the field of Self-Determination Theory, and provide a useful resource for educators and administrators. Secondary education institutions could also use this study and related research to better support students with ADHD. Promoting conditions that would stimulate students’ feelings of relatedness, competence, and autonomy could improve intrinsic motivation for all students, not just those with ADHD.
REFERENCES


Student Interview Questions

1. Name and grade level

2. How long have you had a diagnosis of ADHD/when were you first diagnosed?

3. Were you a part of the diagnosis process? For example, did you notice any differences that you brought to your parents’ attention? Or was the diagnosis process coming mostly from them or teachers?

4. Are you on medication for ADHD? Do you take it faithfully?

5. Are you on any other medications?

6. Are you involved in any extracurricular activities through school or the community?

7. Do you work after school? Tell me about your job.

8. How do those activities impact your day?

9. Do you have siblings? Tell me about them. How do you get along with your sisters and brothers? Do any of them have a diagnosis of ADHD?

10. Tell me about your parents. How do you get along with them?

11. Are there any stressors between you and your parents?

12. Tell me about your friends.

13. Tell me about making and keeping friends.

14. Tell me about school.

15. Tell me about your teachers, and the relationships that you have with them.

16. How do you feel about having ADHD?

17. How “in control” of your life do you feel? Do you feel like you are able to direct your life? Or do you feel others are directing your life for you? In what ways?
18. Tell me about your classes. Tell me about your school.

19. How do you feel about yourself as a student?

20. How does ADHD impact your life?

21. (If on medication) How do you feel about taking medication daily?

22. Describe a “day in your life.”

23. Are there any areas of school which are particularly challenging? Why do you think this is?

24. Are there any parts of school at which you easily excel? Why do you think this is?

25. Do you have any kind of an accommodation plan in place? If so, what kind of accommodations do you have? Are they helpful?

26. Are there any teachers or staff members at school with whom you feel particularly close? Tell me about them.

27. Tell me about your best friend.

28. Do you feel academically competent in your classes? In your school?

29. How do you feel about going to school? Do you enjoy it?

30. How motivated do you feel to do well in school? What motivates you to do well?

31. What do you want to do when you graduate high school?

32. Describe your life 15 years from now.

33. What would you like teachers who work with students with ADHD to know?

Reflection Prompts:

A. Tell me about ADHD

B. Tell me about you.
APPENDIX B

PARENT QUESTIONNAIRE
Parent Questionnaire

Student Name:

Is your child’s primary language English?

When was your child diagnosed with ADHD? (Approximate age)

Do you know with what type of ADHD your child was diagnosed?

If so, which: ADHD-Inattentive Type ADHD – Combined Type

ADHD – Hyperactive/Impulsive

What type of doctor made the diagnosis?

Pediatrician Primary Care Physician Psychologist Psychiatrist

Is your child taking medication related to ADD/ADHD? If so, what kind?

Does your child have any additional medical/psychological diagnoses (such as depression, anxiety, etc.)

Does your child receive any outside academic assistance (such as tutoring or counseling)?

Type:

Do you feel your child is academically successful?

If so, why? If not, why not?

What are the usual marking period/semester grades that your student receives?

All/Mostly A’s
Mix of A’s and B’s
All/Mostly B’s
Mix of B’s and C’s
All/Mostly C’s
Mix of C’s and D’s
All/Mostly D’s
Mix of D’s and E’s
All/Mostly E’s
APPENDIX C

IRB APPROVAL FORM
01-Aug-2016

Ms. Anne Meirow
Mercer University
TFI College of Education
1501 Mercer University Dr.
GA

RE: A Phenomenological Study of High School Students with ADHD (H1607192)

Dear Ms. Meirow:

Your application entitled: A Phenomenological Study of High School Students with ADHD (H1607192) was reviewed by this Institutional Review Board for Human Subjects Research in accordance with Federal Regulations 21 CFR 56.110(b) and 45 CFR 46.110(b) (for expedited review) and was approved under Category 6, 7 per 45 FR 60368.

Your application was approved for one year of study on 01 Aug 2016. The protocol expires 31 Jul 2017. If the study continues beyond one year, it must be re-evaluated by the IRB Committee.

Item(s) Approved:
New application for phenomenological qualitative research study aimed at extracting the essence of experience of the high school student with ADHD

Please complete the survey for the IRB and the Office of Research Compliance. To access the survey, click on the following link: https://www.surveymonkey.com/s/CTCTC8

"Mercer University has adopted and agrees to conduct its clinical research studies in accordance with the International Conference on Harmonization’s (ICH) Guidelines for Good Clinical Practice."

Respectfully,

[Ava Chambless-Richardson, M.ED., CIP, CIM]
Member
Institutional Review Board
Mercer University IRB & Office of Research Compliance
Phone (478) 301-4101
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APPENDIX D

STUDENT INFORMED ASSENT FORM
Informed Assent for Participants 14-21

A Phenomenological Study of High School Students with ADHD

You are being asked to participate in a research study. Before you give your consent to volunteer, it is important that you read the following information and ask as many questions as necessary to be sure you understand what you will be asked to do.

Investigators at Mercer University are doing a research study where we are trying to learn about the self-perceptions of high school students with ADHD.

Procedures:
You will be asked to participate in two audio-recorded interviews 30-60 minutes in length. You will also be asked to complete a reflective journal at the end of each interview, from home. Upon completion of the data collection, you will have the opportunity to review your information, to ensure you are being accurately represented. You have the right to refuse your information be included in the research at any time. Refusing to participate in the study will not jeopardize your classes in any way.

Interviews:
You will participate in 2 interviews at Stoney Creek, of 30-60 minutes each in length. You will be asked questions related to your experiences with having a diagnosis of ADHD. The interviews will be audio-recorded, to ensure all information is captured accurately.

Potential Risks and Discomfort:
There are no foreseeable risks associated with this study. There is no cost associated with this study for students and parents.

Potential Benefits of the Research:
This research may help educators better understand the perspectives of high school students with ADHD, which may help them design instruction better aligned to the learning styles of students with ADHD.
APPENDIX E

PARENTAL INFORMED CONSENT FORM
Parent or Guardian 
Informed Consent Form

Your child has been asked to participate in a research study entitled: A Phenomenological Study of High School Students with ADHD. The study is being conducted by Anne Meirrow through Mercer University, Tift College of Education, 1501 Mercer University Drive, Macon, GA 31207. The results of the study will be used to further understand ADHD and will be for partial fulfillment of the requirements for a doctor of philosophy degree (PhD). It may also be published in a peer-reviewed journal and/or presented to other educators. Your son’s/daughter’s participation is voluntary. A decision to participate in the research will not affect his/her relationship with Stoney Creek High School, his/her relationship with other teachers, or his/her academic standing.

I. The purpose of my study is to explore:

This research study is designed to help with understanding of the self-perceptions of high school students with ADHD. The data from this research may be used as a basis for future research to help educators understand how to better design instruction for students with ADHD.

II. Procedures:

If you allow your child to volunteer for this study, your child will be interviewed twice, for 30-60 minutes per interview. The interviews will be audio taped and will occur at Stoney Creek High School. Every effort will be made to attempt to avoid interviews during classroom instructional time. Following each interview, your child will be asked to complete a reflective journal with a prompt chosen by the researcher, or the students may discuss their own topic. At the conclusion of the research, your child will have the opportunity to review the information gathered by the researcher to ensure the information accurately represents what was discussed with the researcher. Your child will be asked to assent to participate in this research. (Assent means that your child will be asked to voluntarily participate in this research.) If your