

FACTORS INFLUENCING THE ACADEMIC PERSISTENCE OF COLLEGE
STUDENTS WITH ADHD

by

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A Dissertation Presented to the
FACULTY OF THE USC ROSSIER SCHOOL OF EDUCATION
UNIVERSITY OF SOUTHERN CALIFORNIA
In Partial Fulfillment of the
Requirements for the Degree
DOCTOR OF EDUCATION

May 2012

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DEDICATION

This dissertation is dedicated to my precious son, Brandon. He is the true inspiration behind everything that I decide to pursue. His unconditional love, support, and happy spirit motivate me to keep learning and always put forth my best effort. His support and the adjustments that we have made together throughout the years, as I navigated my way through this journey, allowed for this work to be completed.

ACKNOWLEDGEMENTS

A special thank you to Derek Ithori who has been an excellent model of hard work and perseverance as well as a steady source of encouragement. Also, special thanks to my family and friends who have encouraged me along the way and have been so very understanding of my limited availability throughout this journey. I would also like to thank my committee for all of their support and guidance in shaping this work. Finally, a very special thank you to the participants of this study who openly shared their experiences so that we may be better able to understand their challenges and successes.

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ABSTRACT

Students with Attention Deficit Hyperactivity Disorder (ADHD) are at greater risk for failing to complete their postsecondary educational degrees than their typical peers. The present qualitative sought to identify factors influencing the academic persistence of students with ADHD in postsecondary settings. Utilizing direct interviews with postsecondary students at two four-year universities, the present study found that family and peer support, medication, counseling, a sense of connection with faculty/staff, university-based resources, and overall satisfaction with academic and social experiences are contributing factors to the academic persistence of college students with ADHD. These findings can be used to guide postsecondary institutions in supporting students with ADHD. Furthermore, the information gained from this study can be used to assist students with ADHD in identifying and developing beneficial supports that will contribute to their success in the postsecondary education setting.

CHAPTER I

Introduction

The number of students with disabilities entering postsecondary education in the United States has grown significantly over the past several years and current data indicates that approximately 45% of all students with disabilities attend a postsecondary institution within four years of graduating from high school (Newman, Wagner, Cameto, & Knokey, 2009). The overall increase in the enrollment of students with learning disabilities in postsecondary education has been attributed, in part, to the increase in high school graduation rates of students with disabilities (Allsopp, Minskoff, & LesBolt, 2005).

Current data from the National Center for Education Statistics (NCES) indicates that learning disabilities are the most common type of disability reported in postsecondary settings followed by Attention Deficit Hyperactivity Disorder (ADHD) as the second most common type (NCES, 2011). Further, the National Center for Education Statistics (NCES, 2011) reports that in 2008- 2009, students with ADHD accounted for 18% of the population with disabilities enrolled in postsecondary institutions.

The present study sought to gain information regarding factors that sophomore, junior, and senior students with ADHD in four-year postsecondary settings perceive as influential in their academic persistence. A qualitative study was conducted in which the experiences of students with ADHD in postsecondary institutions were explored via individual interviews.

Background of the Problem

According to the National Center for Education Statistics (2011), in 2008-2009, students with Attention Deficit Disorder (ADD) or ADHD comprised approximately 13% of the disabled student population attending two-year public institutions and the same percentage was true for two-year private, not for profit institutions. In comparison, 23% of the disabled student population at four-year public universities had a diagnosis of ADD/ADHD while four-year private, not for profit institutions reported that 26% of their disabled student population had a diagnosis of ADD/ADHD.

Attention Deficit Hyperactivity Disorder is a medically recognized disorder, frequently diagnosed during childhood, with symptoms that often persist into adulthood (Barkley, 1997; Norwalk, Norvilitis, & MacLean, 2009; Wolf, 2006). Overall, students with ADHD experience deficits in various executive functions such as working memory, internalized speech, and self-regulation (Barkley, 1997). Barkley (1997) theorizes that these deficits lead to difficulty with inhibition of task-irrelevant responses, execution of goal-directed responses, motor control, task re-engagement after disruption, control of behavior by internally represented information, and goal-directed persistence. As a result, academic and social functioning is impacted to varying degrees by these difficulties.

Research suggests that 35% to 80% of cases diagnosed in childhood will continue to meet diagnostic criteria for the disorder during adolescence while 49% to 66% will continue to meet criteria into adulthood (Barkley, Fischer, Smallish, & Fletcher, 2006). While ADHD symptomatology is problematic across the various age groups, its

behavioral expression looks different at different age levels (Barkley, 2002). For instance, behavioral symptoms such as hyperactivity, impulsivity, and conduct problems are frequently reported as challenging by parents and teachers of students with ADHD (DuPaul, Jitendra, Tresco, Junod, Volpe, & Lutz, 2006; Miranda, Soriano, Fernandez, & Melia, 2008). However, symptoms of hyperactivity and impulsivity declined with age, while symptoms of inattention were less likely to decrease (Norwalk et al., 2009).

Statement of the Problem

Educational outcomes appear to be one of the areas affected to the greatest extent by ADHD (Barkley, 2002). The most recent available statistics from the National Center for Education Statistics (NCES) indicate that approximately 55% of students who were identified as having an Other Health Impairment (which included those with a diagnosis of ADHD) and received special education services while in high school attended a postsecondary institution within four-years of high school graduation. Approximately 13% of those students attended a four-year institution, 43% attended a two-year college, and thirty-two percent attended a vocational/technical school. Of those who attended a postsecondary institution, 28.8% graduated (received a diploma, certificate, or license). Of those who attended a four-year university, 14.7% graduated with a bachelor's degree within four years (Newman et al., 2009). In contrast, the rate of completion of a bachelor's degree for students without disabilities within the same time period and frame was 36.2% (NCES, 2009). Additionally, the percent of students without disabilities completing a bachelor's degree from any four-year institution within 6 years from start was 57.5% in 2007. In contrast, the rate of completion for students who had a previous

designation of Other Health Impairment (which included those with a diagnosis of ADHD), had enrolled in a four-year institution, and had been out of high school for 6 years was 14.7% in 2007 (NCES, 2009). Although specific information regarding completion rates for students with ADHD could not be found, research conducted by Schnoes, Reid, Wagner, and Marder (2006) found that approximately 67% of students with a classification of Other Health Impairment are placed in this category based on a diagnosis of ADHD. Thus, the data suggests a substantial difference in rates of completion at four-year institutions for students with ADHD compared to the overall population.

Given the challenges experienced by students with ADHD, it is important to consider the impact that these challenges may have on their persistence in postsecondary settings. These challenges may be exacerbated by the total demands placed on students in higher education (Wolf, 2006). Further, these challenges place students with ADHD at-risk for lower academic achievement and lower rates of completion of postsecondary education than their non-ADHD peers (Barkley, 2002).

Purpose of the Study

The purpose of this study is to contribute to the literature with regard to factors that play a role in academic persistence for college students with Attention Deficit Hyperactivity Disorder (ADHD) as perceived by those students themselves. While the bulk of the existing literature informs this topic from a third-person perspective, the current study aims at informing the topic from the first-person perspective of those who have this disorder.

Significance of the Study

Research indicates that students with ADHD in postsecondary settings continue to face challenges related to their disability (Barkley, 2002; Barkley et al. 2006; Wolf, 2006). As supported by the existing literature, these challenges have an impact in the academic functioning of these students and their success in postsecondary settings. The identification of factors that exert a positive influence in the academic persistence of students with ADHD in postsecondary settings is important in order to build new and/or enhance existing supports. However, the existing literature on college students affected by this disorder and factors involved in their persistence is limited. Therefore, expansion of the literature base in existence is a current need.

Research Questions

The research questions that were addressed in the present study are the following:

- 1) What experiences do postsecondary students with ADHD report?
- 2) What supports have influenced their persistence in a postsecondary setting?
- 3) How do the experiences reported by college students with ADHD relate to Tinto's Model of Institutional Departure (1987, 1993) and Bean's Student Attrition model (1980)?

Methodology

The research design for this study was qualitative in nature and consisted of interviews of postsecondary students with ADHD. Criterion sampling was used; therefore, selected criteria were utilized in order to sample the target population for this study. Interviews conducted with the participants in this study were semi-structured and contained specific questions designed to answer the identified research questions. A phenomenological perspective was utilized for the analysis of findings.

Limitations and Delimitations

There were several limitations to this study. The study only sampled students from a single private university and a single public university in Southern California. The findings can therefore not be generalized to other institutions. Further, the sample only included students who have self-disclosed their disability to Disability Services and did not include others who may have a diagnosis of ADHD but have not made the school aware of their status. In addition, the study relied on self-report from participants and only sampled juniors and seniors pursuing a first-time bachelor's degree.

Definition of Terms

For the purpose of clarity regarding the terms used within this dissertation, the following relevant terms have been defined:

Attention Deficit Hyperactivity Disorder (ADHD) – A disorder characterized by inattentiveness, hyperactivity, and impulsivity that are outside of the normal range of development for an individual's chronological age (DSM-IV TR; American Psychiatric Association, 2000).

Attrition – The number of students lost from enrollment between two points in time (IDRA, 2011).

College student – For the purpose of this study, a student attending any postsecondary institution.

Degree – For the purpose of this study, a first-time bachelor degree or equivalent.

Institutional Commitment – The degree of loyalty regarding membership in a particular postsecondary institution (Bean, 1980).

Motivation – The process whereby goal-directed activity is instigated and sustained (Schunk, Pintrich, & Meece, 2008).

Other Health Impairment – IDEA 2004 defines it as “having limited strength, vitality, or alertness including heightened alertness to environmental stimuli that, results in limited alertness with respect to the educational environment that is due to chronic or acute health problems such as asthma, attention deficit disorder or attention deficit hyperactivity disorder, diabetes, epilepsy, a heart condition, epilepsy, a heart condition, hemophilia, lead poisoning, leukemia, nephritis, rheumatic fever, sickle cell anemia, and Tourette syndrome, and adversely affects a child’s educational performance.”

Persistence – For the purposes of this study persistence refers to a student remaining in school until completion of a first-time bachelor’s degree (Camara, 2003).

Postsecondary institution – For the purposes of this study, postsecondary institutions are two-year and four-year colleges and universities.

Self-concept – Pintrich and Schunk (2002) define it as an “individual’s belief about themselves in terms of their academic, social, athletic, and personal capabilities and characteristics.”

Self-efficacy – Schunk et al. (2008) define it as “an individual’s perceived capabilities for learning and performing actions to a specific degree.”

Self-regulation – The process whereby students personally activate and sustain behaviors, cognitions, and affect in order to accomplish specific goals (Schunk et al., 2008).

Universal Instructional Design (UID) – Instructional design that has built-in accommodations or adaptations that provide access to a wide array of students, both with and without disabilities.

Utility value – One of four task value beliefs in expectancy-value theory concerning the subjective beliefs about the usefulness of a task for the individual (Pintrich & Schunk, 2002).

CHAPTER II

Review of the Literature

The present literature review will begin with a discussion of an overview of Attention Deficit Hyperactivity Disorder (ADHD) and the ways in which college students with this disorder are impacted by this diagnosis. Student attrition in postsecondary settings and theoretical models that have offered insight into relevant factors influencing persistence will be presented. Persistence in the overall college population and social-cognitive factors that influence persistence will be discussed.

Students with ADHD – Overview of Attention Disorders

In order to have a better understanding of ADHD, various theories have attempted to explain the aspects related to the disorder and how those are at the root of the behavioral manifestations of the disorder. One of the most recognized theories of ADHD was developed by Russell Barkley (1997). Barkley argued that deficits in response inhibition are the core of the behavioral manifestations of ADHD. He theorized that these deficits create impairment in four vital neuropsychological functions that provide the foundation for goal-directed persistence and named them executive functions. These four executive functions are working memory, internalized speech, self-regulation of affect/motivation/arousal, and reconstitution (goal-directed verbal and behavioral creativity that follows the ability to analyze and synthesize situations).

Based on Barkley's model (1997), inhibition deficits affecting these executive functions result in difficulty with inhibition of task-irrelevant responses, execution of goal-directed responses, motor control, task re-engagement after disruption, control of

behavior by internally represented information, and goal-directed persistence. These difficulties impact student learning and research indicates that educational outcomes appear to be one of the most affected areas by ADHD (Barkley, 2002).

Nigg and Casey's (2005) model involving the neurobiology of ADHD lends support to Barkley's model (1997). Their neuroscientific research provides some clarification regarding the core mechanisms involved in the deficits found in individuals with the disorder. Their model highlights deficits in higher order behavior, which involves the ability to mechanically predict events and their timing. Their research supports involvement of various brain structures such as the basal ganglia, cerebellum, and prefrontal cortex in cases of ADHD. They identified two circuits in the prefrontal cortex that are deficient for individuals with ADHD: the frontostriatal and the frontoneocerebellar circuits. These two circuits must work together in order to monitor the environment and alter behavior accordingly. Impairment in these areas in individuals with ADHD results in difficulty with planning and execution of appropriate actions and displaying adaptive behavior in various situations over time. Difficulties with prediction of occurrences and timing of occurrences also affect self-control skills that might appear as poor sustained attention (specifically with multi-step and/or complex tasks), slow response in rapid decision contexts, difficulty shifting response, and inefficient response to changing contexts in individuals living with this disorder. In addition, Nigg and Casey (2005) suggest that there is evidence of impairment in a third circuit, the frontolimbic loop, which is involved in avoidance-approach behavior related to the emotional significance of an event. This impairment may make it more difficult for individuals

with ADHD to understand, manage, and learn from situations and past experiences.

Despite the challenges associated with a diagnosis of ADHD, the number of students with this diagnosis, as well as other learning disabilities, who attend postsecondary institutions, has grown (Newman et al., 2009). This increase in the enrollment of students with learning disabilities in postsecondary education has been attributed, in part, to the increase in high school graduation rates for students with disabilities in recent years (Allsopp, Minskoff, & LesBolt, 2005).

Student Attrition

Student attrition rates refer to the number of students who enroll at an institution and leave prior to completion of a degree (Tinto, 1975). Attrition in postsecondary settings constitutes a problem for institutions of higher learning as well as for the withdrawing students themselves (Leppel, 2002). High rates of attrition may negatively impact postsecondary institutions in terms of decreased revenue and negative perceptions of the quality of the institutions' programs (Kahn & Nauta, 2001).

With regard to impact for students, Kahn & Nauta (2001) and Leppel (2002) report that abandonment of the pursuit of a postsecondary degree is often associated with decreased future employment opportunities. Further, they indicate that this setback often results in a disruption of life plans and the likelihood of decreased future earnings for those individuals (Kahn & Nauta, 2001; Leppel, 2002). While any college experience is beneficial in terms of personal gain, the benefits of completing a bachelor's degree or higher are particularly large in terms of monetary gain and other benefits obtained through employment (Baum & Ma, 2007). The National Center for Education Statistics

(NCES, 2010) reported that in 2008, individuals with a bachelor's degree earned 28% more than those with an associate's degree, 53% more than those with a high school diploma, and 96% more than those without a high school diploma. In addition, the non-monetary benefits gained through a college degree include better health and increased opportunities for the next generation (Baum & Ma, 2007).

Baum and Ma (2007) highlighted that the societal impact related to level of education is also measurable. Historically, higher levels of education have been associated with lower unemployment and poverty rates. Therefore, individuals with higher levels of education typically contribute more to tax revenues and are less dependent on government assistance. Further, higher levels of education are correlated with higher levels of civic involvement including voting and volunteer work (Baum & Ma, 2007.) Thus, the benefits of higher levels of education to society as a whole appear to be substantial.

Persistence in the Overall Postsecondary Population

Data involving college persistence can be difficult to understand because of the way in which post-secondary institutions categorize this information with respect to different groups. However, despite this variability, colleges typically define persistence in terms of rates of completion of a first-time bachelor's degree at their particular institution (Camara, 2003). Based on this definition, the available data indicates that the percent of students without disabilities completing a bachelor's degree from any 4-year institution within 6 years from start was 57.5% in 2007 (National Center for Education Statistics, 2009). Further, research estimates that the overall rate of attrition in 4-year

postsecondary institutions is between 34% and 60% (Belch, Gebel, & Maas, 2001). Tinto (1996) indicated that 40% of individuals who begin their studies at four-year universities fail to earn a degree. In the eight-year period between 1986 and 1994, it was reported that the rate of postsecondary degree completion by students with disabilities was 16% and that figure dropped to 12% by the year 2000 (Harris and Associates, 2000).

Challenges for Students with ADHD

Despite the increase in attendance rates, students with disabilities, including ADHD are significantly less likely to attend and persist at four-year postsecondary institutions than non-disabled students (Newman et al., 2009). According to the National Center for Education Statistics (2009), approximately 55% of students who were identified as having an Other Health Impairment and received special education services while in high school attended a postsecondary institution within four years from high school graduation. Research conducted by Schnoes, Reid, Wagner, and Marder (2006) found that approximately 67% of students with a classification of Other Health Impairment are placed in this category based on a diagnosis of ADHD.

NCES (2009) indicated that in 2007, 18% of the students above attended a four-year institution, 47% attended a two-year college, and 33% attended a vocational/technical school. Of those who attended a postsecondary institution, 28.8% graduated (received a diploma, certificate, or license. Of those who attended a four-year university, 14.7% graduated; of those who attended a two-year institution, 26.7% graduated; and 38.8% of those who attended a vocational/technical school graduated within four years. Further, NCES (2009) reports that in 2007, the rate of completion for

students who had a previous designation of Other Health Impairment in high school (which included those with a diagnosis of ADHD), had enrolled in a four-year institution, and had been out of high school for 6 years remained unchanged at 14.7% (NCES, 2009).

Given the challenges experienced by students with ADHD, it is important to consider the impact that these challenges have on academic persistence in postsecondary settings. These challenges may be exacerbated by the total demands placed on students in higher education, which are likely, greater than the demands of high school (Wolf, 2006). Further, these challenges place students with ADHD at-risk for lower academic achievement and lower rates of completion of postsecondary education than their non-ADHD peers (Barkley, 2002).

The increased academic rigor of higher education is often a great challenge for students with disabilities including those with ADHD (Mull, Sitlington, & Alper, 2001). Mull et al., (2001) suggests that students with learning disabilities often have low academic skills and lack preparation for the academic work required in postsecondary settings. However, despite the accommodations that students with disabilities are eligible to receive, their learning expectations are not modified in postsecondary settings (Lombardi, Gerdes, & Murray, 2011). Wolf (2006) points out that the heavy academic load accompanied by the relative little external structure provided in college is very taxing on students with ADHD. Time management, planning and organizational difficulties which are part of their impairment in executive functioning become salient and impose a great obstacle to academic success (Wolf, 2006).

In addition to the academic demands in postsecondary settings, the social needs and functional demands placed on students are exponentially higher in this setting (Friedman, Rapport, Lumley, Tzempelis, VanVoorhis, Stettner, & Kakaati, 2003). For many students, the transition and necessary adjustment to the postsecondary setting involves having to function more independently, having fewer social resources to fall back on than previously, and needing to form new social networks (Friedman et al., 2003). However, research suggests that individuals with ADHD have a more difficult time than their typical peers developing adequate interpersonal relationships and that these individuals continue to have social impairments into adulthood (Barkley, Murphy, & Kwasnik, 1996).

Friedman et al. (2003) investigated the interpersonal functioning of adults with ADHD. Their study included 31 adult participants with a diagnosis of ADHD and 32 adult participants without a diagnosis who served as a control group. Self-report of participants with a diagnosis of ADHD in this study suggested deficits in social-emotional competence and deficits in self-awareness of the existence of these deficits. Participants with ADHD indicated significant difficulty regulating their social behavior and demonstrated expressive deficits in verbal output as well as less attunement to emotional stimuli than adults without the disorder. While participants in this study indicated awareness of overall social impairment, they did not demonstrate an awareness of some specific pieces of social interaction that played a role (i.e. difficulty conveying emotions, understanding others' emotions). Further, while they demonstrated awareness of their struggle with other specific pieces of interpersonal interaction such as difficulty

with engaging others in conversation, tactfulness, adjusting behavior according to the situation, and moderating expressions of strong emotion, this awareness did not lead to increased self-control.

One key aspect in the development of social adjustment is self-efficacy. One factor that often influences a student's level of self-efficacy is his or her level of academic achievement. Bandura (1986) defined self-efficacy as "individuals' judgments of their capabilities to organize and execute courses of action required to attain designated types of performances" (as cited in Lackaye et al., 2006). Individuals typically use prior experiences and feedback from others as measures of ability in various regards. Students with learning disabilities, including those with ADHD, usually have experienced academic difficulty in many areas as well as negative feedback regarding their performance. Therefore, their self-efficacy is typically lower compared to non-disabled peers; this appears to be true even for those students with disabilities who have experienced some academic success but have had to work harder than their non-disabled peers in order to experience success (Lackaye et al., 2006). Even when successful in overcoming some of their academic challenges, these students often need to put forth more time and effort than their non-disabled peers in order to accomplish the same academic results. At times, despite adequate effort, they continue to experience academic failure. These differences in ability and performance influence the self-efficacy of these students (Lackaye et al., 2006).

Lackaye et al., (2006) found that self-efficacy beliefs have an impact not only on the academic performance of students with learning disabilities but also on the types of

activities and social environments that they select or are accepted into. These choices appear to be shaped by lower levels of social self-efficacy beliefs, which may be, in part, a function of lower levels of peer acceptance experienced by these students. Students with low social self-efficacy make fewer attempts to initiate interaction with peers, display low levels of participation during social opportunities, and have less confidence in their social skills. Lower levels of social self-efficacy are likely to negatively impact academic performance by placing the formation of adaptive social supports at-risk (Lackaye et al., 2006).

The combination of academic and social challenges experienced by students with disabilities has an impact on their self-concept. Self-concept relates to the way an individual thinks of him/herself and their self-worth (Aronson, 2008). Research indicates that students with learning disabilities display lower levels of global self-concept than their non-disabled peers. These lower levels of global self-concept have a negative effect both on academic performance and social competence (Lackaye et al., 2006).

Theoretical Framework

Contributing factors to college attrition rates have been explained through various models. Two dominant models that attempt to explain issues related to college persistence are Tinto's Integration Model (Tinto, 1975) as well as its updated Interactionalist Model of Student Departure (Tinto, 1993), and Bean's Student Attrition Model (Bean, 1980). Both models emphasize the role of the institutional environment on student decisions to leave school.

Tinto's Interactionalist Model of Student Departure (1993) claims that in order to persist in postsecondary settings, students must become integrated into both formal and informal academic and social systems within the institution. Tinto's model has its roots in David Emile Durkheim's theory of suicide which claims that suicide is more likely to take place when individuals are not sufficiently integrated into society (Tinto, 1975). Tinto (1975, 1993) theorized that social conditions similar to those believed to result in suicide would result in "academic suicide" or college dropout. Tinto's theory holds that inadequate social integration in college, evidenced by insufficient interactions with others and incongruence with the values of the collective system of the institution lead to low commitment to that system and result in student dropout. Thus, Tinto's model views student persistence as an outcome directly related to students' interactions with their postsecondary institutions (Kahn & Nauta, 2001).

Tinto's model, including his update to the original model, suggests that the interplay between the academic system and the social system that occurs during an individual's college experience, greatly influences persistence (Tinto, 1993). Tinto (1975, 1993) asserts that student characteristics such as family background, personal attributes, and previous experiences influence college performance as well as interactions within the system that lead to varying degrees of integration (Tinto, 1975). For many students, especially for those that commute, this interplay between both systems may occur exclusively in the classroom, while for others, the classroom may be the gateway to further socialization experiences with peers (Tinto, 1993).

The Student Attrition Model put forth by John Bean (1980) proposes that the academic and social experiences of students in higher education shape the attitudes and beliefs of college students toward their academic institution. In turn, these attitudes and beliefs are thought to shape students' intentions to remain at an institution and thus, positive academic and social experiences increase the likelihood of persistence (Bean, 1980; Kahn & Nauta, 2001).

Tinto's model also suggests that goal commitment and institutional commitment both play a large role in persistence (Tinto, 1975). John Bean's Student Attrition Model (1980) provides further support for the role of institutional commitment in academic persistence in college (Bean, 1980). Bean's model (1980) suggests that institutional commitment is the most important variable related to dropout rates in the college population both for men and women while past academic achievement and university GPA were the second most important variables for women and men respectively.

Tinto's Interactionalist model (1993) sustains that students' academic performance provides proof of integration to the formal academic system of the institution and therefore influences persistence. Bean (1980) also indicated that academic performance has an impact on persistence and asserted that when academic performance is poor, it may lead to feelings of frustration and inadequacy. Research has shown that students who are adequately integrated have available support systems that can offer comfort as well as academic and social support to lessen these negative feelings (Leppel, 2002). Other important factors for both men and women as found by testing this model

were students' perceptions of their role as repetitive, and the degree to which students feel they are developing as a result of attending the university (Bean, 1980).

Social-Cognitive Factors

Research indicates that environmental/social influences and individuals' perceptions of their previous experiences influence social-cognitive variables such as ability beliefs regarding specific tasks, goals, and affective memories and that these in turn, influence effort and persistence (Wigfield & Eccles, 2000). The literature also suggests that student motivation is greatly influenced by social-cognitive factors such as self-efficacy, adaptive attributions, control beliefs, level of interest, intrinsic motivation, and goal orientation (Pintrich, 2003).

Pintrich (2003) suggested that individuals' motives influencing behavior are mediated by social-cognitive factors such as goals. Many researchers view cognitive, motivational, and regulatory processes as factors that are involved in learning and persistence. Further, the importance of interactions with others and the social context of individuals and their interactions are highlighted by researchers in the field of education as important contributors to persistence (Leppel, 2002).

Literature addressing achievement motivation has explored the role of self-efficacy with regard to academic motivation. Adaptive self-efficacy (an individual's belief that they are capable of performing a task to the degree that they are reasonably able to) has been found to positively impact the level of effort that students put forth and in turn their resulting performance (Pintrich, 2003). However, an accurate level of self-efficacy is necessary in order for it to be considered adaptive. While an individual needs

to perceive that they are capable of performing a task, their perception needs to be well aligned with their actual ability and their judgment of ability must be accompanied by adequate skills (Schunk, 1991).

Feelings of competence or self-efficacy accompanied by an internal locus of control have been linked to increased intrinsic motivation (Ryan & Deci, 2000). Therefore, having an environment that supports both self-efficacy beliefs and feelings of control over one's academic environment becomes an important part of a successful academic experience. Pintrich (2003) indicates that increased intrinsic motivation has been linked to increased academic performance, which in turn has been linked to increased persistence.

Although self-efficacy is an important variable influencing academic motivation, it is not the only contributing factor. Kahn and Nauta (2001) found that students' beliefs, measured during second semester of college, regarding the consequences of persisting in their studies and their determination to graduate significantly influenced their decision to return to college after completion of their first year. In addition, they found that determination to graduate, which is a performance goal, was also a significant predictor of persistence into sophomore year.

The role that goal orientation plays in academic motivation is also heavily discussed in the research literature. Differentiation between goals that are performance oriented versus those that are mastery oriented has been made and these differences may have implications regarding motivational, cognitive, affective, and behavioral outcomes (Schunk, Pintrich, & Meece, 2008). The literature suggests that a mastery goal

orientation is the most conducive to fostering intrinsic motivation and in turn, academic achievement and persistence (Schunk, Pintrich, & Meece, 2008). However, some research has found that performance goals increase academic persistence in the college population (Kahn & Nauta, 2001; Wolf, 1998). In a study involving 400 freshmen pursuing a bachelor's degree in a large public university in the Midwest, Kahn and Nauta (2001) found that following completion of the first semester of college, students' decisions regarding returning the following semester were significantly moderated by their determination to graduate, which constitutes a performance goal. In addition, they found that their decision to persist was also significantly moderated by the expected consequences of persisting in college. This suggests that these students expected that their degree would have a utility value.

In addition to the above discussed constructs, theorists and researchers have argued that performance and persistence are not only influenced by people's beliefs about how well they expect to do on an activity but also by the extent they find value in it (Wigfield & Eccles, 2000). With respect to achievement value as it relates to academic motivation, various components of value such as attainment value, intrinsic value, utility value, and cost need to be considered. Eccles et al. (1983) defined attainment value as the importance of doing well on a given task, intrinsic value as the gratification that an individual gains from engaging in the task, utility value as the fit between the task and the individual's future plans, and cost as the effort that needs to be put forth, the emotional cost, and the level to which engaging in an activity limits access to other activities.

In order to enhance motivation and persist in their studies, many college students make use of both intrinsic and extrinsically based strategies aimed at boosting their value or interest in the material; these strategies include efforts to tie the material to their own lives, to the lives of friends or relatives, or to a time and place where knowing the material could be important (Wolters, 1998). In a study consisting of self-report measures from 115 college students attending a large Midwestern university, researchers found that students used self-regulated cognitive, both intrinsically based as well as extrinsically based strategies that lead to behavior that helped them to focus their attention, block out distractions, and optimize timing of task completion, in order to sustain academic effort. Further, students reported cognitive strategies such thinking about and reminding themselves of their desire to do well on tests and the importance of achieving good grades in order to maintain academic effort. Thus, the results suggest that motivation was enhanced by performance goals (Wolter, 1998).

For many students, family plays an important role in their decision to persist in college and family influence adds to the perceived value of a college degree (Dennis, Phinney, and Chuateco, 2005). Although both family support and peer support factors have been heavily discussed in the literature as having an influence on student outcomes, research indicates that peer support appears to be a stronger predictor of college outcomes, specifically for minority students. Although family members of minority students are able to provide emotional support, they are in many cases not equipped to provide instrumental support in the same way that peer groups are able to (Dennis et al., 2005).

Cultural background and gender appear to have significant differences in outcomes on various research studies looking at persistence. For instance, Allen (1999) found a significant motivational effect on persistence for minorities when compared to non-minorities in his study. In his study, he used self-report measures of 581 freshmen pursuing a first-time bachelor's degree at a medium-sized public four-year university in the Southwest and found that although minority students tend to have parents with lower educational attainment than non-minorities' parents, level of parental encouragement and support had a significant effect on persistence for minority students (Allen, 1999). Guiffrida's (2006) research supports Allen's findings regarding the importance of family support for minority students. Guiffrida (2006) proposes that minority students, especially those with collectivist cultural backgrounds, benefit from those familial connections as they struggle to become integrated into the more individualistic academic and social environment at most four-year postsecondary institutions. Therefore, he suggests that Tinto's model would benefit from adaptations that are culturally sensitive to this issue (Guiffrida, 2006).

With regard to gender, Leppel (2002) found that some of the factors that influence persistence do so in different ways for men and women. His study found that having children has a significantly negative impact on men's persistence but a significantly positive impact on women's persistence in college. With regard to ethnicity, Leppel (2002) found that being of Black ethnicity raises persistence significantly for women, but the same is not true for men. However, a significant positive impact on persistence was found related to the ethnicity variable for both men and women when students were of

Asian descent. For some variables, however, the impact on the persistence of men and women was found to be similar. Age, marriage, and hours worked were found to have a significantly negative impact on both men's and women's persistence while family income, and (predicted) GPA had a significantly positive impact on both men's and women's persistence. Considering gender, research provides support for Tinto's model and validates that persistence is higher for both men and women who are more integrated into the college experience (Leppel, 2002).

Available Institutional Supports for Students with ADHD

Based on their disability, students with ADHD and other disabilities are entitled to certain protections under current law (Janiga & Costenbader, 2002; Wolf, 2006).

By law, according to the Americans with Disabilities Act of 1990 (ADA), students with ADHD must be provided supports that will allow them to gain full access to higher education (Wolf, 2006). Further, in January 2009, the Americans with Disabilities Act Amendments (ADAA) took effect and included "limits in concentrating, reading, and thinking" as examples of impairments in major life activities which would make individuals eligible for protections (Shaw, Keenan, Madaus, & Banerjee, 2010).

Based on the need for services due to disability status, postsecondary settings offer support services to students. Approximately 25% of students who receive disability services in postsecondary settings have a diagnosis of ADHD (DuPaul, Weyandt, O'Dell, Varejao, 2009). However, unlike the federally mandated and highly regulated supports available in high school through special education laws such as IDEA (Individuals with Disabilities Education Act), the supports available in postsecondary settings vary across

institutions (Madaus & Shaw, 2004). Under ADA, postsecondary institutions that receive federal funding are required to make reasonable accommodations for students with disabilities; however, these accommodations are not as well defined as they are through IDEA (Janiga & Costenbader, 2002).

Lombardi, Gerdes, & Murray (2011) point out that while not all institutions have the same type or level of services, many of the supports provided include and are not limited to program modifications, assistive technology, counseling, direct academic support, strategy training, and interventions designed to strengthen academic skills. Despite the available services, many disparities exist in the level of support that students with ADHD and other disabilities have access to and receive in college compared to the supports that these same students had access to while in high school. These differences may contribute to adjustment difficulties experienced by students with disabilities in postsecondary services (Lombardi et al., 2011).

One important difference between high school and postsecondary settings is the need to self-disclose and self-advocate in order to receive accommodations and/or support services in postsecondary institutions (Newman et al., 2009; Janiga & Costenbader, 2002). During the time spent within the public education system, the responsibility for identifying individual needs, arranging accommodations and providing supports for students with disabilities resides with the school district; however, this responsibility shifts from the school district to the students as they transition to a postsecondary setting (Janiga & Costenbader, 2002). Thus, it is important for students

with disabilities, including those with ADHD, to be adequately prepared to take on the responsibility of self-advocacy in post secondary settings.

Prior to transitioning to postsecondary settings, students with identified disabilities who have an Individualized Education Plan (IEP) receive mandated transition services as part of their IEP. IDEA mandates that these transition services begin no later than at age 14 and annually thereafter, and specify the transition needs of students and a plan by which the needs will be met (IDEA, 1997). Once a student has determined that he or she is able to and is interested in pursuing postsecondary education, the transition plan must contain components that will ensure that the student is preparing for postsecondary education as a future goal. Skills such as awareness of appropriate career options, self-awareness, and the ability to engage in self-advocacy when necessary should be integrated into transition plans (Janiga & Constenbader, 2002).

Janiga and Constenbader (2002) found that coordinators of special services for students with disabilities reported little satisfaction with the transition services that were provided to students prior to their entry into postsecondary settings. Sixty-seven percent of the 74 special service coordinators that were part of their study indicated that improvement of self-advocacy skills for incoming students was necessary. Further, 39% of the participants indicated that the transition services for incoming students should improve in the area of helping students to better understand their disability and specific needs in order to be adequately equipped to advocate for themselves.

In addition to prior school preparation to take on the role of self-advocate in a postsecondary setting, social support from family and peers has been identified as

influential in college students' ability to effectively self-advocate (Lombardi et al., 2011). In a study consisting of in-depth interviews with 9 undergraduate students identified with various learning disabilities at a large public university on the East Coast, Troiano (1993) explored the experiences of students with learning disabilities and the role of their perceived social supports as it related to their academic experiences. He found that students with higher levels of social support and are more willing to disclose their disability status and are better equipped to communicate their needs for accommodations (Troiano, 2003). Thus, the evidence suggests that social agents exert influence on students' self-advocacy.

Other important aspects to consider with regard to the needs of college students with ADHD are their psychological and pharmacological needs (Byron & Parker, 2002). Individuals with ADHD frequently have co-morbid disorders such as depression, anxiety, bipolar disorder, personality disorders, pervasive developmental spectrum disorders (PDS), and substance use and abuse disorders (Barkley, 2002; Wolf, 2006). Further, college students with learning disabilities have been found to report more symptoms of stress and anxiety than their non-disabled peers, which places them at higher risk for psychological distress (Wolf, 2006). Thus, college students with ADHD are in need of multi-disciplinary services in order to fully address their needs.

Parker and Benedict (2002) suggest that four types of services may be most effective for this population: disability awareness, referrals to diagnostic, medical and therapeutical specialists in adult ADHD (on and off campus), strategy instruction related to effective medication management, and coaching that focuses on performance-based

deficits rather than skills-deficits (ADHD coaching). Research supports the need for coordinated efforts both in terms of assessment and intervention for college students with ADHD (Parker & Benedict, 2002). Coordinated supports are likely particularly important for students with ADHD who, due to the nature of their impairment, may need additional support with planning and follow-through.

Student Perceptions of their Postsecondary Experiences

Current research involving accounts of first-person experiences of college students with ADHD is limited. However, the available data indicates that young adults with the disorder self-report significant educational and social difficulties (Barkley et al., 2006). A longitudinal study conducted by Barkley et al. (2006) with 149 young adults with ADHD between the ages of 19-25, revealed that these individuals reported significantly lower educational performance and attainment as well as significantly higher levels of difficulty maintaining and developing close friendships compared to a control group. Shaw-Zirt, Popali-Lehane, Chaplin, and Bergman (2005) reported similar findings in their study of 21 undergraduate college students who met criteria for ADHD. Their study found that these students reported lower levels of self-esteem, social skills, and social-emotional adjustment to college compared to a control group, as measured by self-report questionnaires (Shaw-Zirt et al., 2005).

A longitudinal study conducted by Blase et al. (2009) involving 27 undergraduate college students with ADHD attending a public and a private university in the southeast United States, measured the association between ADHD and college adjustment over time via self-report. Overall, their study revealed that college students with ADHD

reported higher levels of emotional distress and social concern, lower GPAs, more concern about their academic performance, and rated themselves as less emotionally stable in comparison to their peers regardless of gender and ethnicity. This study did not find a significant decline in college adjustment overtime, however, it provided evidence that students with ADHD face additional challenges when compared to their non-ADHD peers and that these difficulties remain stable over time (Blase et al., 2009).

Summary

In summary, students with disabilities including ADHD are increasing in numbers in postsecondary education (NCES, 2011). However, despite the increase in attendance rates, students with disabilities, including those with ADHD, are significantly less likely to persist at four-year postsecondary institutions than non-disabled students (Newman et al., 2009). In reviewing factors involved in the academic persistence of college students with ADHD, theoretical models of persistence were examined. Tinto and Bean report that in the overall college population, persistence is influenced by formal and informal academic and social institutional interactions and overall institutional integration (Bean, 1980; Tinto, 1975, 1993).

Because of their diagnosis, research has found that students with ADHD often experience difficulty with behavioral regulation and socialization (Barkley, 2002). The role of social-cognitive factors such as self-concept and its impact on the interpersonal functioning of college students with ADHD appears to be significant (Lackaye, 2006). These challenges place students with ADHD at-risk for lower academic achievement and lower rates of completion of postsecondary education than their non-ADHD peers

(Barkley, 2002). Further, students with ADHD may experience more difficulty than their non-ADHD peers adequately integrating into postsecondary settings. Based on this information, further research is needed in the area of persistence of students with ADHD in postsecondary settings. The following chapter will review the methods involved in the proposed study to address this important issue.

CHAPTER III

Methodology

Student attrition rates refer to the number of students who enroll at an institution and leave prior to completion of a degree (Tinto, 1975). Attrition in postsecondary settings constitutes a problem for institutions of higher learning as well as for the withdrawing students themselves. High rates of attrition may negatively impact postsecondary institutions in terms of decreased revenue and negative perceptions of the quality of the institutions' programs. With regard to impact for students, premature departure or abandonment of the pursuit of a postsecondary degree is often associated with academic failure and/or some form of dissatisfaction with the college experience. Further, this setback often results in a disruption of life plans and the likelihood of decreased future earnings for those individuals (Kahn & Nauta, 2001).

In 2007, the percent of students without disabilities completing a bachelor's degree from any four-year institution within 6 years from start was 57.5%. In contrast, the rate of completion for students who had a previous designation of Other Health Impairment in high school (which included those with a diagnosis of ADHD), had enrolled in a four-year institution, and had been out of high school for 6 years was 14.7% in 2007 (NCES, 2009). Research conducted by Schnoes et al. (2006) found that approximately 67% of students with a classification of Other Health Impairment are placed in this category based on a diagnosis of ADHD. Thus, the data suggests a substantial difference in rates of completion at four-year institutions for students with ADHD compared to the overall population.

The purpose of this study was to contribute to the literature with regard to factors that play a role in academic motivation and persistence for college students with Attention Deficit Hyperactivity Disorder (ADHD) as perceived by those students themselves. The research questions that the present study sought to address are the following:

1. What experiences do postsecondary students with ADHD report?
2. What supports have influenced their persistence in postsecondary settings?
3. How do the experiences reported by college students with ADHD relate to Tinto's Model of Institutional Departure (1975, 1993) and Bean's Student Attrition model (1980)?

Design Summary

The research design for this study was qualitative in nature and consisted of interviews of postsecondary students with ADHD. Institutional Review Board approval to conduct this study was obtained through the University of Southern California (see Appendix A). Because this study sought to understand and describe the essence of the experiences of college students with ADHD, a phenomenological approach was used (Creswell, 2009). Phenomenology was first used by the German philosopher Edmund H. Husserl and its application in social science was heavily influenced by others such as Alfred Schutz, Merleau-Ponty, and Clark Moustakas. It aims to understand the perceptions and significance of others' experiences through methods that are as direct as possible (Patton, 2002). This study aimed at gaining an understanding of the perceptions

of lived experiences as expressed by college students' with ADHD; therefore, utilizing a phenomenological perspective was useful in finding commonalities within this group.

Criterion sampling was used; therefore, selected criteria (specified in the next section) were utilized in order to sample the target population for this study (Patton, 2002). Interviews conducted with the participants in this study were semi-structured and contained specific questions designed to answer the identified research questions in this study.

The interview questions that were used to answer the research questions were based on the information obtained from the literature review conducted for this study. Based on this review, Tinto's model of Student Departure (1987,1993) and Bean's Student Attrition model (1980) are two of the most prominent theories regarding this topic and therefore will be the theory used as the framework of this study. Most interview questions are based on the premise of Tinto's (1975, 1993) and Bean's theory (1980), which propose that the institutional interactions influence the level of social and academic integration achieved by college students which in turn, plays a main role in college student attrition (Tinto, 1987, 1993).

Factors related to social and academic integration in a postsecondary setting such as interaction with faculty, social involvement, institutional commitment, student perception of fit between self and institution, academic performance, level of interest in the material, as described by Tinto (1975,1993) and Bean (1980) and the extent to which these apply to students with ADHD in a postsecondary setting were explored. Additional

experiences and challenges posed by being a student with diagnosis of ADHD were investigated.

Instrumentation

For the purposes described above, interview questions were developed following the theoretical models presented by Tinto (1987,1993) and Bean (1980). Please see Appendix A for a description of the correlation between the questions and the theoretical models. The individual interview questions are listed below:

1. What is your major?
2. Tell me about your decision to come to this university.
3. Tell me about your experiences at this university.
4. Did you encounter anything unexpected? If so, tell me about it.
5. Tell me about the courses and what you have thought of them so far - what they have been like in terms of the material and its delivery.
6. Tell me about any opportunities for interaction with faculty and how often you interact with them inside and outside of the classroom.
7. Tell me about opportunities for social activities with other students and your level of involvement.
8. Tell me about your ADHD and how you experience it.
9. Do you feel that having ADHD has impacted you in any way as a student at this university? If so, how?
10. How have your experiences thus far impacted your motivation to continue at this university?

11. Did you ever consider dropping out or reducing your courseload and graduating later?
12. How important is it to you to graduate from this particular university as opposed to others? Why?
13. What do you feel has helped you (people, resources, etc) as a student?
14. What factors/supports, not limited to the ones we've discussed, do you consider influential in your decision to continue at this university?
15. How are you doing academically? What is your G.P.A. at this point?

Participants and Setting

The unit of analysis for this study was students with a diagnosis of ADHD in a postsecondary educational setting. The sample for this study was derived from two postsecondary institutions: a private not-for profit four-year research university and a public four-year university that are both located in Southern California. In 2010, the private university had 17,500 undergraduate students and 19,500 graduate students for a total of 37,000 students. Approximately 2% of the student population has registered with Disability Services, although the percentage of students with a diagnosis of ADHD is unclear at this time. In 2010, the public university had approximately 36,000 undergraduate and graduate students.

The targeted population for the present study was undergraduate students with ADHD in postsecondary education. I conducted direct interviews with 12 undergraduate students with this diagnosis. Given that this study sought information regarding factors that have led to academic persistence, in addition to having a diagnosis of ADHD, one of

the criteria for this study was that participants had achieved sophomore, junior, or senior status at the university, thus demonstrating that they have and continue to persist in a postsecondary setting. In order to access the targeted population, students with ADHD who have registered with Disability Services and/or existing Learning Centers for students with disabilities at both the private and public universities chosen for this study were the source of the sample for this study.

Participants were included in this study on a voluntary basis. Disability Services and/or existing Learning Centers for students with disabilities at both universities either sent an e-mail to all students registered with their center or posted flyers describing the present study requesting participants. Participants were compensated for their time with a \$25 gift card.

Data Collection and Analysis

Individual interviews were conducted with the participants in this study. These interviews were audio recorded and later transcribed. All names and identifying personal information will be kept confidential. Further, participants were assigned pseudonyms in order to protect their privacy. An interview guide including questions that were aimed at shedding light into the research questions was utilized (Patton, 2002). This interview guide also served as an analytical framework for the information obtained through the interviews and guided part of the coding process. For instance, answers provided by the participants were coded into the various categories relating to Tinto's (1975, 1993) and Bean's (1980) models as well as other categories related to the diagnosis of ADHD.

When developing codes and categories for the information derived from this study, the researcher looked for convergence and divergence in the data (Patton, 2002).

Substantive significance was determined with respect to the extent that the findings of this study are consistent with the current literature. In addition, the data was analyzed for new patterns or themes that became new categories. Pattern matching was used in order to look at the multiple factors that play a role in academic motivation and in turn lead to persistence (Patton, 2002).

Limitations and Delimitations

There were several limitations to this study. The study only sampled students from a single private university and a single public university in Southern California. The findings will therefore not be able to be generalized to other institutions. Further, the sample only included students who have self-disclosed their disability to Disability Services and did not include others who may have a diagnosis of ADHD but have not made the school aware of their status. In addition, the study relied on self-report from participants and only sampled juniors and seniors pursuing a first-time bachelor's degree.

CHAPTER IV

Findings

This study sought to contribute to the literature regarding factors that play a role in the academic persistence of college students with Attention Deficit Hyperactivity Disorder (ADHD). This study aimed at informing the topic from the first-person perspective of those individuals who have ADHD and who were students at a four-year university at the time that this study was conducted. Participant interviews provided the data for this study. This chapter will present the information obtained and will outline themes that emerged during the course of the interviews.

Introduction of Student Participants

A total of 12 undergraduate students attending one of two four-year universities located in Southern California participated in this study. The first institution was a public university and the second institution was a private, not-for-profit university. The researcher contacted the office of disability services at both universities in order to recruit participants for this study. Participants received information regarding this study through the office of disability services at their respective university. Eleven participants interviewed attended one of the participating universities and one of the interviewed participants attended the second participating university. Six participants were male and six participants were female. Eight participants identified themselves as Caucasian, two identified themselves as Hispanic, one identified himself as both Caucasian and Hispanic, and one participant identified herself as Middle Eastern. Participant ages ranged from 18 to 28 years of age. The mean participant age was 24. With regard to age at the time of

diagnosis, five participants reported receiving the ADHD diagnosis while in elementary school, five reported receiving the diagnosis while in high school, and two reported being diagnosed after high school. All participants had attained at least junior standing at their respective university. Seven participants had transferred from a community college and two participants had transferred from another four-year university. Thus, the majority of the participants in this study had previously attended another postsecondary institution and had later transferred to their current setting at the time of interview. Participants were assigned pseudonyms in order to protect their privacy. See Table 4.1 for a demographic description of the participants.

Participant Pseudonym	Gender	Age	Ethnicity	University Standing	Transferred From Four-Year University	Transferred From Community College
Alan B.	Male	20	Caucasian	Junior	No	Yes
Bree G.	Female	22	Caucasian	Senior	No	No
Carl F.	Male	28	Caucasian	Senior	No	Yes
Dale H.	Male	24	Caucasian	Senior	No	No
Eddie M.	Male	25	Hispanic	Senior	No	Yes
Fred J.	Male	26	Caucasian	Senior	No	Yes
Gina S.	Female	23	Middle Eastern	Junior	No	Yes
Holly Z.	Female	18	Caucasian	Junior	Yes	No
Inga T.	Female	24	Hispanic	Senior	No	Yes
Jen P.	Female	23	Caucasian	Junior	No	Yes
Ken D.	Male	28	Caucasian	Junior	Yes	No
Ann S.	Female	22	Caucasian	Senior	No	No

Research Question One

Research question one asked, “What experiences do postsecondary students with ADHD report?” Relevant issues related to this inquiry were identified as (a) behavioral manifestations of participants’ ADHD diagnosis and educational impact of those manifestations; (b) experiences related to the way that instruction is delivered in their postsecondary setting; (c) experiences related to disclosure of their disability; (d) experiences with accommodations received in their postsecondary setting; (e) other experiences that emerged as common themes.

Behavioral Manifestations

The most commonly reported manifestations of ADHD symptoms in the surveyed sample were difficulty focusing and sustaining focus during instruction as well as during study sessions, time management difficulties, forgetfulness, difficulty remaining still, daydreaming, and difficulty effectively communicating with others. Some students also reported a tendency to procrastinate.

Difficulty focusing and sustaining focus during instruction was reported to interfere with learning by most students. Environmental distractions such as people walking into the classroom, other students’ conversations, and other students turning pages or typing were reported to be distracting. For instance, Carl F. stated “I have trouble concentrating...you know, if someone opens the door in the classroom, I’m always the first one to look, or if a pencil drops, I’m always looking around.” In addition, Eddie M. stated:

The thing about ADHD is that for some reason you hear everything...In a class setting, when you’re sitting there trying to focus on a professor, it is horrible

because someone would open their backpack and I'd turn, or the hardest thing is when professors do like the Powerpoint stuff because I'm trying to write down the Powerpoint and they are talking and I couldn't distinguish between the two, you know, so I was trying to focus so hard on one thing that the test would come up and I would miss a problem but I was in class when they said the answer, you know, and stuff like that.

In addition to difficulty focusing, many participants reported that they struggled with sustaining their focus during instruction or when studying. This often necessitated that they take breaks in order to regain their focus during these activities. For example, Ken D. stated:

It's not like a choice or something like that or that I'm being lazy or things like that, I just can't. There will be times when I'm studying for something and then just for some reason I can't study anymore, it's like no matter how hard I try, I can't absorb anything anymore at that point and I have to you know, get the gauge back down before I can start studying and that's always been a problem.

Further, distractions of an internal nature such as thoughts unrelated to the instruction or the task at hand were reported to interfere with focusing. For example, Dale H. stated:

I'm always thinking about a thousand things except for what I'm supposed to be and it's very difficult to be concentrated on the topic at hand, so it's very difficult to read books. It's very difficult to pay attention to conversations or focus on lectures or in class and stuff like that.

Difficulty with time management was reported as an obstacle that many participants struggle with during their quest for academic success. Comments such as "I procrastinate a lot, which makes me feel overwhelmed and stressed," made by Carl F., were frequently stated throughout the interviews conducted for this study. In addition, forgetfulness was reported to negatively impact the participants' academic performance in terms of missed deadlines and/or appointments as well as difficulty remembering relevant academic material. For example, Bree G. stated:

I have to study probably like twice as much as like the normal person; I don't remember things, my short term memory is more like...is really all I remember...The thing that I've struggled with the most lately is remembering the content because there is so much so I'll be reading and like I just won't remember anything but the main points.

Hyperactive symptoms such as difficulty remaining still, high energy levels, fidgeting, and constant talking were reported by many participants as having a negative impact on academic performance as well as their ability to effectively communicate with others. Bree G. described it as "energy that is almost contagious and it's because you can't really focus on one thing for very long and like it has its ups and its downs," and Holly Z. described it as:

Heavy on the H; I'm always twitching of some sort, or moving, and if I'm not moving there is something wrong, or I'm on my pill, and even then I'm still like picking at my nails or I'm doing something, not only that but when I get really excited or really into something I start talking faster, I don't understand it, and then I have to be like "Calm down!"

Inga T. clearly illustrated some of the communication difficulties associated with hyperactive symptoms as she stated:

The constant movement, the constant talking, interrupting people, I do that a lot...Not being able to understand what people are saying, feeling like they were just talking and you were just like watching them and nothing was going through, just like everything is silent and you see them but all you see is this [demonstrated mouth movements] and you have no idea what's going on.

Some participants also reported daydreaming as occurring frequently and interfering with attention to academic tasks and productivity. As Alan B. described it, "I daydream a lot, I guess I'm always thinking about something," or Bree G.'s description, "I get sidetracked a lot, I'll space out and think of something else."

Experiences Related to Instruction

Most participants interviewed indicated overall satisfaction with experiences related to instruction in their postsecondary setting. Specifically, they reported that smaller class sizes were beneficial because they made it easier to have helpful classroom discussions. For example, Gina S. stated:

I've been in classes with like 50 people, you know, where you can never talk to the teacher and you can't get a discussion going because there's too many people... Here it's so awesome, like in one of my classes I think there is only 12 people and it's on World War II, which is a class I know a lot about so it's nice going into it knowing but learning in more depth.

In addition, participants indicated that instruction that related the material to practical applications made those courses more understandable and enjoyable. For instance, Eddie M. stated the following:

The way they deliver the material is awesome. My department, Environmental Health, is probably one of the best in the nation and they know how to explain stuff so people understand... they've just been doing it for a long time and they relate it to what we're gonna be doing in the field as opposed to just here.

Some students reported that instructional design and the way that instruction was delivered played a role in increasing their ability to focus. In particular, some participants reported that courses using universal instructional design (UID) assisted them with maintaining focus. For example, Ann S. stated:

Being in special education, a lot of our professors are really visual and they show us. We talk a lot about UID strategies so they'll teach it to us in a way that it's so easy to understand because it's visual.

Two participants emphasized the usefulness of having choices with regard to the format of the courses to be taken. For instance, the availability of online courses was

described as having a positive impact on their educational experience in postsecondary settings. Fred J. described his experience with online courses as follows:

I can go at my own pace pretty much. I don't have to worry about getting up and going to class, so I have enjoyed that and if I get distracted, I get a little bit distracted and I can come back and everything is right there. So for example, when a teacher talks in class, if I miss it, I miss it, and because I'm doing something else in whatever, and I can always go back and ask the teacher but if it's right there in front of you, the words, you're not gonna forget it.

Only two participants indicated dissatisfaction that was directly related to instruction. Both participants expressed dissatisfaction with what they reported as lack of clarity regarding the course material and ambiguity with regard to expectations for the specific concepts that they were required to master, which would therefore be part of tests and other course assessments.

Experiences Related to Disclosure

The majority of the interviewed participants reported having disclosed their disability status to both past and current faculty. However, approximately half of the participants in this study indicated that they disclose their disability status to faculty on a case-by-case basis. All other participants who disclose their disability indicated that they do so to all of their professors. Those that disclosed on a case-by-case basis reported basing their decision to disclose their status on whether or not they felt that they needed accommodations in particular courses. For example, Fred J. stated:

Usually when I see what the test will consist of and then if I'm like, you know, definitely I'm gonna need more time and I can't sit with other classmates and take it with them because I might look around and not just focus and lose focus then that's when I have to definitely discuss it.

These students did not ask for accommodations in all courses as a blanket rule, but rather utilized accommodations only after recognizing a particular need such as the need for extra-time on tests or the need for a note-taker in the specific courses that the accommodation was requested for.

All participants who disclosed their disability status to faculty indicated either overall positive or neutral experiences. Professors were reported to be willing to make accommodations according to the provisions mandated by law, which were coordinated through disability services at their respective campuses. No negative experiences when disclosing to faculty were reported. However, one participant indicated that one of the professors to whom she had disclosed her disability did not seem very aware of confidentiality issues and inadvertently embarrassed the student by being too open and careless when communicating with her regarding the logistics of the accommodations that she received in her classroom. This participant, Bree G., described her experience as follows:

It's like really hard with like my math teacher 'cause she's like outgoing and doesn't really care if other people see her hand me the notes and sign my papers so like I saw a bunch of people I knew and she was like signing it and she's like "Oh, you forgot the notes I printed you out" and all these people are like "what?" so it was so embarrassing...I was like "Ah, I don't want attention!"... Yeah, it's ok, it's not her thing, I don't hold it against her.

Experiences Related to Accommodations

Half of the participants interviewed for this study reported having accommodations provided for them in their K-12 settings after their receiving their diagnosis of ADHD. None of these participants were able to recall whether their

accommodations had been provided through an Individualized Education Plan (IEP) or through a 504 plan. The other half of the participants interviewed for this study reported that they did not receive any accommodations in their K-12 settings. Only two participants in the study reported not receiving accommodations in their postsecondary settings despite being aware of their right to ask for them. As previously discussed, these two participants expressed a desire to rely on as little external supports as possible.

The accommodations most frequently reported within their postsecondary settings were the following: extended time on tests, separate room for testing, breaks during tests, note-takers, and permission to audio-record lectures. All of the participants who indicated that they received accommodations reported that the accommodations were very helpful in addressing their academic need resulting from their disability. The participants who made use of accommodations predominantly reported extended time on tests as the most needed and requested accommodation. Dale H. described it as follows:

It's a major factor in certain classes, like for any classes where I have to write anything 'cause like whenever I'm writing anything, or multiple-choice, when I have to think about multiple possibilities, it's the most complicated thing, like for example Biology or something like that where it's just a simple fill-in the blank or something like that it's a lot quicker, but when there is multiple choice or I have to write something down and express my mind or whatever, it just takes me a really long time.

For most students who made use of accommodations, their reports indicate that these made the difference between being able to successfully complete the course or not. In other words, the accommodations provided access to a postsecondary education that they would not otherwise have. As Dale H. stated, "For some classes, that's the only way I would finish them."

Although most participants reported that they received the accommodations agreed upon by disability services, one participant reported difficulty receiving an accommodation previously received at another four-year institution and another participant reported having to strongly advocate for herself in order to receive the accommodations through disability services. Ken D. reported that he had previously been allowed the use of crib notes during tests at another university but was having great difficulty obtaining the same accommodation approved by disability services in his current setting. Despite this, he indicated that one professor had agreed to allow crib notes for one exam on a trial basis. Although this concession by his professor was described as “a step in the right direction” by Ken D., he expressed great frustration with disability services with regard to this issue. For instance he stated:

For some reason they're treating me as if I'm a criminal...I'm going “I had this accommodation at [name of institution] and they had absolutely no problem with it”... in not so many words, they're basically trying to title me as a cheater or something like that.

Bree G. also reported an initial frustrating experience with disability services when attempting to make arrangements for accommodations. She reported that this initial negative experience discouraged her from pursuing services until her academic performance was so low that she had twice failed a required math class, at which time one of her professors recognized that she was struggling and provided accommodations despite not having the required paperwork. As a result of experiencing success when provided with accommodations, she decided to advocate for herself more effectively with regard to disability services. Her experiences were described as follows:

I really didn't start using the disability center until, well, I had just the worst experience, they were just extremely rude and like I had all my accommodations but they weren't really letting me use them...and the guy wasn't very nice and I just didn't really feel very comfortable there and then I got a D in this math class that you can't really even get a C- in it, for a Liberal Studies major you have to get a C in it, and so I got a D in it and then I took it again and got an F and then I took it again, and so the third time I took it I got a really good teacher and then I started taking it like in a testing room and it was so much better and now I'm in the last math class that I have to take and it's just like... I went back to the disability center, got the same horrible guy and just manned up and got my own room, it was cool.

In fact, half of the participants in this study spoke about the need to self-advocate in a postsecondary setting. Self-advocacy skills were reported to be necessary in order to ask for help, obtain services, and obtain needed accommodations. Additional examples are as follows: Alan B. stated, "The only reason I got the note-taking is because I e-mailed the professor saying 'You said there was someone who had signed up [to be a note-taker].'" In addition, Carl F. stated:

I ask questions and I'm not scared to approach the teacher versus when I was younger I would be timid and not want to ask a question and I had a fear of being judged and I had a fear of asking a stupid question; now I'm a more confident that I can raise my hand and ask a question, or write my teacher an e-mail, or go to the office hours.

Other Common Themes

Comorbid diagnoses. The majority of participants in this study reported having comorbid diagnoses. The most commonly reported comorbid diagnosis was anxiety. Other comorbid diagnoses reported by participants were depression, obsessive-compulsive disorder, dyslexia, and expressive/receptive learning disorders. These comorbid disorders posed additional challenges for participants in both their daily personal and academic lives. For example, many participants indicated that symptoms of

anxiety interfered with their ability to concentrate when studying and also negatively impacted them during test-taking situations. Disorders such as obsessive-compulsive disorders negatively impacted those who reported having it by making their use of time less efficient.

Decreased feelings of self-concept and self-efficacy. It was reported by many that at times the challenges resulting from their diagnoses created decreased feelings of self-concept as well as decreased self-efficacy. During interviews, many participants made sporadic comments that reflected a negative view of the self. For example, Inga T. stated, “Yeah, it’s just a big old mess balled in one person.”

Feeling overwhelmed. In addition to decreased feelings of self-concept and self-efficacy, many students reported feeling very overwhelmed with their academic load. Difficulties keeping up with the pace of their courses, especially those that required a great deal of reading, were reported. Additionally, participants reported spending more time studying than their non-ADHD counterparts and often feeling like the amount of time that was spent studying did not necessarily match the grades they received. For example Eddie M. stated:

Once I got here they expected you to already be at a certain level, and not that I wasn’t on that level, I just didn’t know how to get myself to that level. I would study hours and hours, and countless hours and like not sleeping at night and stuff like that just to pull a C in a class or a B in a class...homework was a little easier for me just because I would be up all night but it would be ok because I’d get to finish; where other people spend an hour or two on their homework, I would spend four or five hours.

Coping strategies. Along with the descriptions of the challenges that they face, many participants reported various coping strategies that helped them to better cope with

and overcome some of their challenges. These coping strategies were in most cases developed over time by the participants themselves as they gained a better understanding of their specific areas of weakness. However, in some cases, coping strategies had been learned within a therapeutic setting as many of the participants reported having received counseling services at some point in their lives. The strategies that participants reported were most often used are the following: organizational strategies such as writing lists and keeping a calendar, positive self-talk, use of clutter-free and distraction-free environments when studying, and studying with a partner.

Counseling. In addition to helping them gain coping strategies, the participants who had received counseling services either at school or in a private setting reported gaining great benefit from counseling. Counseling was reported to have contributed to a greater sense of well-being and control over their lives. It was reported to have helped participants to process feelings regarding their learning differences and to have helped them to problem-solve and make better decisions at key points in their lives. For example, Inga T. indicated that by allowing her to sort through feelings and possible career paths, counseling through her private therapist helped her to remain in school. As Inga T. explained:

Like the second semester I was like “I can’t do this, I’m not someone who goes to school, it’s not me”...I talked a lot to my therapist about it and he’s all, “Whatever you want to do,” but we kind of planned everything out and looked at it from different perspectives and kind of saw that that wasn’t the correct way that I wanted to go but that there’s always different doors that are open for me to go to.

Inga T. further explained her experience with counseling as follows:

A lot of problem-solving and it's cool because he doesn't tell me how to do it but he puts it all out, but he helps me in a way 'cause when I look at a problem I see it all backwards and everywhere, when he sets it up, it's like everything is set up in corners and I just have to find the path that I want to choose.

Acceptance of diagnosis. Although most participants appeared to be adequately adjusted individuals, it was evident that some continued to struggle with coming to terms with their diagnosis, its implications, and had attained different levels of acceptance. As Holly Z. stated, "I've heard of cases where ADHD goes away and I've been trying to train myself to make it go away, and it's really, really hard, but I'm doing it...it's really hard." Other participants expressed similar feelings and thoughts regarding their diagnosis. In reference to receiving the diagnosis, which was given her first year of college, Inga T. stated:

It gave me a little bit of relief but it also gave me a little bit of kind of anger and sadness because it's like, I felt I worked twice as hard as everybody else to get where I am and I kind of...I'm very spiritual but I don't want to blame God but this is like, "Why would you put this on me?" you know, 'cause it put a lot of strain on my family, puts a lot more strain on my sister because I got a lot more attention because of it and it's like, "Why would you put me through this?"

Medication use. Most participants interviewed reported experience with prescription medication for ADHD at some point in their academic careers. Their views on medication and its usefulness were mixed. Slightly more than half of the participants indicated that they were taking medication for ADHD at the time of the interview. Slightly less than half indicated that they had previously taken medication but had stopped at some point prior to the time of our interview. It should be noted that some

participants who were taking medication were prescribed medication that targeted symptoms of ADHD as well as comorbid conditions such as anxiety and depression.

All participants who reported current use of medication for ADHD indicated that they only take their prescribed medication on days when they attend school and do not typically take it on the weekends or over the summer. All of these participants also indicated that they derived great benefit from it and reported that its use allowed them to be functional within an academic setting. The difference that medication made in their lives was well illustrated by Eddie M. as follows:

Once I took Adderall I was like “Really? This is what life is like?” you know? So it was completely different...it’s like your eyes open up, it’s like you understand things that could have never understood before and it’s just amazing, everything is amazing...I could definitely, I could get on a schedule whereas before something small like getting on a schedule or having stuff done...I still don’t do checklists or anything like that but I know when things are due, I know when things are due, you know?

However, participants currently taking medications reported some unwanted side effects such as increased anxiety and subdued emotional states that were described as problematic. Those who had previously taken medication and then stopped reported similar side effects although in their cases the side effects of the medication were reported to be too difficult to manage. These side effects had resulted in stopping the medication altogether after several unsuccessful trials of various other medications. Carl F. described his experience with medication side effects as follows:

I’m currently not taking any medication just because I do have a lot of anxiety so it was making it worse. I probably stopped about three years ago and I tried the non-stimulant drug Strattera. I was on that for a while and that helped but I stopped that because I would still get the anxiety, not like Adderall where you get like the, you know, you lose your appetite... just the side effects of the Adderall and Strattera, and the yucky feelings I got from it, I just couldn’t handle it

anymore, you know, and they tried, you know, giving me like Xanax to offset it, you know, when I would try and sleep, but it just didn't work.

During the course of the interviews, three participants disclosed previous substance abuse problems. These substance abuse problems were reported to have interfered with personal and academic endeavors. For example, Carl F. stated:

When I left [name of university], the reason why I left was because of substance abuse problems, not with uppers, with downers, umm, so that's basically why I took some time off and worked, I wasn't lying when I said I had job opportunities, but I did have to go to rehab.

Two of the participants who reported substance abuse problems related their substance abuse issues to their diagnosis. For example, Eddie M. stated:

I've self-medicated my whole life, like I used to smoke a lot, I used to drink a lot, I still dip a lot, it was all to calm me down...everything before my actual medication now would hurt me instead of help me.

Interestingly, one participant, Dale H., who spoke about his difficulties finding a medication that worked to ameliorate his ADHD symptoms, reported that using marijuana improved his academic performance. He stated the following:

I always attempted to remedy it with one drug or another but it never quite worked; I don't know if it was the dosage or too much or too little or just the wrong medication but nothing really quite worked until I was in my sophomore year of college at the university here, I started to smoke a lot of pot and my grades went from like a 2.0, something like that, to over a 3.0, and like the classes weren't getting any easier.

Desire to be successful with minimal supports. A salient theme throughout the interviews conducted was the participants' desire to do as much for themselves as possible and with as little assistance from external supports as possible. This desire was reflected in the responses obtained from the majority of participants regarding which supports they had in place at their university setting at the time of interview as well as

their statements regarding medication use. Statements such as “I only use the disability card when I really need something, like ‘Oh, I really need the notes’ but most of them [professors] don’t know and it’s fine,” stated by Fred J. and “I don’t like special treatment but I know that if I really need it it’s there...I want to push myself enough where I don’t need it so I can be as normal as everybody else,” as stated by Inga T., were made by all participants in this study. However, despite the expressed hesitation by many to use accommodations, their statements made it clear that accommodations provided needed access. Fred J., who previously used medication but does not take any medication currently further explained wanting to succeed without relying on medication:

I used to be on medication and then what I did is I said “I can just learn to cope with this” instead of having to rely on the medicine to fix me, that’s kind of what I did, kind of eased into my own transition... I just didn’t like how I felt like it was controlling me. I just felt that I could be my own person without this medicine and learn from the others... you could just learn to cope with this...I finally got to it eventually but it’s not like I beat it or anything...

Determination to obtain a degree. All participants in this study expressed being determined to attain their undergraduate degree despite the challenges presented by their disorder. As discussed earlier in this chapter, in addition to the challenges related to their diagnosis of ADHD, many participants were presented with further challenges that were related to comorbid diagnoses. Most participants indicated an internal drive to succeed in a postsecondary setting despite the barriers that needed to be overcome and the knowledge that they may have to work harder than their non-ADHD counterparts. As Alan B. stated, “I feel like most people here are really smart and may be smarter than I am but they’re not gonna work as hard as I am.” Bree G. described her experience as follows:

I feel like struggling just makes you survive but it didn't really drag me down, I just persevered in it. It's kind of inspiring to know that you have all these obstacles and it doesn't ever get easier but because you want to do it, you do it.

Similarly, Gina S. stated, "It's like I've worked so hard to get here that I will not settle for anything less than doing my absolute best and getting my degree."

The two participants from Hispanic backgrounds indicated that their determination to persist in a postsecondary setting was heavily influenced by family factors. They both expressed a longing for their families to feel proud of them. Eddie M. indicated that being the first one in his family to attend a four-year university was a strong motivator, which made him feel determined to persist. He stated the following:

I decided not to go the route that the rest of my family is, like construction or cops, or anything like that, and come to school. I'm the first one to actually make it to a four-year school and that's my drive, that's what keeps me going.

Inga T. reported that she was determined to complete her undergraduate degree in order to make her parents proud. She described her reasons as follows:

I feel that I have something to give back to my parents, that I have to do this more for them than doing it for myself 'cause I feel like they've put so much into me that they deserve something and I feel like that's the only reason why I'm in school...I feel that if I get my degree that it would be one of their greatest achievements, sort of, and I feel like I owe them something for what they've done.

Utility value of the degree. All participants, with the exception of Inga T., indicated that an undergraduate degree would have utility value. The value that they saw in the degree was a motivating force behind their determination to attain it. Most participants indicated that they needed the degree in order to obtain a specific job while others expected to apply to graduate programs after receiving their undergraduate degree. Some participants stated that the current economic climate highlighted the need for an

undergraduate degree even more than before. Further, they expressed concern regarding their ability to compete with other job applicants and become employed in a highly competitive job market with a high rate of unemployment.

Community college transfers. An additional finding was that over half of the participants in this study had transferred from a community college into their respective four-year universities. All of these participants indicated that having attended a community college was beneficial to their academic attainment. Three of these participants specifically emphasized that the smaller, closer-to-home environment of a community college held an advantage for them. Alan B. illustrated these views as follows:

First of all, like probably going to Junior college was the best thing I ever did...I don't think I was ready to come here by myself yet at that point in time. It's like a half-way point to like being independent and not quite being independent yet and I felt like that was a really great bridge in order to like develop myself as a person and feel out what's like expected of you and everything is on a different level now and a little bit harder but in general it's better because I went to a Junior college.

Employment status. The majority of participants reported having a part-time job at the time of interview, although some had previously held full-time jobs while in college. Most participants expressed feeling very overwhelmed in trying to balance their school and job responsibilities. Further, these participants reported struggling with having divided attention between their work and school settings. For instance, Carl F. stated:

I find it much easier if I'm either working or if I'm going to school full-time. And I find it much easier when I'm going to school full-time. I tend to get real stressed out and I find it easier when I just have one thing to concentrate on.

Gina S. also reflected on this issue as follows:

I'm really thinking about quitting my job. I think people who have these challenges, even someone like me where I feel like I've overcome a lot of them and gone like a great distance. I feel like doing too much at once is like the worst thing 'cause it's like you already have you know, I already have an issue focusing and concentrating, even with medicine, it's not like I can rely on it entirely, so it's like you have to limit everything else in order to be able to overcome those and do well in school.

Jen P. indicated that this challenge balancing more than one responsibility is difficult for others to understand. She stated:

It's the hardest thing for me to explain to people, 'cause people do not understand that I cannot...I'd rather like not work, and have known this, and have taken 18 units every semester, and just got done rather than like do both at once...it's so much more to me, I just can't focus.

Research Question Two

Research question two asked, "What supports have influenced the participants' decision to persist in a postsecondary setting?"

The specific supports that were most frequently identified by participants as influential in their decision to continue to persist in a postsecondary setting were family support, prescribed medication, support from friends, and university-based resources. Other supports that were less frequently specifically identified as influential were religion, and private counseling.

Family Support

The majority of participants identified family support as influential in their decision to remain in a postsecondary setting. In this category, continued parental support was by far the most influential in these participants' decision to persist. As Ann S. stated, "I think that logistically in how I was able to graduate and then attend college,

was a lot of help at home with my mom.” Other comments such as Jen P.’s comment of “I have really good parents, they are super-supportive and no one in my family has gone to school so they’re really bent on it, like I better finish” were common. However, the two participants from a Hispanic background indicated that extended family support was just as influential as that of their parents and carried weight in their decision to persist in school. Eddie M. indicated that support from his wife has been greatly influential.

Regarding this support he said:

The main person I focus on is my wife...she’s a teacher too and she works at a school, it’s called an all-inclusive school...she’s a kindergarten teacher there and she gets a lot of students there that have IEPs and have their own paras and do their own thing so when she comes home, she’s able to treat me a different way where the normal person would just get mad because I don’t do something, she kind of talks to me more about it so...It’s annoying sometimes you know, because it’s like “I’m not one of your students” but in the end I know that she’s trying to help me and then I know that in the end, her doing little things like that help me succeed and have given me confidence.

For Inga T. the support of her Godmother also influenced her decision to continue in school. She referred to this support as follows:

My Godmother is very proactive on my decisions too, she’s always asking me what I’m doing and how I’m doing, and she always tells me that she’s proud of me and she...when I can’t really talk to my mom about decisions that I want to do, I go to her and she helps me to decide what I should do.

Medication

The availability of medication was reported to have influenced the decision of many students to persevere in a postsecondary setting. Five participants identified medication support as instrumental in allowing them to feel more confident in their ability to succeed in school. For example, Gina S. stated:

I started taking Adderall and I feel like it just gave me the ability to sit down for a second and just stop and I would actually listen to what the teacher said and I actually found it to be interesting.

Inga T., a participant who had previously dropped out of another four-year university and later enrolled at a community college prior to transferring to her current postsecondary institution stated, "I'm on medication now so it's helping me a lot in my classes and I'm actually doing a lot better than the two different colleges I went to before."

Support from Friends and Peers

Four participants indicated that both emotional and academic support from friends and peers was influential in their decision to persist in a postsecondary setting. For some participants these supportive friendships were established prior to attending college while others became friends with college peers while attending a postsecondary setting. With regard to classes that he found difficult, Fred J. stated, "Those are difficult and I struggle so I ask my friends to help me, teach me and stuff." Holly Z. reported that having group study sessions was extremely helpful. She stated:

Personally I think that the most important thing to me was studying with a group because when you have ADHD, the best, best thing for you to do is study in a group of people that are focused on what you're studying.

However, she cautioned against large groups, which she defined as having more than three members as she stated, "If you're trying to do your homework alone, not gonna happen, ever, period. You have to be in a small group, two to three people is optimal, maybe one or two, I'd say two is optimal." She also cautioned against forming groups with more than one member with a diagnosis of ADHD. She indicated that this was her recommendation because:

ADHD people feed off of other people's energy and off of their focus, and even then, if there's too many people in the room, we won't be focused, if you're with one person at a table, and that one person is communicating with you, about the same thing, you will be in that mindset so you can communicate back, because ADHD people are like social butterflies, they want to be talking, they want to be doing this, they want to be doing that.

Support from University-Based Resources

Most participants indicated that support from university-based resources influenced their decision to persist in a postsecondary setting. All participants who received accommodations through the disability services center at their university identified access to the disability services center on-campus and access to the accommodations provided through them as a key factor in their decision to persist in school. For example, Dale H. stated "The opportunities at the department of disabilities were really helpful...there is always tutors for nearly any class you're taking to help you out if you need help...I wouldn't be able to get by without it." Two participants specifically identified university-based counseling services as influential. For example, Gina S. stated:

I started seeing a counselor in the special services center and that was probably the best accommodation I could have gotten, just to go to talk to somebody, it wasn't like therapy...but it helped me so much, she like guided me.

Two participants mentioned that having access to the university library where they were able to find a quiet space to study was a helpful resource that allowed them to persist in school. One participant indicated that a mentoring program that the university offered was instrumental in her decision to persist. She described one of her experiences with the mentoring program as follows:

You got to talk to them about how you're feeling about school and they help you with whatever you need and I was taking the CBEST and I have test anxiety and I didn't want to go through the process of the CBEST having your own room because it was like an extreme process and so she just helped me with like dealing with like "when you're doing this question think of this, be positive," that was helpful.

Another participant reported that the availability of a variety of courses, which could be interspersed with the required courses for her major, greatly influenced her decision to continue her enrollment at her postsecondary setting. This participant stated:

Finding different outlets on-campus was helpful; I had classes that I didn't necessarily have to take, I took a theater class...It brought some lightness to my class load and helped me to do stuff that I enjoyed while I did stuff that was a bit more difficult for me.

Research Question Three

Research question three asked, "How do the experiences reported by students with ADHD relate to Tinto's Model of Institutional Departure (1975, 1993) and Bean's Student Attrition Model (1980)?" Relevant factors related to this inquiry were identified as (a) the level of institutional commitment reported by participants in this study; (b) their level of social integration within their postsecondary setting; and (c) perceptions of fit between themselves and their postsecondary institution.

Institutional Commitment

Five participants in this study expressed a sense of commitment to their respective postsecondary institution. One participant indicated that the prestigious name of the university he attended along with being a legacy student made him feel committed to his particular university. Two others indicated that their particular experiences in their

university setting made them feel committed to the institution until completion of their degree. Bree G. described her sense of commitment to her institution as follows:

I've been through a lot here, I mean, I've had a whole wild experience from the sorority through school, through new identities, just like I mean, I feel like when I graduate and I wear that [institution name] robe, I'll be excited that I finished here because of my experience.

When asked how important it was to graduate from their particular institution as opposed to others, Eddie M. responded:

It's extremely important. I consider [institution name] one of the best schools out there and a lot of people just because it's a local school, they kind of down it a little but you know, this university to me is huge.

Two participants expressed that their sense of commitment to their postsecondary institution was rooted in the advantages that they saw in completing their particular program at their institution. For example, Jen P. indicated an interest in enrolling in a Masters' program at the university where she attended and felt that completing her undergraduate degree at that institution would give her an edge when applying for it. The remaining participants did not indicate sharing this sense of commitment to any particular setting. Instead, they reported being committed to completing their undergraduate degree but not necessarily in their setting at the time of interview. For example, when asked how important it was to complete his degree at his particular institution, Dale H. stated:

It's not important at all, in fact, I'm gonna be possibly getting a job where I might have to relocate ...when they station me they'll station me wherever they need me the most and so it might not be anywhere near [name of institution] and so I'm gonna have to, you know, take classes in my spare time at another place or come back if I choose to do that.

In response to the same question, Holly Z. stated, “It’s just important for me to graduate...it doesn’t matter from where...I just need to graduate with a Bachelor’s.”

Social Integration

With regard to social integration, participants were asked about their involvement in extra-curricular activities, participation in group activities, and overall social involvement with peers and faculty.

Ten participants reported continuous opportunities for social interaction with peers, which had resulted in positive social experiences. Six participants reported involvement in organized groups within their institution. Examples of the types of organized groups which participants reported having membership in were a College Republicans group, an Environmental and Occupational Safety Association, Kinesiology club, a Rugby team, a school newspaper, and a Council for Exceptional Children. Involvement in these organizations was described as both enjoyable and important to those who participated. For example, Jen P. stated:

We do a lot with the community, like with the City of San Fernando, they had a program, like a fitness program over the summer and they have one going on now and students go and volunteer their time and get to know like the doctors in the program, so it’s like neat, the camaraderie and stuff.

Many of the transfer students indicated that they had previously been involved with organized groups at their community college and subsequently decided to be involved in organized groups after transferring to their new setting. For example, Inga T. reported the following experience:

I found out that joining a club at my community college helped out meeting people so I kind of came here with the intention of meeting people through

different clubs or something, so I joined the rugby team and I'm helping out with the newspaper, to help me get settled in and feel more at home.

Of the participants in the study who reported social involvement, four participants reported ongoing social involvement with peers that occurred in a less structured manner. These participants indicated frequent social contact with peers that involved getting together with others to enjoy meals or coffee, to attend seasonal university-sponsored activities, and getting together for study sessions. Two participants reported frequent contact and involvement with peers at their dorms and through their sororities. One participant reported frequent contact with peers at her place of work, which was a lab within the university. Participants reported that the common denominator in all of these structured and unstructured social groupings was a common interest between all those who were involved in the different groups. For some groups, this common denominator was academic in nature while for others it revolved around non-academic interests. For example, Jen P. expressed the common denominator within her group as follows:

I got engulfed in this lab and I absolutely love it, everyone is really close and it's really nice to be around people that have a specialized focus like I do, they are all Exercise Phys...so we're all on the same path, it's really nice.

As an example of non-academic common interests that have led to involvement with peers, Dale H. shared the following:

I have a couple of friends that ride motorcycles. I'm a motorcycle rider and specifically, stunt motorcycles...so basically just from riding our bikes around, ran into each other...we all go to [name of institution] and we all have stunt bikes and live across from campus and we always meet up and ride and stuff like that.

With regard to opportunities for social interaction with faculty inside and outside of the classroom, the majority of participants reported having minimal opportunities for

social interactions with professors. Only three participants indicated having ongoing opportunity for ongoing social contact with professors via university-based organized groups. However seven participants stated having had a sense of connection with various faculty members or academic advisors at different points throughout their academic careers in postsecondary settings. These relationships and sense of connection with faculty and/or staff were reported to have had a positive effect on their academic motivation and to have influenced their persistence. For example, Carl F. stated:

I got really close to the head of the department and he passed away like three months ago unexpectedly, and he had some sort of vision problem and so I would give him rides to his house sometimes 'cause he couldn't drive... When I transferred in he kind of took me under his wing because I was changing majors, I was coming into a new school, and we just kind of bonded and he helped me and he new of my learning disability and we just kind of bonded and he was kind of like a mentor for me for a while and I like stayed in contact with him, you know, throughout my time here.

Perceptions of Fit Between Self and Institution

The majority of participants indicated that they felt that their postsecondary setting at time of interview provided a good fit for them. Only two students indicated feeling as though their postsecondary setting was not a good match for them. It should be noted that both participants who indicated not sensing a good fit were transfer students during their first semester at their respective universities. Further, both students reported feeling as though their previous setting had provided a good fit. It is possible that adjustment issues may have played a role as to their feelings regarding fit at the time of interview.

Half of the participants indicated that they felt that there was a good fit between the way instruction was delivered and their individual learning style. For instance, Ken D. stated:

I like the professors, I like the Geology professors, they're passionate about their chosen field, they like explaining things, I like that. I like it when someone doesn't have a problem explaining something, I like it when they actually go an over-explain something 'cause I guess I sort of jive on their energy, you know, I can absorb some of that and be like "oh, ok, this goes with this and this goes with this," and once it clicks all together I have my aha! moment, I go, "Got it!," that's my big motivating thing right there.

Most of the participants who indicated a good fit between instruction and learning style stated that class discussions helped them learn the material. Two others indicated that the availability of the online format for courses was a good way to work around their attentional difficulties.

The other half of the participants expressed various levels of dissatisfaction with instruction at the postsecondary level. Three participants indicated that their professors did not take enough time to thoroughly explain the material and therefore they struggled understanding concepts. For instance, Holly Z. stated:

There's a lot of things that I would change if I was a chancellor or something... I don't know, it's just that the teachers half-explain everything, you're sitting there like "What are you talking about?"... most of the time they explain it to you and it goes right over your head... you go home and look up the problems and if I can't figure it out I call a friend! Because that's probably my best chance of ever understanding the problem.

Two participants indicated difficulty following along while at the same time taking notes when their professors did PowerPoint presentations in their classrooms. Further, they indicated that it was challenging to find note-takers for those classes. For example, Carl F. explained it as follows:

Part of the problem with the note-taking is that a lot of teachers have slides, and what they give you is, have you seen, like the paper, the transparency paper and that's basically how they work the note-taking system but some people take notes just on the slide so, it's hard to find a note-taker because they just take notes on the slide and if the teacher doesn't provide the slides online, some professors do and some don't, it can become a problem, so I even the other day, I was like when I went to the disability resource office, I said, for teachers that don't put their Powerpoint slides online, it's hard to find a note-taker, so it might be an idea for those teachers to provide the slides for the students with disabilities.

Dale H. expressed dissatisfaction with the use of specific types of technology in the classroom. For instance, he indicated that when clickers were used, the classroom setting became too overwhelming for him. He described his experience as follows:

The clickers and all that stuff, I really didn't like that 'cause it forced me to pay too much attention to everything. I mostly preferred not to even go to classes or just to learn on my own 'cause when I'd be in class, I couldn't pay attention to anything so I'd most likely tune out everything while I was in class as much as I could afford to and then whenever it came time to take tests or whatever, I'd just cram, go through the books and do it that way.

All of the participants, with the exception of one, indicated that their academic performance was at least adequate at the time of interview. The majority indicated that their GPAs had increased over time, especially once they had fulfilled the general education requirements and began taking courses specifically related to their major. Many expressed that the general education requirements were more difficult to get through than the classes that better held their interest which were generally the courses related to their chosen major. For example, Ken D. described his frustration with this issue as follows:

Well, in the Geology class I feel pretty good because I like it, I understand it...but in the GE classes, because I don't feel why I have to take those classes when I'm already doing so well in the Geology class, so I'm less motivated to succeed in the GE classes because to me they feel like a waste of time so I've been recently taking all of the Geology classes, all of the major classes I can and then that way

in case I lose financial aid, I can go back to a community college and just finish up all of the little GE things that they want to force me to do...but yeah, I like my chosen major right now.

The majority of participants reported that their past and current experiences within a postsecondary setting provided them with motivation to persist until completion of their undergraduate degree. Most of them expressed feelings of accomplishment and pride when thinking about how far they had come in the pursuit of an undergraduate degree. Gina S. described how much her experiences with professors played a role in her continued motivation to persist in a postsecondary setting as, “So much, in every way, like, good teachers that don’t just go by the book in how they teach you but...I feel like some of the teachers really like shook me until I understood, you know.” Other participants indicated that positive experiences within their postsecondary setting allowed them to enjoy learning. For instance, Jen P. stated:

Since I started, like since I’ve gotten more involved like with my department, I like love it, it’s so much fun, then when I do well on a test, that’s...I’m motivated like when I do well and stuff, and like when I make new friends too.

CHAPTER V

Discussion of Results

The purpose of the present qualitative study was to investigate factors that play a role in the academic persistence of students with ADHD attending four-year postsecondary institutions. The experiences reported by the participants in this study were examined and compared to the existing literature and several common themes were identified and explored. Based on the information obtained from the study, possible applications for practice as well as recommendations for future studies will be discussed.

Discussion of Research Questions

The present study addressed three research questions. Each of these research questions was examined based on first-person accounts as obtained through direct interviews with the participants.

Research Question One

Research question one asked, “What experiences do postsecondary students with ADHD report?” The results of the interviews provide information regarding several behavioral manifestations of ADHD that contribute to making postsecondary education challenging, participant experiences related to instruction, experiences regarding disclosing their disabilities to others, and accommodations that the participants found to be valuable. Additional themes identified through the interviews included the existence of comorbid diagnoses, decreased feelings of self-concept and self-efficacy, feelings of being overwhelmed, the use of coping strategies and medications, the beneficial effect of

counseling, the desire to function with minimal supports, perceptions of utility value of an undergraduate degree, and an internal drive to succeed.

Behavioral manifestations. The participants in the present sample reported experiencing difficulty focusing and sustaining focus during instruction as well as during study sessions, time management difficulties, forgetfulness, difficulty remaining still, daydreaming, and difficulty effectively communicating with others. All of these behavioral manifestations were reported to interfere with learning and social aspects of daily life within their academic setting. The difficulties reported by the participants in this study are consistent with what the literature has informed us regarding difficulties commonly experienced by individuals with a diagnosis of ADHD. For instance, difficulty focusing and sustaining focus, time management difficulties, and working memory difficulties related to ADHD have been heavily discussed in the literature and have been highlighted by Barkley and others as having a neurobiological basis (Barkley, 1997, 2002; Nigg & Casey, 2005). Further, ADHD symptomatology and behavioral manifestations have been found to negatively impact individuals in academic settings (Barkley et al., 2006). Additionally, difficulties with effective communication exhibited by adults with ADHD have been documented in the literature (Barkley et al., 1996; Friedman et al., 2003). Previous research indicates that individuals with ADHD continue to display social impairments into adulthood (Friedman et al., 2003). These social impairments have been found to be related to difficulties with interpersonal functioning in part due to difficulty communicating effectively with others. Consistent with findings

by Friedman et al., (2003) the participants in this study displayed communication difficulties such as talking too fast or interrupting others and were aware of these deficits.

Experiences related to instruction. The majority of participants indicated positive experiences regarding instruction and the way that the course material is delivered in their postsecondary classrooms. As research has shown, students who are satisfied with the formal academic systems of institutions tend to persist in postsecondary settings (Tinto, 1987, 1993). Particular mention was made of the helpfulness of professors relating the course material to practical applications and their encouragement of classroom discussions. Research has found that a dynamic teaching approach that includes classroom discussions and cooperative learning facilitates learning and increases student satisfaction (Lau, 2003). In addition, the effectiveness of the utilization of Universal Design for Learning practices in various classrooms was mentioned by participants. Further, the availability of online courses that were easy to access contributed to feelings of overall satisfaction with instruction.

Experiences related to disclosure. The majority of participants reported having disclosed their disability status to both previous and current faculty. Approximately half of the participants reported disclosing to faculty on an as-needed basis, that is, only when they felt the need to request accommodations in particular courses. This is consistent with research conducted by Hartman-Hall and Haaga (2002), which found that students who have disabilities that the student perceives as being both global and stigmatizing are less likely to be willing to seek help. The participants in the present study reported positive and neutral experiences when disclosing their disability status to professors. Most

participants indicated that they also disclose their diagnosis to close friends and family members.

Experiences related to accommodations. Half of the participants in this study reported having previously received accommodations either through an Individualized Education Plan (IEP) or a Section 504 plan in their K-12 settings following their diagnosis of ADHD. Accommodations that the participants in this study received in their postsecondary settings and which they found helpful were extended time on tests, use of a separate room for testing, being allowed breaks during tests, note-takers, and permission to audio-record lectures. Consistent with Trammell (2003) who found that college students with ADHD benefit from accommodations, participants in this study were responsive to and benefited from the accommodations provided within their postsecondary setting. Participants making use of the accommodations outlined above reported that these accommodations allowed them better access to the course content, allowed them to demonstrate mastery of the material during testing, and helped them to successfully complete courses that they would not otherwise be able to complete as a result of their disability.

It is noteworthy that participants in this study disclosed their disability to professors on an as-needed basis, only when they recognized the need for a specific accommodation for a particular course. This is also consistent with Trammell (2003) who found that college students with ADHD make fewer requests for accommodations when compared to peers with other learning disabilities.

Comorbid diagnoses. The literature indicates that ADHD frequently co-exists with other disorders that affect behavior and performance such as depression, anxiety, bipolar disorder, personality disorders, pervasive developmental spectrum disorders, and substance use and abuse disorders (Barkley, 2002; Wolf, 2006). Consistent with the literature, this study found a high rate of comorbidity of ADHD with other disorders. Several of the participants in this study reported having an anxiety disorder that resulted in additional academic challenges. Other comorbid diagnoses reported by participants in this study were depression, obsessive-compulsive disorder, dyslexia, and expressive/receptive learning disorders, which also were reported to interfere with academics and daily life. In addition, some participants indicated experiencing previous substance abuse issues that impacted them in some way.

Medication use. Most participants interviewed reported experiences with prescription medication for ADHD at some point in their academic careers. Their views on medication and its usefulness were mixed. While the majority reported benefit from prescription medication, there were many others who reported unwanted side effects that outweighed the benefits of taking the medication and had therefore stopped taking it. Recent research indicates that the benefit of ADHD medication for college students has not been empirically established (Rabiner et al., 2008; Blase et al., 2009). However, the majority of participants in this study reported that medication management of ADHD was greatly beneficial and in some cases necessary to succeed in a postsecondary setting.

Feeling overwhelmed. The majority of participants in this study reported feeling overwhelmed with their academic load, especially with classes that required a great

volume of reading. This is consistent with findings from Mull et al., (2001) who found that the academic rigor of higher education was a great challenge for college students with ADHD. Further, the participants' experience is consistent with the literature which indicates that the combination of a heavy academic load and the little external structure provided in postsecondary settings poses a greater challenge for college students with ADHD compared to their non-ADHD peers because it taps directly into the weaknesses related to their disorder (Wolf, 2006).

Self-efficacy and self-concept. The reports of many participants in this study supported the literature with regard to decreased feelings of self-efficacy and lower self-concept for individuals with a diagnosis of ADHD. Although the participants in this study had attained some success in the postsecondary setting, as evidenced by having attained at least junior standing, the challenges that they reported experiencing were described as contributing to decreased levels of self-efficacy. This is consistent with Lackaye's (2006) findings indicating that students with ADHD experience feelings of decreased self-efficacy due to having to put forth greater effort and investing more time to overcome challenges in order to accomplish the same academic results of non-disabled peers. Further, this study supported Lackaye's (2006) findings of low levels of global self-concept in students with disabilities. Throughout the interviews, participants expressed many negative comments regarding self-concept. However, unlike findings reported by Lackaye (2006), the participants in this study did not report few attempts to initiate social interaction with peers or low levels of participation during social opportunities that were afforded to them. In fact, many participants reported seeking

involvement and participating in available social opportunities within their academic settings.

Coping strategies. Participants in this study reported using some of the strategies that have been discussed in the literature. Wolters (1998) reported that college students reported frequently using both intrinsically and extrinsically based strategies aimed at improving academic performance. Consistent with Wolter's (1998) findings, participants in this study reported the use of intrinsically based cognitive strategies such as positive self-talk. This self-talk included reminding themselves that it was important to achieve good grades and that they were capable of doing this successfully. Further, extrinsically based strategies such as the use of clutter-free and distraction-free environments when studying as well as studying with a partner were reported as being used by participants in order to block out distractions and increase attention to task.

Counseling. Both private and university-based counseling services were reported to have helped the participants to process feelings regarding their learning differences, problem-solve, and to make better decisions. Further, counseling was reported as influential in the decision to persist in a postsecondary setting. Although the literature on the outcomes of counseling services for adults with ADHD is scarce, some of the research has found that cognitive therapy is a useful approach when treating adults with ADHD (McDermott, 1999). Further, others in the field have found that psychosocial approaches through counseling services such as educating clients about their disorder, career counseling, and life coaching are helpful when treating adults with ADHD (Murphy, 2005).

Desire to function with minimal supports. Trammell (2003) found that college students with ADHD make fewer requests for accommodations when compared to peers with other learning disabilities. This is consistent with the desire expressed by all participants to function and succeed with the minimal number of supports as possible and the limited number of accommodations that they reported utilizing. No specific differences were found between the two participants in this study who chose not to receive accommodations in postsecondary. One of these participants was female and the other one male and one had received accommodations in their K-12 setting while the other had not.

Performance goal orientation. Previous research suggests that a mastery goal orientation is most conducive to academic persistence (Schunk et al., 2008). However, others have found that a performance goal orientation has been a significant predictor of college persistence (Kahn & Nauta, 2001; Wolf, 1998). The experiences reported by the participants in this study suggest that a performance goal orientation heavily influences the academic persistence of students with ADHD. The majority of participants indicated that their goal was to do well enough to obtain their undergraduate degree, which reflects a performance goal.

Utility value of degree. Most participants indicated that the reason they were working hard to obtain their undergraduate degree was that they felt that it was valuable in many respects. They expressed feeling that an undergraduate degree would allow them to obtain a desirable job. For those who wanted to continue in school, it would allow them to further their education and eventually get an even more desirable job.

Thus, the information shared by the participants suggests a performance goal orientation. This also supports previous research indicating that persistence is influenced by the extent that individuals find value in the activity (Wigfield & Eccles, 2000).

Benefit of prior attendance at a community college. An unexpected finding of this study was that the majority of participants in this study had attended a community college prior to enrollment at their four-year institution. All of these participants indicated that having attended a community college had been beneficial to their academic attainment. These participants saw the community college experience as an advantageous bridge between high school and a four-year institution. No previous studies were identified addressing students with ADHD in community college settings and the degree to which attending community college impacts academic persistence in this population. However, Graham, Greenbaum, and William (1995) found that students with learning disabilities often attend more than one postsecondary institution including community colleges. In addition, they found that students with learning disabilities reported that they often changed institutions due to changes in goals or characteristics of the institution and reported that the smaller setting of a community college was beneficial to those students.

Research Question Two

Research question two asked, “What supports have influenced the participants’ decision to persist in a secondary setting?” The results of the interviews indicate that the specific supports that were most frequently identified by participants as influential in their decision to continue to persist in a postsecondary setting were family support,

prescribed medication, support from friends, and university-based resources such as disability centers, university-based counseling, and libraries. In addition, participants indicated that having experienced a sense of connection with faculty/staff at some point in their postsecondary academic career was influential in their decision to persist.

Family support. Consistent with research by Dennis et al. (2005), family support was identified as playing an important role in the participants' decision to persist in their postsecondary setting. The current study specifically identified parental support as very influential in the participants' decision to persist in college. Noteworthy was the finding that both participants in this study from a Hispanic background indicated that the support of extended family was influential in their decision to persist in college. This is consistent with research findings indicating that minority students, especially those from collectivist backgrounds, benefit from familial connections as they integrate to postsecondary environments (Guiffrida, 2006).

Medication. The majority of participants in this study listed the availability of medication, which they reported to ameliorate their ADHD symptoms, as influential in their decision to persist in college. The available research in this area does not indicate a particular direction with respect to this finding.

Support from friends and peers. The reports of the participants in this study support research conducted by Dennis et al. (2005), which indicated that peer support positively influences outcomes for college students. Many participants in this study reported that support from friends and peers was influential in their decision to persist in

their postsecondary settings. This is consistent with Tinto's (1987, 1993) assertions that informal social systems are influential in the retention of postsecondary students.

University-based resources. Access to a variety of services through disability centers including access to accommodations, tutoring, and counseling services were identified by participants as being influential in their decision to persist. The importance of these services in order to provide access to a postsecondary education has been highlighted in research conducted by Lombardi, et al. (2011) and is supported by the reports of the participants in this study.

Sense of connection with faculty/staff. The participants in this study reported minimal opportunities for structured social interactions with professors. However, the majority reported having had a sense of connectedness with various faculty members or academic advisors at different points throughout their postsecondary education. These guidance-focused relationships and sense of connection with faculty and/or staff were reported to have strongly influenced participants' persistence in that students felt as though they had mentors to guide them through their postsecondary years. While there is limited research regarding mentoring in postsecondary settings, a meta-analysis by Brown, Takahashi, and Roberts (2010) suggests that mentorships have a positive impact on students with disabilities. Furthermore, research suggests that mentoring programs in postsecondary institutions foster higher retention rates (Campbell & Campbell, 1997). Although only one participant in this study reported participation in a mentoring program at her institution, it was clear that most participants felt that connections with faculty and academic advisors were important.

Research Question Three

Research question three asked, “How do the experiences reported by students with ADHD relate to Tinto’s Interactionalist Model of Institutional Departure (1993) and Bean’s Student Attrition Model (1980)?” In responding to this question, participants’ level of institutional commitment, level of social integration, perceptions of fit between themselves and their institutions, and goal commitment were examined.

Institutional commitment. The data obtained through the interviews suggests that institutional commitment was a factor that played a role in the academic persistence of the majority of participants in this study. The majority of participants expressed that their postsecondary experiences had contributed to feelings of loyalty toward their institutions and their intention to continue to persist in their particular settings. This is consistent with Tinto’s (1993) and Bean’s (1980) models, which postulate that institutional commitment plays an important role on academic persistence in college students.

Social integration. Additional data suggests that the participants’ level of social integration likely played a role in their academic persistence as the majority of participants were involved in both formal and informal social systems within their universities. Not only were the majority of participants involved in social activities with peers at their institutions, but they also explicitly identified peer support as influential in their decision to persist in college. This is consistent with Tinto’s (1993) and Bean’s (1980) models involving student retention, which postulate that positive social experiences shape the attitudes of students toward their academic institution and in turn

their intentions to remain in those postsecondary settings. Other researchers such as Belch (2004) emphasize that involvement in social activities allows students the opportunity to experience a sense of connection to the institution and other individuals within it, which fosters a sense of community and commitment.

Unlike Tinto's (1993) and Bean's (1980) models, which de-emphasize the role of family support and involvement in favor of university-based support systems, the present study found that familial supports were reported as important by the participants. Family support and social supports within the university were both reported as influential in their persistence and complimentary to each other rather than helpful in isolation. In addition, Tinto's and Bean's models did not address psychological factors such as anxiety or other comorbid diagnoses as related to college persistence. It should be noted that many participants had a diagnosis of anxiety and reported anxiety symptoms. Comorbid disorders such as anxiety are commonly present with a diagnosis of ADHD.

Fit between self and institution. Most participants also expressed feelings of a having a good fit between themselves and their institutions. Both academic and social experiences factored into these feelings regarding appropriateness of fit. The experiences shared by the participants revealed that most of them felt satisfied with their overall instructional and social experiences within their institutions. Furthermore, at the time of interview, the majority of participants indicated feeling that their academic performance was adequate and felt capable of being successful in their postsecondary settings.

Adequate academic performance as well as overall satisfaction and integration in formal

and informal academic and social systems were reported by Tinto (1993) and Bean (1980) as the pillars of retention of college students.

Commitment to individual goals. Tinto's Interactionalist Model of Student Departure (1993) also proposed that students' level of commitment to individual goals plays a role in academic persistence in college. All of the participants in this study expressed a high level of commitment to obtain an undergraduate degree. Although the participants' reasons for wanting to obtain an undergraduate degree were varied, the level of commitment that they expressed was strong nevertheless. Further, their commitment to attaining a degree greatly contributed to their academic persistence and is consistent with Tinto's (1993) and Bean's (1980) models.

Strengths and Limitations of the Study

The present study demonstrated many areas of strength. First, the interview questions were carefully designed to obtain the greatest level of knowledge regarding participant experiences in postsecondary settings. Therefore, the information obtained was rich and detailed, allowing the researcher to gain an in-depth understanding of their experiences. Second, the qualitative nature of the study allowed the researcher to gain a depth and breadth of information that would not have been possible in a quantitative format. Third, the study included students from two different universities, as experiences may vary from campus to campus. Fourth, an equal number of male and female participants were identified and interviewed. This is important because male and female participants may present with different experiences within the postsecondary setting due

to varied gender roles and the perceptions of others regarding their disabilities. Finally, all participants appeared open and willing to disclose their experiences without hesitation.

The present study also demonstrated several areas of limitation. First, the sample size was limited, as it consisted of only 12 participants, 11 of which were from one institution and one of whom came from another institution. Therefore, the experiences described in the study are largely based on one postsecondary setting. Second, the researcher did not require verification of an ADHD diagnosis, although all participants appeared honest in their disclosure. Third, although the study was open to sophomore, junior, and senior students, only students with junior standing or higher were available to be interviewed. Therefore, the present study may not represent the experiences of students who are new to postsecondary education, those who are transitioning to postsecondary education from high school, or those who are graduate students. Fourth, consistent participant reports of high levels of social interaction may be reflective of extroverted personality traits. Students with more introverted personalities may be less likely to volunteer to participate in a study such as this one. Therefore, the participants' reports regarding social activities may be a reflection of the sample of volunteers rather than the experiences of a majority of students. A final limitation of the present study was that a large number of participants had comorbid diagnoses. Therefore, the experiences of these participants may not be solely related to their ADHD symptoms, as many of the participants exhibited comorbid anxiety disorders that may have impacted their perceptions.

Implications for Practice

The research obtained provides several implications for practice both for students and for postsecondary institutions. These implications are listed below:

1. The Disability Services Office (or equivalent) at postsecondary institutions may wish to develop faculty mentor programs for students with ADHD.
2. Postsecondary institutions may wish to have counseling resources available in order to assist students with ADHD develop coping strategies.
3. Faculty members should be trained to be sensitive and open about receiving requests for accommodations by students.
4. Disability Services staff members should be aware that their attitudes, behaviors, and sensitivity can have significant effects on the comfort level of students who come to them to request accommodations.
5. Students with ADHD may benefit from being advised to take courses that have a strong discussion component to their instruction.
6. Students with ADHD should carefully consider which postsecondary institution they attend, taking into account class sizes, size of the campus, available supports, and type of instruction emphasized.
7. Students with ADHD may wish to attend institutions that have many social opportunities.

Recommendations for Further Research

Future studies may wish to include several postsecondary institutions as well as recruit a larger sample. In addition, future researchers may wish to expand the sample to

include freshman and sophomore status students with ADHD. Furthermore, additional studies may wish to compare the experiences of non-disabled students to those of students with ADHD in order to differentiate between typical experiences and those that are related to disabilities. Future researchers may wish to isolate their sample to students who have ADHD rather than those with additional comorbid diagnoses. Finally, future studies should explore the degree to which attending a community college impacts academic persistence in students with ADHD.

Conclusion

Overall, the findings of the present study indicate that family and peer support, medication, counseling, a sense of connection with faculty/staff, university-based resources, and overall satisfaction with academic and social experiences are contributing factors to the academic persistence of college students with ADHD. The results of this study are consistent with previous research and add to the growing body of literature regarding the retention of students with ADHD in postsecondary settings. These findings can be used to guide postsecondary institutions in supporting students with ADHD. Furthermore, the information gained from this study can be used to assist students with ADHD in identifying and developing beneficial supports that will contribute to their success in the postsecondary education setting.

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APPENDIX A

Institutional Review Board Approval of Study

Date: Aug 23, 2011, 07:29am
Principal Investigator: [Claudia Melara](#)
Faculty Advisor: [Patricia Tobey](#)
Co-Investigators:
Project Title: [Academic Persistence of College Students with ADHD](#)
USC UPIRB # UP-11-00288

The iStar application and attachments were reviewed by UPIRB staff on **8/23/2011**.

The project was APPROVED.

Based on the information provided for review, this study meets the requirements outlined in 45 CFR 46.101(b)(2) and qualifies for exemption from IRB review. The study is not subject to further IRB review. IRB exemption of this study was granted on **8/23/2011**.

APPENDIX B

Similarities Between Theoretical Models and Interview Questions

Appendix B	
<i>Similarities Between Theoretical Models and Interview Questions</i>	
Sources of Attrition	Interview Questions
1. Academic Performance (Bean, 1980; Tinto, 1975, 1993)	What is your GPA at this point?
2. Informal Faculty/Staff Interactions (Tinto, 1975, 1993)	Tell me about any opportunities for interaction with faculty and how often you interact with them inside and outside the classroom.
3. Extracurricular Activities (Tinto, 1975, 1993)	Tell me about opportunities for social activities with other students and your level of involvement.
4. Peer Group Interactions (Tinto, 1975, 1993)	Tell me about opportunities for social activities with other students and your level of involvement.
5. Student perception of fit between self and institution (Bean, 1980).	<p>Did you encounter anything unexpected? If so, tell me about it.</p> <p>Describe your experiences with the courses that you have taken so far. What have you liked best and is there anything that you wish could have been different?</p> <p>Do you feel that having ADHD has impacted you in any way as a student at this university? If so, how?</p> <p>How have your experiences thus far impacted your motivation to continue at this university?</p> <p>What do you feel has helped you (people, resources, etc.) as a student?</p>
6. Institutional Commitment (Bean, 1980)	How important is it to you to graduate from this particular university as opposed to others? Why?