

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

---

Educational Administration: Theses, Dissertations,  
and Student Research

Educational Administration, Department of

---

Winter 12-1-2009

# Experiences of Community College Students with ADHD: A Qualitative Study in the Tradition of Phenomenology

Charla N. Lawrence  
lawrencenicole@hotmail.com

Follow this and additional works at: <http://digitalcommons.unl.edu/cehsedaddiss>



Part of the [Educational Administration and Supervision Commons](#), and the [Social and Behavioral Sciences Commons](#)

---

Lawrence, Charla N., "Experiences of Community College Students with ADHD: A Qualitative Study in the Tradition of Phenomenology" (2009). *Educational Administration: Theses, Dissertations, and Student Research*. 17.  
<http://digitalcommons.unl.edu/cehsedaddiss/17>

This Article is brought to you for free and open access by the Educational Administration, Department of at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Educational Administration: Theses, Dissertations, and Student Research by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

EXPERIENCES OF COMMUNITY COLLEGE STUDENTS WITH ADHD:  
A QUALITATIVE STUDY IN THE TRADITION OF PHENOMENOLOGY

by:

Charla Nicole Lawrence

A DISSERTATION

Presented to the Faculty of  
The Graduate College of the University of Nebraska  
In Partial Fulfillment of Requirements  
For the Degree of Doctor of Philosophy

Major: Education Studies

Under the Supervision of Professor Sheldon L. Stick

Lincoln, Nebraska

December, 2009

EXPERIENCES OF COMMUNITY COLLEGE STUDENTS WITH ADHD:  
A QUALITATIVE STUDY IN THE TRADITION OF PHENOMENOLOGY

Charla Nicole Lawrence, Ph.D.

University of Nebraska, 2009

Advisor: Sheldon L. Stick

Postsecondary educational institutions of all types have seen increases in the number of enrollees diagnosed with ADHD. Despite such increases less is known about ADHD among college students because the majority of research has focused on children and adolescents. This qualitative study conducted in the tradition of phenomenology, explored the lived experiences of ten students attending a community college. Personal interviews were conducted for the purpose of gaining insight into how students with ADHD experience higher education in a community college environment; what support services were most/least useful; challenges faced and successes enjoyed; factors influencing success or failure, and the role of family supports. Analysis of the data resulted in the establishment of nine typologies and 25 themes that helped to illuminate student experiences and resulted in a number of conclusions.

The challenges experienced by students were largely due to ADHD symptomology and deficits in executive functioning resulting in an inability to manage time effectively, organize tasks, and effectively plan/strategize. The successes described by students as part of their community college experience varied in magnitude but all were viewed to be important factors in academic persistence, motivation and self-esteem.

Supports and accommodations provided by the office of Disability Support Services had little impact on the experiences of the study participants because students were not aware of services, chose not to utilize them or the services needed were not available. Social impairments were a common theme across typologies indicating that such issues played a significant role in the overall experience.

The factors most influencing success and failure included previous educational experiences, strategies employed by students to manage ADHD symptomology, instructional styles used by faculty, and study areas selected by students. Family

supports were foundational but not deemed important in managing and living with ADHD and therefore not attributed to having a large impact on the college experience.

## TABLE OF CONTENTS

	Page
List of Tables .....	vi
Chapter	
1 INTRODUCTION.....	1
Statement of the Problem.....	3
Background on ADHD .....	3
Importance of this Research.....	17
Purpose Statement.....	19
Research Question .....	19
Definition of Terms.....	19
2 LITERATURE REVIEW.....	22
Academic and Psychological Functioning.....	22
Social and Family Functioning .....	31
Treatment and Intervention Strategies .....	38
Summary .....	42
3 METHODOLOGY.....	43
Qualitative Approach .....	43
Qualitative Tradition.....	45
Sample.....	46
Data Collection .....	49
4 PRESENTATION OF THE DATA .....	57
Data Analysis .....	57
Data Analysis Process.....	58

Nine Typologies.....	61
5 SUMMARY, RECOMMENDATIONS AND LIMITATIONS .....	98
Summary of Findings .....	98
Generalizations .....	108
Recommendations.....	118
Limitations of the Study/Suggestions for Further Research .....	120
6 SUMMARY .....	123
References.....	126
Appendix A. Recruitment Flyer.....	131
Appendix B. Consent to Participate.....	133
Appendix C. Personal Interview Questions .....	136
Appendix D. Research Project Timeline .....	141
Appendix E. IRB Approval Letter .....	143
Appendix F. Approval from Durham Technical Community College .....	146
Appendix G. Peer Reviewer Qualifications.....	148
Appendix H. Sample of Coded Quotations.....	150
Appendix I. Sample Transcript.....	160

## LIST OF TABLES

	Page
1. Study Sample.....	48
2. Initial Data Codes .....	61
3. Themes by Typology.....	62
4. ADHD Symptoms Experienced by Study Participants ...	65
5. Selection of Study Area.....	80
6. Use of Accommodations/DSS Counseling Services .....	85
7. Subject and Assignment Preferences based on Chosen Area of Study .....	89

## CHAPTER 1

### INTRODUCTION

Attention Deficit Hyperactivity Disorder (ADHD) has been defined as a pattern of behavior characterized by inattention, hyperactivity, and impulsivity, which alone or in combination can adversely affect a person's academic, social, and occupational functioning (Swartz, Prevatt, & Proctor, 2005). The literature contains estimates that the number of school-aged children with ADHD ranges from 3 to 7% (Bernfort, Nordfeldt, & Persson, 2007; Weyandt & DuPaul, 2008). According to a July 2008 report from the Centers for Disease Control, 4.5 million children between the ages of 5 and 17 have been diagnosed with ADHD by a medical doctor, mental health professional, or other qualified clinician. The report also indicated that those numbers are rising, noting that from 1997 to 2006 the average annual increase in the percentage of children with verifiable ADHD was 3% nationally.

ADHD once was believed to be a childhood disorder that was outgrown with the onset of puberty (Weyandt & DuPaul, 2008); however, more recent research provided evidence that as many as 50% of such persons experience significant symptoms into adulthood (Bernfort et al., 2007; Heiligenstein, Johnston, & Nielsen, 1996). The National Institutes of Mental Health (NIMH) (1996) estimated that range as being higher, noting that 30% to 70% of children diagnosed with ADHD will have symptoms in adulthood. While some ADHD symptoms such as hyperactivity and impulsivity can fade in adulthood, others such as inattention and poor concentration often persist (Bernfort et al., 2007).



Although children with ADHD experience higher levels of academic underachievement and are less likely than their peers to be graduated from high school (Barkley, Fischer, Edelbrock, & Smallish, 1990; Young, Toone, & Tyson, 2003), the fact that more school-age children are being diagnosed than ever before has led scientists to believe that more of these children will enter the higher education system at some point in the future. The findings reported in available literature supports this assertion, offering that as a result of improved diagnostic measures and treatment options for adolescents with ADHD increasing numbers of young adults with ADHD are progressing to college level study (Meaux, Green, & Broussard, 2009; Rabiner, Anastopoulos, Costello, Hoyle, & Swartzwelder, 2008; Shaw-Zirt, Popali-Lehane, Chaplin, & Bergman, 2005). A report by the Institute for Higher Education Policy credited the increases in postsecondary pursuits to the success of the Individuals with Disabilities Educational Act of 1990 in educating more students with disabilities at the K-12 level and better preparing them for postsecondary opportunities (Wolanin & Steele, 2004).

An accurate number of college students diagnosed with ADHD is difficult to estimate due to the fact that students are not required to disclose their disabilities to institutions of higher education unless they seek accommodations. Of college students that do choose to disclose a disability, approximately 25% receive accommodations for ADHD (Vance & Weyandt, 2008). However, given that prevalence rates are typically determined based on the number of college students receiving services, the reported numbers might not be reflective of the actual number of students affected by ADHD (Weyandt & DuPaul, 2008). Estimates vary, but reports in the literature say that 0.5% to

5% of college students have (verified) ADHD (Farrell, 2003; Glutting, Youngstrom, & Watkins, 2005; Swartz et al., 2005).

### Statement of the Problem

The increase in the overall number of students with ADHD pursuing postsecondary education is compounded by the fact that less is known about ADHD among college students because the majority of research to date has been focused on children and adolescents (DuPaul Schaughency, Weyandt, Tripp, Kiesner, Ota et al., 2001; Weyandt & DuPaul, 2008). The aforementioned factors lead to the belief that more research is needed so institutions of higher education can be better prepared to identify, support, and serve this growing population of students and, in doing so, better help to ensure the success of this academically vulnerable subset of students.

The remaining sections of this chapter include some background on ADHD, the importance and purpose of the study, the research questions used to guide the investigation, and definitions of relevant terms.

### Background on ADHD

To explore ADHD in the context of postsecondary education, it is important to first understand how the disorder is diagnosed and treated, the personal and societal costs associated, how the disorder specifically affects college students, and some of the implications for institutions of higher education.

#### *Diagnosis and Treatment of ADHD*

While research specific to college students is relatively sparse, ADHD overall is often cited as one of the most widely studied mental health disorders. Goldman, Genel, Bezman, and Slanetz (1998) noted, “ADHD is one of the best researched disorders in

medicine and the overall data on its validity are far more compelling than for many other medical conditions” (p. 1105). Despite extensive research, the exact cause of ADHD remains unknown but is believed to have a neurobiological basis and tends to run in families. While scientists and clinicians continue to study the causes and expand upon treatment options, there is little disagreement that ADHD is a valid disorder that can cause significant impairment among those affected (American Academy of Child and Adolescent Psychiatry, 2007).

A diagnosis of ADHD requires that symptoms including inattention, hyperactivity/impulsivity, or a combination of both be present at levels that significantly impact the ability of a person to function effectively in a professional or work environment, educational environment, and/or in social settings. The disorder has diagnostic heterogeneity and is more common in boys than girls (Heiligenstein, Guenther, Levy, Savino, & Fulwiler, 1999). ADHD is typically diagnosed by physicians, mental health professionals, and other qualified clinicians using a variety of tools related to information in the 4<sup>th</sup> edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV, 1994) developed by the American Psychiatric Association. Special emphasis is placed upon ruling out other conditions that may be underlying causes of the symptoms associated with the presenting ADHD characteristics and behaviors.

The Centers for Disease Control (2008) website outlined the DSM-IV diagnostic criteria recognizing three types of ADHD including 1) predominantly inattentive type, 2) predominantly hyperactive/impulsive type, and 3) combined type. The inattentive type is often referred to as Attention Deficit Disorder (ADD), and the symptoms can consist of difficulty paying attention or focusing on an activity/task, a tendency to miss details, a

high level of distractibility, forgetfulness, and poor organizational skills. The hyperactive/impulsive type presents symptoms such as excessive talking and fidgeting, restlessness and/or impulsive behavior, and a tendency toward increased incidence of injury or accidents. The combined type includes both sets of symptoms presenting with equal prevalence. Each type of ADHD has a corresponding list of nine presenting behaviors. The DSM-IV (1994) requires a patient to exhibit at least six out of nine behaviors from each list for a diagnosis. For the combined type diagnosis, a patient must display six of the nine behaviors from each list.

Other tools and resources such as rating scales, interviews, physical examinations, and psychological testing are recommended to ensure an accurate diagnosis. Clinical Practice Guidelines from the American Academy of Pediatrics (American Academy of Pediatrics, 2000) offer a number of recommendations in the diagnosis of children with ADHD. First, a child must meet the DSM-IV (1994) criteria outlined above. Second, an ADHD assessment requires information from a child's parents or caregiver specific to the onset of symptoms and the duration and degree of associated behaviors. Third, an ADHD assessment must include evidence obtained directly from a child's classroom teacher for the purposes of understanding the degree of impairment and associated academic challenges. Lastly, the evaluation should include a thorough assessment for possible comorbid conditions such as learning disabilities, oppositional defiant disorder, mood disorder, and anxiety disorder (American Academy of Pediatrics, 2000).

According to the American Academy of Child and Adolescent Psychiatry (2007), the most commonly used rating scales and checklists to assist in the diagnostic procedures include 1) the Teacher Report Form of the Child Behavior Checklist

(Archenbach, 2001), 2) the Conners Parent and Teacher Rating Scales (Conners, 2009), 3) ADD-H Comprehensive Teacher Rating Scale (Ullmann, 1988), and 4) Barkley Home Situations and School Situations Questionnaires (Barkley & Murphy, 2005). The tools are often used in conjunction with the DSM-IV in an effort to establish that ADHD symptoms are present in more than one setting (i.e. school and home), and information is provided from multiple perspectives (i.e. parent/caregivers and teachers).

The process for adult diagnosis of ADHD is similar to that used for children although it can be more difficult to identify. Oftentimes adults do not fully understand or recognize the symptoms of ADHD in themselves. In some instances, adults seek treatment for depression or anxiety and discover that ADHD is the root cause of their problems (National Institutes of Mental Health, 1996). In any case, a history of childhood behavior, interviews with the patient's life partner and parent(s), physical examination, and psychological testing are necessary to correctly diagnosis the disorder in adults (NIMH, 1996).

Treatments for ADHD vary depending on the severity of symptoms and age of a patient. Typically treatment requires a multimodal approach that can include stimulant medications, behavioral and psychological interventions, and educational services with associated accommodations as appropriate. A multimodal approach is particularly relevant for those who have comorbid conditions such as behavior disorders, depression, anxiety, and learning disabilities (National Resource Center on ADHD, n.d.). In the same report, The National Resource Center on ADHD estimated that as many as two-thirds of children diagnosed with ADHD also have a comorbid condition.

### *Personal and Societal Costs of ADHD*

A diagnosis of ADHD in and of itself does not prevent a child from reaching educational and/or career goals later in life; however, those with the disorder tend to perform more poorly as compared to their peers without ADHD (Bernfort et al., 2007). Adults with ADHD have been found to have lower levels of educational attainment, are more likely to be unemployed, and are more likely to experience periods of incarceration compared to similar adults without ADHD (Secnik, Swensen, & Lage, 2005). The implications of such outcomes can be considerable both in terms of the personal and societal costs. Bernfort and associates conducted a review of the current literature to develop a possible framework for calculating the overall costs of ADHD. The result was the identification of a number of personal and societal costs associated with the disorder including psychosocial problems, low educational levels, substance abuse, psychiatric problems, production losses, healthcare costs, material costs, and criminality.

The authors (Bernfort et al., 2007) noted that individuals with ADHD often have difficulties in social situations and experience challenges related to communication in both personal and professional relationships. They also reported that individuals with ADHD had fewer years of formal education, fewer higher degrees, poorer grades, and more failed courses, all of which likely impacted employment prospects and career options. Difficulties with substance abuse are also a significant factor as up to 50% of those with persistent ADHD symptoms have been associated with the abuse of substances. Adults with ADHD are at increased risk of developing psychiatric problems such as anxiety and depression. Secnik et. al. (2005) did a matched comparison group study with more than 2,000 subjects in each group, and claimed that adults with ADHD

were significantly more likely at the  $p < 0.01$  level to also be diagnosed with other mental health disorders. Those differences were highlighted as anxiety (13.77% vs. 3.46%), bipolar disorder (4.48% vs. 0.58%), depression (17.10% vs. 2.93%), antisocial disorder (0.31% vs. 0%), oppositional disorder (0.53% vs. 0.04%), and drug/alcohol abuse (5.11% vs. 1.87%).

Bernfort et al. (2007) noted that the societal burdens of the disorder were substantial and argued that production loss was perhaps the largest of the attendant costs due to the chronic symptoms associated with ADHD and the psychosocial and psychiatric problems that often accompany the disorder. The related health care costs are another key factor as persons with ADHD are more likely to consume greater healthcare resources as compared to an average individual. A study by Birnbaum, Kessler, Lowe, Secnik, Greenburg, and Leong (2005) found that after controlling for comorbid conditions, adults with ADHD had higher annual costs for both outpatient (\$3,009 vs. \$1,492) and inpatient care (\$1,259 vs. \$514) when compared to adults without ADHD.

Material costs to society can include damage to public or private property as a result of traffic accidents or engagement in high-risk behaviors. The symptoms of ADHD can make an individual exhibit less control over their behavior, which is apt to lead to taking increased risks particularly when driving (Bernfort et al., 2007). High-risk behavior as well as substance abuse and/or psychosocial issues potentially increase levels of criminality. Those with ADHD and related disorders tend to be overrepresented in crime statistics and prison populations impacting various public entities including law enforcing, judicial, correction, and probation systems.

### *College Students and ADHD*

College students with ADHD differ somewhat from the general population of adults with ADHD who have not or do not attend college. Given their enrollment in college, students with ADHD have likely experienced more academic success in secondary school and/or have developed better compensatory skills (Glutting, Monaghan, Adams, & Sheslow, 2002). However, when ADHD students were compared to typical college students, they seemed to be at greater risk for academic underachievement, emotional instability, and subsequent dropout (Lee, Oakland, Jackson, & Glutting, 2008). Barkley et al. (1990) supported the above assertion noting that college students with ADHD were less likely to complete their educational goals and/or reach graduation. The study reported that 5% of students with ADHD graduated as compared to 41% of those without ADHD within a matched comparison group. A study by Heiligenstein et al. (1999) further supported the findings noting that, when compared to controls, college students with ADHD tended to have lower grade point averages (2.5 vs. 3.2), were more likely to be on academic probation (38% vs. 7%), and were more likely to report academic concerns/problems (14% vs. 10%).

According to the National Resource Center on ADHD (n.d.), there are a number of academic and personal problems that tend to be prevalent among college students with ADHD such as poor organizational and time management skills, reading problems stemming from an inability to concentrate or focus, poor writing and note-taking skills, low self-esteem, lack of appropriate social skills, absence of clear goals or direction for the future, procrastination, lack of persistence, and poor sleep habits. While the symptoms associated with ADHD have the ability to markedly impair the daily



functioning of college students, it is important to note that such students do not necessarily lack the intellectual capacity to learn (Reaser, Prevatt, Petscher, & Proctor, 2007). Instead, they usually require significant supports that will enable them to achieve their academic potentials.

### *Implications of ADHD on Postsecondary Education*

The impacts of ADHD on postsecondary institutions are multidimensional and interrelated encompassing legal aspects, institutional organizational structures and the associated costs, as well as faculty and instructional aspects. The legal requirements surrounding students with ADHD and other disabilities are of sufficient scope to warrant a brief review of key federal laws and how they have influenced the development of organizational structures within postsecondary education necessary for compliance. Instructional faculty personnel are impacted through the provision of required academic and classroom accommodations and the implementation of various policy modifications for students with disabilities.

### *The Rehabilitation Act of 1973 and the ADA*

The two federal laws most applicable to students with disabilities in a higher education environment include Section 504 of the Rehabilitation Act of 1973 and Title II of the Americans with Disabilities Act of 1990. Section 504 stated that qualified individuals with a disability in the United States shall not be excluded from, denied the benefits of, or be subjected to discrimination under any program or activity that either receives or benefits from Federal financial assistance (U.S. Department of Justice, 2005). The legislation prescribed standards for postsecondary institutions that received federal

funding related to admissions and recruitment, treatment of students, academic adjustments, housing, and financial and employment assistance (Denbo, 2003).

The passage of the American with Disabilities Act (ADA) in 1990, often cited as the most important civil rights legislation for people with disabilities, provided much more comprehensive protections and included entities that do not receive federal funding. Public Services or Title II of the ADA prohibited discrimination against disabled individuals by public entities and covered all state universities, colleges, and programs (Nunez, Margulies-Eisner, Manheimer, & MacNeil-Stinson et al., 1996). Title II requires that public entities provide those with disabilities equal opportunity to benefit from all programs, services, and activities. To provide equal opportunity to benefit that legislation required institutions to modify policies, practices, and procedures unless doing so would fundamentally alter the service or program (Denbo, 2003).

Although the scope of Section 504 was increased substantially through the passage of the ADA, Congress intended for the two statutes to be consistent. Denbo (2003) noted that Congress required new regulations under Title II of the ADA be consistent with the regulations adopted under Section 504. Further, in cases brought under the ADA, many courts have incorporated, by reference, prior interpretations of Section 504 (Denbo, 2003).

The ADA defined disability as a physical or mental impairment that substantially limits one or more of the major life activities of such an individual, a record of such impairment, or being regarded as having such impairment (U.S. Department of Education, 2007). Where this legislation has most relevance to ADHD is the inclusion of mental or psychological disorders. The ADA defined mental impairments broadly to

include mental retardation, organic brain syndrome, emotional or mental illness, and specific learning disabilities. This definition entitled college students with ADHD and other learning disabilities to reasonable accommodations under the law and led to significant increases in the number of student with disabilities that attended college and received accommodations (Lee et al., 2008). Nadeau (1995) provided an example of the trend noting that the percentage of students with ADHD registered with the Office of Disability Services at the University of North Carolina, Chapel Hill rose from 18% in 1992 to 60% by 1998.

### *Organizational Structures*

Understanding the purpose and scope of these federal laws is only one aspect. How institutions comply with them in practice is another. The U.S. Department of Education, Office for Civil Rights is responsible for the enforcement of Section 504 and the ADA, and while both school districts and postsecondary institutions are required to comply, the specific requirements for each vary. For example, Section 504 and Title II require school districts to provide a free appropriate public education to children with disabilities. School districts must identify disabilities and then provide special education services, supports, and any necessary aids to ensure that a child's educational needs are met. Conversely, postsecondary education is not compulsory, and institutions are not required to provide a free appropriate public education. Instead they must make necessary accommodations so students with disabilities are not excluded from participation or denied the benefits of higher education because of an existing and verified disability (U.S. Department of Education, 2007).

Under the law, postsecondary institutions may not deny otherwise qualified applicants admission based on a disability nor can they charge such students for any additional costs associated with providing academic accommodations. Some examples of academic accommodations are priority registration, reduced course load, course substitution, note takers, recording devices, sign language interpreters, extended time and/or alternative locations for examinations. Examples of supports or provisions not required of institutions include personal attendants, individually prescribed devices, readers for personal use or study, tutoring and typing services (U. S. Department of Education, 2007). It is important to note that institutions are not required to modify or lower the overall academic requirements for students with disabilities. In other words, an institution may provide additional time to take an exam but is not required to alter the content. In short, students with disabilities are entitled to receive reasonable accommodations under the law but must be able to meet academic standards for admission and progress within a program of study in the same way their non-disabled peers do (Wolanin & Steele, 2004).

Compliance with federal law goes beyond just offering academic accommodations because institutions must also ensure that buildings and other structures are accessible to students with physical disabilities. For example, if a student with a disability desired to take a course typically offered in a building that was not accessible, either the edifice must be made accessible or the course be moved to a location that was (Nunez et al., 1996). To comply with the complexities of federal law, as well as the associated costs, many institutions have ADA compliance officers, legal staff, and other

administrators that monitor progress and assist in the implementation of changes needed to ensure adherence to regulations.

In practice, the laws have translated into different levels of student services often provided through on-campus offices of Disability Support Services (Wolf, 2006). The scope and quality of the services vary significantly by campus and can range from having a staff of professionals that provide comprehensive assessment, tutoring, coaching, remediation, and accommodations to providing only accommodations (Wolf, 2006). At a minimum, disability support services staff assist students in establishing eligibility for services and the development of an associated plan for accommodations. The office of disability support services often accepts the responsibility for working with instructional personnel on behalf of students to ensure that the requested accommodations are understood and implemented appropriately.

#### *Faculty and Instructional Issues*

In many respects, the passage of the ADA brought ADHD and other learning disabilities to the forefront for persons who had not had cause to think about them, specifically instructional faculty and staff in postsecondary education. The result was an increased need for instructors to become more knowledgeable about the requirements of Section 504 and the ADA, what constituted reasonable accommodations, student responsibilities in the process, and how to best modify classroom practices and policies on a case-by-case basis (Thompson & Bethea, 1997).

Since instructional personnel are pivotal to making academic accommodations and ensuring student success, their ignorance of the law could create a barrier for students with disabilities. A study conducted by Thompson and Bethea (1997) seven years after

the passage of the ADA, found that less than 18% of surveyed postsecondary instructors had familiarity with the regulations guiding higher education specific to Section 504. Only 50% had familiarity with the regulations associated with the ADA. It is important to note that the survey was limited to 400 faculty members and administrators at one large southeastern university. Presentation of that study is done to illustrate what was possibly a more widespread issue across institutions, and it is not beyond the scope of reasonableness to wonder how much of such ignorance currently exists.

Knowledge of the law is not the only barrier to implementation. Wolanin and Steele (2004) noted that faculty knowledge of the law may be limited, but faculty resistance to implementation could also be a contributing factor. The authors argued that academic culture and attitudes could present significant barriers. Traditional academic culture provides considerable autonomy to members of a faculty in curriculum development, course content, creation of academic standards, and governance. Accommodations that alter classroom practice and are imposed by offices of disability support services may be viewed as interference and/or an unwelcomed intrusion (Wolanin & Steele, 2004). Further, the typical campus “pecking order” places staff from disability support services at a lower level than instructional faculty members in terms of status. That reality can present challenges for disability support services staff in advocating on behalf of students with disabilities to academic staff (Wolanin & Steele, 2004). Resistance can also be rooted in the fact that implementation of accommodations can be burdensome for administrators, faculty members, and students. Wolanin and Steele (2004) noted that a typical accommodation plan can require a meeting with a dean of a school to extend the time frame for degree completion, a meeting with a department

chair to arrange for alternative coursework outside of those typically required for a specific degree, and still other meetings with different professors to arrange for increased time, alternative locations, and/or varied formats for examinations or other class assignments. It is the latter issues, dealing with the instructional personnel, where oftentimes the most resistant barriers exist.

Faculty attitudes toward students with disabilities and knowledge about the characteristics of specific disabilities can impact how effectively student accommodations are ultimately administered within a classroom. A survey conducted by Benham (1997) looked at faculty attitudes toward students with disabilities and their relationship of those attitudes to variables of faculty rank, academic area, gender, years of teaching experience, experience providing accommodations for disabled students, and age of a faculty member. The results were interpreted to mean there was a significant relationship ( $p < .05$ ) between faculty attitudes and the independent variables of college academic area, faculty gender, years of teaching experience, prior experience accommodating students with disabilities, types of accommodations used, age of faculty, prior instructional experience, and faculty rank.

Approximately 54% of the variance in faculty attitudes was explained by the above variables in combination (Benham, 1997). Males and those with more than 10 years of teaching experience expressed more negative attitudes toward students with disabilities. It is important to note that likely there has been a shift in attitude since that survey was conducted as processes and procedures related to students with disabilities have become more commonplace than they were in 1997 when the ramifications of the

ADA were taking root in practice and forcing change that likely was not embraced universally.

A more recent study conducted by Vance and Weyandt (2008) explored professor perceptions and knowledge specific to college students with ADHD. Similar to the Benham (1997) study, the research sought to understand how the earned academic credential or degree held by a professor, number of years teaching, college in which a professor was employed, experience teaching students with ADHD, and training related to ADHD impacted instructor perceptions. The results were viewed to mean that those factors did not significantly impact professors' perceptions of students with ADHD. Further, the study findings were interpreted to mean that the level of knowledge on the part of professors about ADHD was lacking and negative impressions were pervasive; 59% of respondents agreed or somewhat agreed that a student with ADHD was like a student with a learning disability; 49% agreed to somewhat agreed that students with ADHD had lower grade point averages; 30% agreed to somewhat agreed that students with ADHD were more stressful to teach; and 26% agreed to somewhat agreed that instructional faculty should not accept alternative assignments or provide lecture notes to students with ADHD. Those results and conclusions provide important insight into the kinds of challenges students with ADHD might face in a higher education environment and highlight the need for additional training for postsecondary personnel related to "invisible disabilities," those not as obvious as the ones with a physical manifestation.

#### Importance of this Research

All types of postsecondary institutions are impacted by the increasing numbers of students with ADHD and other disabilities; however, this study focused on community



colleges because recent data indicated that such institutions may be disproportionately affected (Wolanin & Steele, 2004). Wolanin and Steele found that students with disabilities chose types of postsecondary institutions in proportions that were different from their peers without disabilities. The authors claimed that, among 1999-2000 U.S. undergraduates, 49% of students with a disability attended a public 2-year institution as compared to 41% with no reported disability, and 38% of undergraduates with disabilities attended a four-year institution compared to 46% of those with no reported disability.

There are a number of factors that could influence students with ADHD and other disabilities to choose a community college setting over other higher education options. For example, there is a pervasive perception that community colleges provide a more relaxed academic culture and/or a reputation that they utilize more effective teaching strategies aimed at diverse populations (Wolanin & Steele, 2004). Further, students may select the community colleges system because of the various vocational/technical educational opportunities offered, particularly the students that performed poorly in core academic subjects in secondary school. Lastly, a history of academic underachievement does not preclude a student from enrolling in a community college, and there are no requirements for aptitude testing such as the SAT or ACT generally required prior to acceptance by most four-year institutions. The factors discussed here are not exhaustive but are offered to highlight why college-age students with ADHD may choose the community college system in greater numbers and exemplifies the need for further research that addresses this specific population of students.

### Purpose Statement

The purpose of this qualitative study was to understand the experiences of community college students with ADHD: what services they found most useful, what services were lacking or not accessible, what challenges they faced, what successes they achieved and how it was done. The goal was to interpret lived experiences of students attending community colleges so those institutions could reflect upon how to continue developing strategies for enhancing the services to this population and helping to ensure their academic and life successes.

### Research Question

Central Research Question: How do adult students diagnosed with ADHD experience higher education in a community college environment?

#### Sub Questions:

- What support services are most/least useful?
- What support services are not readily available or accessible?
- What are the greatest challenges faced by students with ADHD?
- What successes have been achieved?
- What factors influence success or failure?
- What role do social or familial support systems play in student success or failure?

### Definition of Terms

#### **Attention Deficit/Hyperactivity Disorder (ADHD)**

A mental health disorder characterized as developmentally inappropriate levels of hyperactivity, inattention and/or impulsivity in a severe and persistent manner (DeRidder & DeGraeve, 2006). This term is used throughout the study to reflect

those diagnosed with just attention deficit often referred to as ADD or the combined type known as ADHD.

### **The Individuals with Disabilities Education Act (IDEA)**

Formally known as the Education for All Handicapped Children Act of 1975, the IDEA ensures services to children with disabilities and governs how states and public agencies provide early intervention, special education, and related services to eligible infants, toddlers, children, and youth with disabilities (U.S. Department of Education, 2007).

### **Reasonable Accommodations**

Changes to policy or procedures designed to afford those with disabilities an equal opportunity to participate in educational programs. They are not required by institutions if they present undue financial burden or fundamentally alter the program or service being provided.

### **Neurobiological Conditions**

An illness of the nervous system caused by genetic, metabolic, or other biological factors. Many illnesses categorized as psychiatric disorders are neurobiological, including autism, bipolar disorders, obsessive-compulsive disorders, schizophrenia, and Tourette syndrome.

### **Comorbid Condition**

A comorbid condition refers to one or more diseases or conditions that occur together with the primary condition.

**Psychological Disorder**

A pattern of behavior occurring in an individual usually associated with distress or disability that is not expected as part of normal development or culture.

**Psychosocial Disorder**

Disorders involving aspects of both social and psychological behavior.

**Multimodal Treatment**

Multimodal treatment is a treatment approach that includes multiple elements that work best together and support each other. The various interventions or "modes" of treatment reinforce each other and can produce better outcomes.

## CHAPTER 2

### LITERATURE REVIEW

This chapter presents a selected review of relevant literature specific to college students with ADHD. The literature chosen for inclusion helped to establish the theoretical framework for the present study and supported the underlying research purpose highlighted in the previous chapter: to understand the lived experiences of community college students with ADHD. It is important to note that research related to college students with ADHD is limited, which served as a compelling reason for pursuing this topic and furthering this body of knowledge. Moreover, given that this area of research is in its infancy, the literature available generally focuses on the developmental issues facing college students with this disorder. The literature reviewed provided a deeper understanding of prevalent developmental issues, helped to determine the most appropriate research approach, and verified the need for it. The topics within this chapter cover an array of interrelated concepts including academic and psychological functioning of college students with ADHD, social and familial functioning, and treatment and intervention strategies.

#### Academic and Psychological Functioning

A study conducted by Heiligenstein et al. (1999) considered how ADHD affected key measures of academic performance and psychological functioning for college students attending the University of Wisconsin-Madison. The study consisted of 54 students utilizing the Counseling and Consultation Services (CCS) Center on campus. Twenty-six of those students had a diagnosis of ADHD as determined by the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV, 1994). The remaining 28 control-

group students were utilizing career services at CCS but did not have an ADHD diagnosis. The control-group students participated in the Career Interest and Inventory Program, but none sought counseling or support services beyond that session. The 54 students were selected from 508 students who had requested an assessment at CCS during the fall semester of 1997. Initially, 69 met criteria for inclusion in the study that included either an ADHD diagnosis or a request for career testing. Of the 69 qualified, 15 were excluded due to the presence of a previously diagnosed psychiatric condition, incomplete data, medical or psychiatric co-occurring conditions, or the use of psychotropic medications.

Each of the 508 students completed a confidential information form (CIF) that collected demographic, academic, and clinical data. Using the information captured on the CIF, grade point average (GPA), number of enrolled units, and academic probation status were calculated. Additionally, participating students completed an Inventory of Common Problems (ICP) (Hoffman & Weiss as cited in Heiligenstein et al., 1999) that included 31 questions in six categories related to depression/anxiety, academics, interpersonal relationships, physical health, substance abuse, and lethality. Responses to the questions ranged from (1) not at all to (5) very much and were scored both in subsets by topic area and as a whole. Total scores ranged from 31 to 155, and subset scores ranged from 4 to 20 (except lethality which had a range of 5 to 25).

The academic variables used for the purposes of analysis included GPA, number of enrolled units, probation status, and the academic subset score taken from the ICP (Hoffman & Weiss as cited in Heiligenstein et al., 1999). The remaining ICP items highlighted above were used as the psychosocial variables. Univariate F statistics were

used to compare the two groups on each of the measures within the categories of academic and psychosocial. The findings were significant at the  $p < .001$  level for GPA, ICP academic subset score, and academic probation status. The findings were interpreted to mean that students with ADHD had lower average GPAs and were more likely to be on academic probation. Additionally, the ADHD group reported having more academic problems on the ICP when contrasted to their peers in the comparison group. Different from other research, the findings from that study did not reveal that students with ADHD had increased psychological challenges, as the effect between the two groups was not significant on any of the psychosocial measures. Heiligenstein et al. (1999) noted that the absence of psychological problems within their sample could imply the presence of a subset of individuals with ADHD who were at less risk for psychological impairment. The authors argued the finding underscored the importance for screening and assessing for ADHD among college students experiencing academic difficulties.

Overall, the Heiligenstein et al. (1999) study provided support for the notion that students with ADHD experienced academic challenges with greater frequency than did their non-affected peers and, by extension, may be at a greater risk for dropping out of college. While the findings from the study provided an important foundation for the current study, it lacked exploration of factors that may contribute to the academic challenges faced by students with ADHD. For example, the study did not delve into factors such as study habits and strategies, support systems and services, participation in support mechanisms and the purported value derived, and self-regulation issues such as time-management skills.

Reaser et al. (2007) attempted to fill in some of the gaps in research on college-bound ADHD students by exploring variables believed to detrimentally impact their academic performances – learning and study strategies. The authors compared the learning and study strategies of college students with ADHD to two other groups, students with learning disabilities (LD) and students with no disabilities (ND). The study sample included 150 students attending a large public university in the southeastern United States with 50 students in each of the three comparison groups. The Learning and Study Strategies Inventory, 2<sup>nd</sup> ed. (LASSI) (Weinstein & Palmer as cited in Reaser et al., 2007) was used to obtain data from all study participants under 10 general categories: anxiety, attitude, concentration, information processing, motivation, self-testing, selecting main ideas, use of study aids, time management, and test-taking strategies. The LASSI utilized a 5-point Likert scale that required respondents to select the answer that best described them from (1) not at all typical to (5) very much typical, and yielded raw scores in each of the 10 categories that could be combined to create a percentile score.

Student scores on the LASSI (Weinstein & Palmer as cited in Reaser et al., 2007) were converted to a standard T score for the purposes of comparability. Analysis was run using a MANOVA to test for differences between the three groups in each of the 10 categories. Results of a Wilks' Lamda test ( $WL = .39, F(20, 266) = 7.92$ ) was interpreted to mean there was a multivariate effect at a significance level of  $p < .001$ . Follow-up univariate analysis showed significant effects for each of the 10 categories at  $p < .05$  or better. Post hoc Tukey analysis was interpreted to mean significant pair-wise differences existed at the  $p < .001$  level between the LD and ADHD groups. For example, the LD group scored higher (in a positive direction) than did the ADHD group



in a number of categories such as concentration, selecting main ideas, study aids, test strategies, and time management. Analysis of ipsative measures (forced choice to the most preferred one) allowed for the identification of the relative strengths and weaknesses of the ADHD group on each of the subscales. Ipsative measures were collected so each subject's total score across measures or subscales was equal to the totals for other subjects.

The LASSI (Weinstein & Palmer as cited in Reaser et al., 2007) was designed to collect data using a Likert scale that prompted respondents to rank statements, making the data ipsative in nature and allowing for such a comparison. Cohen's *d* effect sizes were used to measure the strengths and weaknesses of the relationships with positive, significant mean differences indicating strengths and negative significant mean differences weaknesses. Weaknesses for the ADHD group included concentration, test strategies, and selecting main ideas. Strengths for that group included attitude, information processing, and study aids. Lastly, a multiple regression analysis was run to assess the relationship of the subscales to GPA. Motivation had a significant positive effect at the  $p < .05$  level for both the ND and ADHD groups. For the ND and LD groups, study strategies and learning styles, as measured by the LASSI, accounted for 22% of the variance in predicting GPA ( $R^2 = .22$  for ND and LD) however, that relationship was not significant for the ADHD group ( $R^2 = .06$ ).

The results from the Reaser et al., (2007) study were interpreted to mean that ADHD students reported difficulties in four key areas: time management, concentration, selecting main ideas, and test-taking strategies. Also, four areas in which ADHD students had lower scores than the ND group, but their scores were higher than those

from the LD group were motivation, anxiety, information processing, and self-testing. Areas in which students with ADHD reported scores that were similar to the ND group included attitude and use of study aids. Similarities between the ADHD and LD groups included higher levels of anxiety and deficiencies in information processing and self-testing skills. The authors claimed their findings had important implications for how support services were delivered and what support services were provided to students with ADHD as compared to those with LD. Due to the fact that students affected by these different disabilities appear to have different strengths and weaknesses, the authors suggested that differential interventions be administered rather than an “across the board” strategy for both ADHD and LD students. For example, while both LD and ADHD students experience challenges associated with information processing, the same intervention probably would not be appropriate for both.

The research reported above highlighted the relative strengths and weaknesses of students with ADHD and could be useful in the design of appropriate services and supports for such students. However, the study did not explore the personal perceptions held by the students engaged in such services, the perceived value of programs and services, the usefulness of the structure or lack thereof, or the specific components of different support mechanisms.

Another aspect of academic and psychological functioning is related to the adjustment to a higher education environment from a secondary school. This transition can be expected to present a host of challenges for students with ADHD, particularly in areas related to self-regulation and time management. Additionally, for many such students college is their first experience living away from family and other support

systems and the first experience independently developing new routines and managing daily life. This lack of external structure can present difficulties for students with ADHD in making the adjustment to college life and can place them at greater risk for substance abuse, social problems, low self-esteem, and/or high risk sexual behavior (Farrell, 2003; Grenwald-Mayes, 2002; Swartz et al., 2005).

Rabiner et al. (2008) studied college adjustment among students reporting ADHD and further considered the impact that medication had on it. The study included 1648 first-year freshman enrolled at two different four-year universities in the southeastern part of the United States, one public and one highly competitive private institution. All study participants completed a web-based survey with items specifically addressing a number of factors including ADHD status, ADHD symptoms, personality factors, academic concerns, social dissatisfaction, depressive symptoms, and alcohol, tobacco, and drug use.

The survey tool was comprised of statements respondents addressed by selecting a rating from a five-point scale that ranged from strongly agree to strongly disagree. Sixty-eight of the total respondents (4.13%) reported having a current diagnosis of ADHD, and 47 of those students said they (69.12%) were being treated with medication. Due to the large imbalance among students that reported a diagnosis of ADHD and those that did not, a sample of 200 were randomly selected from the 1648 student respondents for the purposes of analysis. The sample of 200 was drawn from race and gender groupings that matched the respondent populations from each site.

Analysis of variance tests were run to determine if the means were significantly different among the ADHD and non-ADHD groups with regard to inattention and

hyperactive/impulsive symptoms, academics, depression, and social satisfaction. The results were understood to mean that students with ADHD reported significantly higher rates of inattention and hyperactivity/impulsivity ( $p < .01$  level with large effect sizes of  $d = .96$  and  $d = .92$ , respectively) than did their non-ADHD counterparts. ADHD students also had greater levels of concern about academics and more depressive symptoms although the effect sizes were smaller ( $d = .48$  and  $d = .37$  respectively).

The data did not allow for speculating that ADHD students' social experiences were notably different from those of other students, nor were the ADHD students more likely to use substances such as alcohol or drugs. They were, however, more than twice as likely to have used tobacco in the previous 30 days. Consequently, based upon the participants from that study, it was inferred that students identified as having ADHD were really no different from other college students with regard to their social experiences and tendencies for engaging in high-risk behaviors involving alcohol or drugs, but were more likely to use tobacco (Rabiner et al., 2008).

Comparisons of the students reporting ADHD that were taking medication (N=47) versus those with ADHD not using medication (N= 21) were conducted related to academic concerns, depressive symptoms, and social satisfaction to determine if those using medication experienced better adjustment to college. The differences were small across the three categories, and none were statistically significant. Overall, the use of medication did not seem to mitigate ADHD symptoms or aid in student adjustment to a college environment. The authors (Rabiner et al., 2008) noted there might have been a number of factors influencing that finding. For example, ADHD students taking medication could be persons with more pronounced problems, and that could clarify the

question of why their social adjustment was not better than the non-medicated participants even though they may have been benefiting from the medication. Another plausible explanation might have been the incorrect administration of medication or failure on the part of a student to complete the medical regimen as prescribed. Also, it might have been that the positive effects achieved through medication among primary and secondary students was mitigated because of becoming acclimated to the dosages and also being compounded by the difficult life transition experienced by college freshman with ADHD.

The findings from the Rabiner et al. (2008) study can be viewed to mean that the positive results that many younger ADHD students receive from medication possibly do not extend into adulthood. In particular, the benefits may be diminished during adjustment to college due to the lack of external structures previously provided by family, high school teachers, or other support systems. The implication was that educational institutions working with students having a verified ADHD condition should realize the potential scope of the problems attendant to these students and work to create individualized services plans and support mechanisms. While that study shone light on this important issue, it was somewhat limited by the fact that ADHD status was self-reported, therefore the diagnosis was not verified by researchers. Further, the study did not specifically look at the community college population or explore what type and extent of supports students had prior to beginning college or the benefits inherent in such supports.

## Social and Family Functioning

Few studies have explored the social functioning of college students with ADHD despite the link between social difficulties and ADHD in children (Faigel, 1995; Weyandt & DuPaul, 2008). A study by Shaw-Zirt et al. (2005) examined adjustment, self-esteem, and social skills in 21 college students meeting DSM-IV (1994) diagnosis criteria for ADHD as compared to 20 non-ADHD students at a large Catholic University in the Northeast. Both samples were drawn from 592 undergraduates that completed a screening questionnaire. The 21 ADHD students were matched with the comparison group based on age, gender, and self-reported GPA. In addition to the screening and diagnostic measures used to establish the ADHD group, all participants completed a college-adjustment questionnaire, a self-report assessment of social skills, and two self-esteem inventory measures.

The Student Adaption to College Questionnaire (SACQ) (Baker & Siryk as cited in Shaw-Zirt et al., 2005) is made up of 67 items and used to assess students' adjustment to different aspects of college including academic adjustment, social adjustment, personal-emotional adjustment, goal commitment, and institutional attachment. The Social Performance Survey Schedule (SPSS) (Lowe & Cautela as cited in Shaw-Zirt et al., 2005) is a 100-item self-report questionnaire used to assess students' level of social skills. The Social Self-Esteem Inventory (SSEI) (Lawson, Marshall, & McGrath as cited in Shaw-Zirt et al., 2005) was used to measure feelings of self-worth in social situations and consists of 30 items rated by respondents using a Likert-type scale. Lastly, the Rosenberg Self-Esteem Scale (Rosenburg as cited in Shaw-Zirt et al., 2005) was also

used as a global measure of self-esteem consisting of 10 items also rated by respondents using a Likert-type scale.

The authors sought to test the hypothesis that students with ADHD would report lower levels of college adjustment, self-esteem, and social skills as compared to their non-ADHD peers. To test adjustment to college for the groups, a multivariate analysis of variance (MANOVA) was conducted using group and gender as the independent variables. A significant effect for group was found on all four subscales of the SACQ (Baker & Siryk as cited in Shaw-Zirt et al., 2005) ( $Wilks\ lambda = .46, F(4, 34) = 10.04, p < .001$ ) indicating that the ADHD group reported lower levels of adjustment to college. The effect for gender was not significant. To compare self-esteem between the groups, separate two-by-two analysis of variance (ANOVA) tests were run using group and gender as the independent variables and scores on the SSEI (Lawson, Marshall, & McGrath as cited in Shaw-Zirt et al., 2005) and Rosenberg (Rosenburg as cited in Shaw-Zirt et al., 2005) as the dependent variables. A significant effect was found for group on the SSEI ( $F(1, 37) = 11.01, p = .002$ ) and the Rosenberg ( $F(1, 37) = 22.55, p = .001$ ) indicating that those in the ADHD group reported lower scores on self-esteem. To test social skills, three additional two-by-two ANOVAs were run testing the positive, negative, and total subscales of the SPSS (Lowe & Cautela as cited in Shaw-Zirt et al., 2005) separately. The ANOVA test for the positive social subscale showed a significant effect for gender ( $F(1, 37) = 5.87, p = .03$ ) indicating that females reported higher levels of positive social skills than their male peers. The ANOVA test conducted on the negative subscale revealed a group and gender interaction effect ( $F(1, 37) = 5.87, p = .02$ ). Additional effects for group within gender ( $F(1,37) = 34.83, p = .001$ ) indicated

that female participants with ADHD were more likely to report higher levels of negative social behavior as compared to their non-ADHD female counterparts. The total subscale on the SPSS also showed significant effects for group and gender suggesting that students with ADHD reported lower overall levels of social skills than those in the non-ADHD group. Additionally, females reported better social skills than did males across groups.

In sum, the results from the study (Shaw-Zirt et al., 2005) found that college students with ADHD reported lower levels of college adjustment, social skills, and self-esteem as compared to a matched comparison group of students without ADHD. The findings provided further support for the notion that children and adolescents with ADHD continued to experience problems related to social functioning into adulthood. The authors noted that their results held important implications for how interventions were targeted and provided to college students with ADHD. They suggested additional research be conducted to determine the needs of this group and the types of interventions and services that may be most effective. Additionally, they suggested further exploration of the variables that might impact adjustment to college, including factors related to family supports.

In seeking to understand how family factors impact college students with ADHD, Grenwald-Mayes (2002) conducted a study that explored how family life and functioning impacted the perceived quality of life for college students with ADHD. Specifically, the study sought to answer three key questions, 1) How do college students with ADHD compare to non-ADHD students in terms of quality of life?, 2) How do college students with ADHD compare to non-ADHD students regarding family relationship dynamics?,



and 3) Are family dynamics related to current quality of life for ADHD and non-ADHD college students?

The author (Grenwald-Mayes, 2002) hypothesized that ADHD students would experience a lower quality of life, have more negative family dynamics, and indicate a stronger relationship between family dynamics and quality of life when compared to non-ADHD college students. The ADHD group included 37 undergraduate students drawn from two private universities and one community college in the St. Louis area of Missouri. The control group was comprised of 59 undergraduate students never diagnosed with ADHD selected from the list of private universities. Students from each group participated in one appointment where they completed four self-report measures including a background information form, Quality of Life Questionnaire (QLQ) (Evans & Cope as cited in Grenwald-Mayes, 2002), Family Environment Scale (FES) (Moos & Moos as cited in Grenwald-Mayes, 2002), and the Family Adaptability and Cohesion Evaluation Scale II (FACES II) (Olson, Portner, & Bell as cited in Grenwald-Mayes, 2002).

The background information form collected demographics, grade-point average, marital status, drug and alcohol use, and arrests. The QLQ (Evans & Cope as cited in Grenwald-Mayes, 2002) included 192 items within 16 scales including material well-being, physical well-being, personal growth, marital relations, parent-child relations, extended family relations, extramarital relations, social desirability, altruistic behavior, political behavior, job characteristics, occupational relations, job satisfiers, creative behavior, sports activities, and vacation behavior. A total score was determined by representing a composite of the 16 scales. The FES (Moos & Moos as cited in Grenwald-

Mayes, 2002) was a 90-item, dichotomous measure, arranged into 10 scales designed to measure the social and environmental characteristics of families. The 10 scales include cohesion, expressiveness, conflict, independence, achievement orientation, intellectual-cultural, active-recreational, moral-religious, organization, and control. The FACES II (Olson, Portner, & Bell as cited in Grenwald-Mayes, 2002) consists of 30 items with Likert-type responses within two scales, family cohesion and family adaptability.

Chi-square analyses were conducted to identify differences between the groups on the data obtained through the background information form. Students with ADHD were more likely to report that their fathers had graduated from college, were more likely to have a family member with ADHD, and were less likely to be married or living with a partner. Further, students with ADHD were more likely to have problems with alcohol and drugs and to have been arrested.

To test the stated hypothesis (lower quality of life, more negative family dynamics, stronger relationship between family dynamics and quality of life) the author (Grenwald-Mayes, 2002) conducted a series of analysis of variance tests to consider the difference between ADHD and non-ADHD groups with regard to quality of life. Significant differences were found between the two groups on the QLQ (Evans & Cope as cited in Grenwald-Mayes, 2002) related to four of the scales, parent-child relations ( $F(1, 27) = 10.21, p < .01$ ), political behavior ( $F(1, 87) = 5.65, p < .05$ ), personal growth ( $F(1, 94) = 8.79, p < .01$ ), and social desirability ( $F(1, 87) = 6.28, p < .05$ ). The findings were viewed to mean that students with ADHD reported poorer parent-child relations, had less interest/involvement in political behavior, reported less personal growth, and were less likely to present themselves in a socially desirable way.

To explore the family dynamics of ADHD students as compared to non-ADHD students, a series of ANOVAS were completed to look for a difference in scores related to the FACES II (Olson, Portner, & Bell as cited in Grenwald-Mayes, 2002) and FES (Moos & Moos as cited in Grenwald-Mayes, 2002) measures. The only significant difference identified between the groups was on the active-recreational subscale of the FES ( $F(1, 94) = 4.42, p < .05$ ) indicating that those in the ADHD group had higher scores. The author (Grenwald-Mayes, 2002) noted that the finding implied students with ADHD might engage in physical activities more frequently in an effort to overcome the challenges associated with ADHD symptoms.

To predict student quality of life based on family dynamics, a factor analysis was conducted yielding three factors that explained most of the variance within the FACES II (Olson, Portner, & Bell as cited in Grenwald-Mayes, 2002) and the FES (Moos & Moos as cited in Grenwald-Mayes, 2002) measures and reducing the overall number of variables used in the analyses. The three emerging family dynamics factors were positive emotional climate and activities, structure and organization, and achievement/orientation. Multiple regression analyses were conducted to determine if the identified factors were more useful in predicting the quality of life for ADHD students as compared to non-ADHD students. The results were interpreted to mean that the three factors were significant predictors of quality of life for students with ADHD (Grenwald-Mayes, 2002). Positive emotional climate and activities predicted altruistic behavior, creative/aesthetic behavior, job characteristics, job satisfiers, marital relations, material well-being, occupational relations, and vacation behavior at  $p < .05$  or better significance levels. Positive emotional climate and activities along with structure and organization predicted

extended family relations and political behavior at  $p < .05$  or better. Finally, achievement and orientation predicted parent-child relations at  $p < .05$  significance level.

The same factors were less useful in predicting the quality of life for students without ADHD (Grenwald-Mayes, 2002). For example, positive emotional climate and activities predicted extended family relations, extra-marital relations, social desirability, and sports activities at the  $p < .05$  or better. Structure and organization predicted creative/aesthetic behavior and physical well-being at the  $p < .01$  level. Together, positive emotional climate and activities and structure and organization predicted altruistic behavior at the  $p < .01$  level. The findings of the analyses indicated that family might be a more important factor in the academic and personal success of college students with ADHD than previously believed, and less so for non-ADHD students.

Overall, the study (Grenwald-Mayes, 2002) results were interpreted to mean that college students with ADHD reported a lower quality of life than did their non-ADHD counterparts, scoring significantly lower on 4 of the 16 QLQ (Evans & Cope as cited in Grenwald-Mayes, 2002) scales. Additionally, positive emotional climate and activities emerged as the most important factor in predicting the quality of life for college students with ADHD. This finding indicated that family environment might play a relatively large role in how adults with ADHD perceive their quality of life. The author noted that the study had important implications for how interventions were developed for families with children affected by ADHD, and interventions creating positive emotional family environments possibly improved perceptions of quality of life further down the road and into adulthood.

### Treatment and Intervention Strategies

Colleges utilize a number of intervention strategies in assisting students with ADHD and other disabilities. Such interventions can include the use of prescribed medications and/or educational interventions and accommodations. Accommodations can range from books on tape, note-taking services, separate testing rooms, extra time for examinations, and alternative formats for exams and assignments (Weyandt & DuPaul, 2008). While many of the above accommodations seem to make sense on a practical level, few have been rigorously researched to determine effectiveness.

Review of the research yielded one study that explored an educational intervention called ADHD coaching, which was designed to assist individual students in problem-solving and strategizing the problems associated with the disability of ADHD. The coaching approach strategy sought to address the deficits students with ADHD presented with executive functioning and being manifested in difficulties with time management, organization, and problem-solving (Swartz et al., 2005). ADHD coaches served as “collaborators who let the client (student) define his/her own needs and goals” (p. 648). The optimal result of coaching was that participating students developed the skills to independently set and achieve goals. Further, coaching will ideally “increase client’s self-efficacy, an individual’s belief that he/she can master a situation and bring about desired change” (Swartz et al., 2005, p. 648).

Swartz et al. (2005) conducted a case study consisting of one ADHD student attending a large university in the southeastern part of the United States. The study was designed to explore the challenges and benefits associated with implementing and evaluating ADHD coaching. Coaching was provided by a PhD-level psychologist

involved in a faculty training program. The student received eight weeks of coaching that revolved around the development of long-term goals, weekly objectives, and rewards and consequences. The student filled out two pre-test measures including the LASSI (Weinstein, Palmer & Shulte as cited in Swartz et al., 2005) (previously described) and the Coaching Topics Survey. The Coaching Topics Survey was designed especially for the Swartz et al. (2005) case study and asked the respondent to rate her academic and personal life on a number of topics using a 5-point scale ranging from (1) definitely need to work on to (5) do not need to work on. Both measures were administered after the 8-week coaching session. The author provided no further detail on how the scale was developed.

The student set two long-term goals including establishing a study routine to which she would adhere, and to earn a letter mark of “B” in her Adult Health class, a course she reportedly was failing at the initiation of ADHD coaching. Based on the Coaching Topics Survey, the student identified the need to improve time management, establish routines and good habits, organize schoolwork, study, keep track of things, pay attention in class, take good notes, manage long-term assignments, plan and prioritize, wake up, and stay up. The results of the LASSI (Weinstein, Palmer, & Shulte as cited in Swartz et al., 2005) were understood to mean that the student had a need to target time management, concentration, selecting main ideas, study aids/support techniques, and test strategies. During the progression of the mentoring program, the student completed a daily log that outlined objectives and tracked the completion of daily tasks or the reason for non-completion.

The results from comparing the pre/post test revealed that on the LASSI (Weinstein, Palmer, & Shulte as cited in Swartz et al., 2005), the student improved in four of the seven areas selected as goals (concentration, time management, study aids, and test strategies), had no change in one area (motivation) and showed decreases in two areas (selecting main ideas and self-testing). On the Coaching Topics Survey, the student showed improvement in eight out of nine areas identified as goals, with no change in one area (managing long term assignments). Careful review of the daily logs disclosed that the student exceeded study goals in four out of seven weeks (week 1 was a baseline measurement) indicating a positive upward trend in overall study time. The findings from that research were interpreted to mean that ADHD coaching was potentially promising, but prior to embracing the idea it was prudent to engage in a larger more critically developed study. Of note is that community college students might present a different set of challenges by virtue of why they attend a community college, working and attending school on a part-time basis, being less than fully prepared for postsecondary study, being less capable students, and being generally non-traditional college students.

The effectiveness of stimulant medications as a treatment for ADHD among college students has not been widely researched. One study by Heiligenstein et al. (1996) reviewed the efficacy and safety of psychostimulants in college students with ADHD. The study was conducted retrospectively using chart reviews of all students with a clinical diagnosis of ADHD that utilized the counseling and consultation center at the University of Wisconsin-Madison. The study focused on a particular class of stimulants called Pemoline.

Forty students (records) were included in the study, all of whom had a clinical diagnosis of ADHD and had used the stimulant Pemoline for a minimum of 14 days and a maximum of 12 weeks. Participating students who had been diagnosed as children were interviewed for the purposes of assessing current levels of impairment and/or symptoms experienced. Two independent psychiatrists reviewed the records/charts and rated each participant using the Clinical Global Impression Scale for Severity of Illness and Global Improvement (CGI) (National Institutes of Mental Health as cited in Heiligenstein et al., 1996). The clinicians scored students at initial intake and evaluation and again at approximately the mid-point of treatment. The scores from each clinician were combined and averaged to yield the final scores for each of the 40 students.

The results of the analysis illustrated that 70% of the students treated for 14 days or more had CGI (National Institutes of Mental Health as cited in Heiligenstein et al., 1996) scores that indicated they had improved or very much improved, 28% had minimal improvement or no change, and 3% had decremented scores. When considering the severity of illness measured by the CGI, the mean score at baseline was 4.11 on a 7-point scale, with 1 representing not ill and 7 representing extremely ill. Midpoint in the treatment, the mean had decreased to 3.01, and the change during Pemoline treatment was significant at the  $p < .001$  level.

The authors (Heiligenstein et al., 1996) noted their findings were promising and underlined the need for additional research of that drug in the treatment of college students with ADHD. They noted that the majority of students did see benefits and improvements using the drug and an advantage of Pemoline was its low potential for abuse in contrast to other psychostimulant medications. Overall, they suggested that



university clinics should consider prescribing Pemoline to mitigate ADHD symptoms, improve cognitive functioning, and reduce the incidences of academic failure among affected students.

### Summary

The review of relevant literature provided important insight into the academic and psychological challenges often experienced by college students with ADHD as well as some of the factors that may influence academic performance. Further, this section explored how students with ADHD usually adjusted and transitioned to a college environment, as well as some of the intertwined social and familial issues. Lastly, a brief exploration of literature addressing treatment and interventions for ADHD confirmed there were strategies and possible solutions to assisting this vulnerable population of students, but additional research is needed to further understand how to best go about the business of doing so.

The present study addressed many of the gaps in the research related to ADHD students attending postsecondary institutions, and in particular those who matriculated at a community college. Perhaps of paramount importance is that this research sought to gain first-hand information from students presenting the ADHD condition and, by doing so, learn what has been and is of greatest importance to them in terms of enhancing prospects for academic success. The implication of this research was to provide community college administrators with the voices from students as to how they might be best helped by services and interventions. The next chapter presents the procedures followed when implementing this research.

## CHAPTER 3

### METHODOLOGY

This chapter describes the research approach used in this exploratory study. The intent was to secure sufficient information to create a greater understanding about the lived experiences of community college students with ADHD. Further, the chapter offers background on the qualitative tradition of research, describes the sampling method and resulting sample used for the study, outlines the data collection process and procedures, highlights ethical considerations, and examines the role of the researcher.

#### Qualitative Approach

The purpose of qualitative research is to seek an understanding of peoples' perceptions or experiences. Miller (2000) noted that the underlying assumption was predicated on the idea that reality was socially constructed and ever-changing based on the perceptions of people. The vantage point of this type of scholarly inquiry was that of an emic, or insider's perspective, gaining information from persons directly involved and in their own voices. This kind of research is value-laden and based on a more holistic approach that seeks a big picture kind of understanding.

Hatch (2002) defined qualitative research by saying it sought to describe inherent characteristics of what was studied instead of seeking to write a tidy paragraph that captured the essence of the research. The expository presentation was what gave qualitative research its special flavor. Hatch noted that qualitative research occurred in natural settings, was based on participant perspectives, used the researcher as the data collection instrument, required extended engagement with study participants, had centrality of meaning (meanings constructed by individuals), included the subjectivity of

the researcher, had an emergent design, utilized inductive data analysis processes, and embraced reflexivity. It was a means to unveil truth without resorting to the possible ambiguity contained in the analyses of numbers and constrained by the presentation of a statistic that carried the aura of definitiveness.

The present study was designed using a qualitative paradigm because it matched the world views, the training and experience, and the psychological attributes of the researcher (Miller, 2000). For example, the researcher had reasonable experience and a high comfort level working in contexts lacking specific rules and procedures through previous experiences facilitating focus groups and listening circles for other qualitative and mixed methods research projects. Also the researcher had the ability to sort through ambiguity, such as that contained within qualitative data (Miller, 2000), to ferret out the relevant from the irrelevant, and the meaningful from the less meaningful. Adding to the above was that the researcher had successfully completed a number of advanced graduate courses that emphasized qualitative research design and analyses, and most employed practical experiences within their formats.

Additionally, the nature of this research lent itself to exploratory research characterized as having few known variables or established theories. The outcomes were determined from the intuitiveness of the researcher who engaged in multiple forms of seeking truthfulness. Lastly, it was decided that a qualitative approach would provide a different set of lenses for understanding the issues attendant with ADHD students seeking postsecondary education. The exploratory nature of this investigation enabled the construction of a platform upon which additional research can be undertaken, and it provided an important service to community colleges and their disability support services

staff: how to better serve this growing population of students by virtue of having a better understanding about their experiences within the postsecondary educational setting known as the community college.

### Qualitative Tradition

Phenomenology describes the meaning of experiences lived by several individuals and seeks to understand the essence of that experience. Questions that may be answered by this type of research include (a) what do the participants have in common as they experience a phenomenon? and (b) what does it mean? Phenomenology has its roots in the “philosophical perspectives” of German mathematician Edmund Husserl (1859-1938) and has been used extensively in the social and human sciences including sociology, psychology, nursing/health sciences, and education (Creswell, 1998).

There are several approaches to phenomenology. Creswell (1998) highlighted the psychological approach, which focuses on the meaning of experiences with particular attention to individual experiences. He described the tenets of this thinking as “determining what an experience means for the persons who have had the experience and are able to provide a comprehensive description of it. From these individual descriptions, general or universal meanings are derived” (p. 53). The procedural steps associated with utilizing this phenomenological approach to research include the following:

- 1) An understanding of the philosophical perspectives associated with the approach and the primary goal of seeking to understand how people experience a phenomenon as well as the necessity to bracket one’s own preconceived notions and personal biases.

- 2) Development of research questions that explore the experiences of individuals.
- 3) Collection of data from individuals who have experienced the specific phenomenon of interest.
- 4) Data analysis that transforms statements into “clusters of meaning” and from these clusters develops both textural and structural descriptions of what was experienced and how it was experienced respectively (Creswell, 1998).

This research paradigm approaches data collection through the gathering of information from individuals that have actually lived with the “phenomenon” at the center of the study. Documents and observations can also be a part of the data collection because such information (a form of triangulation) serves to provide reinforcement or contradiction to ideas being developed. Analysis of the data is focused on significant statements, themes, and descriptions of the “phenomenon.” The narrative structure used in reporting the findings attempts to describe the “essence” of the experience as described by the study participants (Creswell, 2007) and, in doing so, ostensibly portrays what a researcher seeks to learn.

The current study was conducted using the phenomenological tradition because the overarching goal of the research fit well with this approach, to understand the collective “lived” experiences of a sample of North Carolina community college students diagnosed with ADHD.

### Sample

In contrast to quantitative research, sampling in qualitative research is purposeful rather than random in nature (Jones, Torres, & Arminio, 2006). Samples are drawn that

reflect “an emphasis on information-rich cases that elicit an in-depth understanding of a particular phenomenon” (Jones, Torres, & Arminio, 2006, p. 65). The purposeful sampling strategy employed for this study is best described as comprehensive sampling because the entire sample was selected based on the fact that participants met a common set of criteria (Schumacher & McMillian, 1993). The criteria included enrollment at a large, urban community college in central North Carolina and a clinical diagnosis of ADD/ADHD.

Ten participants were successfully recruited through the college’s Disability and Support Services (DSS) program and/or by informational flyers posted across campus. The study flyer is available for review in Appendix A. Persons with an interest in the study were asked to contact the researcher directly for further information and to arrange for an interview. Seven of the 10 study participants were directly referred by staff at disability support services, and three were recruited through the informational flyers posted across campus. Those not directly referred by DSS were required to show evidence of a current ADHD diagnosis to be eligible for participation in the study.

An informed consent document (see Appendix B) approved by the University of Nebraska, Lincoln Institutional Review Board, was utilized, and it clearly explained the purpose, parameters, and details of study. Further, the informed consent emphasized the student’s right to opt out of the study at any point in the process.

The sample included students at varying stages of life, from different backgrounds, and with unique sets of circumstances. The general characteristics of the sample are highlighted in the table below.

Table 1

*Study Sample*

<i>Sample Characteristics</i>	<i>(n=10)</i>
Gender	5 male
	5 female
Race/Ethnicity	5 Caucasian
	2 Asian
	2 Hispanic
	1 African American
Educational Goals	6 transfer students
	4 vocational/technical
Clinical Diagnosis	5 ADD
	5 ADHD
Timeframe for Diagnosis	6 as children
	4 as adults
Using Prescribed Medications	6 yes
	4 no
Employment Status	5 working full/part-time
	5 not employed
Enrollment Status	6 part-time
	4 full time

## Data Collection

Creswell (1998) highlighted four different forms of qualitative data including observations, interviews, documents, and audiovisual materials. Hatch (2002) outlined the strengths of such forms as “permitting a better understanding of the context in which social phenomena occur” (p. 72). He further noted it may also allow a researcher to gain access to sensitive information that might not be otherwise obtained based on his/her inclusion and participation in the group or setting in which the data is being collected. In other words, by virtue of the researcher’s presence and participation in the data collection setting, he/she is better able to build rapport with study participants and subsequently gain deeper levels of information and acquire greater insights.

Data collection by interviews may be accomplished through a series of unstructured, open-ended questions, through semi-structured processes, or through focus groups. Interviews may be transcribed verbatim from recordings or recorded using hand-written notes (Creswell, 1998). Given the goals and purpose for this research and the richness of information associated with data collected through personal interviews, this was the primary data collection method used for this study.

### *Processes and Procedures*

The data collection process for this study began with a steady stream of phone calls by interested students who had either been referred directly by the counseling staff at DSS or had seen a flyer about the study on campus. Students were provided with general information over the phone about the study and screened to ensure that they met basic eligibility requirements. Many students who inquired were not eligible because while they believed that they had many of the symptoms commonly associated with



ADHD they could not provide evidence of a clinical diagnosis. Approximately 25 students inquired about the study, and of those 12 were deemed eligible; however, only 10 ultimately participated in the interviews. Selection of those 10 persons was made on the basis of availability.

Actual data collection began in January 2009 with the first of two semi-structured interviews (see Appendix C). The semi-structured interview protocol provided overarching themes and associated questions, but this less formal structure allowed the researcher to probe concepts that emerged during the conversation rather than being limited by a prescribed script. The first interview was designed to collect demographic information about participants, background information about their experiences with ADHD, previous and current strategies used to address symptoms, personal and academic goals, services and accommodations used recently and in the past, and the key challenges associated with their higher education experience.

The second set of personal interviews were held during the month of May and just prior to the end of spring semester. The purpose of the second interview was primarily for follow-up, to find out what happened over the course of the semester for this group of students. The follow-up interviews were designed to collect information about semester outcomes, concerns/worries, plans for the future, changes to course schedule or enrollment status, new strategies, services, or accommodations utilized since the initial interview, greatest achievements and challenges, and overall experiences.

Each of the two personal interviews averaged about an hour in duration and followed the interview protocol in Appendix C. All interviews were audio-recorded with the permission of the participants and transcribed verbatim by the researcher in

preparation for analysis. As a token of appreciation and in an effort to minimally compensate students, a \$25.00 cash incentive was provided upon completion of each of the interviews for a total incentive of \$50.00 per student. Attrition was not anticipated in this study because of careful recruitment and selection processes as well as ongoing communication over the semester between the researcher and the study participants. These strategies proved effective as the study had 100% participation at the follow-up interview.

Arranging for and completing the interviews with students often presented challenges. The challenges were sometimes a result of students' very busy school/work schedules or simply forgetting about scheduled interviews. To ensure maximum participation rates, the participants were contacted by phone the day before the scheduled interview. Despite the reminder call, three students forgot about their interviews, but those interviews were successfully rescheduled and completed at a later date. There were also challenges associated with meeting students in a public place when the only previous contact had been over the phone. Those issues became easier as the first set of interviews progressed and the researcher became more adept at identifying the body language of students who were clearly waiting for someone they did not know.

Most of the interviews were completed in an office located within the suite of on-campus offices utilized by DSS. DSS allowed the use of a small office located just off the waiting room/reception area, which proved to be both convenient and well-suited for the task at hand. The room was small and somewhat bare but had a large window, two comfortable chairs, and a desk. The interviews began with a brief introduction that included the researcher's background and the personal and professional interests in

pursuing this line of inquiry. The introduction was followed by a review of the informed consent document, which outlined the study purpose, parameters, goals, risks, benefits, and opt-out rights. Students were given an opportunity to ask questions before signing the document and were provided with a copy of the informed consent document.

Following this process, students were given the \$25 incentive payment before launching into the interview protocol. It is interesting to note that several students said it was unnecessary to pay them an incentive as they would have participated anyway because they believed it was important work and they were interested in the results. All students accepted the incentive, but their attitudes illustrated a level of commitment to this study that was not anticipated.

Many of the students appeared a bit nervous initially. It was attributed to a high degree of uncertainty about what to expect from the interview, what sorts of questions might be asked, and how comfortable they would be in answering them. This initial discomfort seemed to dissipate quickly after the introduction piece for most participants. During the follow-up interview, students appeared more at ease, which was both an expected and desirable outcome. All participants were asked if it was okay to digitally record the interviews, and it was explained that they would be given an opportunity to review the resulting transcripts for accuracy. All participants agreed to be recorded and to review their respective typed transcripts.

### *Establishing Credibility*

Creswell (2007) said there are many perspectives on how qualitative research can be effectively validated, and that was an important aspect to qualitative study since researchers often sought parallel approaches to traditional validation. Most researchers

support the notion that validation is important in qualitative research despite the reality that the validation processes are not as widely known/accepted as those used in quantitative work.

This study utilized three verification strategies: peer review, member checking, and rich-thick description. Peer review was described by Lincoln and Guba (1985) as a process through which the peer plays devil's advocate by asking questions about the methods and interpretations of the data. The researcher utilized a Ph.D. level associate professor with a 10-year research experience in health policy and management from the University of North Carolina at Chapel Hill to serve in this role. The researcher kept notes reflective of the topic areas discussed, the comments made, and the suggestions offered by the reviewer. This process is explained in greater detail in Chapter 4.

Member checking was accomplished by requesting that each participant review the transcriptions of their interviews to ensure the information was recorded accurately and in the appropriate context. Rich-thick descriptions were used within this report to describe data collection, the analysis process, and subsequent findings. This provides the reader with the opportunity to "transfer the information to other settings and to determine if the findings can be transferred" because of common characteristics (Creswell, 1998, p. 203).

### *Ethical Considerations*

The ethical considerations related to this study included acquiring IRB approval, participant consent, data storage, incentives, and confidentiality. Institutional Review Board (IRB) approval was granted through the University of Nebraska. The approval letter is available for review in Appendix D. As noted previously, the informed consent

document was used to ensure that students were made aware of the purposes for the data collection, how the data would be used, and possible risks and benefits associated with participation. Additionally, the voluntary nature of the study was emphasized in the consent document and was re-emphasized at the start of the interviews.

No identifying information that could effectively link a participating student to a specific interview transcript was recorded or maintained. Only first names were used in the transcripts. The consent to participate forms were the only documents used in the study that included the participant's full names, and those were stored in a locked metal file cabinet in the researcher's office at Duke University. Interview transcriptions were stored on a secure computer drive and password protected with access granted only to the primary researcher.

As noted previously, students received a total of \$50 for participating in both interviews over the course of the spring semester. The purpose for providing incentives was two-fold: 1) to help student fully understand that their participation represented a service to the community college as well as to other students with ADHD who might enter the system in the future, and 2) to help students believe their efforts were of value so there was minimal compensation for the time and energy involved in participating. That minimal incentive fell below a level that would be considered excessive or too great for a student to resist, thus resulting in undue influence.

### *Role of the Researcher*

The role of the researcher in qualitative inquiry varies significantly across studies and is based on the data collection method chosen. The prolonged and sometimes intensive interaction between a researcher and a study participant in qualitative research

can introduce ethical and personal issues that should be identified and considered as a part of the overall study development (Creswell, 2003). Some of the issues a researcher needs to consider specific to their role in a study include past experiences, potential bias, personal values, and interests in the topic (Creswell, 2003). Related issues include pre-existing relationships with study participants or personal connections to a study site often referred to as “backyard” research.

While “backyard” research may present some conveniences for a researcher, there are issues associated with researcher objectivity and the subsequent reporting of uncompromised findings. The researcher in this study did not work in the institution selected for the research, nor in any other community college setting, and did not have existing relationships with ADHD students, DSS staff, or college administration at the research site. Access to study participants was achieved through a joint effort by the researcher and the DSS staff, based on mutual interest in the topic and the potential for the findings to further improve services to this population of students. However, the researcher was not completely without bias.

Personal experiences with immediate family members diagnosed with ADHD not only served as a driving force behind the development of the study proposal but could have influenced the perspective and objectivity of the researcher in some instances. To what degree that happened is not known, but it was deemed important for the reader to have the information. Whenever there was a potential for bias to emerge in the data collection and/or analysis, bracketing was utilized to identify personal experiences.

Creswell (2007) noted it was challenging at best, to totally eliminate all bias when conducting qualitative research, but it was important that researchers identified those

biases and considered their implications in all phases of a study. Identification of possible biases early in the process was believed to have eliminated the potential for future distortions or prejudicial statements.

## CHAPTER 4

### PRESENTATION OF THE DATA

In keeping with the tradition of qualitative research and acknowledging the active role the researcher plays in data collection and subsequent description of the data, this chapter is presented in the first person (Hatch, 2002). The chapter describes the type of data analysis used in the study, the process by which analysis was conducted, and the research findings.

#### Data Analysis

Data analysis for this study was conducted using typological analysis. Hatch (2002) described the typological model as dividing the collected data into groups based on predetermined categories developed from sources such as theories, common sense/intuition, and overall research objectives. Hatch (2002) noted that studies relying on interviews as the sole source of data were often focused around a set of guiding questions with the overarching goal being to gain the perspectives of individuals related to a particular topic or aspect of a topic. This focus provided an obvious place for beginning the process of developing typologies.

Hatch and Freeman (1988) conducted a study of Ohio educators' perspectives on a kindergarten curriculum and teachings that sought to understand the relationship between the philosophies of participating teachers and their practices in the classroom. Rather than directly asking educators about their philosophies, they developed a set of questions that probed their thinking and feelings about their work. Additional questions prompted participants to describe their work and how they conducted it. The initial typologies used for the purposes of analysis included educator philosophies and educator



practices. Other typologies that emerged from the study included purposes for kindergarten, classroom organization, goals and objectives, children's tasks, instructional delivery, and approaches to literacy (Hatch, 2002).

Hatch (2002) outlined nine steps for researchers conducting typological analysis including 1) identify typologies to be analyzed, 2) read the data and mark entries as they may relate to one or more of the established typologies, 3) read entries by typology and develop main ideas or summaries, 4) identify patterns, relationships, and themes within typologies, 5) read data and code entries according to identified patterns, 6) determine if patterns are supported by the data and search for non-examples of patterns, 7) look for relationships among the patterns identified, 8) write your patterns as brief generalizations, and 9) select quotes from the data that support those generalizations.

Utilizing the typological approach and Atlas.ti qualitative software, the transcriptions from the personal interviews were coded and analyzed utilizing Hatch's (2002) nine steps. This approach was selected because it is favored for understanding the different ways in which people describe or discuss a particular topic or phenomenon as well as being one of the most accessible for qualitative researchers (Morse & Richards, 2002). The comprehensive purpose of this type of data analysis is to find patterns within a framework or create a deeper understanding of a topic area. The aim is to bring all the ideas on the same topic together in one place, which aligned well with the goals of this project.

#### Data Analysis Process

The process of data analysis for the present study began with completing the transcriptions of the recorded interviews and soliciting input from participants about any

changes or corrections they deemed necessary. I made efforts to complete the transcriptions within one-week of the interview so that the information received was fresh in my mind and details were accurately reflected. After the transcriptions were completed, each participant received an email with the respective transcript attached and a request to review it for content accuracy and respond with needed corrections. The member checking process produced very few suggestions for edits, and a number of students commented that it was strange to read their own words presented in a conversational format. I transcribed the interviews verbatim, using hand written notes to augment literal transcriptions, in an effort to more fully capture the mood, tone, and even subtleties of the conversations. A sample transcript is available for review in Appendix I.

The finalized transcripts were loaded into an Atlas.ti file for coding. My next step was to re-read all of the transcripts for the purposes of identifying typologies. That process yielded a total of nine typologies as follows: diagnosis and symptoms, primary and secondary school, family support, social and life impacts, nature of transition to college, plans and goals, college academics, semester outcomes, and overall college experience. Using these typologies as overarching categories, I began the process of coding the transcripts. Initially, the codes focused on items descriptive of the sample, for example, factors such as whether or not the student was part-time or full-time, worked or did not work, and planned to transfer to a four-year school. The early coding process contributed to the development of 58 codes. That number seemed unwieldy but was useful in helping me sort the data, determine which codes were meaningful, and decide which were not especially important in answering my research questions. The codes are listed alphabetically in Table 2. Additionally, Appendix H provides an Atlas.ti report

generated from one transcript showing which specific quotations were highlighted and how they were subsequently coded.

Table 2

*Alphabetical List of Initial Data Codes*

Academic History	Factors Influencing Attendance at a Community College	New Strategies
Accommodations (college)	Family History vs. No Family History	No DSS Services
Accommodations (primary/secondary)	Family Support (what helps)	Online Learning Experiences
ADD	Full-time vs. Part-time	Other Organizations (services from)
ADHD	Goal Articulation	Overall Experience
Areas of Interest	Grades	Relative Importance of Family Supports
Attended Private School	Greatest Achievement	Semester Outcomes
Best Assignments	Greatest Challenges	Social Impacts
Best thing about Community College	High School Drop Out	Strategies Used (college)
Challenges Related to Community College	Impacts on Primary/Secondary	Strategies Used (primary/secondary)
ADHD Coach (positives)	Key Symptoms	Subjects (difficult)
Comparison (semesters)	Least Effective Instruction	Subjects (easier)
Continue vs. Not Continue	Level of Understand (social/family)	Transfer to 4-year school
Course Repeat	Life Impacts	Types of Courses (taking currently)
Degree of Family Support	Make Semester Better (Factors that would)	Types of Services (using currently)
Depression Issues	Medication (negative)	Working vs. Not Working
Diagnosed as a Child	Medication (positive)	Worries vs. No Worries
Diagnosed as an Adult	Medication vs. No Medication	Worst Assignments
Dropped Courses	Most Effective Instruction	
Duration of Enrollment	Nature of Transition	

The next step in the data analysis involved a peer review process. As noted in Chapter 3, a Ph.D.-level researcher from the University of North Carolina at Chapel Hill served in the role of peer reviewer. The peer reviewer qualifications are available for

review in Appendix G. We met for a two-hour block of time set aside to review the nine typologies and the resulting codes through a process that involved reading through two of the coded transcripts together. The reviewer made a number of suggestions for improving and combining the established codes as well as offering suggestions specific to the way that I had coded comments within the transcriptions. That process helped me to view the data from a different perspective; recognize premature assumptions I had made, develop new themes, and verify those I had already identified. I utilized the peer reviewer's guidance and applied it across all subsequent interview codings.

### Nine Typologies

Using the nine typologies listed above as general categories, I set about the task of clustering the coded data, combining codes based on similarities and developing overall themes within the data. In the end, 25 themes were established from the 58 initial codes. The resulting themes are highlighted by typology in Table 3.

Table 3

#### *Themes by Typology*

Typology (n=9)	Themes (n= 25)
Diagnosis and Symptoms	1: Academic Difficulties
	2: Behavioral Issues
Primary and Secondary School	1: Grade Retention
	2: Self Esteem/Social Issues
	3: Attention and Focus Difficulties

Table 3 continued

Typology (n=9)	Themes (n= 25)
Family Support	1: Lack of Understanding about ADHD 2: Familial Frustrations
Social and Life Impacts	1: Lack of Understanding about ADHD 2: Difficulty Maintaining Links with Peers 3: Life Long Impacts 4: Pervasive Depression
Nature of Transition	1: Early Independence Impacts Transition 2: Cost/Convenience/Exploration
Goals and Plans	1: People and the Arts 2: Lofty Goals
College Academics	1: Limited Interaction with DSS 2: Medication Matters 3: Know Thyself 4: No Lectures Please!
Semester Outcomes	1: Trouble Keeping Up 2: No New Strategies 3: Making it Better Next Time
Overall College Experience	1: Networking and Socialization 2: Challenges 3: Achievements

### *Diagnosis/Symptoms*

Six of the 10 participants indicated they had been diagnosed with ADHD as children (under 18 years of age). I asked participants about the kinds of symptoms they experienced leading up to their diagnosis and the following two themes emerged: 1) academic difficulties and 2) behavioral issues. The following quotations are examples of supporting commentaries.

#### Diagnosed as children:

My first grade teacher brought it to my parents' attention because I was unable to finish my class assignments. She said that is was not because I wasn't smart. When I was left alone to work, I wasn't able to do it. They took me to a doctor (psychiatrist) and I was diagnosed by 2<sup>nd</sup> grade.

When I was little I had problems with spelling and grammar. I have always been a slow reader but they didn't figure it out until I got into high school.

My parents had me diagnosed because I got in trouble a lot. I always did well in my studies but I was never focused and always on little tangents.

#### Diagnosed as adults:

I was experiencing academic problems as well as social. I was having learning difficulties and trouble managing my time.

ADD is a constant battle about not being able to finish anything.

I procrastinate.

The types of symptoms described in these examples [inability to complete classroom assignments, difficulties with reading, behavioral issues, poor time management skill and organizational skills] are consistent with those outlined by the Centers for Disease Control (2008) and the National Resource Center on ADHD (n.d.). Table 4 highlights the core symptoms noted in the literature and the corresponding

frequencies of key symptoms expressed by study participants regardless of when they were diagnosed.



Table 4

*ADHD Symptoms Experienced by Study Participants (n=10)*

Prevalent Symptoms	Frequency
Poor Organization	1
Poor Time Management	2
Reading Problems	2
Inability to Concentrate/Focus	4
Poor Writing/Note Taking Skills	0
Low Self-esteem	2
Poor Social Skills	4
Absence of Clear Goals	0
Procrastination	1
Lack of Persistence	3
Poor Sleep Habits	0

*Note: Numbers do not add up to 10 as some study participants noted more than one symptom.*

*Primary and Secondary School*

A key assumption I made in exploring ADHD among college students was that students' perceptions of their community college experiences are not shaped solely by the time they have spent enrolled in college. Feelings, expectations, and attitudes about postsecondary education are likely shaped much earlier in life, taking root during the primary and secondary school years. To understand the experiences of students in a postsecondary educational environment it was important to know about their earlier

educational experiences, particularly as they may have been impacted by ADHD. During the first interview, I asked students about their educational experiences in primary and secondary school including any accommodations they may have received, any strategies they used to manage symptoms, what they believed to be the overall impacts of ADHD, and earlier academic outcomes.

*Accommodations.* Three of the six participants diagnosed as children had accommodations in primary or secondary school, such as tutoring, extended test time, a separate testing location, open-book testing, and alternative test formats such as multiple choice or true-false questions.

*Impacts.* The apparent impacts ADHD had on primary and secondary educational experiences for the 10 study participants ranged from relatively minor to substantial, but all noted they believed it had had some negative impact. The following three themes emerged from this typology: 1) grade retention/high school dropout, 2) self-esteem and social issues, and 3) attention/focus difficulties. The subsequent comments are illustrative.

I was held back in second grade because of my difficulties with phonics. My teacher was willing to pass me but my parents made the decision to keep me back. Of course that didn't really help but I progressed on.

I was always looking out the window, daydreaming. What I would find was I would be in the classroom and she would be talking and she would say a word that I didn't know and I would be thinking - I wonder what that means and I would sit there and think about it. By the time I was paying attention again she was three sentences on so I was a bit lost and behind. It was unfortunate because they had the red table and blue table and green table and so on. The red were As and the blue were Bs and the green were Cs. I would vacillate between the C table and D table. Some days I could pay attention and some days I couldn't. I would talk to the other kids and I didn't think they were that much smarter than me but I just couldn't recall or come up with the information. I think it also impacted me socially. I was feeling inadequate and I think it made me withdraw. I

don't think other kids thought there was anything wrong, rather it was internal or my own self-image.

When I was younger I couldn't really keep my attention on what I was learning so a lot of times I had trouble with classes. I would always have these little activities that I would start and never finish because I got bored. I had real difficulty with follow through. My grades were fairly average with some peaks and valleys. If I was interested in a class then I would do well but if I wasn't interested in it then I didn't do so well. Like in math, I hate math. English I always did well in because I love reading but not math. I taught myself to read in pre-school.

I had challenges in elementary school and I had trouble paying attention. I also misbehaved some. I had reading problems, especially reading comprehension. I could read the information but I could not really connect my thoughts. I could see something but I couldn't really incorporate that information. I don't have much problem with memory- it is more comprehension. I did graduate high school but I repeated 2<sup>nd</sup> and 3<sup>rd</sup> grades.

I was given medication and sent on my way and I wasn't doing fine in school. I mean I was just a little boy. I think my family didn't realize that I also needed counseling because I wasn't doing well. I did badly with the medicine but horrible without the medicine. I could have used support services but I don't think it was available back then. We are talking about 1986 or so and they just didn't know as much back then.

Two students noted they had been retained in one or more grades and considered those events as likely detrimental influences on their self-esteem and socialization experiences. Two persons indicated they had not graduated from high school primarily due to issues of depression. Others described feelings of inadequacy and poor self-image as a result of academic performance. Pronounced difficulties in focusing attention and completing projects/tasks, as well as encountering challenges connecting thoughts and recalling information were also noted as having deleterious influences on subjects' primary and secondary education. The findings are supported in the literature (Baverstock & Finlay, 2003; U.S. Department of Education, 2003) showing that students

with ADHD, when compared to peers not affected by the disorder, tend to have persistent academic difficulties often resulting in lower grades, increased incidence of grade retention, more expulsions, increased high school dropout rates, and lower rates of college matriculation.

The above comments reflected the types of challenges study participants faced in primary and secondary school and help lay the groundwork for further understanding of how these earlier experiences have impacted postsecondary educational pursuits.

### *Family Supports*

During the initial interview, I asked students about the level of support they were receiving or have received from family as it related to ADHD and how important that has been in helping them manage it. Within this typology two key themes emerged: 1) lack of understanding about ADHD as a psychological disorder and 2) familial frustrations with ADHD symptoms.

*Lack of understanding.* All participants indicated they felt they had good support systems in place but only three noted that those supports had been of primary importance in helping them manage the disorder. It might have been because the general support described was not always accompanied by a corresponding level of understanding about ADHD as a clinical psychological disorder. That point was purported to mean that true “understanding” would go beyond just accepting the disorder and extend to recognizing the symptoms and helping develop both effective and helpful corresponding strategies for dealing with them.

Needless to say it was really hard growing up with ADHD. I know my family has tried to be supportive in their own way but at the same time the biggest thing I see is that people just don't understand how it works.

My mom would tell me two days before that she understood that I was struggling and then she would turn around and say, “get on the ball and do this and do that” – really chewing me out. It is a bag of mixed messages.

My mom can be very harsh. I think only because she knows no other way of expressing herself. If she says something it is because she may not know the kind struggles that I am facing. Also, because she doesn't know how to cope with that. She says you just need to be quicker.

Some people think of it as an excuse. It is really not an excuse because it really is hard for me to focus and keep up in a class or when I have to manage so many things.

*Familial frustrations.* When asked about the degree of family support received, students felt generally supported by family, but stated that family members were not without frustration in dealing with some aspects of their ADHD. The following comments help illustrate the above point.

Even when people understand how ADHD works just having to live with me and live with the way I am can get them aggravated. There is a lot of negativity thrown at me. Things like what is wrong with you? You are just lazy. In a way it is a kind of abuse.

My mom was really positive and she supported me no matter what. She expected the best out of me and if I put forth my best effort she was grateful. She also attempted to understand ADD but the negative aspect was that even though she tried to understand, she flipped that around on me sometimes and that wasn't all that helpful.

I think it is more than they just understand why I act a certain way or say the things that I say. You know I say the first thing that comes to my mind and that gets me in trouble a lot. I think with family, they understand and try to just let it roll off their backs.

Overall, it appears that while students felt supported by family, such support was not of primary importance in living with and managing ADHD for most of the participants. The absence of a true understanding of this psychological disorder often led to frustrations for parents, siblings, and partners negatively impacting relationships and perhaps diminishing the overall value of familial supports from the perspective of

participating students. Such a finding presents an interesting contrast to research conducted by Grenwald-Mayes (2002) and highlighted in Chapter 2.

Grenwald-Mayes (2002) found that families characterized as providing positive emotional environments played an important positive role in how college students with ADHD perceived their quality of life and by extension, impacted academic and life successes. It might be that the participants did not recognize the importance of familial support and/or environment in their psychological well-being and/or personal success in overcoming some challenges of ADHD, or simply did not choose to attribute it to that. Conversely, it is also possible the study participants did not come from families that provided positive emotional environments. Grenwald-Mayes (2002) noted that the family environments of children with ADHD are often more negative and include higher levels of family conflict, more marital problems, greater use of punitive child-rearing methods, and increased stress levels.

### *Social and Life Impacts*

Social interactions with peers are an important component of an overall educational experience. Such interactions serve to not only enhance the college experience but also provide a foundation for learning to work with other adults from diverse backgrounds and perspectives. While positive social interactions with peers have the potential to serve students well in both their professional and personal life endeavors, students with ADHD oftentimes lack the appropriate social skills to facilitate such interactions. Individuals with ADHD can exhibit behavior that may be viewed by others as impulsive, disorganized, aggressive, overly sensitive, intense, emotional, or disruptive. Those behaviors can result in misunderstandings and/or miscommunications with family

members, peers, friends, co-workers, and spouses leading to negative social consequences (Centers for Disease Control, 2008).

I asked the interviewees to describe how ADHD impacted their social lives and/or relationships with peers. Also, I asked about life-long effects of the disorder in the interest of understanding how students considered ADHD impacting them beyond college, if at all. Four themes emerged from this typology: 1) lack of understanding, 2) difficulties maintaining links, 3) life-long impacts, and 4) pervasive depression.

Students were unanimous in saying that ADHD had had significant social impacts on their lives. The spectrum of effect ranged from friends feeling slighted because of forgotten birthdays, to sensing peers were displeased to the extent of conveying the impression they had been rebuffed.

Immensely but not as much when I am hanging out with friends. More so when it comes to partners - that is devastating. They just don't understand. Sometime you try to show them proof to help them understand. It has gotten to a point where I question why I should even be in a relationship because I am such a burden to them. I have heard criticisms like I am kid and I can't focus on simple things like keeping the house clean. For example, there can be a big mess in the kitchen and it just becomes part of the background to me. I don't see it. When it is pointed out to me - I think oh my god how could I let this happen and then I get into this punishing thing and start thinking what is wrong with me?

In high school I didn't really feel it had any impact. I would say sometimes it affects my friends and family in terms of them questioning my priorities and I only say that because I am really bad at dates. Birthdays and stuff - birthdays really trip me up.

I don't always stay in contact with friends especially when I am involved in other things. The same thing is true with my boyfriend - there are little things that get on his nerves.

I think it has. You tend to be more attracted to other people with ADD because they can understand you better. I have had two relationships and both have had ADD one was diagnosed and the other wasn't. Thankfully

my daughter doesn't have it. When I had her I was feeling like Forrest Gump you know "is she like me?"

I tend to get along better with older adults than with my peers. I think my peers are not understanding about why I am impulsive, interrupt or repeat myself. In high school I used to get groans when I would ask questions.

Well, I have this problem in that I make friends and stay friends with people for a little while but then we tend to go our own separate ways. I struggle with maintaining the link. I really do not like talking on the phone so either online or face-to-face works better for me. I have difficulty speaking, like right now and I have trouble talking and I stammer a lot and I really don't like that. My favorite way is online where I can type and people can understand me.

That is another big one. I miss social cues. I can be very abrupt and blunt. I miss body language and gestures. I can sometimes be misinterpreted. If I meet someone, for example, I don't do the follow-up things like calling someone. For me out of sight is out of mind and I don't think about those things.

Because of my ADHD I tend to repeat myself or ask a lot of questions and when that happens, it tends to repel people.

*Lack of understanding.* This was also a theme within the family support typology and a common theme within this area of discussion. Students described relationship difficulties rooted in an apparent lack of understanding on the part of others about the effects ADHD symptoms can have on daily functioning. It was also suggested that there might be a tendency to be attracted to others with ADHD or older adults because they have a greater understanding or acceptance of the inherent challenges.

*Maintaining peer connections.* Difficulties specific to maintaining connections with friends was also mentioned. One student described it as "out of sight, out of mind." The inability to maintain connections with peers conceivably led to social isolation and depression. Faigel (1995) supported this thesis saying that the challenges for students with ADHD in maintaining peer relationships may be related to short attention span, distractibility, and the divergence of conversation making it difficult to make sustainable



connections with peers. The author further suggested that a limited circle of friends and the absence of close friendships can contribute to isolation and feelings of worthlessness.

*Life impacts.* In describing how they felt ADHD would impact their lives beyond college, the students' responses were both thoughtful and astute. The following quotations are examples of the comments made.

It still will affect me career wise. I have found that there are certain jobs that my ADHD really affects. For example, I can't do menial labor. I just can't move fast. Other jobs where they have to do with problem solving or critical thinking I do very well. I think that the kinds of jobs that I choose will be critical to my success.

Oh yeah especially in decision making. I think that I will have to choose things that are more stimulating. School provides structure and fills in the gaps during the day so when that is done I don't know how I might be impacted.

It will be much like it is in school. With ADHD, sometimes I could concentrate on one thing to the exclusion of everything else and at other times I get distracted by everything. My stride gets interrupted but it kind of varies depending on how interested I am in what I am doing. I think that will be much the same with working and will try to do more of the former than the latter. I don't see it impacting my social life because I am not a very social person anyway unless it is related to friendships with my fellow employees whoever they may be.

I think when I finally have children the chances are I will be impatient. I could overlook a lot of their problems because ADHD people tend to be self-centered or wrapped up in their own thing so I may not see some of the signals from my children that I might otherwise notice.

It will impact my life but with my medication, I am able to cope better and interact with people and concentrate on what I am supposed to do. I think that I will have a sense of relief because my symptoms are centered around school. I won't have to worry about school and I can just concentrate on my job and making a living. It will impact my life but in a different way.

Again, all study participants acknowledged that ADHD probably would be something to contend with for the rest of their lives, and would have pervasive impacts

upon their careers and family lives. The students recognized that career choice was critical to their success and was interpreted to mean that maintaining employment opportunities in fields they consider to be of high interest or those that are more intellectually stimulating was of paramount importance. This notion has support in the current literature. Schirduan et al. (2002) considered the cognitive abilities of students within the framework of eight “types of intelligence” and found that more than half of participants with ADHD had “natural or spatial” types of intelligence (p. 324). The natural or spatial type of intelligence does not align well with the linguistic and logical types of intelligence most suited for and valued within, educational systems. This was considered to mean that students with ADHD learn/perform better when they are highly interested in the material/topic or when specific activities are novel or perceived as more important (Reaser et al., 2007).

Family functioning was another life-long effect expressed, with one student offering that he expected to possibly have parenting challenges as a result of being self-absorbed and out-of-touch with his children. It is interesting to note that the student’s father also has ADHD, so his concerns likely were based more on personal experiences from his own childhood rather than simply predicting possible effects.

*Depression and substance use.* Students with ADHD are also more likely to exhibit emotional instability, have increased risks for substance abuse, and experience low-self esteem (Secnik et al., 2005; Swartz et al., 2005). In seeking to understand the prevalence of these kinds of issues and their effects on the college experience, I asked students if they had ever had bouts with depression or substance abuse. Eight of the 10 participants indicated they had experienced periods of extended depression. Six said they

had been clinically diagnosed as depressed, and most had or currently were taking a prescribed medication to treat depressive symptoms. The finding is consistent with current literature. Secnik et al. (2005) found in a matched comparison of more than 2,000 adults with ADHD that depression and anxiety were the two most common comorbid conditions. Also noted from the available literature was the fact adults with ADHD were five times more likely to report depression and four times more likely to report anxiety as compared to the control group.

One student indicated they had abused drugs and alcohol in high school but said it was no longer an issue. One other noted that he was using marijuana at the time of the study but usually did not drink alcohol. Given that youth and adults with ADHD are more likely to abuse substances or exhibit other kinds of addictive behavior, it was surprising that more of the interviewees did not report those kinds of challenges. It is also possible that students were not forthcoming about such difficulties.

A study by Meaux et al. (2009) found addictive behavior to be a considerable problem for students with ADHD in managing college life. Forty percent of study participants admitting they believed they were addicted to playing video games and 20% indicating they had experienced consequences associated with binge drinking, specifically unwanted interactions with law enforcement. The relatively low level of substance abuse within this study population could be related to the fact that 6 out of 10 were taking medication to treat ADHD during the study. The use of medication has been found to reduce the risk of substance abuse by up to 85% in youth with ADHD (Secnick et al., 2005). While it is not definitive that such advantages translate to an adult

population, it is plausible that psychostimulant medication may have had a positive impact in this regard.

### *Nature of Transition*

A bumpy start to college can be difficult to overcome, particularly for students who struggle academically or socially. In further pursuing my understanding of how this group of students has experienced college, I wanted to learn more about their perceptions of how it began. To that end, I asked students about their transition to college from high school, why they selected a community college, what apprehensions they felt, and what aspects proved difficult. Two themes emerged from this typology: 1) early independence impacts transition and 2) cost/convenience/exploration.

Half the students described the transition of moving from a secondary to postsecondary school environment as difficult. The remaining half felt the process was easier with an interesting commonality among this latter group. Three of the five who described easier transitions had lived independently of their families either during the latter portion of high school or right after high school but prior to beginning college. The students noted that living on their own prior to starting college helped them establish the self-discipline and responsibility they needed for a successful transition to college. The following quotations help further support the above idea.

My last year of high school I lived in a collective house that was made up of all different ages. We met every two weeks to make house decisions so I learned independent living skills. I didn't have any apprehensions about starting college; I embraced it with open arms.

I took about a year and a half off and worked. I lived on my own in high school- took care of myself, got myself up in the morning, etc. I think I was ready for college because of that.

Five of the 10 students indicated they had initially started college at a four-year institution and later transferred to the community college. Of those, three claimed to have had more difficult transitions but it was noted that they had not lived independently beforehand. The kinds of challenges described by the above subset are highlighted in the subsequent comments.

Before I came here, I started at a 4-year college. Academics were no problem. I didn't really have much apprehension about the academics. I am smart and have always been okay there. I think the most challenging part was living independently. I went home almost every weekend. Even though I live back home with my parents now, I am still working on the independence thing.

I was apprehensive about being two and a half hours away from home and if something went wrong I couldn't just call my parents to come get me. When I was growing up I was very unmotivated to get out of bed and go to school so my mom always had to wake me up. I am much better about that now but when I went away to school I kind of missed that. Telling me to go to class, do my homework, etc. and giving me nudges to stay on track.

I had some culture shock when I first went to college. The lifestyle is just so different. There was a lot of distraction. I was worried about how I was going to take care of myself. I was worried about my future whether I would come out with flying colors. I was a bit depressed.

*Choosing community college.* I asked students why they chose to attend the community college and what factor(s) influenced that choice. Three students noted that the lower costs for tuition were an important contributory factor in their decision to attend community college. Three also mentioned that the school was very close in proximity to home making it more convenient to attend. Three noted they were not sure what they wanted to do and attending the community college provided an opportunity to explore their interests before making any decisions. Others mentioned they felt they would not have qualified to attend a four-year institution based on academic performance in high

school or that they did not want to take the SAT or ACT. Examples of the comments made are provided below.

Vocational Rehabilitation Services recommended that I come here because they thought it was a good school for people with ADHD. I came here because it was closer to my home and I wasn't sure what I wanted to do and I heard that it was cheaper.

I didn't want to torture myself with the SATs or ACTs. I found out in high school that I could go to community college first and then transfer to a 4-year college. On top of that I wasn't sure what I wanted to do exactly and I thought it would be a waste of money if I went straight to a 4-year school.

It is easy to enroll as compared to a 4-year school where you really have to go full-time. Here I can do a lot or not a lot. The universities just seemed more intimidating to me when you don't know where you are at.

My brother went here and is now at a 4-year school so I am kind of following in his footsteps.

The above findings indicate that students who lived on their own early in adulthood and/or prior to reaching adulthood found the transition to college easier. It seemed reasonable to believe that living independently necessitated the development of increased self-discipline and responsibility. Furthermore, those who started at a four-year institution directly from secondary school tended to experience greater challenges with their transition to college. This would be expected given that most students experience some level of difficulty with college transition but these issues may be compounded somewhat for students with ADHD due to poor time management and organizational skills.

The literature offered that the reasons for such difficulty transitioning from secondary to postsecondary school were rooted in the fact that most new college students suddenly were exposed to greater amounts of unstructured time, coupled with greater

demands academically when compared to secondary school (Rabiner et al., 2008; Wolf, 2006). Such combinations, in addition to less structure and support from family and teachers, may increase the challenges associated with transitioning to college for all students, but may be particularly profound for students with ADHD.

The reasons offered for choosing a community college make sense on both economic and academic levels and further support the notion that community colleges may be disproportionately affected with regard to the overall number of enrolled students with ADHD. Such students probably choose the community college system in larger numbers because of academic underachievement in high school and a subsequent lack of clear academic goals, as well as other transitional issues. Regardless of the motivating factors, the fact remains that a disproportional number of students presenting ADHD symptoms elect to pursue postsecondary goals at community colleges.

### *Goals and Plans*

To more fully understand the experiences of the students studied, I thought it would be telling to ask about their plans for the future, areas of interest, and academic goals for the semester. Current and previous academic experiences may play a major role in goal formulation and in shaping plans for the future. I was also interested in knowing why they believed their chosen fields or occupations likely were a good fit. Two themes emerged from this typology: 1) people and the arts and 2) lofty goals.

As noted previously, 6 of the 10 students had plans to transfer to a four-year institution and complete a bachelor's degree. The remaining four were enrolled in various technical or vocational studies such as computer programming/information systems, architecture, occupational therapy, and pharmacy technician programs. Of those

who were working on transfer courses, the areas of interest were broad but tended to lean toward the arts and away from more core academic subjects like math, English, or the sciences. Three of the six students who were working toward transferring had interests in the arts and music, one was interested in hospitality and tourism, one in seminary school, and one in pursuing a law degree. Table 5 highlights the areas of study and the reasons students offered for choosing them.

Table 5

*Selection of Study Area*

Areas of Study	Reasons for Selection
Architecture	I have always loved building things starting when I had legos as a little kid. I would build houses and space ships and stuff. I was fascinated with buildings in general and it is just something I would really like to do.
Art History or Design	I am passionate about this field. I am a creative kind of person. With having ADD you tend to find things that are more visual or more with your hands rather than reading.
Computer Programming	My counselor suggested that I work with computers because I am actually pretty good with them. I don't know as much about programming but I am good with fixing and repairing. It is not a passion of mine but I am good at it.
Graphic Arts	I knew that I was interested in computers but I wasn't sure. I ended up getting an AA degree in information systems but since I was interested in web technologies as well, I was taking those classes too. All of this helped me decided what I really wanted to do - graphic design but more of the technical aspect.
Hospitality/Tourism	I got into hospitality and tourism on a whim. I had worked in food service. When I first got into college I didn't know anything about looking at other programs to see what you like. I just went into something that I knew about.



Table 5 continued

Areas of Study	Reasons for Selection
Law	Growing up I always thought that I would either be a doctor or a lawyer and I chose to be a lawyer. I always assumed that I had the intelligence to do what I wanted to. I want to go into corporate law. I think it would be a good fit for me because I am sociable but also very logical and rational in my mind.
Music	I am really interested in vocal performance and just learning about music and maybe going on to grad school. Maybe working in a church or teaching vocal lessons. It is just something that grew on me and thankfully it is something I am interested in.
Occupational Therapy	I plan to work in the field of occupational therapy. I can't hurt anyone. We don't give medications and that makes me feel good. I worry about making mistakes. I can be scatter minded and I am very bad at multi-tasking.
Pharmacy Technician	There is a great demand for pharmacy technicians because there is a shortage. I like this field because dispensing medication is a physical task but there are various other job duties associated.
Seminary School	I want to be a minister. After I complete my BA in Psychology, I plan to go to seminary school. I think it is a good fit for me because it is the best of all worlds. It ties into many of my interests and would allow for lots of interaction with people as well as a chance to help people.

Knowing about the long-range plans and goals of this group of students was helpful for understanding further how students view themselves in the context of an academic environment, what they believe they are capable of accomplishing, and how they viewed education as being beneficial. It was interesting to note that 6 of the 10 students selected areas of study that typically lead to jobs allowing for a high degree of creativity (arts) or tend to have considerable interactions with people or the general public.

Faigel (1995) offered that a short attention span often leads people with ADHD to shy away from careers that require sustained attention or attention to detail (such as accounting) and toward jobs that lent themselves to switching tasks frequently (such as sales). Four of the 10 students did not reflect that tendency with regard to their chosen areas of study, but instead selected fields that require significant concentration and attention to detail such as architecture, computer programming, law, and pharmacy technician.

*Goals.* I also asked students about their goals for the current semester and found that many had set lofty goals for academic performance but very few could offer specific strategies they planned to use in reaching those goals. Examples of the goals articulated follow.

Since I am only taking two classes, I am going to try to get solid Bs if not As. I don't want to say As because a lot depends on the teacher. I am back on my meds now regularly and I am hoping that it will start integrating into my system and I can start getting on a better routine. Even simple things like making sure I take a shower first thing in the morning. I want to be more structured in my school work because I have tried to put my academic stuff before my life stuff and life stuff always seems to interfere. This time I decided to organize my life stuff and then organize my school work next.

Just graduate! The rest is just personal stuff. Graduating and transferring.

A 4.0 GPA would be a good goal.

I want to get a C or higher. know most people shoot for As but as long as I am passing then I feel okay. I guess that isn't a good thing for a college student to say.

All As is kind of always my goal. No specific strategies because I can sit down and focus for five hours if I need to. If I know something is pressing or I convince myself that it is I can put all my effort into it.

I really want to pass this biology class with a C or higher. I would like to bring my weight down - health wise. I plan to try to watch how much I eat and exercise. I get up at 5 am and by the time I get home it is 6 pm and I

am weak and exhausted. I am also doing a study group for the biology. I am recording the lectures and rewriting my notes so that they are organized. It helps for retaining the information.

I want to get good grades and find a new place to live.

One of the key reasons for conducting the second round of interviews was to learn how those students ultimately fared in reaching their goals for the semester and moving toward the plans described earlier. Later in this report I highlight the results of the semester for participating students.

### *College Academics*

Academics obviously represented a significant proportion of the overall interview focus for this study. I asked students a variety of questions related to academic performance in college, types of accommodations received, their effectiveness and the relative importance of their DSS counselor, subjects and assignment types they found the most difficult/easy, least/most effective instructional styles, and strategies employed to overcome the challenges associated with ADHD. Four key themes emerged from this typology: 1) limited interactions with DSS, 2) medication matters, 3) know thyself, and 4) no lectures please!

Individually and collectively, the previous academic performance of this group of students was surprisingly good given that the literature indicates that students with ADHD were at significant risk of academic underachievement (Barkley et al., 1990; Heiligenstein et al., 1999; Lee et al., 2008). It is also possible that those 10 students were not candid with regard to their academic histories in order to avoid embarrassment. The design of the study did not incorporate checking student records for verification. The following quotations highlight how students described their grades in previous semesters.

I got all Bs initially but I also started off with the easiest classes.

My first year here they were really good but by my third semester when I had to fulfill my prerequisites my grades started to fall.

I currently have a 3.9 GPA.

Last semester (my first semester) I got a B and a C.

I think that I have done pretty well. I am in the honor's society.

My grades have fluctuated between As and Ds. I don't get As in Math.

Up to now I have had a 3.0 GPA but I don't really have any worries.

My GPA last semester was a 2.8.

Last semester I had my best GPA ever, it was a 3.0.

Last semester I got an A and a B.

*Current accommodations.* Six of the 10 students told me they had a plan in place that outlined specific accommodations approved through DSS. Some of the accommodations described were extended test time, separate testing, assistance with acquiring class notes (either the instructor's notes or another student's notes), oral or multiple choice exams rather than essays, the use of computers for assignments and tests, and lectures on tape (provisions that allow students to record lectures). Most said the accommodations were useful but they did not use them all every semester. Only three of the students indicated they had actually met with their DSS counselor during the current semester. Four students did not have any accommodations and did not utilize any counseling services at DSS. It is important to mention that the three students who had not met with their respective counselors during the semester had fairly negative semester results including dropping one or more classes or failing to receive a passing grade in one or more classes. Table 6 highlights this information.

Table 6

*Use of Accommodations/DSS Counseling Services*

<i>DSS Services</i>	<i>Number of Students (n=10)</i>
Current Accommodation Plan in Place	6
Met with DSS Counselor in Current Semester	3
Did not Meet with DSS Counselor	3
No Accommodation Plan in Place	4

*Strategies used.* Students offered a number of interesting strategies they have used to aid them in managing ADHD specific to school but also life in general.

I have started using Google calendars. It sends me a text message to remind me of things that I am supposed to do. For example, it sent me a text to remind me of this meeting with you today. I also take my medication and my DSS counselor gave me some strategies to try like breathing techniques and exercise.

I really find that Gingko (herbs) helps but I don't always take that and I don't always buy it but that is another story.

Medication is a key strategy for me because it enables me to study. Life experience has helped this too. I have a friend who is tutoring me two times per week for my math class.

Medication when I feel I need it and fish oil pills. I actually feel that marijuana helps with ADHD. I did some research and found out that in Chile they prescribe it for ADHD. It has a calming effect but still allows some degree of focus.

I really like using the library because it is really quiet. Nothing ever really happens in there so I am not distracted because I am really easily distracted. I like that space where there is just closed in walls so I can focus. If I look up - I just have to remind myself to get back to work.

Exercise helps. I do yoga and breathing exercises. That helps with stress and anxiety.

The use of calendars was mentioned by two students and two others mentioned they have utilized natural herbs, both the legal and illegal varieties. Outside tutoring, regular exercise, and breathing techniques to manage stress and anxiety were also mentioned as strategies. Additionally, identifying an ideal study location free from distractions or interruptions was noted. Six of the 10 participating students said they were taking a prescribed medication for ADHD at the time of the study and of those, two considered it a primary strategy in managing the symptoms of ADHD. Meaux et al. (2005) had similar findings among a sample of 18 university students with ADHD noting that students cited taking medication, utilizing alarms and reminders, and removing distractions as strategies that helped manage daily life. Since the use of ADHD drugs was indicated for 6 of the 10 students in the present study, a number of positives and negatives associated with using medication to treat ADHD were discussed.

I think people with ADHD tend to have unique personalities and I think the drugs can take that away and make you different. It makes you kind of go into a cocoon. When I am not on my medication - I will talk to someone at random like at a gas station but when I am taking my Ateral I don't really talk to anyone.

One negative thing about medication is that I don't really eat much. The problem is if I don't take it for one day it is like a switch turns off in my head. I am able to eat though.

Ritalin has worked, I mean the first day I took it, and a light bulb went off. It made me cry because it was so profound. I noticed a difference in every area of my life. My Dr. asked me to keep a log of how I felt and also to have someone I work closely with keep one. I asked a lady I work with to fill out a daily sheet about my behavior. My colleague was astounded. I stopped interrupting (I could never have a conversation with someone without interrupting before). The reason was that if you carried on talking and I had to wait until you were finished, I would forget what I was going to say. With the medicine I immediately stopped interrupting.

I got off of it after high school because I wasn't going to school so I figured that I didn't need it. I did notice that other parts of my life were

starting to suffer. Daily routines were hard for me to manage or keeping up with appointments.

I am grateful that I wasn't put on medications because in high school I saw a lot of my friends - some of them had other disabilities and some had ADHD and I could tell it was like night and day when they were on it and when they were not. Some of them who were taking meds, especially those who were artists, were depressed because they felt they lost creativity when they were on it. At the same time, I did see a couple that it really did help. Another reason I am grateful is it forced me to acknowledge that I really do have ADD. I think it helped me to confront it and deal with it. I felt taking medicine would be passive and not force me to work on my faults. I would also be afraid that I might lose some of the positive aspects associated with my ADD. I know that it also comes with negatives if I work on those maybe one day I will have the best of both worlds.

Based on the examples above, students seemed to derive significant benefits from the use of medication and in some cases noticed the absence of those benefits upon discontinuing the use of medication. Others said medication had too many negative side effects, including aspects that may influence personality or creativity.

*Subjects and assignment types.* During the initial interviews, I asked students about the kinds of classes or subjects they found to be the most challenging as well as those that were relatively easier for them. Additionally, I wanted to know what types of class assignments they preferred and what types they found to be more difficult. I was especially interested to learn if these preferences would line-up well with their chosen fields of study and career plans described earlier. In other words, I wondered if students were being realistic about selecting their areas of study based on what they knew about their own academic strengths and weaknesses.

Nadeau (2005) noted that appropriate career selection can be critical to the success of adults with ADHD, particularly given their propensity for challenges related to executive-level functioning. Poor time management, disorganization, and difficulties

with self-regulation can lead to missed deadlines, cluttered offices, misplaced paperwork, and an inability to prioritize projects or work independently. The author notes that for the many young adults with ADHD, a comprehensive assessment may be necessary and can include a clinical interview to examine work history and/or current workplace issues, neurocognitive testing to measure strengths and weaknesses, psychological testing to identify comorbid conditions, personality testing to assess temperament and values specific to career, and interest testing to determine the goodness of fit between interests and career choice. The goal of such an assessment is to determine if interests and abilities are indeed compatible and where they are divergent to provide guidance in a new direction that may allow the greatest chances for success.

Table 7 highlights what each of the students described as their most difficult/easy subject and least/most favorite type of class assignments arranged by chosen area of study.



Table 7

*Subject and Assignment Preferences based on Chosen Area of Study*

Area of Study	Best Subjects/Assignments	Worst Subjects/Assignments
1. Architecture	Architectural Design Drawing and Auto CAD	Math Group Projects
2. Art History/Design	None Noted	None Noted Oral Presentations
3. Computer Programming	Religion, Psychology, Ethics Group Assignments	Math None Noted
4. Graphic Arts	History, Philosophy, Tech Group Assignments	English and Math None Noted
5. Hospitality/Tourism	Business Management Group Assignments	Math None Noted
6. Law	Sciences, Philosophy, History Individual Assignments	Spanish and English Group Assignments
7. Music	Music and Math	Foreign Languages
8. Occupational Therapy	Arts and Sciences	Math
9. Pharmacy Technician	Computer Technologies Multiple Choice Tests	Math Essays
10. Seminary School	English and Music Interactive Activities	Math None Noted

According to Table 7, most but not all of the students selected fields of study that match their impressions of subject areas they excelled in and assignment types they preferred. For example, the 6 participants who planned to be engaged in professional work associated with a high degree of interaction with people, including team-based work environments, tended to prefer group assignments and oral presentations. Those who selected careers typically less collaborative in nature, such as Architecture and Law, noted that group assignments were their least favorite. It is interesting to note that seven students mentioned Math as their least favorite subject area. The other subjects mentioned most often as the “least” favorite were English and foreign languages.

*Instructional styles.* The participants were asked about preferred instructional styles; the types of instruction they believed was the most/least effective in facilitating the learning of new material. Six indicated that lecturing was the least effective instructional style noting the challenges associated with paying attention to a speaker for extended periods of time. For instance,

Lecture is the worst unless it is something that I am really interested in and even then I can't take notes. If I start trying to take notes then I can't listen to what is being said and I stumble all over myself. I can pay attention but it doesn't seem to help.

Lectures are boring and they are hard to stay focused on.

The majority of students said the most effective instructional style or format was a hands-on or an interactive learning environment. Students seemed to struggle a bit with how to articulate what instructional style they preferred but almost all used terms like “hands-on” or “visual.” Others noted that an instructor with a good sense of humor and a bit of humility provided the best instruction. Still others mentioned that a small class size allowing for more one-on-one interaction with the instructor provided the best results.

### *Semester Outcomes*

I conducted a follow-up interview with each participant at the end of the semester to see how they had progressed, to learn about any new circumstances or changes since we had met last, and get a sense of their overall experience during the semester. Three themes emerged from this typology: 1) trouble “keeping up”, 2) no new strategies, and 3) making it better next time. I began the second interview by asking students how classes had gone over the semester and their expectations in terms of grades. Two students indicated they had dropped one or more classes since our first interview. Four noted they were doubtful they had passed one or more classes and had already made plans to retake those courses during the summer or fall semesters. Only four of the students described positive semester results, defined as passing all their courses with a C or better. One student earned two As. Some of the reasons offered for the less positive outcomes were:

I dropped micro-economics because I couldn't keep up. I couldn't understand my instructor because he had really thick accent.

I dropped the OT classes because I felt I couldn't keep up. The classes included a lot of material and they were very fast-paced. It was just a lot and very quick. It was not necessarily the tests but it was more the amount of information we had. I had a hard time sorting through it and organizing the stuff. After a month or so, I just gave up.

Introduction to pharmacy and the pharmacy math calculations are not going well. I think that the reason I am not doing well is because I am taking a biology class that takes a lot of my time away from my other classes and I feel that has impacted my performance in the pharmacy program.

The above comments reflect time management deficiencies and the apparent inability to juggle multiple priorities simultaneously. Students with ADHD expressing the feeling of not being able to “keep up” is a common theme across the comments above

and has support in the literature, as Reaser et al. (2007) identified time management as a serious impediment to success for students with ADHD.

*New accommodations and strategies.* When considering the semester outcomes, it was important to know whether students were utilizing any new accommodations or had employed any new strategies. It was particularly relevant for those with poor academic performance during the semester. I was interested to learn if they had attempted to be proactive in taking steps to address problems when they first became apparent. Only one of the six students that had experienced significant academic challenges requested new accommodations through DSS. This student subsequently received extended test time. I asked the interviewees if they had tried any new strategies to address such problems since our initial interview and they said,

I went back to vocational rehab where I can get counseling and help with finding work. I just had my case re-opened.

I have been trying to write things down more. I went in and talked to someone that I know is good with computers and tried to get some tutoring from him for my computer class.

I have been seeing a therapist outside of school but I am not using any new strategies for my schoolwork.

The comments illustrated that while the students may have recognized a need for support, in most cases they did not seek out assistance or employ strategies that could have impacted their academic performance and, by extension, their grades.

*Making it better.* In the interest of looking ahead, I asked all students what they believed could have made the semester better. Each of the students offered their thoughts about what could have improved the semester and some of the comments were:

It could have been better if I hadn't had all the personal distractions but also if there were a support network of some kind here.

To have options for assignments would have been great. For example, if the instructor could give you the option to write a paper or do an oral presentation. This kind of accommodation would be very helpful for students with ADHD and a great opportunity.

I'm sure it would have been better if I had taken time to participate in my study group before the final exam in one of my classes.

It could have been better if I had a job and a better living situation. With those things I could have done fine.

It has been a positive semester but I still think I could have done better. If I hadn't worked so many hours at my job I could have done better but also my classes were a little easier this time.

I think if there was a program to teach me how to organize and categorize things so that I can keep things in order.

I really like the idea of an ADHD coach or counselor. I think that could have helped. I mean there are student advisors but they work more with you on your schedule and for overall well being. An ADHD counselor to work with me throughout the semester would be great. It would be like a specialist that would have an understanding and background in this issue.

Some of the more concrete examples of strategies included the use of an ADHD coach or counselor to assist and monitor student progress over the course of the semester, which would allow for the ongoing review of strategies and existing accommodations, thus allow for timely corrections as needed to address issues or problems. Student support networks were suggested although not clearly defined. It was unclear as to whether such a network would include only students with ADHD or all interested students, and whether such a network would be led by students or professional staff. Two participants suggested that assignment options, or allowing students to choose the format they used to demonstrate their knowledge of the subject matter, would be very beneficial to students with ADHD.

*Current verses previous semesters.* Students were asked to compare their current semester with prior ones at the community college. I wanted to know how typical that

semester was for each of the students or if some of the semester outcomes had been due to mitigating circumstances or challenges outside the norm.

In a sense this semester has been easier because there hasn't been a lot of stress. Before I had a lot of stress and frustration. I don't have that this semester. Just not having all this self conflicting stress makes such a huge difference for me. The online classes were a saving grace because I don't have to worry about paying attention in class. I can just read it when I want to. I haven't been all that successful at getting a more regimented schedule. I still need to work on that.

Due to outside factors it has been my worst semester. Academically this semester hasn't been very hard or more frustrating. I think with my ADHD I wasn't motivated. I feel like sometimes I need to be kicked in the butt to do it.

I am enjoying it more. The more I do it, the more I enjoy it. With being a more mature student, I tend to be the oldest in the class. At first I was a little nervous wondering how I would be taken. I just keep going to school and to the kids, I am just in their class and we are all trying to get through. It just keeps getting easier.

I think it is mainly the point that I am reaching the end of it all - that makes things feel a little different. Previously I knew that I had several semesters ahead of me and I was kind of stuck in the middle. I have two more classes both of which I will take in the summer and then I am done. Better and worse. Better in the fact in that I have gotten into my groove but worse that I am anxious to get it over and done with.

This has been really tough because of all the stuff going on outside of school. My troubles with the law because of this ticket thing have been hard and I get down on myself because I got no money and no job. I am not used to this.

I would say that this semester felt like a failure. It felt manageable at first and I feel like if I had worked hard enough maybe I could have made it. I can still see the classes on Blackboard and see the class's progress and so it is disappointing. The classes just felt overwhelming.

I think this semester has been much more challenging. Overwhelming really and I am disappointed. I think it was a little bit of everything - course load and anxiety. I try to find ways to cope.

Three of the students had life events that became distractions that seemed to have significantly impacted the semester. Despite those distractions, two of the three students

still had a positive semester, again defined by not dropping any courses and passing all classes with a C or better. For example, one student was required to spend every weekend in jail as restitution for an unpaid ticket. This circumstance limited his ability to keep up with his schoolwork as he was not allowed to bring his books with him. Another had a close friend who was sexually assaulted and felt obligated to provide comfort and assistance as needed. Still another was in a car accident that totaled his vehicle and posed transportation challenges. The circumstance necessitated that he find a part-time job so he could purchase another car.

### *Overall College Experience*

In trying to get at the essence of the experience for community college students with ADHD, I asked a series of questions about the students' overall experiences; what they believed was the best thing about community college, the most challenging aspect, and their greatest achievement so far. The following themes emerged from this typology: 1) networking and socialization, 2) challenges, and 3) achievements.

*Best things.* While there were very few comments made specifically to the “best things” about community college, four students offered that meeting people, networking, and socializing had been the best part. This is consistent with an earlier theme – people and the arts in which the majority of students indicated plans to enter professional fields characterized as having high levels of interaction with people and/or the public.

*Challenges.* When asked about the challenging aspects of community college, students provided responses that fall into the following five general areas: doing the work and staying focused, turning assignments in on time, getting to class, work-school balance, and studying.

For me, I would say doing the homework and turning it in on time. Because the teachers do not remind you and they shouldn't have to remind you, they are not supposed to. I do love the teachers that do though.

The most difficult part would be having the time to really focus, I mean with working full-time.

I think the hardest aspect is actually going to school, getting there. Once I am there, I am able to do everything just fine. I have had a day or two when I wasn't motivated to get up. I try not to do that very often.

The hardest thing to me is the studying. I need to learn how to study. If I can learn how to study, I can get a degree.

Being on time with assignments and getting to class.

For me it is my tendency to procrastinate and put things off until the last minute. I do think that ADHD restricts you from doing your work.

Some students also described other challenges that seemed less specific to school and more indicative of life challenges. For example, one student said that learning to identify his stress factors and being realistic about how much he could handle was a big overarching challenge. Another student felt that the lack of social opportunities within the community college was a significant challenge. Poor organizational skills represented the single greatest challenge for another student.

*Achievements.* Building upon the above discussions, students were asked to describe their greatest achievement since beginning community college. Nine of the 10 were able to offer information on an achievement since they began the community college. The subsequent comments highlight some of the responses heard.

My first big achievement was graduating with my information systems AA degree. I haven't really thought much about this.

My grades have been my greatest achievement and just really enjoying it. I have really enjoyed the teachers and staying with it. Staying with it is personally a big one. It is more of a sacrifice when you work full-time and go to school.



Induction into the honor's society. I wish I had done the community college thing first and then gone on to a 4-year after.

I don't have one - not yet.

The fact that I have been able to work full-time and do well in school.

I am proud that I passed two anatomy classes. I got an A first semester and a B second semester. I still remember some of the stuff so I did really well. When I started the OT program I figured it couldn't be any worse than the anatomy classes but it turned out to be so.

I think getting accepted into the pharmacy technology program would be an important achievement.

Some of the achievements offered were more concrete than others, such as earning an AA degree or induction into the campus honor's society. Other achievements fell more within the realm of life skills like learning to manage the work-school balance or learning how to be more self-disciplined and self-motivated. I did not offer any examples or guidance as to the kinds of responses I sought in asking this question because I wanted students to define what they thought constituted "achievement."

## CHAPTER 5

### DISCUSSION, RECOMMENDATIONS AND LIMITATIONS

This phenomenological study explored the educational experiences of a small sample of students with ADHD attending a community college in central North Carolina. The purpose was to understand the essence of their postsecondary experience and, in doing so, provide guidance to interested stakeholders as to what services, supports, and strategies may be most effective in helping to ensure the success of this academically vulnerable subset of community college students. The experiences of the 10 participating students were captured through two personal interviews, categorized into nine typologies, and further distilled into 25 resulting themes.

The knowledge gained from this inquiry is expected to serve the community college that was the focus of the study, and similar institutions striving to find new ways to support and retain a growing number of enrollees affected by this disorder. This chapter provides a summary of key findings, discusses conclusions in relationship to the established research questions, makes recommendations for community colleges, offers suggestions for future research, and notes limitations to the study.

#### Summary of Findings

The nine typologies that emerged from the interview data include the following: 1) diagnosis and symptoms, 2) primary and secondary school, 3) family support, 4) social and life impacts, 5) nature of transition, 6) goals and plans, 7) college academics, 8) semester outcomes, and 9) overall experiences. Within the above overarching typologies, 25 themes emerged that helped to illuminate and further define the experiences of those participants.

### *Diagnosis and Symptoms*

Typology 1 explored the diagnosis and the symptoms that the students claimed resulted in a clinical diagnosis of ADHD. Four had been diagnosed as adults and six as children. Five students were diagnosed with ADD, the predominately inattentive type, and five with ADHD or the combined type that includes symptoms of both inattention and hyperactivity. All experienced symptoms highly consistent with the clinical definitions of the disorder outlined by the Centers for Disease Control (2008). Examples of the symptoms described by study participants included the inability to complete classroom assignments, difficulty reading, behavioral issues, poor time management and inadequate organizational skills.

### *Primary and Secondary School*

Feelings, expectations, and attitudes about education are often shaped in primary and secondary school years; therefore, to more fully understand the community college experience for students with ADHD, it was relevant to explore how past educational experiences had been impacted. Typology 2 framed study participants' descriptions of their experiences during the years when they were in primary and secondary school, including accommodations they received, strategies for managing symptoms, and the overall impacts of ADHD.

The primary and secondary educational experiences relayed by the students were not particularly positive in nature and were characterized by grade retention and grade failure, problems with attention and maintaining focus, and social/emotional challenges including depressive symptoms and low self-esteem. Of the six students diagnosed in childhood, only three noted they had received accommodations in primary and secondary

school. In view of the fact the 10 participants were of an age to attend a postsecondary school, it is likely their K-12 educational systems were not as well-informed about ADHD and probably even less capable of being sufficiently responsive to provide necessary assistance to that special population of learners. It is believed that during the past 10-15 years considerable progress has been made in both the identification of and supports available via school systems, and thus adding to the knowledge base it is anticipated the findings from this research can serve as a twofold springboard; immediately addressing postsecondary education needs of ADHD students and also encouraging increased awareness of what to do for and with them during their K-12 period of learning.

#### *Family Support*

An assumption in the development of this study was that family support was pivotal to the subsequent academic success of students and the overall management of the symptoms associated with ADHD. The third typology explored this assumption and the findings allowed for claiming that while those 10 students believed they had good familial support systems most did not consider them to have been of substantial importance in helping them to live with and/or effectively manage the disorder. The paucity of information related to ADHD presumably led to an absence of understanding about ADHD as a clinical psychological disorder, and how it tended to impact a constellation of related and associated persons.

Grenwald-Mayes (2002), found that positive emotional family environments play a positive role in how college students with ADHD perceive their quality of life and by extension contributed to academic and life successes. However, participating students

either did not recognize the importance of family support and/or environment as central to their psychological well-being, did not chose to attribute it to that, or did not come from family structures characterized as providing positive emotional environments. In any case, familial supports were not deemed to be of critical importance in managing and living with ADHD for those students.

### *Social and Life Impacts*

The literature indicated that students with ADHD experience significant social impairments and may lack the skills necessary to engage in meaningful interactions with peers (CDC, 2008; Faigel, 1995; Shaw-Zirt et al., 2005). The interviewees supported those reports and went on to clarify how they envisioned ADHD as impacting their lives beyond postsecondary education. The key themes that emerged from the fourth typology included a lack of understanding by peers about how the disorder can impact daily functioning and behavior, difficulties maintaining social links with peers over time, life-long impacts, and pervasive depression. The degree to which students believed their social lives had been and would be impacted socially ranged from moderate to appreciable, and all claimed that they had encountered some degree of socialization penalties, and that such punitive feedback had further influenced them in negative ways.

All the students indicated that they believed they were likely to experience life-long effects associated with ADHD but most described them in the context of careers rather than social issues specifically. Some noted that they believed career choice was of paramount importance to their personal success suggesting that maintaining employment opportunities in fields they consider to be of high interest and intellectually stimulating will be important. Noteworthy is the fact that of the four students who had selected fields

of study generally requiring sustained focus or greater attention to detail (architecture, computer programming, law, pharmacy technician) three had poor semester outcomes characterized as dropping one or more classes due to weak academic performance or failing to earn a semester grade of “C” or better. That finding indicated that for college students with ADHD, selecting a major field of study should extend beyond areas of apparent interest. What appeared to be attractive to a student when initially exploring career options might be misleadingly seductive and thus it was necessary to provide such learners with a comprehensive assessment for professional goals (Nadeau, 2005).

Pervasive depression was reported by 8 of the 10 participants. Six said they had been clinically diagnosed and most of those had, or currently were, taking a prescribed medication to treat depressive symptoms. That finding underscored the importance of campus counseling centers staffed with knowledgeable professionals to assist students in identifying resources, supports and interventions for managing depression and other comorbid psychological conditions. Perhaps at no time in the history of higher education in the United States has there been a more distinct clarion for ensuring that postsecondary students are provided with sufficient and meaningful mental health and educational building blocks. Students presenting symptoms of ADHD probably are much more vulnerable than most and should be deemed as a valuable resource, not be ignored.

#### *Nature of Transition*

Typology 5 explored students’ transitions to community college because the nature of such a transition can have implications for the overall experience including academic outcomes. Two themes emerged: early independence favorably impacted transition and cost/convenience/exploration. The five interviewees who had limited self-

reliance exposures explained they had difficult transitions to colleges. The other five said they had been self-sufficient, to varying degrees, and reported having had a less difficult transition to role of a college student. Those students said that the apparent ease of their transitions likely resulted from living on their own, which presumably necessitated the development of self-discipline and the acceptance of responsibility for self.

Transition to a college environment presents challenges for all students because of an increased amount of unstructured time and greater academic demands (Rabiner et al., 2008; Wolf, 2006). Such circumstances coupled with less direct support from family and teachers can be expected to exacerbate the effects for students affected by ADHD. The findings from the current study supported the contention that assumption of increased self-efficaciousness, including living independently for some period of time after high school or living at home with an empathetic constellation while attending community college, might be an important vehicle for mitigating difficulties associated with transitioning to a college environment.

The participants offered a number of factors influencing their decision to attend the community college, such as lower cost of tuition, proximity to home, and the ability to explore options that would aid them in more clearly defining academic objectives and personal goals for the future. Additionally, some mentioned that they did not believe they would have qualified for a four-year institution based on poor academic performance in secondary school. Others cited concerns about their ability to perform satisfactorily on standardized entrance exams such as the SAT. These findings lent support to the notion that community colleges may be disproportionately affected by the number of enrolled

students with ADHD and other disabilities for these and other reasons (Wolanin & Steele, 2004).

### *Goals and Plans*

Typology 6 addressed the educational plans and life goals of the 10 interviewees. Two themes emerged: people and the arts and lofty goals. Six of the 10 students planned to transfer to a four-year institution and subsequently earn a Bachelor's degree. Three of the six transfer students had interests in the arts or music, one in hospitality and tourism, one in law, and one in seminary school. The remaining four students were enrolled in various technical and vocational programs with no immediate plans to transfer to a four-year institution. It was interesting to note that 8 of the 10 students had selected areas of study that ostensibly would lead to careers allowing a high degree of creativity and/or that had opportunities for interactions with people (architecture, art history/design, graphic arts, hospitality/tourism, music, occupational therapy, pharmacy technician, and seminary).

The academic goals for the semester offered by students were lofty but were generally not accompanied by any concrete strategies designed to reach such goals. Hence, it was difficult to determine if students were being unrealistic or overly idealistic. The absence of specific strategies likely was culpable in preventing the majority of students from reaching their objectives. The students' articulation of the goals implied at least a desire to achieve them; however, translating a desire into motivation and persistence is a complex issue (Nedeau, 2005). In some cases, repeated academic and personal failures and/or frustrations can create a dynamic of "learned helplessness" that



can be difficult for adults with ADHD to overcome in reaching goals (Nadeau, 2005, p. 552).

### *College Academics*

Typology 7 addressed college academics and included subtopics such as: academic history, accommodations, preferred subjects and assignment types, best instructional styles, and strategies used to overcome the challenges associated with ADHD. Data analysis allowed for the identification of four key themes: limited interactions with DSS, medication matters, know thyself, and no lectures please!

Six of the 10 students indicated they had accommodations in place approved through DSS and those supports were generally helpful; however, they did not always utilize them. Accommodations commonly mentioned were extended test time, separate testing, and oral or multiple choice testing. It was interesting to note that only three students indicated they had met with their DSS counselor during the semester, thereby suggesting it may be a highly underutilized resource. Conceivably the students needed greater structure for employing that resource or maybe they considered it to be a vacuous support. Four students did not have any accommodations nor did they utilize any counseling services at DSS. Meaux et al. (2009) had similar findings in a study of 18 university students with ADHD and noted that a lack of knowledge about the services available or simply not taking advantage of available services was common among study participants.

The strategies mentioned for managing ADHD, as it related to schoolwork, included the use of calendars, natural herbs, tutoring, regular exercise, breathing techniques for stress and anxiety, and medication. Of the six students who were taking

prescribed medications, two mentioned it as their primary strategy for managing ADHD. Students expressed a variety of both positive and negative factors associated with the use of medication. Based on the comments offered and the fact that the majority of participants utilized prescribed medications, it can be inferred that the benefits derived from their use outweighed any detrimental effects.

It was determined that for the most part students recognized their strengths and limitations and had made preliminary academic and career decisions/plans that reflected some awareness that they understood what would suit them best both personally and academically. For example, of the six that had selected fields typically associated with greater interaction with people and/or team-based work environments (i.e. hospitality, occupational therapy, and seminary), most preferred group assignments/projects and oral presentations. Those selecting fields not typically associated with high levels of collaboration (i.e. architecture or law), tended to prefer individual assignments and projects. It was interesting to note that 7 students mentioned math as their least favorite subject, yet three of those had selected areas of study that are fairly math intensive such as architecture, computer programming and pharmacy technician. That finding implied a disconnect for some students between apparent interests and strengths, highlighting a need for DSS services that help students with ADHD identify functional strengths and weaknesses in selecting a field of study and setting career goals.

Lectures were the least favorite instructional method and the reason cited was the difficulty focusing on transient and fleeting auditory inputs for extended periods of time, plus the lack of interaction often associated with that pedagogy. Six students mentioned

“hands-on” or “visual” instructional methods as the most effective noting the need to be actively engaged in learning new material.

### *Semester Outcomes and Overall Experiences*

The second interview focused on semester outcomes and overall experiences at the community college with these topics framing typologies 8 and 9 respectively.

Typology eight (semester outcomes) focused on the semester results. In addition to learning about academic performance, students were asked to provide additional feedback about what could have made the semester better, more productive, and/or positive. Further, students shared what they believed to be the best thing about community college, the most challenging aspects, and described their greatest achievements to date.

The semester outcomes typology produced three key themes: trouble keeping up, no new strategies, and making it better next time. Trouble keeping up was a common theme among students. The comments made by participants reflected time management deficiencies, poor organizational skills, and trouble managing competing priorities. Additionally, students were asked about any new strategies they had implemented since their initial interview. This was of particular interest for those who had negative semester outcomes. Only one of the six students who experienced significant academic difficulties during the semester requested and received additional accommodations from DSS. Three others offered strategies they had employed but they were not deemed to be the types of activities that would have likely impacted semester outcomes in the short-term. Some of the strategies mentioned included: utilizing the vocational rehabilitation program to find employment, off-campus clinical therapy services (not related to academics), and writing

reminder notes. This finding denoted an underutilization of DSS counselors and services as a resource. Further, it may be indicative of deficits in executive-level functioning associated with recognizing a problem and taking steps to address it proactively (Reaser et al., 2007).

All of the study participants offered ideas about what they thought could have improved their semester outcomes. Suggestions included the availability of an ADHD coach or similar specialized counselor, student support networks, and more diversity in class assignment options as a specific accommodation. Such suggestions implied that the apparent underutilization of DSS services noted previously may be related to service array or a lack of appropriate programs/services/resources.

In responding to questions about their overall college experience, students noted the best things about community college were opportunities for socialization such as meeting new people and networking. This is consistent with study findings presented earlier within the goals and plans typology which indicated the students preferred a high degree of interaction with people despite the fact that they acknowledged having social difficulties. Participants reported the most challenging aspect of community college included doing the work and staying focused, turning assignments in on time, getting to class, work-school balance, and studying. Addressing such types of time management, organizational, and self-motivation challenges are fundamental to academic success for college students and support the notion that affected students need programs and services that help them learn to better compensate for the lack of these critical skills.

Lastly, the 10 students readily provided examples of their achievements ranging from earning an AA degree to acquiring important life skills such as self-discipline. It

was reflective of a kind of optimism inherent with that sample of participants. They were relatively positive about their educational experiences with the community college despite apparent academic and social challenges along the way.

### Generalizations

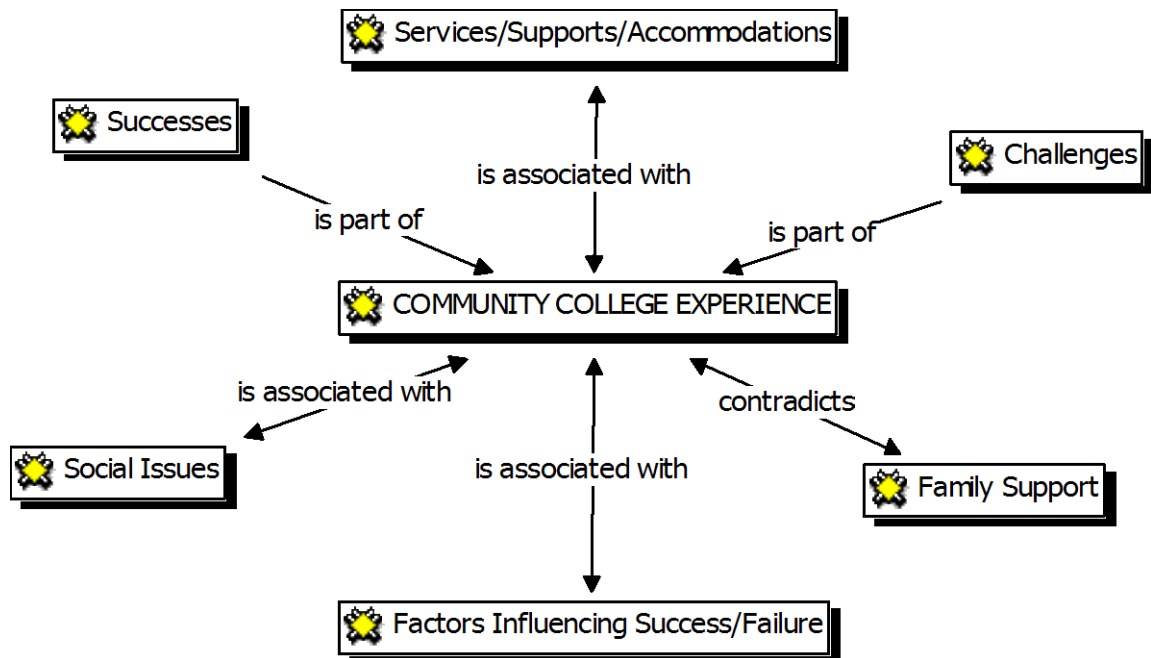
The nine established typologies and 25 corresponding themes provided a comprehensive exploration of many facets of the community college experience for students with ADHD. This section will shift from the specific findings within typologies and consider what generalizations may be extracted from this research across typologies and themes. Specifically, it will show how the data addresses the research question posed in Chapter 1.

*Central Question* - How do adult students diagnosed with ADHD experience higher education in a community college environment?

*Sub-questions* - What support services are most/least useful? What are the greatest challenges? What successes have been achieved? What factors influence success or failure? What role do family supports and social issues play?

Figure 1 highlights the relationship between the community college experience and how the factors explored through the sub-questions impact those experiences. For example, challenges and successes were described as a part of the college experience. Services, supports and accommodations, social issues, and other factors influencing success and failure were associated with the experience and/or contributed to shaping it. Family support had a contradictory relationship because it was not thought to significantly impact the college experience. We will explore each of these factors in turn

for the purposes of understanding how the typologies and themes can be combined to contribute to our understanding of the research questions that guided the inquiry.



**Figure 1. Relationship between factors and college experience.**

### *Challenges and Successes*

The challenges and successes described as part of the community college experiences were explored within typology 9, overall college experience. Students described numerous challenges such as completing and submitting assignments on time, mustering the motivation to attend class regularly, and focusing on the task at hand. Other challenges included learning to identify stressors and setting realistic goals based on an understanding of self and what could reasonably be accomplished in a given time frame. Many of these challenges were easily correlated with students' symptomology highlighted within typology one. Symptoms such as poor organization, poor time management, inability to concentrate/focus and lack of persistence would all be

contributing factors to the challenges described. Further, these kinds of symptoms/challenges may be reflective of deficits in executive functioning. Mahone and Silverman (2008) reported that ADHD is often associated with lifelong executive dysfunction resulting in deficits in one's ability to manage time effectively, organize a specific activity, and develop a plan/strategy for getting a specific task done. The authors use the example of baking a cake which requires a number of steps and processes that rely on executive functioning including "initiation, planning, organization, shifting of thought or attention, inhibition of distracting thoughts, sustained and sequenced behavior and working memory" (p. 48). The authors noted that executive function develops and improves throughout childhood and into adolescence and despite the apparent deficits for those with ADHD, executive function can be taught with appropriate coaching. Thus, the effects of ADHD on this core function can be minimized. Difficulties with executive function were further exemplified as students indicated they had not employed any new strategies or in most cases had failed to seek out supports when they realized they may have difficulties over the course of the semester.

The successes and achievements that helped shape the community college experience for students ranged from considerable to emergent. One student described having already earned an Associate's Degree and was anticipating graduating with a second. Another student mentioned that she had been inducted into the campus honor's society and was proud of that accomplishment. Other students described learning to balance work and school effectively and "sticking with it" over the course of the semester as achievements. Successes no matter how small are important factors in academic

persistence and may have lasting affects with regard to increasing motivation and improving self-esteem.

### *Services, Supports, and Accommodations*

Services, supports, and accommodations were explored through typologies 7 and 8, college academics and semester outcomes. Six of the 10 students indicated they had accommodation plans in place with DSS and most said they had been useful, but they did not feel they needed all the accommodations outlined within their plans every semester. Utilization was often dependent upon the courses in which they were enrolled. Three of the six had met with their respective DSS counselors at least once over the course of the semester, but none utilized this resource regularly. No one indicated the use of, or articulated awareness of, other programs or services offered by DSS beyond an accommodation plan. Meaux et al. (2009) found that university students were largely unaware of available services for students with ADHD and many believed they should not need special services noting that as adults they should be able to manage things on their own.

Unfortunately, the findings from the present study did not point to specific reasons for the underutilization of services, supports, and accommodations among students. It might be inferred from participant comments about the “things that could have made the semester better” that service array may be a factor. For example, students offered that an ADHD coach or other specialized counselor could have improved their semester. Also suggested were programs that teach students with ADHD how to organize themselves as well as offering accommodations that allow for differential assignment types. Overall, the findings did indicate that DSS had relatively little impact



on the experiences of this sample of community college students, many of whom could have benefited from services evidenced by the fact that less than half of participating students had positive semester outcomes.

### *Social Issues*

Based on the data from the interviews, it was apparent that social issues played a significant role in defining the community college experience for this group of students. In fact, social issues were captured within four of the nine typologies: diagnosis and symptoms, social and life impacts, plans and goals, and overall college experience.

All study participants described numerous social impairments associated with ADHD both in and out of an educational setting at varying levels of intensity. A lack of acceptance by peers was frequently cited and tended to be attributed to a poor understanding of ADHD and associated behaviors such as repeating oneself, stammering when speaking or having trouble articulating thoughts, missing social cues, acting impulsively, or interrupting when others are talking. Still others offered that while they were able to make friends readily they had challenges maintaining friendships or sustaining links with peers. Eight of the 10 participating students had experienced periods of extended depression in adulthood. Further, more than half also described issues/symptoms related to poor self-esteem, poor self-image, and difficulties with socialization during childhood and adolescence.

The large role of social functioning in shaping the community college experience for those students was not particularly surprising. Shaw-Zirt et al. (2005) highlighted the connection between social functioning and the development of self-esteem. The author noted that poor social functioning can create poor self-esteem and perpetuate a cycle that

may lead to identity problems, lack of motivation, and emotional and interpersonal difficulties. Such factors in combination can negatively impact social, educational, and occupational outcomes (Shaw-Zirt et al., 2005).

In spite of the social challenges, the desire for social interaction and opportunities to engage with others was a common theme. More than half the students indicated they planned to engage in careers that generally require a high degree of interaction with co-workers and/or the public. Consistent with this finding, four students noted that the best part about community college was the opportunity to meet other students, network, and socialize. Taken together these findings indicated that while students with ADHD do experience deficits in social functioning, these deficits do not diminish their desire to engage socially. The fact that this issue was identified in a number of themes and within four of the nine typologies suggested the overall importance of social issues in shaping the experiences of community college students with ADHD.

#### *Factors Influencing Success and Failure*

The factors believed to most influence the success and failure of participating students cut across a number of typological categories and themes within the data including: primary and secondary school experiences, nature of transition, goals and plans, and college academics. Overall, students described their primary and secondary school experiences as mostly negative, characterized by grade retention and/or dropping out of high school, poor socialization and self-esteem, and difficulties with attention and focus. One student described herself in primary and secondary school as vacillating between listening to her teachers and daydreaming, typically resulting in grades that ranged from average to below average (i.e., Cs and Ds). Difficulties with reading and

comprehension were also noted as significant challenges and were attributed to poor educational outcomes.

Such types of early educational outcomes generally do not support a foundation on which positive higher education experiences can be built, nor do they instill the confidence needed to embark on more rigorous and independent college-level study. Further, the experiences likely played a role in the decision to attend a community college rather than a four-year institution for many students. Trusty, Robinson, Plata, and Ng (2000) noted that collective educational experiences lead to self-observation and determination of abilities, which subsequently influences college and career choices. The authors further noted that the self-efficacy measures which are based largely on past educational achievement, influence outcomes by determining expectations of self.

The comments made by students in the present study support this assertion as participants offered their reasons for attending the community college including: fear of performing poorly on standardized entrance tests such as the SAT or ACT, worry that they were not academically qualified for a four-year institution, lack of direction or career goals, and unsuccessful attempts at four-year institutions. These factors suggest that students had doubts about their abilities to be successful in a postsecondary educational environment based on previous academic performance. Such histories and experiences contribute to how students perceive themselves, their academic abilities, and, by extension, how they experience higher education.

While community colleges have little or no influence on the primary and secondary educational experiences of their students, they can recognize that this factor

may impact students on multiple levels and such awareness may provide additional insights into how to best serve students with ADHD.

Within the college academics typology, strategies used by students in managing ADHD and faculty instructional styles were thought to be key factors in influencing student success or failure. The primary strategies used by students for managing ADHD in relation to schoolwork and/or daily life was the use of calendars and electronic alarms/devices, natural herbal supplements, exercise, ADHD medication, and removing distractions in order to facilitate sustained focus. Given that 6 of the 10 students did not have particularly positive semester outcomes, it could be inferred that most students had not developed and/or implemented the necessary strategies to manage the symptoms of ADHD and subsequently impact academic performance. Further, when significant difficulties arose over the semester only one student sought out formal help in dealing with such problems. Others offered new strategies they were trying but none were the kinds of actions that would have impacted semester outcomes. These findings were interpreted to mean that the identification and implementation of individualized strategies and/or multi-modal treatment approaches to manage ADHD may be critical to student success and persistence.

The instructional styles utilized by faculty were also described by students as an important factor with the majority indicating that lectures represented the least effective teaching method due to difficulties maintaining focus and attention for extended periods of time. Most students offered that “hands-on” or “interactive” instruction was the preferred learning method as well as smaller class sizes that allowed for greater one-on-one interaction with faculty. Unfortunately, lecturing remains a predominate pedagogy in

higher education particularly in general education courses that often have higher enrollments. It could be argued that most students, regardless of whether or not they have ADHD, do not prefer lectures. However, this has especially important implications for the types of courses and the areas of study selected by students with ADHD given their higher propensity for academic underachievement and/or failure.

Areas of study and career goals were considered in relationship to student's perceptions of their own strengths, weaknesses, and preferences. As would be expected, the majority of students had selected fields of study that reflected some understanding of their own academic strengths and weaknesses. Six of the 10 students had selected fields that lead to jobs characterized as having a high degree of creativity and/or high levels of interaction with others in completing work processes. Further, students mentioned core academic subjects such as math, English, and foreign languages as their least favorite subjects, which likely reflects poor academic performance in those areas previously.

Nadeau (2005) highlighted the importance of definitively matching strengths and areas of interest to ensure success for adults with ADHD in light of the inherent challenges they face. The author further recommended clinical assessments that allow for objective analysis of cognitive abilities (to measure IQ), psychological testing (to identify other disorders), personality testing, and interest testing. The absence of this kind of comprehensive assessment implies that students simply selected a field that aligned with personal interest and perceived academic abilities based on previous educational experiences. Given that this group of students expressed mostly negative experiences in primary and secondary school, some had made unsuccessful attempts at four-year institutions, and most had poor semester outcomes, it could be inferred that many were

embarking on studies for which they were poorly equipped and/or careers for which they may not be well suited.

### *Family Supports*

While all students indicated that they believed they had good family support systems in place, only 3 of the 10 noted that such supports had been of significant importance in managing and living with ADHD. Family supports were important on a foundational level but were not associated with impacting the functioning of participating students and, therefore, were not attributed to having significant influence on the college experience. Students offered that even while being “supportive,” often family members did not truly understand ADHD and the inherent effects. This lack of understanding contributed to increased frustrations on the part of family members that oftentimes negatively impacted relationships. This apparent disconnect led most students to undervalue family support as contributing significantly to their community college experience.

This section was intended to reframe the study findings that were initially presented within typologies and themes, and consider them in a broader context; how they impact the overall college experience. In doing so, we have identified key insights into the research question that guided this inquiry. In sum, these findings have; increased our knowledge of some of the successes and challenges faced by this student population, enhanced our understanding of the services, supports and accommodations used and needed, highlighted the importance of social issues, and helped to identify key factors that may impact outcomes for students.

## Recommendations

A number of recommendations were developed over the course of conducting this study that will aid community colleges in devising ways to better serve and retain students with ADHD, as well as inform other students affected by this disorder as they matriculate into similar postsecondary environments. It is clear from the findings of this study that students with ADHD often experience significant academic challenges that often require more than just a list of approved accommodations. None of the participating students utilized DSS services or support beyond an accommodation plan. Six of the students had accommodations in place and four of those had negative semester outcomes defined as dropping one or more classes and/or not completing all courses with a grade of C or better. Of the four that had no accommodation plans in place, half had positive semester outcomes and half did not. The above facts speak to a need for an enhanced service array within DSS and greater utilization of services by students. Services could be enhanced by including an ADHD coach or other specialist that could potentially meet the unique needs of this population offering one-on-one mentoring, and study skills programs, along with time management, organization, and planning support. Such services may be most effective if they are individualized, developed using a strengths-based model (rather than deficit-based), and successes are recognized and serve as a foundation on which additional successes can be built. Further, increasing the capacity of community colleges to provide comprehensive clinical assessments related to appropriate career choices based on students' strengths and weaknesses could be a valuable service to this population. Such assessments could help to prevent students from

embarking on an academic and/or career path for which they are not well suited and effectively reduce the propensity for academic failure.

Programs that address social deficits for students with ADHD may also be warranted given the importance of social issues in shaping the overall experience. The National Resource Center on ADHD (n.d.) recommends treatments for social issues that focuses on increasing knowledge of the social challenges, creating positive attitudes, setting goals, observing others, role playing, visualization, built-in prompts, and increasing social likeability as critical to improving social functioning.

The underutilization of DSS services might be addressed by increasing outreach efforts to students during enrollment processes or through orientation programs as appropriate. Working to maintain connections with ADHD students through periodic email messages may also be effective in reminding students of this resource and of the availability of staff to support them as problems may arise over the course of the semester.

Community colleges that do not have student health centers or similar resources should work to develop links within the community so that students can access medical services to maintain prescriptions for ADHD medications but also for addressing the depressive symptoms so pervasive among this group. Two students within the study noted that a lack of health insurance or a medical provider had impacted their ability to stay on their medication.

Expansion of the current array of available academic accommodations may also be useful in better serving students. Study participants noted that having greater variation in assignment options as a specific accommodation would be beneficial. This would



entail allowing students to choose from multiple options in demonstrating their knowledge of subject matter. For example, students could opt to give an oral report rather than write a term paper when appropriate. Implementing an accommodation of this kind would likely require educating or re-educating faculty members about ADHD, advocating to key administration regarding this need and developing policies to guide implementation.

The need for student support groups and/or more social opportunities was also a key theme within two typologies or categories of discussion. The findings from this study suggested that while students with ADHD often have social impairments, they do value environments that allow for a high degree of interaction with people. It is also interesting to note that the chosen fields of study and career goals of these students tended to lean toward the arts and music suggesting that this group of students may have a number of things in common and could benefit from a support group not only to talk about issues relevant to living with ADHD and share experiences, but also to forge friendships. Such a support group would likely be most effective if it was co-led or co-chaired by a qualified DSS counselor and a student.

#### Limitations of the Study/Suggestions for Further Research

One key limitation of this study was the relative size and scope; 10 students were recruited from one community college campus located in an urban setting in central North Carolina. While the perspectives of the students has enhanced the understanding of their overall experience, a larger sample from multiple community colleges across the country would provide a greater breadth of information and would make the findings more generalizable to this population of students. Further, North Carolina has a well

supported network of community colleges across the state receiving substantial support from the state legislature because a key element in the mission of the system is vocational and workforce training. Such is not the case for all community colleges and, therefore, the sample characteristics could be different if drawn from various schools with different focuses and overarching missions.

Students were recruited for the study based on a clinical diagnosis of ADHD, but several had other comorbid conditions. While this is a limitation of the study because it becomes difficult to isolate the impacts of ADHD from other conditions, it is also more reflective of how students with ADHD commonly present. In other words, those with comorbid conditions were not excluded because such circumstances are not analogous to the “real world.” Klein, Rachel, and Biderman (1999) estimated that the prevalence of comorbid conditions among those with ADHD are high-ranging from 30% to 60%. Additional research could address this limitation by utilizing a larger sample and comparing the experiences of those with only ADHD in verses those with ADHD and other comorbid conditions.

The expansion of this work to include a mixed methods research design that could include both qualitative and quantitative data would serve to further enhance the knowledge base in this arena. Incorporating surveys and case file reviews that would allow the researcher to obtain a more definitive review of students’ academic histories and DSS records would be useful in further understanding and framing the overall experience.

The National Resource Center on ADHD (n.d.) noted there are numerous guides and catalogs available to students with learning disabilities that outline the services

available on the campuses of various colleges and universities across the county, specifically addressing the unique needs of this group. A similar process of discovery and the subsequent development of a guide for students with ADHD would be a very useful tool for students and may help them make more informed decisions about the best colleges to attend.

Further exploration of the types of careers for which adults with ADHD have the most aptitude would be enlightening and assist campus DSS centers in assessing and counseling students about selecting majors and developing career goals early in their postsecondary education experience. Research that assesses career functioning and success among adults with ADHD in various fields and sectors of employment would be useful.

Lastly, the tendency to be drawn to the arts or music was an interesting commonality among participating students. Research that explores a possible link between creativity and ADHD could introduce some new areas for additional research.

## CHAPTER 6

### SUMMARY

This study provided a unique opportunity to explore the lived experiences of community college students with ADHD in an effort to gain greater insights into the challenges faced, the successes achieved, and the key factors influencing success or failure. This study has particular relevance given the increasing numbers of students with ADHD pursuing postsecondary education within community colleges, as well as the fact that little research has been conducted on the topic to date. Further, the symptoms associated with this disorder place affected college students at increased risk for academic underachievement and failure.

The goal was to provide important feedback to community colleges serving such students so that they may continue to improve systems and strategies for assisting students with ADHD and in doing so help to ensure their persistence and success. The central research question that guided this inquiry sought to shed light on how adult students with ADHD experience higher education in a community college environment.

Analysis of the data yielded nine overarching typological categories and 25 themes that helped to illuminate the community college experience as described through interviews with 10 students diagnosed with ADHD. A number of generalizations emerged from this research and are briefly summarized as follows.

*Challenges* - The challenges experienced by students were largely due to deficits in executive functioning often resulting in an inability to manage time effectively, organize tasks, and effectively plan/strategize in the contexts of both school and life. The literature (Silverman, 2008) reported that appropriate training and coaching can minimize

the effects of ADHD on executive function and many study participants indicated a desire and need for the kind of supports and services that would support such deficits.

*Successes* - The successes described by students as part of their community college experience varied in magnitude ranging from earning an Associate's degree to learning how to balance work and school. Nonetheless, all successes were viewed to be important factors in academic persistence, motivation and self-esteem.

*Services, Supports and Accommodations* - The findings from this study indicated that DSS had little impact on the experiences of the study participants largely because the students were not aware of services, chose not to utilize existing services or did not find the array of services needed.

*Social Issues* - This issue was a common thread that weaved through four of the nine typologies and across a number of themes indicating that social issues played a significant role in the overall experience. Students described social impairments that ranged from feeling different from their peers to repelling them. Regardless of the scope, most noted that social functioning had negatively impacted their self-esteem. Further, the findings indicated that despite social deficits, students had strong desire to engage socially both in an educational setting and in the context of career.

*Factors Influencing Success and Failure* - The other factors described as most impacting student success or failure included previous educational experiences such as primary and secondary school, strategies employed by students to manage ADHD symptomology, instructional styles used by faculty, and field of study or career paths selected by students.

*Family Support* - Such supports were foundational but not deemed important in managing and living with ADHD and therefore not attributed to having a large impact on the college experience by participating students.

Such issues taken together are important in considering how community colleges might best support students with ADHD in developing the resiliency needed to persist in a higher education environment. In developing new ways to serve community college students with ADHD it is imperative that social issues are given a high priority. It is also important that the factors associated with success and failure are proactively addressed including considering how to best support students in the context of their previous educational experiences. Equally important is the development of individualized strategies and multi-modal treatment options for managing ADHD, as well as providing guidance and appropriate assessments to help students identify fields of study and career options that will build upon strengths and maximize their opportunities for success.

## REFERENCES

- American Academy of Child and Adolescent Psychiatry. (2007). *Practice parameters for assessment and treatment of child and adolescents with attention-deficit/hyperactivity disorder*. Retrieved November 3, 2008, from <http://www.aacap.org>
- American Academy of Pediatrics. (2000). Diagnosis and evaluation of the child with attention-deficit/hyperactivity disorder - Committee on quality improvement, subcommittee on attention-deficit/hyperactivity disorder. *Pediatrics*, *105*(5), 1158-1170.
- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4<sup>th</sup> ed.). Arlington, VA: Author.
- Archenbach, T. (2001). *Child behavior checklist*. Burlington, VT: Archenbach System of Empirically Based Assessments.
- Barkley, R., & Murphy, K. (2005). *Attention deficit-hyperactivity disorder* (3<sup>rd</sup> ed.). New York: Guilford Press.
- Barkley, R. A., Fischer, M., Edelbrock, C. S., & Smallish, L. (1990). The adolescent outcome of hyperactive children diagnosed by research criteria: I. An 8-year prospective longitudinal study. *Journal of the American Academy of Child and Adolescent Psychiatry*, *29*, 546-557.
- Baverstock, A. C., & Finlay, F. (2003). Who manages the care of students with attention deficit disorder in higher education. *Child Care Health and Development*, *29*(3), 163-166.
- Benham, N. (1997). Faculty attitudes and knowledge regarding specific disabilities and the Americans with Disabilities Act. *College Student Journal*, *31*, 124.
- Bernfort, L., Nordfeldt, S., & Persson, J. (2007). ADHD from a Socio-economic Perspective. *Acta Paediatrica*, *97*, 239-245.
- Birnbaum, H., Kessler, R., Lowe, S., Secnik, K., Greenberg, P., & Leong, S. (2005). Costs of attention deficit-hyperactivity disorder in the US: Excess costs of persons with ADHD and their family members in 2000. *Current Medical Research and Opinion*, *21*, 195-206.
- Centers for Disease Control. (2008, July). *National Center for Health Statistics - Updated report on prevalence of ADHD*. Retrieved August 14, 2008, from <http://www.help4adhd.org/>

- Conners, K. (2009). *Conners Comprehensive Behavior Rating Scales*. North Tonawanda, NY: Multi-Health Systems Inc.
- Creswell, J. W. (1998). *Qualitative inquiry and research design: Choosing among the five traditions*. Thousand Oaks, CA: Sage.
- Creswell, J. W. (2003). *Research design: Qualitative, quantitative and mixed methods Approaches* (2<sup>nd</sup> ed.) Thousand Oaks, CA: Sage.
- Creswell, J. W. (2007). *Qualitative inquiry & research design: Choosing among five approaches* (2<sup>nd</sup> ed.). Thousand Oaks, CA: Sage Publishing.
- DeRidder, A., & DeGraeve, D. (2006). Healthcare use, social burden and costs of Children with and without ADHD in Flanders, Belgium. *Clinical Drug Invest*, 26, 75-90.
- Denbo, S. M. (2003). Disability lessons in higher education: Accommodating learning disabled students and student athletes under the Rehabilitation Act and the Americans with Disabilities Act. *American Business Law Journal*, 41, 145-203.
- DuPaul, G. J., Schaughency, E. A., Weyandt, L. L., Tripp, G., Kiesner, J., Ota, K., & Stanish, H. (2001). Self-report of ADHD symptoms in university students: Cross-gender and cross-national prevalence. *Journal of Learning Disabilities*, 34(4), 370-379.
- Faigel, H. (1995). Attention deficit disorder in college students: Facts, fallacies and treatment. *Journal of American College Health*. 4, 147.
- Farrell, E. (2003). Paying attention to students that can't. *The Chronicle of Higher Education*, 50(5), A50-A51.
- Goldman, L. S., Genel, M., Bezman, R. J., & Slanetz, P. J. (1998). Diagnosis and treatment of attention deficit-hyperactivity disorder in children and adolescents. *Journal of the American Medical Association*, 279(1), 1100-1107.
- Glutting, J., Youngstrom, E., & Watkins, M. (2005). ADHD and college students: Exploratory and confirmatory factor structures with student and parent data. Arlington, VA: American Psychological Association.
- Glutting, J., Monaghan, M. C., Adams, W., & Sheslow, D. (2002). Some psychometric properties of a system to measure ADHD among college students: Factor pattern, reliability and one year predictive validity. *Measurement and Evaluation in Counseling and Development*, 34, 194-208.



- Grenwald-Mayes, G., (2002). Relationship between current quality of life and family of origin dynamics for college students with attention deficit hyperactivity disorder. *Journal of Attention Disorders*, 5, 211-222.
- Hatch, J. A., & Freeman, E. B. (1988). Kindergarten philosophies and practices: Perspectives of teachers, principals, and supervisors. *Early Childhood Research Quarterly*, 3, 151-166.
- Hatch, J. A. (2002). *Doing qualitative research in education settings*. Albany: State University of New York.
- Heiligenstein, E., Guenther, G., Levy, A., Savino, G., & Fulwiler, J. (1999). Psychological and academic functioning in college students with attention deficit hyperactivity disorder. *Journal of American College Health*, 47(4), 181.
- Heiligenstein, E., Johnston, H., & Nielsen, J. (1996). Pemoline therapy in college students with attention deficit hyperactivity disorder: A retrospective study. *Journal of American College Health*, 45, 35-39.
- Klein, R. G., & Biderman, J. (1999). *ADHD long-term outcomes: Comorbidity, secondary conditions, and health risk behaviors*. Conference Proceedings. Division of Human Development, National Center on Birth Defects & Developmental Disabilities, Centers for Disease Control and Prevention. Retrieved June 17, 2009, from <http://www.cdc.gov/ncbddd/adhd/workshops/outcomes.html>
- Lee, D. H., Oakland, T., Jackson, G., & Glutting, J. (2008). Estimated prevalence of attention-deficit/hyperactivity disorder symptoms among college freshman. *Journal of Learning Disabilities*, 41(4) 371-384.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage.
- Mahone, M., & Siversman, W. (2008). ADHD and executive functions: Lessons learned from research. *Exceptional Parent*, 38, 48-51.
- Meaux, B., Green, A., & Broussard, L. (2009). ADHD in the college student: A block in the road. *Journal of Psychiatric and Mental Health Nursing*, 16, 248-256.
- Morse, J., & Richards, L. (2002). *README FIRST: For a user's guide to qualitative methods* (pp. 111-128). Thousand Oaks, CA: Sage Publications.
- Nadeau, K. (1995). Diagnosis and assessment of ADD in postsecondary students. *Journal of Postsecondary Education and Disability*, 11, 3-15.

- Nadeau, K. (2005). Career choices and workplace challenges for individuals with ADHD. *Journal of Clinical Psychology, 61*, 549-563.
- National Institutes of Mental Health. (1996). *Attention deficit hyperactivity disorder*. United States Department of Health and Human Services Publication. Retrieved October 23, 2008, from <http://www.nimh.nih.gov/health/publications/adhd/nimhadhdpub.pdf>
- National Resource Center on ADHD. (n.d.). A program of CHADD. Retrieved July 18, 2009, from <http://help4adhd.org/aboutus.cfm>
- Nunez, G., Margulies-Eisner, T., Manheimer, P., & MacNeil-Stinson, B. (1996). The impact of the Americans with Disabilities Act on engineering education. *IEEE Transactions on Education, 39*, 251-256.
- Jones, S. R., Torres, V., & Arminio, T. (2006). Negotiating the complexities of qualitative research in higher education: Fundamental elements & issues (pp. 37-61). New York: Routledge.
- Quinn, P. O., Ratey, N. A., & Maitland, T. L. (2001). Working with an ADD coach. In P. O. Quinn (Ed.), *ADD and the college student: A guide for high school and college students with attention deficit disorder* (pp. 99-109). Washington, DC: Magination Press.
- Rabiner, D., Anastopoulos, A., Costello, J., Hoyle, R., & Swartzwelder, H. (2008). Adjustment to college in students with ADHD. *The Journal of Attention Disorders, 11*, 689-699.
- Reaser, A., Prevatt, F., Petscher, Y., & Proctor, B. (2007). The learning and study strategies of college students with ADHD. *Psychology in the Schools, 44*(6), 627-638.
- Schirduan, V., Case, K., & Faryniarz, J. (2002). How ADHD students are smart. *The Educational Forum, 66*, 324-328.
- Schumacher, S., & McMillian, J. (1993). *Research in education: A conceptual introduction* (3<sup>rd</sup> ed.). New York: Harper Collins.
- Secnik, K., Swensen, A., & Lage, M. (2005). Comorbidities and costs of adult patients diagnosed with attention deficit hyperactivity disorder. *Pharmacoeconomics, 23*, 93-102.
- Shaw-Zirt, B., Popali-Lehane, L., Chaplin, W., & Bergman, A. (2005). Adjustment, social skills and self-esteem in college students with symptoms of ADHD. *Journal of Attention Disorders, 8*, 109-120.

- Swartz, S., Prevatt, F., & Proctor, B. (2005). A coaching intervention for college students with attention deficit/hyperactivity disorder. *Psychology in Schools, 42*(6), 647-656.
- Thompson, A., & Bethea, L. (1997). Faculty knowledge of disability laws in higher education: A survey. *Rehabilitation Counseling Bulletin, 40*, 166.
- Trusty, J., Robinson, C., Plata, M., & Ng, K. (2000). Effects of gender, socioeconomic status, and early academic performance on postsecondary educational choice. *Journal of Counseling and Development, 78*, 463-472.
- Ullmann, R. (1988). Comprehensive teacher rating scale. Champaign, IL: MetriTech.
- United States Department of Education. (2007). *Students with disabilities preparing for postsecondary education: Know your rights and responsibilities*. Washington, DC: Office for Civil Rights.
- United States Department of Education. (2003). *Identifying and treating attention deficit hyperactivity disorder: A resource for school and home*. Washington, DC: Office of Special Education and Rehabilitative Services, Office of Special Education Programs.
- United State Department of Justice, Civil Rights Division. (2005, September). *A guide to disability rights laws*. Washington, DC: Author.
- Vance, T. A., & Weyandt, L. (2008). Professor perceptions of college students with attention deficit hyperactivity disorder. *Journal of American College Health, 57*, 303-308.
- Weyandt, L. L., & DuPaul, G. J. (2008). ADHD in college students: Developmental findings. *Developmental Disabilities Research Reviews, 14*, 311-319.
- Wolanin, T., & Steele, P. (2004). *Higher education opportunities for students with disabilities*. Washington, DC: Institute for Higher Education Policy.
- Wolf, L. (2006). College students with ADHD and other hidden disabilities. *Annals of The New York Academy of Sciences, 931*, 385-395.
- Young, S., Toone, B., & Tyson, C., (2003). Comorbidity and psychosocial profile of adults with ADHD. *Personality and Individual Differences, 35*, 743-755.

APPENDIX A  
RECRUITMENT FLYER

# **ADHD Research Study**

## **Be a part of an Important Research Study at Technical Community College.**

- Are you 19 years or older?
- Do you have a medical diagnosis of ADHD?

**If you answered yes to these questions you may be eligible to participate in a research study.**

The purpose of this study is to gain insight into the experiences of community college students that have been diagnosed with ADHD. We hope to learn more about what support services are most/least helpful, what academic challenges you have faced and what successes you have achieved.

### **Study participants will:**

- Be asked to participate in 2 personal interviews to be conducted on campus over the spring semester beginning January 2009.
- Receive a \$25 cash incentive for each interview (\$50 total).

For more information please contact:  
**Nicole Lawrence at (XXX) XXX-XXXX**

APPENDIX B  
CONSENT TO PARTICIPATE



Consent to Participate (to be signed at 1<sup>st</sup> Interview)

Project Title: Experiences of Community College Students with ADHD: A Qualitative Study in the Tradition of Phenomenology

IRB Approval #2008109235EP

Dear Student:

Your participation has been requested in a study that seeks to understand the experiences of students in a community college setting that have been diagnosed with ADHD. The study aims to better understand what support services you found most helpful and why, what services you feel are lacking or not accessible, what challenges you face and what successes you have achieved. The results of this study will be used to help this and other community colleges to develop programs and services that better serve students with ADHD in the future by providing insight into your experiences.

By signing this consent you are agreeing to participate in two personal interviews over the course of the spring semester beginning in January of 2009. Each of the personal interviews will require a one hour time commitment (2 hours total) and will be held on campus or at an agreed upon alternative location. As a small token of appreciation for your time and commitment to this research project, a \$25.00 cash incentive will be provided upon completion of each of the interviews for a total incentive of \$50.00 per student.

There are no known risks associated with participation in this research and the confidentiality of students is the highest priority. The personal interviews will be recorded using a digital recording device and later transcribed verbatim. After the data is transcribed, the recordings will be erased. No identifying information from the interviews will be included in the transcriptions and only first names will be used. Any reports or publications that result from this research will not directly identify the school where the data was collected and will use pseudonyms to protect the confidentiality of the participants. Students will be asked to review the transcriptions that are generated from the interviews to ensure accuracy and appropriate representation of statements made. Additionally, students will receive a copy of the final report to include research findings.

Even if you sign this consent, you can opt to withdraw from the study at any point in the process for any reason. You will have an opportunity to ask questions about this study during each of our meetings. Additionally, you will be provided with a copy of this consent which includes my personal contact information should a question or concern come up between our planned meetings. Please sign as indicated below.

Sincerely,

Nicole Lawrence

*Name and Contact Number for Principle Investigator (Researcher):*

Nicole Lawrence  
Office at Duke University (919) 668-3282  
Home (919) 379-1961  
Cell (919) 272-3607

*University of Nebraska Institutional Review Board Contact Number:*

University of Nebraska, Lincoln  
Human Research Protections Program  
312 N. 14<sup>th</sup> Street, Suite 209 Alex West  
Lincoln, NE 68588-0408  
(402) 472-6965  
irb@unl.edu

---

**Name of Participant (Please Print)**

---

**Signature of Participant**

---

**Date**



APPENDIX C  
PERSONAL INTERVIEW QUESTIONS

## Personal Interview Protocol

### Initial Set of Questions (Interview # 1):

1. How long have you been a student at Technical Community College?
2. Why did you choose to attend Tech?
  - 2a. What factors influenced this choice?
3. Describe the kinds of courses are you enrolled in this semester.
4. What field do you plan to work in?
  - 4a. What sparked your interest in this field?
  - 4b. Why do you think it would be a good fit for you?
  - 4c. What other areas of interest do you have in terms of career aspirations?
  - 4d. Do you plan to transfer to a 4- year institution in pursuit of a bachelor's degree?
5. Are you a part-time or full-time student?
  - 5a. Number of units in which you are currently enrolled?
6. Do you work in addition to going to school?
  - 6a. If yes, tell me about your job.
7. When were you diagnosed with ADHD?
  - 7a. What issues prompted the need to seek a diagnosis?
  - 7b. Is your diagnosis for attention only (ADD) or the combined type (ADHD)?
8. Do you currently take medication?
  - 8a. If yes, share with me what kind of medication you take and the dosage.
  - 8b. How long have you been taking ADHD medication?
9. Do you have other family members with ADHD?
  - 9a. Have they experienced similar symptoms?
10. Talk to me about the level of support you feel you receive from family members or friends related to your ADHD.
  - 10a. What kinds of things do family/friends say/do that seem to help?
  - 10b. What kinds of things do not help?
  - 10c. How important is family/friend support in helping you manage ADHD? Why?
11. Talk to me about how ADHD impacted your educational experiences/academic success in primary and secondary school.
12. Describe any strategies you used in primary and secondary school to overcome academic challenges related to ADHD. Examples- use of ADHD medication, study or test taking techniques. Support services/programs/interventions/accommodations?

13. Were such strategies helpful in primary and secondary school? Why or why not?
14. Talk to me about the transition from high school to community college.
  - 14a. What aspects did you find challenging?
  - 14b. Were there things that you were apprehensive about?
  - 14c. Did you find those concerns to be founded or unfounded? Why or why not?
15. How would you describe your academic performance (grades)? Share with me any worries that you have related to academics.
16. What kinds of strategies do you use now to overcome challenges associated with your ADHD symptoms?
  - 16a. Are they mostly effective, not very effective or marginally effective? Why?
17. What kinds of courses/classes do you find most difficult and least difficult? Why?
18. Tell me about any academic or personal goals you have set for the semester.
  - 18a. If yes, can you share some of them with me?
  - 18b. How do you plan to reach your goals? Specific strategies, ideas?
19. What is the most difficult/challenging aspect of college?
  - 19a. What is the easiest or best thing about college?
20. Tell me about any services you have used or currently use through Disability Support Services.
  - 20a. Have you used services from other organizations/service providers?
21. What services/interventions/accommodations have you found to be most helpful?
  - 21a. Least helpful? Why?
22. What services do you think that you could benefit from (if any) that are not currently available?
23. Have you ever heard of or utilized an ADHD coach?
  - 23a. Do you think that you would use one? Why or why not?
24. What kind of teacher/instruction style is most effective in helping you to learn new material? For example- a teacher that lectures, relates subject material to everyday life, tells jokes or keeps the classroom environment light, etc.
25. What kind of teaching style is least effective for you?
26. What kinds of class assignments/activities do you enjoy the most? Dread the most?
27. Have you ever taken an online class or participated in distance learning?

- 27a. If yes, can you tell me about that experience?  
 27b. Was it successful or unsuccessful? Why?
28. Describe how ADHD impacts your social life or relationships with peers (if at all).
29. Have you experienced challenges with depression?  
 29a. Have you used drugs or excessive amounts of alcohol since beginning at Tech?
30. Can you share other things with me about your college experience as it relates to ADHD that I may not have asked you about?

### **Follow-up Questions (Interview # 2)**

1. How are your classes going at Tech?  
 1a. What do you expect in terms of grades this semester?
2. As the semester is winding down, do you have any concerns or worries about any of your classes?
3. Are you utilizing the same services from Disability Support Services as you were when we met back in January?  
 3a. Are those services helping? Why or why not?  
 3b. If different, what kinds of services are you using now?  
 3c. Are they more helpful? Less helpful? Why?
4. What services did you find to be most effective in helping you to manage your ADHD symptoms over the course of this semester?
5. How important was your contact/relationship with your Disability Support Services coordinator? Why?
6. What new strategies did you learn and/or employ over the semester (if any) to manage ADHD symptoms as it relates to your studies?
7. How would you compare this semester to previous semesters (if applicable)?  
 7a. What factors made it better or worse?
8. Do you plan to continue at Tech. next semester? Why or why not?  
 8a. What factors most influenced your decision?
9. What concerns or worries do you have about next semester (if any)?
10. What has been your greatest achievement at Tech.? Why?
11. What has been your greatest challenge at Tech.? Why?

12. Beyond college, how do you see ADHD impacting your life (if at all)?
13. Can you describe your overall experience this semester?
14. What could/would have made it better, more productive, more positive?
15. Are there other things that you can share with me about your experience this semester that I may not have asked you about?

APPENDIX D  
RESEARCH PROJECT TIMELINE

## Project Timeline

Month	Project Activities
September 2008	Acquire Institutional Review Board (IRB) Approval – UNL
October 2008	Acquire Community College Approval
November 2008	Participant Recruitment
December 2008	Participant Recruitment
January 2009	Semi-structured Personal Interviews
February 2009	Interview transcription
March 2009	Data coding and analysis Verification strategies- member checking, peer review
April 2009	Arrange for final interviews
May 2009	Final Semi-structured personal interviews
June 2009	Interview transcription, coding and analysis Verification strategies- member checking, peer review
July 2009	Report Write-up

APPENDIX E  
IRB APPROVAL LETTER





October 15, 2008

Charla Lawrence  
Department of Educational Administration

Sheldon Stick  
Department of Educational Administration  
123 TEAC UNL 68588-0360

IRB Number: 2008109235EP  
Project ID: 9235  
Project Title: Experiences of Community College Students with ADHD: A Qualitative Study in the Tradition of Phenomenology

Dear Charla:

This letter is to officially notify you of the approval of your project by the Institutional Review Board (IRB) for the Protection of Human Subjects. It is the Board's opinion that you have provided adequate safeguards for the rights and welfare of the participants in this study based on the information provided. Your proposal is in compliance with this institution's Federal Wide Assurance 00002258 and the DHHS Regulations for the Protection of Human Subjects (45 CFR 46).

Your stamped and approved informed consent form has been uploaded to NUgrant (Informed\_Consent\_Form-Approved.pdf file). Please use this form to make copies to distribute to participants. If changes need to be made, please submit the revised informed consent form to the IRB for approval prior to using it.

Date of EP Review: 10/09/2008

You are authorized to implement this study as of the Date of Final Approval: 10/15/2008. This approval is Valid Until: 10/14/2009.

We wish to remind you that the principal investigator is responsible for reporting to this Board any of the following events within 48 hours of the event:

- Any serious event (including on-site and off-site adverse events, injuries, side effects, deaths, or other problems) which in the opinion of the local investigator was unanticipated, involved risk to subjects or others, and was possibly related to the research procedures;
- Any serious accidental or unintentional change to the IRB-approved protocol that involves risk or has the potential to recur;
- Any publication in the literature, safety monitoring report, interim result or other finding that indicates an unexpected change to the risk/benefit ratio of the research;
- Any breach in confidentiality or compromise in data privacy related to the subject or others; or
- Any complaint of a subject that indicates an unanticipated risk or that cannot be resolved by the research staff.

For projects which continue beyond one year from the starting date, the IRB will request

continuing review and update of the research project. Your study will be due for continuing review as indicated above. The investigator must also advise the Board when this study is finished or discontinued by completing the enclosed Protocol Final Report form and returning it to the Institutional Review Board.

If you have any questions, please contact the IRB office at 472-6965.

Sincerely,  
Mario Scalora, Ph.D.  
Chair for the IRB

APPENDIX F

APPROVAL FROM TECHNICAL COMMUNITY COLLEGE

Email Communication

Friday, November 07, 2008 3:36 PM -0500

Nicole,

I apologize again for the time it's taken to get approval for your study. Today, I was able to meet with our new Vice President and she has approved the study.

Her only concern was that I ensure that participants in the study were given the option to not participate at any point in the process. I verified that this was the case as indicated in your supporting documentation.

Thanks for your interest in working with Tech. I wish you the best in this study. Please let Ms Rubio know how we might assist from this point forward.

Tom

APPENDIX G  
PEER REVIEWER QUALIFICATIONS

Associate Professor  
Health Policy and Management  
Gillings School of Global Public Health  
University of North Carolina at Chapel Hill

---

Education

1988	Princeton University	BA, Public and International Affairs
1998	University of Michigan	MHSA
1999	University of Michigan at Ann Arbor	PhD, Health Services Organization and Policy

APPENDIX H  
SAMPLE OF CODED QUOTATIONS

**All (48) quotations from primary document: P 5: ADHD.rtf (C:\Documents and Settings\mrsuser\My Documents\Nicole\ ADHD.rtf)**

---

HU:	ADHD Study
File:	[C:\Documents and Settings\cl92\My Documents\Scientific
Software\ATLASTi\TextBank\ADHD Study.hpr5]	
Edited by:	Super
Date/Time:	10/29/09 01:48:42 PM

---

**P 5: ADHD.rtf - 5:1 [Since 2005, so a long time. I ..] (15:15) (Super)**

Codes: [Duration at DT]  
No memos

Since 2005, so a long time. I changed my major.

**P 5: ADHD.rtf - 5:2 [At first I had gone to UNC Cha..] (19:19) (Super)**

Codes: [academic history]  
No memos

At first I had gone to UNC Charlotte and I didn't adjust very well to the college experience. I missed a lot of my classes. I went in with about a 3.0 GPA and came out with a 1.9.

**P 5: ADHD.rtf - 5:3 [I decided to go the local comm..] (19:19) (Super)**

Codes: [factors influencing choice]  
No memos

I decided to go the local community college. I live about 10 miles away.

**P 5: ADHD.rtf - 5:4 [I plan to work in the field of..] (29:29) (Super)**

Codes: [areas of interest]  
No memos

I plan to work in the field of architecture and after this semester I should finish my associates and I plan to get my certificate and I am hoping to get a job.

**P 5: ADHD.rtf - 5:5 [If not I am hoping to transfer..] (29:29) (Super)**

Codes: [transfer to 4yr]  
No memos

If not I am hoping to transfer to NC State. Ideally I would like to get a job that would pay me to go to school but right now I am just hoping to get a job - given the way things are right now. I have one class left that I plan to take over the summer. I will have to take some classes through university transfer if I do end up transferring.



**P 5: ADHD.rtf - 5:6 [At one point I wanted to be ps..] (29:29) (Super)**

Codes: [areas of interest]

No memos

At one point I wanted to be psych major but I decided it was a little too much work. I am also interested in music- I like it a lot. I play the Cello but not well. I also sing.

**P 5: ADHD.rtf - 5:7 [I am a full time student this ..] (34:34) (Super)**

Codes: [Full time vs Part time]

No memos

I am a full time student this semester 12+ units.

**P 5: ADHD.rtf - 5:8 [I have a part time job working..] (38:38) (Super)**

Codes: [Working vs Not Working]

No memos

I have a part time job working a movie theater. Mostly on the weekends but I don't like working there - too many complaints.

**P 5: ADHD.rtf - 5:9 [I was diagnosed with ADHD] (43:43) (Super)**

Codes: [ADHD]

No memos

I was diagnosed with ADHD

**P 5: ADHD.rtf - 5:10 [somewhere around the age of fo..] (43:43) (Super)**

Codes: [diagnosed as a child]

No memos

somewhere around the age of four

**P 5: ADHD.rtf - 5:11 [My parents were concerned most..] (43:43) (Super)**

Codes: [key symptoms]

No memos

My parents were concerned mostly about my attention span. I was very distracted by random things when I was really little. I was even put into special pre-school and I don't think they actually have that anymore.

**P 5: ADHD.rtf - 5:12 [My dad has ADHD and wasn't dia..] (52:52) (Super)**

Codes: [family history vs no family history]

No memos

My dad has ADHD and wasn't diagnosed until he was an adult. He has similar symptoms to me. He is a computer engineer and he can focus on something to the exclusion of everything else. He is also mister fix it. Whenever something breaks he fixes it in a pretty short amount of time.

**P 5: ADHD.rtf - 5:13 [As far as supportive my mom ki..] (58:58) (Super)**

Codes: [Degree of FS]

No memos

As far as supportive my mom kind of understands that sometimes I don't always pay attention in class so my grades haven't always been the best but she encourages me to improve all the time. All the time - Laugh, Laugh. My mom nags but that may be something all mothers do. Never anything particularly negative. She gets exasperated but I am sure that is pretty normal too. Overall my family has been a support to me.

**P 5: ADHD.rtf - 5:14 [Well, when I was younger I cou..] (62:62) (Super)**

Codes: [impacts on prim/sec. edu]

No memos

Well, when I was younger I couldn't really keep my attention on what I was learning so a lot of times I had trouble with classes. I would always have these little activities that I would start and never finish because I got board. Difficulty with follow through. My grades were fairly average with some peaks and valleys. If I was interested in a class then I would do well but if I wasn't interested in it then I didn't do so well. Like in math, I hate math. English I always did well in because I love reading but not math. I taught myself to read in pre-school.

**P 5: ADHD.rtf - 5:15 [I had an IEP in school. Someti..] (65:65) (Super)**

Codes: [strategies-prim/sec. edu]

No memos

I had an IEP in school. Sometimes I would be given the test in a separate room so that I could take the test by myself but that was mostly in elementary school and junior high. I think it was helpful in preventing me from getting distracted. They also gave me extra time and overall those things were pretty helpful.

**P 5: ADHD.rtf - 5:16 [Most of it was that I wasn't r..] (75:75) (Super)**

Codes: [Nature of Transition]

No memos

Most of it was that I wasn't really motivated to actually go to class. I didn't want to wake up early in the morning and walk across to campus to get to class. At one point I had an eight o'clock class with a teacher who was Asian and had a thick accent. I couldn't understand him so I didn't go to class very often. Classes that had 200 people in them were very distracting for me.

**P 5: ADHD.rtf - 5:17 [I was apprehensive about being..] (75:75) (Super)**

Codes: [Nature of Transition]

No memos

I was apprehensive about being two and a half hours away from home and if something went wrong I couldn't just call my parents and have them come. When I was growing up

I very unmotivated to get out of bed and go to school so my mom always had to wake me up. I am much better about that now but when I went away to school I kind of missed that. Telling me to go to class, do my homework, etc and giving me nudges to stay on track.

**P 5: ADHD.rtf - 5:18 [Yes, I think I have done prett..] (78:78) (Super)**

Codes: [Grades]

No memos

Yes, I think I have done pretty well. I actually have gotten into the honor's society here on campus.

**P 5: ADHD.rtf - 5:19 [I set time for doing the thing..] (82:82) (Super)**

Codes: [strategies-college]

No memos

I set time for doing the things that I need to do. For instance I had an art class last semester that had homework and I would set time to do the work. Most of my classes more recently haven't had much homework, the work in mostly done in class. For the art class last semester I would tape notes around where I could see them that would say "do your drawing". This seemed to be effective for me because I didn't miss any drawings.

**P 5: ADHD.rtf - 5:20 [I am getting accommodations th..] (82:82) (Super)**

Codes: [accommodations- college]

No memos

I am getting accommodations through DSS such as extra time for tests. I don't really need separate testing so much anymore.

**P 5: ADHD.rtf - 5:21 [Math is the thing that I like ..] (85:85) (Super)**

Codes: [subjects- difficult]

No memos

Math is the thing that I like the least.

**P 5: ADHD.rtf - 5:22 [As long as I get a C or higher..] (90:90) (Super)**

Codes: [goal articulation]

No memos

As long as I get a C or higher I am good. I know most people shoot for As but as long as I am passing than I feel okay. I guess that isn't a good thing for a college student to say. I do work at my own pace as much as I can.

**P 5: ADHD.rtf - 5:23 [I think the hardest aspect is ..] (94:94) (Super)**

Codes: [challenging thing about CC]

No memos

I think the hardest aspect is actually going to school, getting there. Once I am there, I am

able to do everything just fine. I have had a day or two when I wasn't motivated to get up. I try not to do that very often.

**P 5: ADHD.rtf - 5:24 [I have seen Paula here at DSS ..] (98:98) (Super)**

Codes: [accommodations- college]  
No memos

I have seen Paula here at DSS but I don't necessarily see her every semester. I basically just get extra time for tests if I need it

**P 5: ADHD.rtf - 5:25 [I think it was the MTA study (..) (101:101) (Super)**

Codes: [other organizations]  
No memos

I think it was the MTA study (Duke Study that I was in) because they helped me learn how to cope with ADHD. I also went to a camp a couple of times when I was growing up- Camp Soar. It was aimed at kids with ADHD and gifted children. It was camp that helped kids cope with associated problems and it had summer sessions where you took classes to help you in weaker academic areas. Last time I went, I was in middle school. The program addresses problem solving, leadership, behavior issues, social skills and strategy development.

**P 5: ADHD.rtf - 5:26 [I could have used one when I w..] (109:109) (Super)**

Codes: [coach-positives]  
No memos

I could have used one when I was at UNC Charlotte. I sure that there were counselors there but I never actually talked to anyone about that.

**P 5: ADHD.rtf - 5:27 [For me the smaller the class t..] (112:112) (Super)**

Codes: [most effective instruction]  
No memos

For me the smaller the class the better because the teacher can focus more on each of the students as compared to when they have a whole mass of people. For instance in my architecture classes we have no more than 10 people and so if we have questions we can ask our teacher and he can come over and answer them. If someone else is asking a question, it is small enough so that you can listen in. It depends on the content. Like if it is something that has a lot of visual aids- I had this one class where we had a lot of pictures or actual samples that we could look at (pipes) it makes it more interesting.

**P 5: ADHD.rtf - 5:28 [I don't like steady lecturing ..] (112:112) (Super)**

Codes: [least effective instruction]  
No memos

I don't like steady lecturing with few visual aids where the teacher just drones on.

**P 5: ADHD.rtf - 5:29 [I like AutoCAD and drawings] (119:119) (Super)**

Codes: [best assignments]  
 No memos

I like AutoCAD and drawings

**P 5: ADHD.rtf - 5:30 [I am not a very social person ..] (119:119) (Super)**

Codes: [worst assignments]  
 No memos

I am not a very social person so group activities I don't like so much. I kind of prefer to do my own thing especially since I tend to work at a faster pace than most people.

**P 5: ADHD.rtf - 5:31 [Not purely online. I had this ..] (124:124) (Super)**

Codes: [OL Experiences]  
 No memos

Not purely online. I had this class where I had to do some stuff online but then I also had a lab. It wasn't just purely email with the instructor, there was interaction. I think that I would like an online course since I already spend so much time on the computer. I think my mom would encourage me not to that because she thinks I already spend too much time on the computer. I do think that I could be successful in that kind of course.

**P 5: ADHD.rtf - 5:32 [Well, I have this problem in t..] (128:128) (Super)**

Codes: [social impacts]  
 No memos

Well, I have this problem in that I make friends and stay friends with people for a little while but then we tend to go our own separate ways. I struggle with maintaining the link. I really do not like talking on the phone so either online or face to face works better for me. I have difficulty speaking, like right now and I have trouble talking and I stammer a lot and I really don't like that. My favorite way is online where I can type and people can understand me.

**P 5: ADHD.rtf - 5:33 [I am currently diagnosed with ..] (132:132) (Super)**

Codes: [depression issues]  
 No memos

I am currently diagnosed with a light case of depression. It is not like I want to go jump off a bridge or something. I am not on meds for that.

**P 5: ADHD.rtf - 5:34 [When I was in elementary school..] (75:75) (Super)**

Codes: [attended a private school]  
 No memos

When I was in elementary school, I went to a private Catholic school that had very small classes. Even in high school I never had a class with more than 30 people.

**P 5: ADHD.rtf - 5:35 [I am the architecture program...] (22:22) (Super)**

Codes: [types of courses]

No memos

I am the architecture program. I am getting my associates in architectural technology. Most of my classes or actually all of my classes are tailored towards that.

**P 5: ADHD.rtf - 5:36 [Not currently but I have had p..] (48:48) (Super)**

Codes: [Meds vs no Meds]

No memos

Not currently but I have had pretty much everything growing up. I took Aderal, Dexedrine, Wellbutrin, and Concerta. Oh and Ritalin. Since I have had to grow up with ADHD, I have learned to deal with it so I am not on medication now.

**P 5: ADHD.rtf - 5:37 [I didn't do so well in one of ..] (143:143) (Super)**

Codes: [semester outcome]

No memos

I didn't do so well in one of my classes - I already got my grade back and it was a 73 so that is a D. I think that in my other two classes I am getting solid Bs. My physics class is still up in the air but I think that I might pull it off with a C.

**P 5: ADHD.rtf - 5:38 [Yes and no. I have a paper tha..] (152:152) (Super)**

Codes: [same accommodations]

No memos

Yes and no. I have a paper that I print out each semester that shows what accommodations I am supposed to get but I don't come in for counseling. I don't always feel that I need the extra accommodations like separate testing, etc. but I can use them if I want them. I haven't really used it much this semester because most of my classes only have about 5 people so there isn't much point in taking a test in a separate classroom. I just haven't really needed the accommodations that much this semester.

**P 5: ADHD.rtf - 5:39 [Didn't really use them this se..] (155:155) (Super)**

Codes: [use of accommodations]

No memos

Didn't really use them this semester.

**P 5: ADHD.rtf - 5:40 [I haven't met with her this se..] (158:158) (Super)**

Codes: [relative importance of DSS counselor]

No memos

I haven't met with her this semester.

**P 5: ADHD.rtf - 5:41 [I think it is mainly the point..] (165:165) (Super)**

Codes: [compare semesters]

No memos

I think it is mainly the point that I am reaching the end of it all - that makes things feel a little different. Previously I knew that I had several semesters ahead of me and I was kind of stuck in the middle. I have two more classes both of which I will take of the summer and then I am done. Better and worse. Better in the fact in that I have gotten into my groove but worse that I am anxious to get it over and done with.

**P 5: ADHD.rtf - 5:42 [Coming back for my last two cl..] (169:169) (Super)**

Codes: [continue vs. not continue]

No memos

Coming back for my last two classes over the summer - I want to complete the program.

**P 5: ADHD.rtf - 5:43 [Not so much. My mom wants me t..] (172:172) (Super)**

Codes: [worries vs. no worries]

No memos

Not so much. My mom wants me to work more now that I am only taking two classes so she wants me to work more but I don't really like my job but money is money. I am not so worried about the balance between my studies and work it is just that I don't like the job. I don't have a problem with studying because the architecture classes are hard to study for because most of the work is in class work.

**P 5: ADHD.rtf - 5:44 [Mainly the fact that left UNC ..] (175:175) (Super)**

Codes: [greatest achievement]

No memos

Mainly the fact that left UNC Charlotte with a 1.4 GPA and after a few semesters here I ended up with a 3.5 and was inducted into the honor's society. I wish I had done the community college thing first and then gone onto a 4 year after.

**P 5: ADHD.rtf - 5:45 [I have gotten complacent becau..] (178:178) (Super)**

Codes: [greatest challenge]

No memos

I have gotten complacent because of how easy my classes seemed at first but they have gotten harder and I have had to adjust to that. I got straight As and then I started taking classes that were harder. For instance, this semester the class I got a D in was Mechanical drawing and I had to figure out all this technical stuff and that is a bit harder for me to do.

**P 5: ADHD.rtf - 5:46 [Well it will be much like it i..] (181:181) (Super)**

Codes: [life impacts]

No memos

Well it will be much like it is in school. With ADHD, sometimes I could concentrate on one thing to the exclusion of everything else and at other times I get distracted by

everything. My stride gets interrupted but it kind of varies depending on how interested I am in what I am doing. I think that will be much the same with working and will try to do more of the former than the latter. I will be getting paid for it rather than paying. I don't see it impacting my social life because I am not a very social person anyway unless it is related to friendships with my fellow employees whoever they may be. I have been making more friends this semester because I joined a club that I didn't know about previously. I do more things outside of school with this group. It is a gamer club for video games and stuff.

**P 5: ADHD.rtf - 5:47 [I think that I found a balance..] (184:184) (Super)**

Codes:

[overall experience]

No memos

I think that I found a balance between school and free time. I know when to do school stuff and when to do free time stuff. I am doing better about learning how to manage my time. For example, the other day I had planned on going to the movies and I had to figure out the time table for when my class gets out and how long it takes to get to the movie and then to get back in time for a club meeting. Overall it has been pretty good except for the one class.

**P 5: ADHD.rtf - 5:48 [I'm sure it would have been be..] (187:187) (Super)**

Codes:

[make it better]

No memos

I'm sure it would have been better if I had taken time to study for the final exam with one of my classmates. He is really good at the written part and I am better on the drawing. I helped him on the drawing part but I never got help from him.



APPENDIX I  
SAMPLE TRANSCRIPT

## Interview Protocol

**Project: ADHD Study**

**Time: 12 noon**

**Date: 2/24/09**

**Location: DSS**

**Interviewer: Nicole**

**Interviewee: Student (P5: ADHD)**

## Personal Interview Questions

### Initial Set of Questions (Interview # 1):

*1. How long have you been a student at this Community College?*

Since 2005, so a long time. I changed my major.

*2. Why did you choose to attend here?*

*2a. What factors influenced this choice?*

At first I had gone to UNC Charlotte and I didn't adjust very well to the college experience. I missed a lot of my classes. I went in with about a 3.0 GPA and came out with a 1.9. I decided to go the local community college. I live about 10 miles away.

*3. Describe the kinds of courses are you enrolled in this semester.*

I am the architecture program. I am getting my associates in architectural technology. Most of my classes or actually all of my classes are tailored towards that.

*4. What field do you plan to work in?*

*4a. What sparked your interest in this field?*

*4b. Why do you think it would be a good fit for you?*

*4c. What other areas of interest do you have in terms of career aspirations?*

*4d. Do you plan to transfer to a 4- year institution in pursuit of a bachelor's degree?*

I plan to work in the field of architecture and after this semester I should finish my associates and I plan to get my certificate and I am hoping to get a job. If not I am hoping to transfer to NC State. Ideally I would like to get a job that would pay me to go to school but right now I am just hoping to get a job – given the way things are right now. I have one class left that I plan to take over the summer. I will have to take some classes through university transfer if I do end up transferring. I have always loved building things starting when I had legos as a little kid. I would build houses and space ships and stuff. I was fascinated with buildings in general and when I was little my dad took me to neighborhoods where they were building houses and we would go inside (even though you are not supposed to) and look at how buildings were made and it is just something I would really like to do. Especially now days that you do so much of it on computers although I do have to hand draw things as well. At one point I wanted to be psych major

but I decided it was a little too much work. I am also interested in music- I like it a lot. I play the Cello but not well. I also sing.

5. *Are you a part-time or full-time student?*

5a. *Number of units in which you are currently enrolled?*

I am a full time student this semester 12+ units.

6. *Do you work in addition to going to school?*

6a. *If yes, tell me about your job.*

I have a part time job working a movie theater. Mostly on the weekends but I don't like working there – too many complaints.

7. *When were you diagnosed with ADHD?*

7a. *What issues prompted the need to seek a diagnosis?*

7b. *Is your diagnosis for attention only (ADD) or the combined type (ADHD)?*

I was diagnosed with ADHD somewhere around the age of four. My parents were concerned mostly about my attention span. I was very distracted by random things when I was really little. I was even put into special pre-school and I don't think they actually have that anymore.

8. *Do you currently take medication?*

8a. *If yes, share with me what kind of medication you take and the dosage.*

8b. *How long have you been taking ADD/ADHD medication?*

Not currently but I have had pretty much everything growing up. I took Aderal, Dexidrine, Wellbutrin, and Concerta. Oh and Ritalin. Since I have had to grow up with ADHD, I have learned to deal with it so I am not on medication now.

9. *Do you have other family members with ADHD?*

9a. *Have they experienced similar symptoms?*

My dad has ADHD and wasn't diagnosed until he was an adult. He has similar symptoms to me. He is a computer engineer and he can focus on something to the exclusion of everything else. He is also mister fix it. Whenever something breaks he fixes it in a pretty short amount of time.

10. *Talk to me about the level of support you feel you receive from family members or friends related to your ADHD.*

10a. *What kinds of things do family/friends say/do that seem to help?*

10b. *What kinds of things do not help?*

10c. *How important is family/friend support in helping you manage ADHD? Why?*

As far as supportive my mom kind of understands that sometimes I don't always pay attention in class so my grades haven't always been the best but she encourages me to improve all the time. All the time - Laugh, Laugh. My mom nags but that may be something all mothers do. Never anything particularly negative. She gets exasperated but I am sure that is pretty normal too. Overall my family has been a support to me.

*11. Talk to me about how ADHD impacted your educational experiences/academic success in primary and secondary school.*

Well, when I was younger I couldn't really keep my attention on what I was learning so a lot of times I had trouble with classes. I would always have these little activities that I would start and never finish because I got bored. Difficulty with follow through. My grades were fairly average with some peaks and valleys. If I was interested in a class then I would do well but if I wasn't interested in it then I didn't do so well. Like in math, I hate math. English I always did well in because I love reading but not math. I taught myself to read in pre-school.

*12. Describe any strategies you used in primary and secondary school to overcome academic challenges related to ADHD. Examples- use of ADHD medication, study or test taking techniques. Support services/programs/interventions/accommodations?*

I had an IEP in school. Sometimes I would be given the test in a separate room so that I could take the test by myself but that was mostly in elementary school and junior high. I think it was helpful in preventing me from getting distracted. They also gave me extra time and overall those things were pretty helpful.

*13. Were such strategies helpful in primary and secondary school? Why or why not?*

See notes above.

*14. Talk to me about the transition from high school to community college.*

*14a. What aspects did you find challenging?*

*14b. Were there things that you were apprehensive about?*

*14c. Did you find those concerns to be founded or unfounded? Why or why not?*

Most of it was that I wasn't really motivated to actually go to class. I didn't want to wake up early in the morning and walk across to campus to get to class. At one point I had an eight o'clock class with a teacher who was Asian and had a thick accent. I couldn't understand him so I didn't go to class very often. Classes that had 200 people in them were very distracting for me. When I was in elementary school, I went to a private Catholic school that had very small classes. Even in high school I never had a class with more than 30 people. I was apprehensive about being two and a half hours away from home and if something went wrong I couldn't just call my parents and have them come. When I was growing up I was very unmotivated to get out of bed and go to school so my mom always had to wake me up. I am much better about that now but when I went away to school I kind of missed that. Telling me to go to class, do my homework, etc and giving me nudges to stay on track.

*15. How would you describe your academic performance (grades)? Share with me any worries that you have related to academics.*

Yes, I think I have done pretty well. I actually have gotten into the honor's society here on campus. Except for a few math classes that I took, I generally did well. I did have to withdraw from a few classes and I know that looks bad on my transcript but it seemed better to me than failing a class.

16. *What kinds of strategies do you use now to overcome challenges associated with your ADHD symptoms?*

16a. *Are they mostly effective, not very effective or marginally effective? Why?*

I set time for doing the things that I need to do. For instance I had an art class last semester that had homework and I would set time to do the work. Most of my classes more recently haven't had much homework, the work is mostly done in class. For the art class last semester I would tape notes around where I could see them that would say "do your drawing". This seemed to be effective for me because I didn't miss any drawings. I am getting accommodations through DSS such as extra time for tests. I don't really need separate testing so much anymore.

17. *What kinds of courses/classes do you find most difficult and least difficult? Why?*

Math is the thing that I like the least. I like architecture classes except for those that include a lot of math. I like classes that allow me to work at my own pace. In one class I actually finished everything a month before the class ended so I just worked on my own project for the remainder of the course. I am really good at architecture.

18. *Tell me about any academic or personal goals you have set for the semester.*

18a. *If yes, can you share some of them with me?*

18b. *How do you plan to reach your goals? Specific strategies, ideas?*

As long as I get a C or higher I am good. I know most people shoot for As but as long as I am passing than I feel okay. I guess that isn't a good thing for a college student to say. I do work at my own pace as much as I can.

19. *What is the most difficult/challenging aspect of college?*

19a. *What is the easiest or best thing about college?*

I think the hardest aspect is actually going to school, getting there. Once I am there, I am able to do everything just fine. I have had a day or two when I wasn't motivated to get up. I try not to do that very often. The social aspect of school is okay but I am not a very social person. Most of the people I talk to are at school except for online.

20. *Tell me about any services you have used or currently use through Disability Support Services.*

20a. *Have you used services from other organizations/service providers?*

I have seen Paula here at DSS but I don't necessarily see her every semester. I basically just get extra time for tests if I need it. I was part of a counseling group through high school to improve my social skill. I was a part of a small group of people my age. I do have free counseling services but I don't actually go because I don't feel like I need it.

21. *What services/interventions/accommodations have you found to be most helpful?*

21a. *Least helpful? Why?*

I think it was the MTA study (Duke Study that I was in) because they helped me learn how to cope with ADHD. I also went to a camp a couple of times when I was growing up- Camp Soar. It was aimed at kids with ADHD and gifted children. It was camp that helped kids cope with associated problems and it had summer sessions where you took classes to help you in weaker academic areas. Last time I went, I was in middle school.

The program addresses problem solving, leadership, behavior issues, social skills and strategy development.

22. *What services do you think that you could benefit from (if any) that are not currently available?*

I heard a saying the other day “don’t meet with people who are experiencing the same problems as you, meet with people that have overcome them”. People who have success stories or those who have learned how to control it.

23. *Have you ever heard of or utilized an ADHD coach?*

23a. *Do you think that you would use one? Why or why not?*

No, not really. I sort of had something like that in high school although she was just a normal counselor. I found it to be helpful but she didn’t help me with the details like you describe it was more general in nature. I could have used one when I was at UNC Charlotte. I sure that there were counselors there but I never actually talked to anyone about that.

24. *What kind of teacher/instruction style is most effective in helping you to learn new material? For example- a teacher that lectures, relates subject material to everyday life, tells jokes or keeps the classroom environment light, etc.*

For me the smaller the class the better because the teacher can focus more on each of the students as compared to when they have a whole mass of people. For instance in my architecture classes we have no more than 10 people and so if we have questions we can ask our teacher and he can come over and answer them. If someone else is asking a question, it is small enough so that you can listen in. It depends on the content. Like if it is something that has a lot of visual aids- I had this one class where we had a lot of pictures or actual samples that we could look at (pipes) it makes it more interesting. I don’t like steady lecturing with few visual aids where the teacher just drones on.

25. *What kind of teaching style is least effective for you?*

See notes above.

26. *What kinds of class assignments/activities do you enjoy the most? Dread the most?*

I like AutoCAD and drawings. I am not a very social person so group activities I don’t like so much. I kind of prefer to do my own thing especially since I tend to work at a faster pace than most people.

27. *Have you ever taken an online class or participated in distance learning?*

27a. *If yes, can you tell me about that experience?*

27b. *Was it successful or unsuccessful? Why?*

Not purely online. I had this class where I had to do some stuff online but then I also had a lab. It wasn’t just purely email with the instructor, there was interaction. I think that I would like an online course since I already spend so much time on the computer. I think my mom would encourage me not to that because she thinks I already spend too much time on the computer. I do think that I could be successful in that kind of course.

28. *Describe how ADHD impacts your social life or relationships with peers (if at all).*

Well, I have this problem in that I make friends and stay friends with people for a little while but then we tend to go our own separate ways. I struggle with maintaining the link. I really do not like talking on the phone so either online or face to face works better for me. I have difficulty speaking, like right now and I have trouble talking and I stammer a lot and I really don't like that. My favorite way is online where I can type and people can understand me.

29. *Have you experienced challenges with depression?*

29a. *Have you used drugs or excessive amounts of alcohol since beginning school here?*

I am currently diagnosed with a light case of depression. It is not like I want to go jump off a bridge or something. I am not on meds for that. No use of drugs or alcohol.

30. *Can you share other things with me about your college experience as it relates to ADHD that I may not have asked you about?*

Nothing really.

### **Follow-up Questions (Interview # 2)**

**Met on 5/11/09 at 1:30pm -DSS**

1. *How are your classes going?*

1a. *What do you expect in terms of grades this semester?*

I didn't do so well in one of my classes – I already got my grade back and it was a 73 so that is a D. I think that in my other two classes I am getting solid Bs. My physics class is still up in the air but I think that I might pull it off with a C.

2. *As the semester is winding down, do you have any concerns or worries about any of your classes?*

I think that after I get my associates I will come back and retake the class where I got a D.

3. *Are you utilizing the same services from Disability Support Services as you were when we met before?*

3a. *Are those services helping? Why or why not?*

3b. *If different, what kinds of services are you using now?*

3c. *Are they more helpful? Less helpful? Why?*

Yes and no. I have a paper that I print out each semester that shows what accommodations I am supposed to get but I don't come in for counseling. I don't always feel that I need the extra accommodations like separate testing, etc. but I can use them if I want them. I haven't really used it much this semester because most of my classes only have about 5 people so there isn't much point in taking a test in a separate classroom. I just haven't really needed the accommodations that much this semester.

4. *What services did you find to be most effective in helping you to manage your ADHD symptoms over the course of this semester?*

Didn't really use them this semester.

5. *How important was your contact/relationship with your Disability Support Services coordinator? Why?*

I haven't met with her this semester.

6. *What new strategies did you learn and/or employ over the semester (if any) to manage ADHD symptoms as it relates to your studies?*

Nothing really – I felt that I was doing well so far. I have had the mindset that if things are working well so far then no point in trying to change it.

7. *How would you compare this semester to previous semesters (if applicable)?*

7a. *What factors made it better or worse?*

I think it is mainly the point that I am reaching the end of it all - that makes things feel a little different. Previously I knew that I had several semesters ahead of me and I was kind of stuck in the middle. I have two more classes both of which I will take of the summer and then I am done. Better and worse. Better in the fact in that I have gotten into my groove but worse that I am anxious to get it over and done with.

8. *Do you plan to continue next semester? Why or why not?*

8a. *What factors most influenced your decision?*

Coming back for my last two classes over the summer – I want to complete the program.

9. *What concerns or worries do you have about next semester (if any)?*

Not so much. My mom wants me to work more now that I am only taking two classes so she wants me to work more but I don't really like my job but money is money. I am not so worried about the balance between my studies and work it is just that I don't like the job. I don't have a problem with studying because the architecture classes are hard to study for because most of the work is in class work.

10. *What has been your greatest achievement here? Why?*

Mainly the fact that left UNC Charlotte with a 1.4 GPA and after a few semesters at Durham Tech I ended up with a 3.5 and was inducted into the honor's society. I wish I had done the community college thing first and then gone onto a 4 year after.

11. *What has been your greatest challenge here? Why?*

I have gotten complacent because of how easy my classes seemed at first but they have gotten harder and I have had to adjust to that. I got straight As and then I started taking classes that were harder. For instance, this semester the class I got a D in was Mechanical drawing and I had to figure out all this technical stuff and that is a bit harder for me to do.

12. *Beyond college, how do you see ADHD impacting your life (if at all)?*

Well it will be much like it is in school. With ADHD, sometimes I could concentrate on one thing to the exclusion of everything else and at other times I get distracted by everything. My stride gets interrupted but it kind of varies depending on how interested I am in what I am doing. I think that will be much the same with working and will try to do more of the former than the latter. I will be getting paid for it rather than paying.



I don't see it impacting my social life because I am not a very social person anyway unless it is related to friendships with my fellow employees whoever they may be. I have been making more friends this semester because I joined a club that I didn't know about previously. I do more things outside of school with this group. It is a gamer club for video games and stuff.

*13. Can you describe your overall experience this semester?*

I think that I found a balance between school and free time. I know when to do school stuff and when to do free time stuff. I am doing better about learning how to manage my time. For example, the other day I had planned on going to the movies and I had to figure out the time table for when my class gets out and how long it takes to get to the movie and then to get back in time for a club meeting. Overall it has been pretty good except for the one class.

*14. What could/would have made it better, more productive, more positive?*

I'm sure it would have been better if I had taken time to study for the final exam with one of my classmates. He is really good at the written part and I am better on the drawing. I helped him on the drawing part but I never got help from him.

*15. Are there other things that you can share with me about your experience this semester that I may not have asked you about?*

I can never think of something to say with these kinds of questions.