This is to certify that the

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ATTENTION DEFICIT DISORDER: THE COLLEGE EXPERIENCE

OF SEVEN ADULTS

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Jennifer Sue Bramer

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ATTENTION DEFICIT DISORDER: THE COLLEGE EXPERIENCE OF SEVEN ADULTS

By

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ABSTRACT

ATTENTION DEFICIT DISORDER: THE COLLEGE EXPERIENCE OF SEVEN ADULTS

By

Jennifer Sue Bramer

This study describes and analyzes the college experiences of seven Attention Deficit Disorder (ADD) adults and the ways in which they dealt with their experiences. It is known that ADD causes significant problems in education and that some adults have ADD. However, educators have had little basis for addressing the needs of ADD students in college. Very little literature has dealt specifically with the learning experiences of ADD adults, in college or elsewhere. For that reason, andragogical assumptions have had to be drawn from the literature based on pedagogy.

In this study, qualitative research methodology was employed to collect, describe, and interpret data. A standardized nonscheduled type of interview was used, and each subject was interviewed extensively. In some ways the experiences that these seven individuals related to me were vastly different, but some common themes about their college experiences emerged, and those provided the basis for my assertions.

Many of the subjects indicated that their college experiences often contributed to a diminishing of their self-esteem. Many also felt that the personality (attitude) of their instructors had an influence on their success. Most of them mentioned that they felt they had serious inadequacies in English or math or both. They all related a lack of focus in the classroom and/or while studying. Most said that they are visual learners, preferring hands-on instruction over lecture-type. Most told me they usually did not seek out support services, or thought they did not exist. Many told me that before they were diagnosed and treated for ADD, they preferred a study environment that was not completely quiet and isolated. None of the subjects completed his or her initial college program within a traditional time frame. Most told me they had found success in their careers, but most of them not in the fields requiring the college program they first pursued. Most also felt they could be/were more successful if/when they went back to college after diagnosis.

The information included in this study can be helpful to educators. It suggests attitudes, services, accommodations, and strategies that can enhance the college experiences of ADD adults.

Dissertation Co-directors: Dr. Cas Heilman and Dr. Douglas Campbell

This study is dedicated to my daughters, Michelle and Renee, without whom I would not have had the inspiration and motivation I needed to persevere.

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I am grateful to many people for their support and assistance with this research project. I would like to thank my employers, my committee, the psychiatrist I call Dr. Evers, the participants in my study, and my family--especially my husband. Without all of them, this dissertation would not exist.

My previous Dean, Dr. William Schaar, former Dean of Student Personnel Services at Lansing Community College, was instrumental in convincing me to work on my doctoral degree. Without his encouragement, I might never have taken the initiative to begin the program that led to this dissertation. I also appreciate the support of my current supervisor, Dr. John Cansfield, in securing the release-time that Lansing Community College granted me to pursue this study.

My program committee members at Michigan State University have been encouraging and supportive. Dr. Max Raines, Dr. Howard Hickey, and Dr. Lou Hekhuis have given wise guidance and encouragement. They have had undying confidence in me, which has fostered my ability to persevere. Dr. Cas Heilman and Dr. Doug Campbell have co-directed this research project. They both have challenged me to be thorough, and Dr. Campbell has assisted me meticulously with the fine details. I am very grateful that I had the benefit of both of their viewpoints to guide me.

"Dr. Evers" has been a godsend in my life for a variety of reasons. Without her, this research truly would not exist. She has treated my daughters, educated me about Attention Deficit Disorder, brainstormed for specific topics with me, acted as a subject matter expert, referred her patients to me for participation in this study, and rented me office space to conduct the interviews. She is wonderful, and I deeply appreciate everything that she has done. (I sincerely regret that I cannot share her real name, but I must maintain her anonymity in the interest of confidentiality for my subjects.)

This research also would not exist without the time and openness of communication provided by the participants in the study. Because of the limits of confidentiality, I cannot name them, but I do want to acknowledge them. All of them gave freely of their time, were open and frank in the sharing of their experiences, and truly wanted to contribute to the research in this field.

To my family, I also am gratefully indebted. My daughters, Renee Irrer and Michelle White, provided the impetus for my interest in the subject matter. They also assisted with domestic duties to help free up my time. They, along with my son-in-law, Brent Irrer, good-naturedly allowed for a modification in holiday festivities so that I could work. I appreciate their support.

Last but not least, I am eternally grateful to the support and editorial assistance of my husband, Bob Bramer. He has the "patience of Job" and truly knows the meaning of support. His encouragement was undying. He was with me

literally every step of the way--from brainstorming ideas to proofreading and editing.

I absolutely could not have done this without him.

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CHAPTER I

INTRODUCTION

Purpose of the Study

The purpose of this study is to describe and analyze the college experiences of seven adults who have been diagnosed with Attention Deficit Disorder (ADD). The seven adults who were interviewed had attended college and had been diagnosed with ADD by the same psychiatrist. This study describes and analyzes college experiences encountered by these adults and the ways in which they dealt with their experiences.

Introduction to the Problem

ADD and Education

The descriptions these adults provide of their college experiences and the ways they have handled their problems could lead to a greater understanding of other ADD adults who attend college. This understanding is important to college educators for humanitarian and legal reasons. It is also important because it relates to the mission of colleges and universities, because these institutions are seen as community leaders, and because it relates to societal needs.

From a humanitarian point of view, all of our citizens deserve the opportunity to reach their full potential. The level of education needed by people in our society becomes greater all the time, and the diversity of the students in our educational institutions also becomes greater all the time. It is increasingly important that we have a thorough understanding of those with special learning needs. Adult learners with ADD are one group of individuals who merit further understanding.

Legally, we must provide quality education to ADD students. There are several federal laws which mandate that educational institutions meet the needs of people with ADD (CH.A.D.D., 1993a; Fowler, 1992). Children (ages birth through 21) are guaranteed a free and appropriate public education by the Individuals With Disabilities Education Act (IDEA). Section 504 of the Rehabilitation Act of 1973 is a civil rights law prohibiting discrimination against persons with disabilities. All educational institutions that receive federal funds must comply with Section 504 by addressing the needs of students with disabilities as adequately as the needs of nondisabled individuals (CH.A.D.D., 1993a). The Americans With Disabilities Act (ADA), enacted in 1990, provides another legal means of requiring all educational institutions to meet the needs of people with ADD. Compliance with the law is one reason that educators would want to better understand students with ADD.

Besides compliance, another reason to be more sensitive to ADD students is to avoid litigation.

> A new type of student is entering postsecondary education--students with disabilities who grew up with the protection of various federal laws (such as the Education of All Handicapped Children Act) and whose parents have learned how to use the legal system to ensure that all legally required opportunities are available to their children. (Shepherd, Duston, Russell, & Kerr, 1992, p. 4)

Because students (presumably including those with ADD) are becoming more aware of their legal rights, they will be more demanding of educators to accommodate them, and therefore to understand them.

Greater understanding of college students with ADD is important because it relates to the mission of colleges and universities. Shepherd et al. (1992) spoke to this issue in relation to the ADA, but what they said is applicable to the broader issue. They stated:

> ADA compliance--making access to education a priority--is consistent with the mission and purpose of community colleges and four-year colleges and universities. . . . Community colleges have long recognized their obligations to their local communities to make higher education accessible to persons from all walks of life, and their mission statements reflect these beliefs. Many four-year colleges and universities have modified their mission statements along similar lines. . . . Institutions dedicated to improving "access" to higher education should place the same emphasis on physical barriers, communication barriers, and attitudinal barriers toward persons with disabilities as they do on other types of barriers, such as economic barriers. (p. 3)

It certainly is within the mission of higher education to provide accessible education to students with ADD. Therefore, understanding their college experiences is important.

Colleges and universities are often viewed as leaders in the community. Because of this respect, those who advocate for awareness of adult ADD will look to educators for leadership in that advocacy. "Just as women and minorities

pushed for changes in institutional awareness, forcing institutions to be leaders in diversity and non-discrimination on the basis of race, sex, and religion, many advocates want to see higher education take the same lead on disability" (Shepherd et al., 1992, p. 4). Thus, the fact that colleges and universities are perceived to be leaders within the community is a fourth reason that educators need to heighten their awareness of ADD in adults.

The fifth reason that an increased understanding about this topic is important to adult educators is that this awareness is related to societal needs. Postsecondary education and future employability are becoming increasingly intertwined ("Education," 1990). If we want the best possible workforce to contribute to our national economy, we want the best possible education for all of our citizens–including those with ADD. Awareness of the needs of ADD adults can contribute to their education, and thus to their effectiveness in the workplace.

ADD in Adults

Until recently, most child psychiatrists believed that ADD diminished in adolescence and disappeared in adulthood. Although some say that this pattern does seem to hold true for some ADD children, there is increasing evidence that some people continue to have a variety of ADD symptoms in adulthood. Exact figures are not available, but estimates of school-age children affected range from 3% to 10%. Weiss and Hechtman (1993) found that about 40% to 50% or more of the young adult subjects in their follow-up study continued to have significant problems with the original symptoms of the hyperactivity syndrome

and/or social, emotional, or personal problems. Another 10% were seriously psychiatrically disturbed and/or seriously anti-social. Barkley (1990) stated that it is clear that 50% to 80% of Attention-deficit Hyperactivity Disorder (ADHD)[1] children continue to have some degree of their symptoms in adulthood. Eyres (1993) stated that she had not seen anyone outgrow ADD in 15 years of practice as a psychiatrist specializing in the diagnosis and treatment of this disorder. Murphy (1992) said that it was a conservative estimate that between 2 and 5 million adults may be affected. He said that most of these are undiagnosed, untreated, and unaware that help is available. Thus, many more college students than we might expect are likely to have ADD.

Barkley (1990) explained that ADHD children are likely to represent the entire spectrum of intellectual development, with some being gifted while others are normal, slow learners, or even mildly intellectually retarded. He said,

> One area of tremendous difficulty for ADHD children is that of their academic performance and achievement. Almost all clinic-referred ADHD children are doing poorly at school, typically underachieving relative to their known levels of ability as determined by intelligence and academic achievement tests. (p. 75)

Later he stated, "Children with Attention-deficit Hyperactivity Disorder (ADHD) may exhibit a wider range of problems in the classroom than in any other setting" (p. 498). The problem areas that he elaborated were staying seated, paying

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[1]There is much confusion about the names and criteria of attentional disorders. The term "ADD" is used in this research ordinarily, but "ADHD" is used when it is part of a specific quotation. (See the section "Definition of Terms" for a fuller explanation.)

attention, working independently, and following directions and rules. He said that ADHD children are often disruptive and disorganized, and have difficulty keeping track of academic materials. A 10-year follow-up study reported by Weiss and Hechtman (1993) found that, overall, ADD young adults had completed less education, had lower average marks, and had failed more grades than non-ADD control group participants. On a psychiatric assessment, ADD adolescents and young adults had more problems of adjustment, fewer friends, felt more restless, were observed to be more restless, and were more impulsive and immature. On a brief psychiatric rating scale, the hyperactive group was significantly higher in anxiety, tension, grandiosity, and hostility. The sum of all of their scores was significantly worse.

Barkley (1990) listed 10 complaints of adults who are being evaluated for ADHD:

difficulty in finding and keeping jobs;

performing below the level of competence on the job;

inability to perform up to intellectual level in school;

inability to concentrate;

lack of organization;

inability to establish and maintain a routine;

poor discipline;

depression, low self-esteem;

forgetfulness or poor memory;

confusion, trouble thinking clearly. (p. 614)

Weiss and Hechtman (1993) reported that although the target symptoms--hyperactivity, distractibility, and impulsivity--had abated by adolescence, they continued to be present. These symptoms were not the main problems complained about by the ADD subjects in the follow-up study. The main complaints were of poor school work, social difficulties, problems related to authority figures (e.g., teachers), and low-self-esteem. Feldman, Denhoff, and Denhoff (1979) described later life outcomes for hyperactive children. They reported lower educational achievement, poorer self-esteem, and greater substance abuse compared to sibling controls.

Barkley (1990) raised some concerns related to the implications for college students with ADHD. Indirectly, he raised the issue when he said,

> Frequently, the significant others in the life of the ADHD adult must be requested to assist the patient in some of these endeavors, much as parents and teachers of ADHD children are indispensable to helping the children to be more attentive, more compliant, more reflective, and better organized. (p. 636)

If ADD adults are college students, it stands to reason that some of these significant others are educators. It also stands to reason that adult educators should be indispensable in helping adults through the college experience. Barkley also said, "At this writing the stage is set for an explosion in public activism that promises to alter both society's view of the disorder and the manner in which it is handled by the educational system" (p. 38). Since we now know

that this disorder exists in adults, it appears that great pressure may eventually be put on the higher educational system to deal with it.

Research Questions

The main research question was: How do adults with Attention Deficit Disorder (ADD) experience this disorder in their college life and deal with the problems the disorder presents to them in college? In interviews, data were collected that describe the following:

a. The individual's understanding of ADD.

b. The individual's early recollections in relation to ADD.

c. The individual's experiences in college.

The basic questions that were answered are as follows:

1. What were the demographics of the subjects studied?
2. What were the individuals' understandings of ADD?
3. What were the individuals' feelings about ADD?
4. What were the personal histories of the individuals?
5. What were the experiences of the subjects related to selection of college and admission?
6. What were the subjects' teaching/learning preferences in college?
7. What were the subjects' study techniques and support mechanisms while in college?
8. What were the subjects' general problems in college?

9. What were the subjects' relationships with instructors?

10. What were the subjects' thoughts about the future while in college?

Definition of Terms

This study describes the experiences of seven adults with ADD who have attended college. The Diagnostic and Statistical Manual of Mental Disorders (DSM-III) of the American Psychiatric Association (1980) defined Attention Deficit Disorder (ADD) by stating that "the essential features are developmentally inappropriate inattention and impulsivity." The DSM-III also said,

> In the past a variety of names have been attached to this disorder, including Hyperkinetic Reaction of Childhood, Hyperkinetic Syndrome, Hyperactive Child Syndrome, Minimal Brain Damage, Minimal Brain Dysfunction, Minimal Cerebral Dysfunction, and Minor Cerebral Dysfunction. (p. 41)

The diagnostic category for the subjects included in this study, Attention Deficit Disorder, Residual Type, comes from the DSM-III under 314.80. The criteria for the category were stated as follows:

A. The individual once met the criteria for Attention Deficit Disorder with Hyperactivity. This information may come from the individual or from others, such as family members.

B. Signs of hyperactivity are no longer present, but other signs of the illness have persisted to the present without periods of remission, as evidenced by signs of both attentional deficits and impulsivity (e.g., difficulty organizing work and completing tasks, difficulty concentrating, being easily distracted, making sudden decisions without thought of the consequences).

C. The symptoms of inattention and impulsivity result in some impairment in social or occupational functioning.

D. Not due to Schizophrenia, Affective Disorder, Severe or Profound Mental Retardation, or Shizotypal or Borderline Personality Disorders. (p. 45)

Much controversy has surrounded the diagnostic labels and criteria for this disorder. Practitioners agree that it exists, but there has not been a clear diagnostic category. At the time of this study, the third revised edition of the Diagnostic and Statistical Manual (DSM-III-R) (1987) presented revised criteria and labeled the disorder Attention-deficit Hyperactivity Disorder (ADHD) rather than ADD. However, because the psychiatrist who did the diagnosis thought that the former clinical diagnosis was clearer for her adult patients, she used the ADD terminology from the DSM-III. (To complicate the issue further, a new edition of the DSM will be published with new terminology at about the same time the present study is published. There has been much controversy about how to represent the disorder, as it exists in adults, in the new diagnostic manual. At the time of this writing, I am not sure of the outcome.)

Because of the evolution of the terminology for this diagnosis, in this study the term "Attention Deficit Disorder (ADD)" is used when referring to the subjects and the disorder except when quoting or paraphrasing writers who use the term "ADHD."

This study defines adults as those individuals who are older than 18 years old. College is defined as an institution of higher education beyond the high school level. It includes both two-year community colleges and four-year colleges and universities.

Method of Research

For the purposes of this study, the research was limited to adults (over age 18) who had been diagnosed as having ADD. Seven adults who had been diagnosed with ADD by the same psychiatrist were studied. This psychiatrist (who has been diagnosing and treating this disorder for 15 years) referred the subjects to me for research. Each subject was interviewed for approximately 2 to 3 hours to determine the following: their understanding of their disorder, their early recollections of diagnosis and awareness of difficulties, and their experiences in college. I used a standard, nonscheduled format. (The same topics are covered with each subject, not necessarily in the same order or using the same wording [Gorden, 1980].) The interviewing time was broken up into two segments. The convenience and attention span of the subject was taken into consideration in making these individual decisions. For all interviews, permission to audio-tape was requested and granted.

Qualitative research was the best approach for describing the experiences of these individuals. It would be possible to use quantitative research to identify the kinds of experiences of ADD adults who have gone to college, and general features of the experiences, but the results would be limited in their usefulness. Quantitative research would only tabulate the types of responses. Field research, on the other hand, can employ interviews to obtain more detailed information. Qualitative research provides poignant data to provide in-depth evidence for the assertions. Descriptions of the experiences of these adults

provide a rich basis for professionals who contribute to the education of ADD college students.

Significance of the Study

The significance of this study is obvious: ADD is a disorder that has just recently been recognized in adults; adults attend colleges and universities; the characteristics of the disorder affect academic achievement; the treatment for the disorder involves education; very little has been written about adults with ADD; virtually no descriptive literature exists concerning ADD adults; and there is no published research to date that deals with ADD college students.

The concept of recognizing that ADD exists during and beyond adolescence has been recognized just in the last decade. There are vast implications for higher education professionals in relation to ADD college students. We know that ADD individuals complete fewer years of schooling, get lower grades, and show lower academic achievement in relation to their abilities. Many of the characteristics of the disorder create problems in the types of activities that are expected of students in academe. It therefore stands to reason that there are probably ADD college students who are struggling to meet their potentials.

When treatment of ADD is discussed, both education about the disorder and the role of the educator are often included in the discussion. In Murphy's (1992) list of coping mechanisms, education was listed as the most important component. He said that it is important to help adults structure their lives to

minimize the negative and to raise their self-esteem by helping them realize their problems stem from neurological causes. There has been a significant amount of research done with school-age children who have ADD, resulting in literature to assist K-12 educators. We can infer that in order for ADD adults to reach their potentials, it is important for adult educators to know more about the ways that they can best assist their students.

Very little has been written about ADD adults. There are virtually no descriptive studies of ADD adults.[2] Barkley (1992) remarked,

> Recently there has been a growing awareness among clinicians of the persistence of symptoms of Attention-deficit Hyperactivity Disorder (ADHD) into adulthood, though few descriptive studies of ADHD have been published. The residual symptoms that may be seen in adults vary in type and severity, and cause considerable disruption in the lives of affected individuals. (p. 613)

Hopefully, a descriptive study of ADD adult learners will contribute to the understanding of those who relate to them.

Assumptions and Conditions

This study was based on several assumptions. The first assumption was that ADD students experience college life differently than non-ADD students. The second assumption was that ADD students encounter some difficulties in college. The third assumption was that the subjects would be willing to be

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[2]ADD--A Lifetime Challenge: Life Stories of Adults With Attention Deficit Disorder, edited by M. J. Johnson, Toledo: ADDult Support Network (1992), is a helpful anthology of personal narratives, but it is not a study that employs research methodology.

truthful. The fourth assumption was that I would be able to put the subjects at ease enough to encourage them to talk about their problems.

It should be noted that ADD is only one variable that has affected the college experience of the subjects. Subjects may differ with regard to coexisting conditions such as learning disabilities and oppositional or conduct disorder. The existence of the high degree of comorbidity (coexistence of two disorders) of this disorder with other disorders could affect the interpretation of the results. No attempt was made to control the other variables (intelligence, presence of learning disabilities, personality type, and so on). It is important that the reader not overgeneralize the conclusions of this study.

As is explained in the postscript, I have two daughters who have ADD and have attended college. Although it might concern some that I had some bias, objectivity was of primary concern. I am a Licensed Professional Counselor who had been practicing her profession for over 18 years at the time of the data collection. The objectivity of the data collection was affected positively by my professional counseling training and experience (I am an experienced interviewer) as well as my effort to maintain neutrality.

The data for this research were based entirely on interviews with the subjects. No effort was made to verify the accuracy of the responses with any other source or individual. The subjects' perceptions of their experiences were the main concern of the study. I had completed a series of graduate-level

ethnographic research courses, in which I conducted a previous study that used the interview method of data collection.

The data of this study were drawn from a relatively small sample. One of the reasons for this was to add to the consistency of the diagnosis. All of the members of this study had been diagnosed and were being treated by the same psychiatrist. If data were collected from additional ADD adults who have college experiences, there would be one more variable to consider in analyzing the data --consistency in diagnosis.

Summary of the Introduction

This study describes and analyzes the college experiences of seven ADD adults and the ways in which they dealt with their experiences. Understanding adults such as these is important to adult educators for a variety of reasons. Some adults have ADD and attend college, so educators need to know how to deal with them. They need to know how adults with ADD experience this disorder in their college life and how they deal with the experiences the disorder presents to them. Qualitative research methodology is employed to describe and interpret data relative to the research topic. Although the study is based on some assumptions, this description of some ADD adult learners will contribute to the understanding of those who educate them.

CHAPTER II

REVIEW OF LITERATURE

Since there is very little literature that specifically deals with Attention Deficit Disorder (ADD) adults and their experiences in college, or their experiences with adult education for that matter, other related literature has been reviewed for its relevance and impact on this topic. A brief review of background literature--covering history, cause, characteristics, diagnosis, and treatment of the disorder--is given to assist unfamiliar readers with an overall understanding of the topic. The intent of this chapter is not to provide a thorough analysis of that literature, but rather to provide a brief overview to give background for understanding this study. Literature related to the condition in adults, the effects that ADD has on the educative processes, interventions for educators, and suggestions for effective collaboration and self-help has been looked at and will be reviewed here.

Attention Deficit Disorder--Background

History

One barrier to understanding the literature in this field is the evolution of the terminology and constantly changing clinical opinions about this diagnosis in adults. The history of the terminology and diagnostic criteria of the syndrome is explained in various sources (Barkley, 1990; Fowler, 1992; Henker & Whalen, 1989; Kelly & Ramundo, 1993; Njiokiktjien, 1988; Silver, 1992; Weiss & Hechtman, 1993). The description of the syndrome is not new, and it first appeared in medical terminology in 1902 (Weiss & Hechtman, 1993). Barkley (1990) summarized the history of the disorder and provided a conceptual framework for discussion of it. At the beginning of the 1900s, ADD became viewed as a biologically based disorder characterized by inadequate control of behavior by morals and volitional inhibition. This view has evolved over the last 90 years to the view of ADD as a biological, often hereditary, predisposition to defects in the regulation of behavior by rules and consequences--defects that could be significantly modulated by social circumstances.

ADD has been known by many different names. Some of these may be synonyms: maturational lag, hyperkinetic reaction, immaturity of the nervous system, and perceptual-motor problems. Two names are often misunderstood: minimal brain dysfunction and minimal cerebral dysfunction. Two fairly common names are usually incorrect: minimal brain damage and minimal brain injury.

Most people with ADD are not brain damaged. However, this disorder is often accompanied by learning disabilities (often called dyslexia).

The first medical acceptance of what is now called ADD or ADHD occurred in the Diagnostic and Statistical Manual of Mental Disorders (DSM II), published in 1968 by the American Psychiatric Association. The term "hyperkinetic reaction of childhood" was used. It stated the behavior usually diminished in adolescence. There was no mention of its continuation into adulthood. When the third edition of this manual was published in 1980, the term for this disorder was changed to "attention deficit disorder" (ADD), and two subtypes were identified: ADD with hyperactivity and ADD without hyperactivity. The diagnostic criteria reflected three behavioral constellations for defining symptoms: inattentiveness, impulsivity, and overactivity or restlessness. A new diagnostic category was added, "ADD, residual type," to include those individuals (usually adults) who had (as children) met the criteria for ADD with hyperactivity.

In 1987, the American Psychiatric Association published Diagnostic and Statistical Manual of Mental Disorders (DSM III-R), a new edition of its guidelines for professionals. This time the term was changed to "ADHD." The 1987 Manual did not say that the term cannot be applied to adults, nor did it give a specific category such as "residual type." The title "ADHD" is somewhat a misnomer because it is not necessary for an individual to have "hyperactivity" as a symptom to qualify for this diagnosis. Additionally, this edition included another term, "Undifferentiated Attention-deficit Disorder." The fourth edition of the DSM is in

the process of being published. There has been much controversy about whether and how the effects of this disorder on adults will be included.

All of these changes in the appropriate medical terminology add to the complexity of understanding the related literature. One must take into consideration the date of the publication and the proper terminology of the times. Furthermore, in regard to follow-up studies of people whom we are now calling ADD or ADHD adults, we must keep in mind that if they were diagnosed as children, their diagnosis may have used different terminology depending on the year and the coding system used by the professional involved in the diagnosis. Klein and Mannuzza (1991) pointed out that there is no question that ADDH (from the DSM III) and ADHD (from the DSM III-R) are overlapping groups clinically, but it would be inexact to assume that they are exactly the same disorder, especially because ADHD encompasses a milder range of dysfunction by not requiring impairment in each domain of attention, impulse control, and motor activity.

Another difficulty in reviewing the literature on ADD or ADHD is that many studies have confused the difficulties and behavioral characteristics of learning disabilities with those of attentional disorders (Silver, 1992). Clinically and neurologically they are separate, but related, disorders. It would be very difficult for a researcher to distinguish this type of diagnostic contamination in the research studies. It was deemed unnecessary for the current study, but Silver's point does merit mentioning.

Cause

There are still many unanswered questions as to the cause of ADD. Over the years the presence of this disorder has been weakly associated with a variety of conditions such as prenatal or perinatal trauma, maturational delay, environmentally caused toxicity such as fetal alcohol syndrome or lead toxicity, and food allergies. History of such conditions may be found in some individuals with ADD, but in most cases there is no history of any of the above. Recently, researchers have assumed that differences in brain biochemistry may be the cause of ADD. A recent landmark study by Dr. Alan Zametkin and associates traced ADHD to a specific metabolic abnormality in the brain. The November 15, 1990, issue of The New England Journal of Medicine showed a photograph of a section of clinical brain imagings with and without ADHD. It demonstrated that there is a metabolic difference between the two brains.

Barkley (1990) said, "There is little doubt among senior investigators in this field that multiple etiologies may lead to ADHD" (p. 95). Fowler (1992) cited Barkley and said, "The frontal-limbic system, particularly the striatum, is believed to regulate inhibition and motivation. Recent brain-based studies on people with ADD indicate impairments in these areas" (p. 14). Barkley explained that most investigators endorse a biological disposition to the disorder, much like mental retardation. Numerous etiologies, such as pregnancy and birth complications, acquired brain damage, toxins, infections, and heredity can give rise to the

disorder. It is a disturbance in the final common pathway in the nervous system. Heredity seems to play the largest role in the occurrence of the symptoms.

Characteristics

Barkley (1990) referred to the "holy trinity of ADHD": inattention, impulsivity, overactivity. These same symptoms or characteristics are manifested and described in a variety of ways. K. R. Murphy (Chief of the Adult Attention Deficit Disorder Clinic at the University of Massachusetts, Worchester) (1992) described their patients as being restless and easily distracted; having trouble focusing, concentrating, sustaining attention; being impulsive, impatient; having inconsistent work performance; being disorganized, failing to plan ahead, failing to finish tasks they have started; having frequent mood swings, short tempers; and having chronic patterns of underachievement.

Barkley (1990) said that it is really behavioral disinhibition--impulsivity, or a deficiency in inhibiting behavior in response to situation demands--that is the core characteristic of ADHD. He said, "Evidence that behavioral disinhibition, or poor regulation and inhibition of behavior, is in fact the hallmark of this disorder has been accumulating recently from several sources" (p. 43). He made a point of reiterating that it is not inattention that distinguishes this disorder as much as it is hyperactive, impulsive, disinhibited behavior. So, although the disorder is named for the former feature (Attention-deficit), the latter characteristics have been found to be more descriptive in recent research.

Diagnosis

Diagnosis of ADD is not a simple process. Although there are standardized rating scales that are used to assess the ways in which individuals meet the criteria for the disorder, they are just one kind of tool used by professionals. Barkley (1990) indicated, "Professionals must rely on several methods of assessment, utilize different sources of information from different settings, and interpret the data obtained within both a biopsychosocial and developmental perspective" (p. 231).

The subjects in the current study were diagnosed according to the third edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM--III) of the American Psychiatric Association (1980). They met the diagnostic criteria for Attention Deficit Disorder, Residual Type, code 314.80, as follows:

A. The individual once met the criteria for Attention Deficit Disorder with Hyperactivity. This information may come from the individual or from others, such as family members.

B. Signs of hyperactivity are no longer present, but other signs of the illness have persisted to the present without periods of remission, as evidenced by signs of both attentional deficits and impulsivity (e.g., difficulty organizing work and completing tasks, difficulty concentrating, being easily distracted, making sudden decisions without thought of the consequences).

C. The symptoms of inattention and impulsivity result in some impairment in social or occupational functioning.

D. Not due to Schizophrenia, Affective Disorder, Severe or Profound Mental Retardation, or Shizotypal or Borderline Personality Disorders. (pp. 44-45)

In their explanation of childhood diagnosis, Weiss and Hechtman (1993) were very explicit about the complexity involved in diagnosis: "Diagnosis of hyperactivity is never made on the basis of a single symptom. Clinically, a number of symptoms (behavioral and sometimes cognitive difficulties) cluster together in one child for the syndrome" (p. 15). They went on to say that a comprehensive multidisciplinary assessment is required for diagnosis, and listed the following types of evaluations that are usually used:

1. A history of the pregnancy, delivery, and the child's developmental milestones from infancy on. A parental history of hyperactivity, alcoholism, sociopathy, hysteria, may be looked for.

2. Assessment of the child's behavioral aberrations; the specific symptoms present, their severity and frequency, the degree to which individual symptoms are situational; the duration of the problem.

3. An educational assessment to determine if specific learning disability is present and if so, its nature. This is of great importance for remedial educational measures.

4. Assessment of the intrapsychic processes in the child, how he or she views himself or herself, family, peers, school; what personality strengths the child possesses.

5. Assessment of the interactions of the child and family. . . .

6. Assessment of the child's classroom. Is the educational environment conducive to learning? . . . .

7. Assessment of the child's neurological status if there is any suspicion of a neurological lesion. Routine neurological examinations of hyperactive children are usually negative except for the presence of soft signs whose significance is not known. EEG's often show diffuse dysrhythmias which tend to disappear in adolescence. Again, the significance is not known. (p. 17)

Taylor (1993a) summarized the elements of a thorough assessment for ADHD adults. He said assessment should include the following:

1. Standardized ratings of present and childhood behavior.
2. Review of prior childhood records if available.
3. Input from significant others from the adult's childhood.
4. Standardized testing of attention and other factors.

Taylor (1993b) listed the inclusionary criteria for diagnosing Adult ADHD as follows:

Inattention:
- Trouble directing attention
- Trouble completing projects
- Easily overwhelmed by tasks
- Organizational difficulties
- Inconsistent work record
- Lack of attention to detail

Impulsivity:
- Making impulsive decisions
- Not delaying gratification
- Restless, fidgety, aimless
- Commenting before thinking
- Impatient, easily frustrated
- Frequent violations of rules

He also listed conditions that professionals must rule out which can be misdiagnosed as ADHD:

- Problems of character
- Mood disorders
- Alcoholism/substance abuse
- Anxiety/obsessive compulsive disorder
- Neurological problems, medical problems, low intelligence

Again, Barkley (1990) cautioned about the complexity of diagnosis when he stated:

> The very nature of ADHD demands a consideration of the biopsychosocial and developmental factors in both assessment and treatment. The primary problem areas of sustained attention, impulsivity, overactivity, and poor rule-governed behavior reflect the multidimensionality of the disorder and necessitate a multitrait assessment approach. Because of the comorbidity of ADHD with other difficulties, such as LD, CD, and oppositional behaviors, an evaluation must consider these individual psychological factors. The problem behaviors must be inappropriate when compared to those of other children of the same mental age, so these behaviors must be assessed within a developmental context, using assessment instruments that have appropriate normative data. (pp. 230-231)

The psychiatrist who diagnosed the adults in the current study used a 2-hour in-depth clinical interview for diagnosing their condition. During this interview she looked at the following items:

1. Their medical history and intergenerational medical history.

2. Any differential diagnosis (other things that might present like ADD, such as anxiety, depression, substance abuse, endocrine abnormalities, menopause, thyroid or estrogen imbalance).

3. A very careful summary of educational history, employment history, and assessment of current functioning.

4. A discussion of the symptoms they related to when they read either The Hyperactive Child, Adolescent, and Adult by Paul Wender, M.D. (1987) or Attention Deficit Disorder in Adults by Lynn Weiss, Ph.D. (1992), paying particular attention to the chronicity of symptoms and the current presenting symptoms that interfere with functioning.

Treatment

Barkley (1990) stated that there is very little available in the scientific literature to guide the clinical management of ADHD in adults, that there is evidence that pharmacotherapy may be useful in treating some adults with ADHD, but that treatments should be viewed as suggestions, not well-proven therapies. He also added that it is unclear to what extent specific behavioral approaches may augment pharmacological treatment in the adult with ADHD. Methylphenidate (Ritalin) is in general more effective than other medications. Wood (1986) noted several areas in which psychotherapy might assist the adult with ADHD. Targets for such therapy might include increasing self-esteem, refining interpersonal skills, teaching medication management, providing vocational assessment, and counseling. Barkley added teaching of time management, self-organizational skills, and anger-control methods to the list.

Most experts agree that a multimodality approach--medical, psychological, educational, and behavioral--to the treatment of this disorder is often needed. This requires the coordinated efforts of a team of professionals, including health care professionals and educators. Weiss and Hechtman (1993) reported that the ADHD subjects in their follow-up study said that they would like to have had available a multimodality type of treatment, including remedial education, tutoring, cognitive therapy, individual psychotherapy, and family counseling.

ADD and Adults

Existence in Adults

The discussion of the existence of ADD in adults must take into consideration the historical perspective of the clinical diagnosis elaborated earlier in this chapter. It must also be noted that there is often a difference between what researchers and practitioners are observing and what is reflected in the clinical diagnostic manual of the time. Empirical findings, clinical impressions, and theoretical considerations are often confused. Currently there is not a specific clinical diagnostic category for ADHD in adults in the DSM III-R, but the literature abounds with reports of its existence and treatment.

As was noted earlier, in the 1960s it was thought that "hyperkinetic reaction of childhood" diminished in adolescence and did not continue into adulthood. Klee, Garfinkle, and Beauchesen (1986) related that in 1971 Mendleson, Johnson, and Stewart reported a 2- to 5-year follow-up in which approximately 75% of their sample (of ADD adolescents) continued to have difficulty with concentration, overactivity, and impulsivity. In 1975 Wood and Wender observed two adult females ages 25 and 41 who had all of the signs and symptoms of hyperkinetic children. They treated them with methylphenidate, and they had good therapeutic response (Wood, 1986). There had been numerous other reports of the disorder continuing into adulthood, and the 1980 edition of the diagnostic manual designated ADD, Residual Type, as a designation for ADD continuing into adulthood. The 1987 revised diagnostic manual stated that

approximately one-third of children with ADHD continue to show signs of the disorder in adulthood (American Psychiatric Association, 1987).

The review of the literature suggests that about 70% of the adolescents who had ADHD in childhood continue to have significant difficulties (Gittleman, Mannuzza, Shenker, & Bonagura, 1986; Weiss & Hechtman, 1993; Werry, 1992). Others (Barkley, Fisher, Edelbrock, & Smallish, 1990) cited studies that generally indicated that between 30% and 50% of ADHD children continue to be impaired by their symptoms in adolescence or to meet current diagnostic criteria for ADHD. Many of the follow-up studies have been done with attention deficit children who have become adolescents; however, some recent studies (Gittleman et al., 1986; Weiss & Hechtman, 1993) indicated that 30% to 50% of those with ADHD continue to manifest the symptoms in adulthood (G. Weiss, 1990). Hechtman (1992) cautioned that the results of studies on long-term outcomes have provided diverse pictures because of different methodologies employed in the studies (e.g., prospective versus retrospective studies, attrition rates, sample size, diagnostic criteria and subjects' characteristics, control groups versus no control groups, assessment methods, age, and length of follow-up).

One landmark study (Zametkin et al., 1990) of the neurobiology of attention deficit not only provided a possible biologic basis for ADHD, but also established verification for the existence of the disorder in adults. This study showed that adults who had suffered from hyperactivity since childhood

displayed normally reduced metabolism in brain regions regulating motor activity and attention. The researchers studied 25 adults who were diagnosed as hyperactive in childhood and who were parents of hyperactive children. They had a control group consisting of 50 nonhyperactives. The PET scans of brain metabolism in the hyperactive adults showed less overall brain metabolism; the most pronounced deficits were in the two areas involved in motor activity and attention.

Although a large amount of recent literature has recognized the existence of Attention-deficit Hyperactivity Disorder in adults, such a clinical concept was not always understood or accepted. Even today the concept is not fully accepted. Although the latest diagnostic manual, DSM III-R, mentioned the possibility of the disorder continuing into adulthood, it did not include a category for ADHD in adults. It is not clear whether the recognition of ADHD in adults will be included in the DSM IV.

Frequency of ADD in Adults

Because the existence of ADD in adults is not unequivocally agreed upon, the frequency of the condition is also speculative. There are figures which indicate that from 1% to 20% of children have ADHD, depending on a variety of number of variables, including the definition (MacAulay, Reed, & Johnson-Fedoruk, 1991; Martin, Welsh, McKay, & Barcuther, 1984; Sloan, Assadi, & Linn, 1991; G. Weiss, 1990). The DSM III-R (American Psychiatric Association, 1987) said that the disorder "may occur in as many as 3% of children" (p. 51). The

most commonly cited frequency of ADHD in children is 3% to 5% (Barkley, 1990).

As indicated earlier, the DSM III-R speculated that approximately one-third of ADHD children carry symptoms of the disorder into adulthood. Barkley and Anastopoulos (1991) cautioned about the limits of the ability of follow-up studies in representing the nature of ADHD. Studies of adolescents with the disorder who were referred to a clinic in childhood might represent a group of individuals who have more severe clinical symptoms and co-existing disorders because they were referred in childhood. Or they might have milder symptoms because they were referred in childhood and have a more extensive history of treatment than those referred as adolescents. There are those who speculate that ADD never completely subsides because it is a neurological disorder and the chemistry of the brain does not change. There is no accurate way currently to establish the frequency of the disorder in adults.

Effects on Adults

Although there is no accurate way to establish the frequency of the disorder in adults, the fact remains that recent research and clinical experience have demonstrated that attention deficits can indeed be exhibited in adults. In considering the general effects of attention deficits on adults, some inferences have to be drawn from the research involving adolescents. Because the literature reflecting follow-up studies and clinical experiences indicates that not

all adolescents outgrow ADD, it stands to reason that some symptoms of youth continue into adulthood.

When considering the existence, frequency, and effects of the disorder on adolescents, various factors must be taken into account. Some of these factors were referred to by Werry (1992) as "situational factors." Werry stated,

> Situational factors also operate to conceal ADD--for example, the move to the high school multi-teacher system, which results in less close observations and decrease in the nuisance to any one teacher. Also, violence and drug problems emerge as the major concern in high school culture and may serve to relegate ADHD to the status of minor irritant. (p. 302)

His main point was that ADHD does persist in adolescence, but it is more likely to be masked or be subclinical.

Follow-up studies are unanimous in finding psychopathy continuing into adolescence. The overall pattern of psychiatric outcome is continuation of the childhood symptoms and development of antisocial behavior (Klein & Mannuzza, 1991). Adolescents studied by Weiss and colleagues (1993) had retained significant levels of restlessness and poor concentration. Barkley and Anastopoulas (1991) reported the following greater percentages of antisocial acts when compared to a non-ADHD control group: theft 43%, assault 27%, vandalism 21%, disorderly conduct 12%. Although some studies (Klein & Mannuzza, 1991) have shown a correlation between substance abuse and ADHD, subjects in the Weiss study were not found to have more substance abuse than the control group, except for cigarette smoking. The Weiss subjects were, however, rated by parents and teachers as less socially competent,

involved in fewer social and organized activities, and having fewer friends. The ADHD teens rated themselves as better adjusted than did their parents and teachers. The only significant differences between the ADHD teens' and the control group's self-evaluations were in depressive symptoms and antisocial acts.

Kramer (1986) discussed that most longitudinal studies have found a reduction in core attention deficit symptoms over time. However, overactivity, impulsiveness, and/or distractibility usually persist to some extent. This author also mentioned that other symptoms such as poor peer relationships, low self-esteem, and depression achieve prominence as the subject reaches adolescence.

Klein and Mannuzza (1991) cautioned that it is important to differentiate between adolescent and adult outcome of hyperactive boys. They stated that in early adolescence, all reports indicated a high rate of continued behavioral and academic dysfunction. A marked diminution of impairment occurs during late adolescence; but hyperactive boys, as adults, continue to have antisocial behavior and substance abuse disorders (other than alcohol). On the other hand, there are few studies that indicate how the disorder does manifest itself in adults, so we have to draw some inferences from studies of adolescents.

Another limitation is that the literature about effects of ADD on adults does not attempt to fully analyze the causes of those effects. There has been no research designed to determine whether the observable effects are caused by

earlier or current ADD. Thus, for example, it is not known whether an ADD adult has problems with basic skills or self-esteem because of the ongoing ADD syndrome or because the individual got behind in development as an ADD child.

Hechtman (1992) provided an excellent summary of the work that has been done to demonstrate the effects of ADHD on adults. She stated: "The view of adult outcome of ADHD can be obtained from four different sources. These include (1) controlled prospective follow-up studies; (2) retrospective studies; (3) evidence of a similar adult disorder; and (4) family studies of parents and relatives of children with ADHD" (p. 557). Hechtman asserted that the controlled prospective study provides the clearest, most reliable picture of adult outcome, but unfortunately there have not been many done. Hechtman said that Weiss and Hechtman, Gittleman and colleagues, and Loney and colleagues have provided the only three existing controlled prospective studies. Klein and Mannuzza (1991) summarized these studies. Weiss found that antisocial personality disorder was the only diagnosis that was significantly more common in the formerly hyperactive group. Neither Weiss nor Loney found higher rates of alcohol or drug use disorders in the grown hyperactive group. Gittleman and colleagues found more of the adults who were hyperactive children had full ADHD syndrome than the control group, who had never been diagnosed as having ADHD (31% versus 3%). Also, 27% of the formerly hyperactive had conduct disorder or antisocial personality disorder, whereas only 8% of the normal control group exhibited these diagnoses. The hyperactives also showed

a 16% drug use disorder (other than alcohol), whereas in the control group only 3% had this diagnosis.

Weiss and Hechtman (1993) reported various other general effects of attention deficit disorders in the hyperactive children whom they followed over a 15-year period. The hyperactives had less education, more children, more reported sexual problems, more acts of physical aggression (but not more reports of verbal aggression), and more suicide attempts than the normal control group. Although more of the hyperactive group complained of neurotic or personal problems than the control group, there was not evidence that hyperactivity in childhood predisposes to psychosis in adulthood. (They disputed earlier studies that indicated a high risk for psychosis in this group, which they indicated was not borne out by research.)

Twenty-three percent of the hyperactive group in Weiss and Hechtman's study were diagnosed with Antisocial Personality Disorder, but no other single diagnosis distinguished them from the controls. And, although these researchers had shown that hyperactive adolescents consumed more alcohol than a control group, this was not true for the adults in the study. On psychiatric tests, 33% of the control group scored in the "normal" range, versus 11% of the hyperactive group.

Overall, the most dramatic difference between the adults who had been diagnosed as hyperactive in childhood and the control group (who had not been diagnosed with ADD) was that 66% of the formerly hyperactive complained of at

least one symptom of ADHD (restlessness, poor concentration, impulsivity, explosiveness) versus 7% of those in the control group. The researchers concluded that about 50% of the hyperactive children grown up had fairly good outcome, with some continuing, but not significantly disabling, symptoms. About 50% of them had mildly to severely disabling symptoms. Klee et al. (1986) also reported that those diagnosed as having ADD in childhood continued to show relative attentional deficits in adulthood when compared to non-ADD adults. This was true even though they had been treated for a minimum of 1 year. They had received a complete course of psychiatric treatment, including psychotherapy, stimulant medication, and remedial education.

Hechtman (1992) classified the outcomes of hyperactive children into three categories: (a) those who function fairly well and are not much different from a control group; (b) those who continue to have significant concentration, social, emotional, and impulsive problems (their problems result in difficulties with work, interpersonal relationships, poor self-esteem, impulsivity, irritability, anxiety, and emotional lability); and (c) those who have significant psychiatric or antisocial problems, i.e., depressed, suicidal, drug/alcohol problems, antisocial behavior (e.g., assault, armed robbery, breaking and entering, and drug dealing). The largest group falls into the second category. The third category is a relatively small group. Hechtman also stated that generally adult outcome is not associated with a particular initial variable, but with additive interaction of personality characteristics and social, familial, and environmental factors. Most

of the literature supports the hypothesis that many adults who had some type of attention deficit disorder as youngsters show continuing effects into adulthood.

Effects on Educative Process

One of the assumptions that this study is based on is that there will be an effect on the college experiences of adults who have been diagnosed with ADD/ADHD. As was stated earlier, there is no available research on the educational experiences of ADD/ADHD adults. There are some references to these types of experiences in the anecdotal anthology A.D.D. A Lifetime Challenge (Johnson, 1992), and in an individual's autobiography which has been included in Weiss and Hechtman (1993). But there are no works that deal exclusively with the topic.

Few Go to College

Kramer (1986) stated that only a few of the subjects of follow-up studies have gone to college. This might be true of ADD adults, or it might just be true of the ones in the studies he was discussing. It might also be that there are ADD adults in college who were not diagnosed as children for any of a variety of reasons. It is just not known how many ADD college students there are, but it can be speculated that if ADD children have problems in school, ADD adults might have problems in college.

Symptoms Create Academic Difficulty

The references in the literature about the way that ADD affects the school experiences of youngsters are abundant. Inferences can be drawn from these sources about the ways in which ADD adults might experience college. The symptoms of the disorder create general academic problems. Academic skills deficits are found to be common in ADD young people, and there is some controversy about the impairment of cognitive functions. Many youngsters with this disorder exhibit special learning disabilities. Research indicates that they have symptomatic difficulties in dealing with an academic environment, and that their overall performance in school is lower than that of the control groups or general population. There are specific interventions that are suggested to accommodate the educational needs of these young people.

The symptoms of the disorder--inattention, disorganization, impulsivity--are attributes that are not usually conducive to positive adjustment and performance in academic settings. The issue of underachievement and difficulties in school of those with ADD has been discussed repeatedly in the literature (Barkley et al., 1990; Hechtman, 1992; Henker & Whalen, 1989; MacAulay et al., 1991; Sloan et al., 1991; Weiss, 1990; Wood, 1986). Weiss (1990) made a point of saying that "they underachieve at school, often in spite of intelligence and even in the absence of specific learning and reading difficulties" (p. 1414). MacAulay et al. (1991) stated, "It is evident that symptoms intensify in contexts where sustained attention is required, such as listening to

a teacher in a classroom, or doing homework assignments" (p. 133). Reflection on what most academic environments are like and the symptoms of this disorder lead to a common-sense judgment that the two would not mix well.

Cognitive and Academic Skill Deficits

A common finding among studies of hyperactive or ADD young people is the presence of academic skill deficits and lower-level cognitive functioning than those in control groups. Kramer (1986) reported most individuals being several years behind in their reading, spelling, and/or mathematical skills. McGee and Share (1988) reported 80% of the children in their study having had learning difficulties in reading, spelling, mathematics, or written language skills. Several authors made general statements related to educational achievement being below normal (Barkley, Anastopolous, Guevremont, et al., 1991; MacAulay et al., 1991; Martin et al., 1984; Weiss, 1990).

Although there is very little, if any, question about the deficits in the academic skills and performance of these individuals, there is some controversy around the issue of cognitive functioning. Some say that cognitive deficits are a primary problem with ADHD individuals. A study of Werry, Elkind, and Reeves (1987) indicated general cognitive deficits in their groups with ADHD. They stated that ADHD children showed few differences from normal children that were not due to verbal IQ except in restlessness. Werry (1992) expressed the opinion that "Research has shown that the primary cause for academic failure is primary cognitive deficit aggravated by inattention and hyperactivity" (p. 305).

Klein and Mannuzza (1991) cited Cohen and colleagues and Hoyt and colleagues and stated that there were worse performances reported on cognitive tasks. They did point out, however, that it is not known whether the children who had poor academic histories were also the ones with cognitive deficits.

Of primary interest in the current research, however, is that the only mention of cognitive deficits in ADD adults is that there is no evidence to substantiate the existence. Klein and Mannuzza (1991) stated that the findings concerning long-lasting impairment of cognitive functions in children are ambiguous. They based this observation on follow-up studies of adults whose symptoms had remitted, and contrasted them with those whose symptoms still existed. Klein and Mannuzza also stated, "In adulthood, no cognitive deficits have been documented" (p. 386). One cannot be sure if they do not exist or if they just have not been documented because there is such a lack of reliable research on the topic.

Special Learning Conditions

Co-existing learning disabilities. Although there is some controversy around the topic of whether or not people with ADD exhibit cognitive deficits, there is no controversy about the fact that ADD and learning disabilities are often co-existing conditions. Up to 40% of those in a follow-up study (Barkley et al., 1991) had been in special education. One article (McGee & Share, 1988) pointed out such a high degree of comorbidity of ADHD and learning difficulties that the authors believed that it is unclear whether most researchers are talking

about children with ADHD who have learning difficulties, or children with learning disabilities who show inattentiveness and hyperactive behavior. They reviewed evidence that ADD in the classroom is a consequence of learning disabilities, not the other way around. They stated that others had made similar proposals, which they thought had not received sufficient attention. The research that they cited was published between 1978 and 1984; it is doubtful that many would subscribe to this attitude today, but it is a viewpoint worth mentioning and does indicate the extent to which learning disabilities and ADD are related.

Difficulties dealing with the environment. The literature supports the fact that ADD children have symptomatic difficulties in dealing with an academic environment, and that those difficulties are retained when they become young adults. In one study (Klee et al., 1986) where former ADD children were compared to a non-ADD control group, the ADD group continued to retain a relative deficit in the acquisition of new learning material. Their symptoms also yield more antisocial behavior and conduct disorder. Kramer (1986) stated, "Initially, researchers concluded that hyperactive children engaged in these behaviors (antisocial) because of frustration with school and peer rejection" (p. 91). It is noteworthy, however, that these researchers gave data which suggested that ADD symptoms at referral did not suggest later antisocial behavior, but aggression (e.g., fighting and destruction of property) did predict later antisocial behavior.

On the other hand, a study by Gittleman and Mannuzza (1985) showed that, "If the original symptoms of hyperactivity had not remitted, the chances of developing a conduct disorder were almost fourfold greater than if the childhood condition was no longer present" (p. 944). Also related to the current study are data that Gittleman and Mannuzza presented, indicating that the former patients (ADD) compared with the controls had significantly more conflicts with teachers. Also, in the McGee and Share (1988) article, the authors stated they believed that ADD behaviors might be considered a disorder of conduct in the classroom because the child with learning difficulties is excluded from much of the normal classroom activity. Although there is some limited controversy about which is the primary disorder--learning disabilities or ADD--there is not any controversy about the fact that the symptoms that they exhibit create behavioral difficulties in dealing with a traditional classroom environment.

Performance. As has been indicated in the last several pages, there is much in the literature which demonstrates that performance in school is low for those with ADD/ADHD. They get lower grades, have more omissions and errors, lack vigilance, repeat more grades, and fail to finish high school more than do their counterparts in control groups of non-ADD/ADHD individuals. Hechtman (1992) reviewed the literature and summarized by stating, "Subjects frequently have educational problems with poor performance" (p. 557). Several studies (Barkley et al., 1990; Borland & Heckman, 1976; Klein & Mannuzza, 1991) have found that the hyperactive group performed less well in their school grades. Klee

et al. (1986) reported a greater number of omissions and total errors on a Continuous Performance Task test. Barkley et al. (1991) showed poorer performance on vigilance. A common finding in studies is that ADD individuals have repeated or failed grades in school (Barkley, 1990; Barkley et al., 1990; Kramer, 1986). Weiss and Hechtman (1993) found that as many as 35% may have failed to finish high school. Barkley et al. (1990) found that the hyperactive group were eight times more likely to have been expelled or drop out of school compared to the normal controls.

Interventions

Because providing quality education to ADD college students is important, it is imperative to review some of the literature in relation to the interventions suggested for this type of student. There is no research available on college students or adults with attentional deficits, and very little literature, so inferences must be drawn from the research and literature about children. The writings about children seem to suggest that educators need to change their belief systems, use instructors whom ADD students find effective, provide special education programming, restructure the learning environment, and apply principles of remediation.

Change Belief Systems

The CH.A.D.D. Educators Manual (Fowler, 1992) is the most comprehensive handbook about ADD and education that is available. It was

written by Mary Fowler in collaboration with Russell Barkley, Ph.D., Ron Reeve, Ph.D., and Sydney Zentall, Ph.D. Fowler's collaborators have all conducted substantial scholarly research on the topic of ADD. They discussed the importance of the impact that parents and educators can have on the lives of ADD individuals. They stated:

> If we, the parents and educators of such children are to have any effect at all in changing the negative outcomes that result from this disability, we have to take the first step. That step is CHANGE OUR BELIEF SYSTEM. We must ACCEPT that ADD is a disability, and that these children behave in a way that comes naturally to them. (p. 8)

They went on to quote Dr. Ross Greene, Assistant Professor of Psychiatry and Pediatrics at the University of Massachusetts Medical Center, who said,

> First you have to establish the level of understanding and knowledge on the part of everybody concerned. To the extent that knowledge, attitudes, and beliefs guide a person's behavior, these factors may have considerable impact upon a teacher's interactions with the student with ADD.

The basis of sound interventions by ADD educators, then, is expanding their knowledge base, increasing their understanding, and accepting this disorder for what it is.

Instructor Effect

Fowler (1992) stated, "Psychology has long embraced the notion that people, environments, and individuals are either suited to each other (good matches), or they are not (poor matches)." She then went on and related that anecdotal reports have told us that school success for children with ADD varies from year to year and that the teacher is the most commonly cited reason for the

Greene, who provided a list of 20 teacher characteristics that are likely indicators of positive student outcomes, which he had gleaned from the work of researchers on disabilities. He listed the following:

1. Positive academic expectations.
2. Frequent monitoring and checking student work.
3. Clarity (e.g., clear directions, standards, expectations).
4. Flexibility (adapts as necessary, e.g., to modifications needed by certain students, schedule changes).
5. Fairness (lack of favoritism).
6. Active involvement with students (remains actively involved with students as they work).
7. Responsiveness (attention to students' responses and comments).
8. Warmth (good relationship with students, receptive to students' approaches).
9. Patience.
10. Humor.
11. Structure (highly structured, predictable lessons).
12. Consistency (sets and maintains contingencies).
13. Firmness.
14. Knowledge of different types of behavioral interventions.
15. Positive attitude toward mainstreaming.
16. Knowledge and/or willingness to learn about working with students with emotional and behavioral problems and exceptional children in general.

17. Willingness to work with special education teacher (e.g., share information regarding student's progress, seek assistance when needed, participate in meetings or conferences involving students).

18. High perception of self-efficacy (perceives self as competent teacher).

19. High sense of involvement (professional responsibility).

20. High professional job satisfaction. (pp. 34-35)

In an article authored by Dr. Greene (1992) himself, he cautioned that many recommendations regarding the characteristics of teachers that match with ADHD students are not based on empirical studies. The characteristics that are usually listed relate to positive attitudes and beliefs, knowledge of behavior management, and knowledge of disability. The indication is that students with ADD need teachers who have these characteristics, but this judgment is largely based on speculation, not on scientific evidence.

Special Education

Barkley et al. (1990) suggested that the availability of federally mandated special education has had an effect in managing some of the problems presented by ADHD youngsters in school. Specifically, they speculated that children might not be retained in a grade as readily as they used to be in an effort to solve their problems. Special education services can address some of the problems presented by youngsters in an academic environment, but there are also other intervention strategies that have been recommended to enhance their

educational experiences. Similarly, special accommodations for college students can address some, but not all, of their problems.

Restructure Learning Environment

Njiokiktjien (1988) stated that experiences with and observation of classroom-based intervention suggest that when cognitive and learning environments are restructured, the problem of the ADHD child is effectively addressed. While the attention deficit does not disappear, it is accommodated within a supportive environment and teaching framework. MacAulay et al. (1991) stated, "The hyperactive child is thus at the mercy of the teacher's repertoire of skills in terms of understanding and dealing with attention deficits in the classroom" (p. 140).

Zametkin (1991) elaborated on the type of environment that ADHD people perform best in: high structure, low distractibility, consistent positive reinforcement, consistent limit-setting, consistent consequences for inappropriate behavior, highly nurturing. CH.A.D.D. (Children and Adults With Attention Deficit Disorders) published a document called CH.A.D.D. Facts, 5, Attention Deficit Disorders: An Educator's Guide (1993b). They, too, stated that the effective classroom environment for the student with ADD generally needs to be highly ordered and predictable. They listed three general categories in which educators can modify the classroom environment: classroom organization, classroom management, and curriculum.

Martin et al. (1984) suggested that academic tasks and teacher expectations need to take into account the child's short attention span. They further suggested that assignments should be brief initially, then gradually extended as the child's capabilities increase. They also suggested that acceptable outlets for excessive energy could be anticipated and planned, for example, allowing the child to run errands after completing assigned work. They also endorsed the environment described by Zametkin above: freedom from extraneous stimuli, behavior modification, and token reinforcement for modifying inappropriate behaviors and improving academic performance. Barkley (1990) suggested adapting some behavior modification methods and self-control therapies for the young ADHD adult trying to meet the demands of a college or vocational training program.

Principles of Remediation

Fowler (1992) stated, "Children with ADD are Learn by Error, Trial and Error Learners. They will learn to work for the following: (1) to get something (stimulating or novel); (2) to get out of or away from something (repetitious, boring)" (p. 15). She then went on to list several principles for remediation, which are based on recommendations that Dr. Sydney Zentall submitted to the Council for Exceptional Children Task Force on ADD. Some of these remediations, which seem particularly applicable to the current study, are as follows:

Principles of Remediation for Failure to Sustain Attention to Routine Tasks and Activities

- **Decrease the length of the task.**
  -Break one task into smaller parts to be completed at different times.
  -Give two tasks with a preferred task to be completed after the less preferred task.
  -Give fewer spelling words, math problems.
  -Use fewer words in explaining tasks (concise and global verbal directions).
  -Use distributed practice for rote tasks, rather than mass practice.

- **Make tasks interesting.**
  -Allow work with partners, in small groups, in centers.
  -Alternate high- and low-interest tasks.
  -Use overhead projector when lecturing.
  -Allow child to sit closer to the teacher.

- **Increase novelty especially into later time periods of longer tasks.**
  -Make a game out of checking work.
  -Use games to over-learn rote material.

- **Do not teach or reinforce "dead-man's behavior"—that is, do not assume the child is not paying attention just because s/he looks out the window or at another child. . . .**

Principles of Remediation for Noncompliance and Failure to Complete Tasks

- **Generally increase the choice and specific interest of tasks for the child.**
  -Allow a limited choice of tasks, topics, activities.
  -Determine child's preferred activities and use as incentives.
  -Bring child's interests into assignments.

- **Make sure tasks fit within child's learning abilities and preferred response style.**
  -Allow alternate response modes (typewriter, computer, taped assignments).
  -Alter assignment difficulty level (give advanced-level assignments or lower the level of difficulty).

-Make sure disorganization is not reason for failure to complete tasks.

Principles of Remediation for Low Self-Esteem

- **Generally recognize the child's strengths and efforts.**
  -Call attention to areas of child's strengths by allowing for a consistent time each day or week during which child can display his/her talents.
  -Recognize that excessive activity can also mean increased energy and productivity.
  -Recognize that bossiness can also be leadership potential.
  -Recognize that attraction to novel stimulation can also lead to creativity.

- **Increase child's feeling of success by increasing child's skills.**
  -Recognize these children's playfulness and use it to develop skills.
  -Mark student's correct performance, not the mistakes. (pp. 15-16)

In reviewing the research and literature about interventions that educators can use to enhance the learning of ADD students, it is apparent that several strategies can be used. There are several "Principles of Remediation" such as those listed above. Educators can also work to change their belief systems about students with the disorder, work to match students with effective instructors, use special education accommodations, and restructure the learning environment.

Effective Collaboration and Self-Help

Besides the specific interventions of educators discussed above, the research and literature also suggests other ways of enhancing the college experience of ADD adults: effective collaboration by professionals and self-help by the ADD students. As was mentioned in the "Treatment" section of this

chapter, most experts agree that a multimodal treatment approach is necessary for this disorder. For effective treatment, educators must collaborate with other professionals. ADD adult students can also assume responsibility for their own welfare.

The Michigan Department of Education organized an ADHD Task Force, which published a report, Attention Deficit Hyperactivity Disorder (1993). In this report, the task force specifically dealt with the importance of collaboration and communication. They listed four requirements for effective collaboration: that the individual parties involved recognize the need and importance of collaboration, that efficient yet informative reporting devices be used in the interest of time, that all parties have an understanding and acceptance of the constraints of confidentiality, and that the professionals involved know what is reasonable to expect from one another. This report then went on to list expectations for the various different professionals (e.g., faculty, counselors, administrators, physicians, psychologists) who could be involved in the treatment team. Because of the numbers and diversity of those professionals, effective collaboration and communication are essential.

Dr. Frank Gersh, a clinical psychologist who works with ADD college students, provided some suggestions in his article "Treatment of the ADD College Student" which also indicate a need for collaboration among professionals. He said that there are a variety of therapeutic approaches to use with ADD college students. He stated:

> These include medication trials, longer-term medication use, improvement of study habits, accommodations in the student learning and test-taking environment, psychiatric or psychological treatment of associated disorders such as substance abuse or depression, developing daily routines and organizational ability, vocational counseling, cognitive therapy, relaxation training, assertiveness training, and training in social skills. (1993, p. 11)

Gersh allowed that treatment must be highly individualistic, depending on the needs identified during a comprehensive, careful assessment. The ideas he discussed seem to present a fairly comprehensive list of treatments, calling for collaboration among various professionals.

Although ADD adults need to rely on the services of professionals, they also have a role to play in their own treatment and development through self-help. As was mentioned earlier, there is very little written about ADD adult students, and there are no research-based studies. However, there is some literature that is anecdotal or clinician-based. This literature encourages ADD adult self-help and self-advocacy.

Although their works are not scholarly research studies, Johnson (1992) and Selkowitz (1993) both provided some anecdotal information that shows the advantages of ADD adult college students helping themselves to become successful students. Selkowitz told her story:

> I re-entered college this past fall. I took three courses, receiving three A's. I worked hard but there were things available to me that made the difference. I use Support Services at school. This means if I need a notetaker or tutor, the school provides them. I also hand my professors a letter that introduces me as a student with a learning difference explaining how I learn. I break larger tasks into smaller ones. . . . I am able to obtain my textbooks on tape to help me retain information. I read along with my textbooks and listen to the taped book at the same time.

> When appropriate, I ask my professors for any visual aids that might help me better understand the materials. I sometimes use rhymes or songs to train my memory. With permission from my professor, I tape lectures so that I can fill in the blanks of my notes after class. Color coding my notes and textbook helps keep me organized. (p. 2)

Like Selkowitz, other ADD adult students can take initiative in finding and requesting professional accommodations, and like her they can use other self-help strategies that complement those accommodations.

Nadeau (1992) is a clinician who is in private practice at a clinic specializing in working with individuals of all ages who have attentional problems. Her article listed 14 suggestions and guidelines for college students with attentional problems. The list, which is annotated in the article, is as follows:

1. Obtain special services which ADD students are eligible for under Section 504 of the Rehabilitation Act. . . .

2. Consider a small college with a strong pro-student attitude. . . .

3. Look for a school with a well-developed learning disability support program. . . .

4. Develop strong self-advocacy skills. . . .

5. If your choice of a major requires a large university setting, plan to transfer after your sophomore year. . . .

6. Think about signing up for a "single" in the dorm. . . .

7. Take a reduced course load of 12 hours. . . .

8. Plan to take your most difficult or challenging courses during summer school. . . .

9. Select your major carefully. . . .

10. Plan your class schedule carefully. . . .

11. Learn how you study best. . . .

12. Don't try to deny that attention, concentration, time management and organization are difficult for you. . . .

13. You can still benefit from medication through college and even in your work life afterward. . . .

14. Counseling can be highly beneficial to ADHD college students. . . . (pp. 5-6)

Nadeau made a strong case for students to help themselves become successful.

Kate Kelly, RN, MSN, a specialist in psychiatric nursing, and her co-author, Peggy Ramundo, a teacher with graduate work in learning disabilities, are both adults who have recently been diagnosed with attentional disorders. In their book You Mean I'm Not Lazy, Stupid, or Crazy?! (1993), which has received broad professional endorsement, they discussed the importance of self-help for ADD adults. They encouraged these adults to identify their individual preferred learning styles and to use their strengths. They also listed and elaborated five "general learning tips" for ADD adults. These are as follows:

1. Use Music or Background Noise. . . .

2. Schedule Learning Times. . . .

3. Use Color to Maximize Learning. . . .

4. Walk, Ride an Exercise Bike. . . . Any physical activity paired with data input can be helpful for visual, auditory and kinesthetic learners. . . .

5. Get Comfortable. . . . (pp. 297-298)

Although these guides to learning are more than likely based on research involving the education of children, they are the only resources in the literature with suggestions for ADD adult learners.

Effective collaboration by professionals and effective self-help by ADD adults are important possibilities in the higher education experiences of ADD students. Most experts agree that a multimodal treatment approach is ideal for this disorder. Thus, educators probably must collaborate with other professionals. In addition, ADD adult students can assume some responsibility for their own educational success.

Summary of Literature Review

This review has provided background information about ADD, about the manifestation of the condition in adults, and about the education of ADD individuals. Background about ADD--its history, cause, characteristics, diagnosis, and treatment--was given to assist the reader in understanding the current study. Background about ADD in adults has obvious, special relevance for this study. The educational research and literature, also clearly relevant, covers the effects of ADD on the educative processes in young people, some interventions that have been recommended for teaching children, and effective collaboration and self-help.

Very little literature has dealt specifically with the learning experiences of ADD adults, in college or elsewhere. For that reason, much of the research and

literature reviewed in this section is related to children and adolescents, is anecdotal, or is based on clinical impressions.

Because there is no scholarly research to guide educational practices for ADD adults, andragogical assumptions must be drawn from the literature based on pedagogy. However, some of the literature about educating ADD children does not lend itself readily to drawing such assumptions. For example, some interventions are designed to respond to hyperactivity, a form of behavior quite common in ADD children but not so apparent in ADD adults. This review does not focus on the literature describing such interventions. On the other hand, the review emphasizes pedagogical literature which does suggest helpful andragogical strategies. Such strategies are those that respond to impulsiveness and inattentiveness, characteristics common both in ADD children and in ADD adults. In addition, the review considers some literature that is anecdotal or is based on clinical impressions, and that provides some direct suggestions for educating ADD adults.

CHAPTER III

DESCRIPTION OF RESEARCH METHODOLOGY AND PARTICIPANTS

My main research question was: How do adults with Attention Deficit Disorder (ADD) experience this disorder in their college life and deal with the experiences this disorder presents? Qualitative research methodology was used to describe and analyze the college experiences of seven adults with ADD. The seven adults in the study had all been diagnosed with ADD by the same psychiatrist. The research design included interviews to collect data about the college experiences they encountered and the ways in which they dealt with their experiences.

Rationale for Methodology

Qualitative Research

Qualitative research seemed to be the best approach for describing and analyzing the college experiences of these ADD adults and the ways in which they dealt with them. Bogdan and Biklen (1982) explained that qualitative researchers proceed on the theoretical assumptions that meaning and process are crucial to understanding human behavior, that descriptive data are what it is important to collect, and that analysis is best done inductively. Because my

primary purpose was to better understand some elements of human behavior, ADD in college life, qualitative research methods were used. The data analysis gives a detailed description of the experiences of these adults and provides a rich basis for understanding for professionals who contribute to the education of ADD college students.

Interview Method

Because I wanted to provide a rich basis for college educators to understand students with ADD, I used interviews to gather descriptions of the experiences of seven ADD adults. Gorden (1980) stated, "There is much literature devoted to studies and experiments on the relative value of interview. . . . Interviewing is most valuable when we are interested in knowing people's beliefs, attitudes, values, knowledge, or any other subjective orientations or mental content" (p. 11). Bogdan and Biklen (1982) pointed out that interviews are used to gather descriptive data in the subjects' own words so that the researcher can develop insights on how subjects interpret some piece of the world. In this study interviews provided valuable information because I was attempting to discover individual knowledge and subjective orientations. The data collected in the interviews helped me develop insights into how these subjects interpreted their college experiences.

Research Design

Research Questions

The main research question was: How do adults with Attention Deficit Disorder (ADD) experience this disorder in their college life and deal with the experiences this disorder presents? The answer to this question draws on the answers to subsidiary questions.

Some research questions were related to personal information. That information provided background for understanding subsequent research questions. The personal information questions were as follows:

1. Demographics
    a. What is the individual's age?
    b. What is the individual's gender?
    c. What is the individual's race?
    d. When did he/she attend college?
    e. Where did he/she attend college?
    f. For how long did he/she attend college?
    g. Which of the 14 DSM III-R characteristics have been exhibited by the individual?
    h. What is the individual's current educational or occupational status?
2. Understanding of Attention Deficit Disorder
    a. What is the individual's understanding of ADD?
    b. Where did he/she obtain most of his/her knowledge about the disorder?

3. Feelings About ADD

   a. How does the individual feel about having ADD?

   b. How does the individual feel about being labeled ADD?

   c. Has the individual ever felt that he/she was different from others because he/she had ADD?

4. Personal History

   a. What was the individual's experience in being diagnosed with ADD?

   b. Has he/she ever been diagnosed as having any learning disabilities?

   c. What history does he/she have with medication?

   d. What does he/she remember about experiences in elementary or high school that might be related to ADD?

   e. Was he/she ever retained in a grade? If so, what kind of messages did that give to him/her?

   f. How does the individual characterize his/her relationships with friends and family?

      (1) What were the reactions of others to problems related to ADD?

      (2) Did he/she tell friends/co-workers about the ADD?

      (3) Has he/she experienced any difficulties in his/her dating/marriage relationships that he/she attributes to ADD?

Some research questions elicited data about the experiences the subjects encountered in college. These were as follows:

5. Selection of College and Admission

   a. How did the individual select the college attended?

b. What, if any, problems did he/she encounter in being admitted to college?

6. College Teaching/Learning Preferences

a. What kinds of classes did he/she prefer (lecture, discussion, etc.; self-paced, regular classroom, laboratory, etc.; small, large)?

b. What types of instructional delivery did he/she prefer auditory, visual, etc.)?

Other research questions elicited data concerning how the subjects dealt with their experiences. These were as follows:

7. Study Techniques and Support Mechanisms While in College

a. What types of study habits/study environments did he/she have?

b. What types of coping mechanisms did he/she employ?

c. What special services did he/she obtain from the college?

d. Were there any special accommodations available at the college to assist in studying, test-taking, etc.?

e. Did he/she attempt to receive any special help (tutoring, special instruction) from anyone, either within the college or outside of the college?

8. General Problems in College

a. What, if any, problems were encountered while in college?

b. Did he/she feel a need to struggle to concentrate/focus in classes or while studying?

c. Did his/her performance ever vary greatly from one time to another?

9. Relationships With Instructors

    a. Did the personality/attitude of the instructor make a difference in his/her learning?

    b. What were the instructors' reactions to problems?

    c. Did the individual tell instructors about ADD?

10. Advice

    a. What advice does the individual have for college instructors who have ADD students in their classroom?

    b. What advice does the individual have for ADD students who are going to college?

Although each of these subsidiary questions was asked in some form, my data analysis offers answers only to those questions that seemed particularly useful.

Population

Protection of human subjects. An application to protect the rights of human subjects was submitted for approval to the Michigan State University Committee on Research Involving Human Subjects (UCRIHS). This application outlined the potential risks to the subjects, and included consent forms and a prospectus of the study. UCRIHS approved the study, indicating that the rights of human subjects had been assured protection (Appendix A).

Selection criteria. For the study, seven adults who have ADD were referred to me by a psychiatrist who had diagnosed and treated them. Before referring her patients to me, the psychiatrist briefly described the purpose of the

research to them. She also assured them that she knew me personally, that I am a professional counselor, and that I would handle their reports in a professional and confidential manner. The psychiatrist obtained a release-of-information form from each of the subjects. She then provided me with the name, address, phone number, and birth date for each subject.

I contacted each subject first through a letter accompanied by a consent form (Appendix B). Then I called them on the telephone and talked with them briefly about the purpose of the study and their willingness to participate. We then set a time for the first interview. A written consent form was obtained from each subject before I interviewed them.

Anonymity and confidentiality. Before I began asking the subjects questions in my first interview with them, I again reviewed the policies of confidentiality and anonymity. I told them that we would not use their names and identifying information about them after the audio recording had begun, and that the only person besides myself who would hear the tapes would be a transcriptionist. The transcriptionist has a long history of handling confidential information in the school district where she is employed as a secretary. I identified the transcriptionist to each individual in case one of them would know her and think that she might recognize his/her voice or personal information. I also told them that the psychiatrist who referred them to me would probably read my complete study and that she would more than likely be able to identify them even though I would be using pseudonyms.

I also explained to each subject that the pseudonyms would be used to protect their identity. This policy has been carried forth in presenting the data in this study. The names of organizations and the individuals, and other identifying characteristics, have been changed to protect the anonymity of those being studied. Care has been taken so that substance of information has not been altered.

Data Collection

Type of data. Each subject was interviewed at length at least twice. The first interviews lasted between 45 minutes and 1.5 hours. The second interviews lasted between 45 minutes and 2 hours. Those who had shorter interviews the first time tended to have longer interviews the second time. All interviews were audiotaped. First interviews were transcribed. I listened to the second interviews repeatedly and took notes. In some cases, individuals were telephoned and asked to clarify data for accuracy. Notes were taken of these telephone conversations.

Place. All of the first interviews were conducted in a room that I rented in the office complex where the psychiatrist who referred the subjects to me has an office. Most of the second interviews were held in the same place. One second interview was held in a hotel room in the hometown of the subject. Another second interview was held in a meeting room of the intermediate school district office in the hometown of the subject. These settings were chosen to make them easy for the subjects to find, to put the subjects at ease in a familiar setting, and

to be considerate of their time. These settings also ensured privacy and lack of interruptions.

Interview guide. During the first interview, I used an interview guide (see Appendix C) that I had prepared ahead of time to assist my memory with the items that I wanted to be sure to cover with each individual. I included a review of the purpose of the study, my interest in this study (both professional and personal), a reassurance of anonymity and the confines of confidentiality, the format, a clarification of terms, and a list of topics for the interview. The items I discussed based on this guide were designed to refresh the memory of the participants, to clear up any misconceptions, and to help put them at ease, as well as to gather data.

Interviews

Type. A standardized, nonscheduled type of interview was used. "Standardized" (in relation to "nonstandardized") refers to collecting precisely the same categories of information from a number of respondents. "Nonscheduled" interviews are those in which the interviewer has some choice as to the order of questions and the freedom to attempt alternative wording. In the book Interviewing: Strategy, Techniques, and Tactics, Gorden (1980) explained that there are several situations in which the nonscheduled interview would be capable of more valid measurement. He mentioned that this might be the case in dealing with topics pertaining to private spheres of experience. He also reasoned that the nonscheduled type is needed where communication is

inhibited by respondents' "fading memory." He said that the interviewer must be free to exercise "low topic control" and vary the sequence of questions. The standardized, nonscheduled type of interview was deemed the best tool for collecting the types of data I sought.

Inhibitors and facilitators. Gorden (1980) described eight categories of inhibitors and eight categories of facilitators in the interview process. He defined inhibitors as any social or psychological barrier that impedes the flow of relevant information by making the respondent unable or unwilling to give it to the interviewer at the moment. Facilitators enhance the flow of relevant information from the interviewee to the interviewer.

The categories of inhibitors listed by Gorden are as follows:

1. Competing demands for time.
2. Ego threat (withholding information that threatens self-esteem).
3. Etiquette (desire to avoid embarrassing, shocking, or threatening the other).
4. Trauma (unpleasant thoughts brought to the surface from talking about it).
5. Forgetting (inability to recall certain types of information).
6. Chronological confusion (often original conditions are forgotten and subsequent conditions which are recalled are more readily assumed to be true in the prior situation).
7. Inferential confusion.
8. Unconscious behavior. (p. 91)

The categories listed by Gorden as facilitators are as follows:

1. Fulfilling expectations (people tend to respond consciously or unconsciously to the expectations expressed verbally and nonverbally by another).

2. Recognition.

3. Altruistic appeals.

4. Sympathetic understanding.

5. New experience.

6. Catharsis (release from unpleasant emotional tensions by expressing feelings).

7. Need for meaning (desire to fill the void between desired knowledge and available knowledge).

8. Extrinsic rewards (rewards which motivate the respondent other than those gained from the interview itself). (pp. 107-117)

In as many ways as possible, I attempted to manipulate the variables involved in the interviews to decrease the inhibitors and to increase the facilitators. The first four inhibitors listed above reduce the willingness of people to communicate in interview situations. A skilled interviewer who plans well can diminish those. The last four inhibitors listed above can render the interviewee unable to give information. The style and timing of the interviews can minimize those.

To eliminate or minimize competing demands for time, I made sure that the times of the interviews were arranged at the subjects' convenience. Not only did I tell them how long I expected each one to take, I told them at the outset that I would check with them after we had been talking for 45 minutes or an hour to

see if they wanted to break or continue. I followed that plan. To reduce the chances of ego threat inhibiting the interviewees' willingness to share with me, I told them that I have two adult daughters with ADD and conveyed empathy and understanding of the disorder. To avoid the restraints of etiquette in our communication, I told the subjects that I have been working for 18 years as a counselor. My hope was that they would infer that not much shocks me. As a professional counselor I have gained experience in clinical interviewing skills that help to prevent trauma and to reduce people's resistance to communicate.

One of the primary controls that I exerted over the inability of people to give information was the use of the standardized, nonscheduled interview. I had the flexibility to have almost informal interactions with them, inasmuch as I allowed them to talk at length about a topic and to often go off on tangents which elicited other relevant information that they might have otherwise forgotten. I also sometimes asked them questions on a certain topic within various contexts, which drew different memories or implications from them. Another control that I exerted was that I interviewed them more than once and left them with the understanding that we could have further contact if either of us thought of other data that would facilitate the research. I often asked them questions during the second interview that were similar to those during the first interview. Sometimes they had thought of things between the two interviews that were helpful. These strategies enhanced the ability to capture memories and to reduce some

chronological confusion. There was not much beyond this that could be done to minimize inferential confusion or to control unconscious behavior.

I also attempted to manipulate the variables that would increase the communication facilitators. In the first place, the subjects were participating because they were "fulfilling expectations." They had agreed with their psychiatrist to participate. They were responding to her expectations as well as to mine. I also took advantage of opportunities to express sincere recognition when it was appropriate during an interview. This intervention contributes to the desire of people to perform in an interview situation (Gorden, 1980). Explaining to the participants the purpose of my research probably appealed to the altruism in many, if not most, of them. They are all ADD adults who have had problems in college. It stands to reason that they would find it worthwhile to participate in research that they thought might help others in similar situations.

Gorden (1980) said,

> The desire to be understood and to have someone offer a "sympathetic ear" is seen not only in the therapeutic interview, but also in many information-gathering interviews. . . . Interviewers who reflect a sympathetic attitude and who know how to direct it toward the objectives of the interview will find their percentage of successes much higher than those who do not. (pp. 111-112)

Being experienced in conducting therapeutic interviews, I provided a sympathetic ear when it seemed appropriate and conducive to the interviewing process.

Another facilitator Gorden (1980) mentioned in his list was the human need for some form of new experience. Participating in this type of research was a first for all of the subjects. Many, if not all, of them told me after the interviews

how much they enjoyed the opportunity to talk about these things. Many of them mentioned to me the catharsis this experience provided for them. Catharsis was also listed as a facilitator of communication. In addition, for some of them, this interview fulfilled a need for meaning--it contributed to their self-knowledge by providing some confirmation of what ADD can mean in their lives.

Beyond the benefits of the facilitators discussed above, the subjects may have received no rewards. They were not paid to participate, and perhaps there were no extrinsic rewards for them. Even so, they all seemed highly motivated to be interviewed.

Gorden (1980) listed eight types of inhibitors to good communication and eight facilitators. I consciously designed the interview in this study to minimize the inhibitors to communication and to maximize the facilitators. In whatever ways possible, I tried to plan and execute the interviews to produce the most valid and relevant data possible.

The interviewer. The interviewer is a variable that must be considered in this type of research. I personally interviewed all of the subjects of this research each time they were interviewed. No data from their communication with anyone else provide information for this study. My personality and characteristics are those that would have a bearing on the respondents.

When Gorden (1980) discussed the appropriate interviewer, he said that skill in interviewing is assumed. I have two graduate degrees in Guidance and Counseling and 18 years working as a counselor. In addition, I completed a

series of graduate-level classes in qualitative research methods, in which I completed a project using interviewing for data collection. So it seems fair to assume that I am proficient at interviewing.

Gorden (1980) went on to list four other criteria of the interviewer that have a direct bearing on maximizing the flow of relevant information: overt characteristics (age, sex, race, ethnicity, social class, manner of dress, and speech), basic personality traits, attitudes toward subjects, and knowledge. I was cognizant of these criteria and did everything possible to control my approachability with the participants (e.g., dressed professionally, but informally; matched my vocabulary to the individual; conveyed respect and empathy). Although it is impossible to control all of these variables, I think that I did the best that was possible for me to do.

Data Analysis

The process of data analysis began when I was interviewing the participants and continued through several months of scrutinizing transcriptions and audiotapes. I began to see some patterns emerging even after interviewing the first few individuals the first time. After I interviewed all of the subjects once, I had the audiotapes transcribed. I studied the transcriptions, noting themes, ideas, and areas for further investigation. I then formulated questions for each participant that I would like to ask him/her in a second interview.

I interviewed each subject a second time and audiotaped the interviews. Afterwards, I listened to the audiotapes and took general notes about the

interactions. Then I studied my notes from the transcriptions and my notes from the tapes, again noting themes and topics that emerged. I developed a coding system and searched the data for regularities and patterns. Then I developed assertions and matched the data with the assertions that I had formulated. I selected assertions that dealt most specifically with college experiences, and that had a substantial amount of supporting data. I then reviewed the data for each assertion to be sure that the data matched my first impression. I altered the assertion to convey each idea most accurately before writing my final analysis.

Description of Participants

Seven participants provided data for this research. All of them were Caucasian. Two of them were female; five of them were male. Their ages ranged from 26 to 41. They had all attended college at one time or another. They had all been diagnosed with ADD by the same psychiatrist. None of them had any other major (significant or serious) psychiatric diagnosis. No clinical data were available about the co-existence of learning disabilities. Two of the subjects reported being diagnosed with learning disabilities, one was unsure, and the others had never been tested.

Most of them (at least four) had not yet been diagnosed and treated for ADD when they were in college. Two of them were diagnosed and treated during their college careers. One of them was not certain how his diagnosis coincided with his college career, but thought that it was either during his last year of college or shortly before he completed it. Their amounts of college experience

covered a wide spectrum. There were two who had a year or less, and one who had 2 years. Two had bachelor's degrees, and one had a bachelor's degree plus a term of law school. One was in her third year of medical school at the time of the interviews.

Data about the experiences of each subject provide the evidence for the assertions in Chapter IV. Chapter V includes a summary of each individual's case. The information in the following paragraphs and in Table 1 will present the reader with a demographic skeleton to assist with understanding the data.

Calvin Jones

Calvin Jones was a 38-year-old two-way radio technician at a major university at the time of my interviews with him. He had not completed high school, but later attended some machine shop classes at the community college. He successfully completed emergency medical technician training at the same college, but then dropped out of the paramedical training that followed. He had never been tested for learning disabilities and was not aware whether he had any. He had been diagnosed with ADD 3 or 4 months before my first interview with him and had not attended any college classes after treatment.

Keith James

Keith James was a 35-year-old owner of multiple businesses when I interviewed him. Following graduation from high school, he had the goal of

Table 1: Demographic characteristics of the study participants.

Name	Age	Occupation	Initial Educational Goal	Educational Attainment Before Drop-Out	Highest Educational Attainment	When Diagnosed & Treated for ADD	Reported a Learning Disability	Attend College After Treatment?
Calvin Jones	38	Two-way radio technician; senior technician at major university	Undecided--later, paramedic degree	Machine shop classes at community college	EMT training; some paramedic training	June 1993; 3-4 months before interview	No--never tested	No
Keith James	35	Multiple business owner; 50-acre farm, feed store manufacturing & sales; rooming house	Bachelor's degree--undecided major	1 year small state university	1 year university	6-9 months before interview	No--never tested	No
Sally Smith	34	Homemaker	Bachelor's degree--teaching	2 years small private college	2 years small private college; one year vocational school	March 1993; about 7-8 months before interview	Yes--dyslexia	No
Tim Franklin	39	Hospital security; desktop publishing business	University degree--photography	Community college--1 term; state university--1 term; community college--assoc. degree in law enforcement	Bachelor's degree in a nontraditional program for returning adult students (10-12 years after associate's degree)	About 2 years before interview	No--never tested	Uncertain

Table 1: Continued.

Name	Age	Occupation	Initial Educational Goal	Educational Attainment Before Drop-Out	Highest Educational Attainment	When Diagnosed & Treated for ADD	Reported a Learning Disability	Attend College After Treatment?
Tim Franklin	39	Hospital security; desktop publishing business	University degree--photography	Community college--1 term; state university--1 term; community college--assoc. degree in law enforcement	Bachelor's degree in a nontraditional program for returning adult students (10-12 years after associate's degree)	About 2 years before interview	No--never tested	Uncertain
Mike Mayes	40	Benefits rep. for UAW at a major automobile manuf. plant	Law degree	Bachelor's degree, small private college; 1 term in law school	1 term law school	About 10 years before interview	No--never tested	Specific interest classes
Dale Howard	26	Computer technician for state gov't agency	Bachelor's degree --music?	Community college--3 years; bachelor's degree in telecomm. from major university	Bachelor's degree in telecommunications from major university	During comm. college--about 6 years before interview	Not sure	Yes

Table 1: Continued.

Name	Age	Occupation	Initial Educational Goal	Educational Attainment Before Drop-Out	Highest Educational Attainment	When Diagnosed & Treated for ADD	Reported a Learning Disability	Attend College After Treatment?
Kathy Johnson	41	Medical student	Bachelor's degree from private university	1 semester private university; enrolled 1 semester in another private college	B.S. degree--small state university; 3rd year of medical school--major university	During 1st year in medical school--almost 2 years before interview	Yes	Yes

obtaining a bachelor's degree, but only attended 1 year at a small state university. He was not aware of ever having been tested for learning disabilities. He had been diagnosed and had begun treatment for ADD 6 to 9 months before my interviews with him. He had not attended any college classes after his diagnosis.

Sally Smith

Sally Smith was a 34-year-old homemaker at the time of our interviews. When she first graduated from high school, she wanted to earn a bachelor's degree and become a teacher. She attended a small private college for 2 years and dropped out; then several years later she attended 1 year at a vocational school. She reported that she was dyslexic in math. She had been diagnosed with ADD and had begun treatment about 7 or 8 months before our interviews. She had not attended any college classes since her diagnosis.

Tim Franklin

Tim Franklin was a 39-year-old security officer and owned his own desktop publishing business at the time of our interviews. Although his initial educational goal was to obtain a university degree in photography, he received an associate's degree in law enforcement and later returned for a bachelor's degree in a nontraditional program for adult students. If he had any learning disability, he was not aware of it. He had been diagnosed with ADD about 2 years before I interviewed him. He was uncertain about the relationship between

the time of his ADD diagnosis and the completion of his bachelor's degree. They had happened at roughly the same time in his life.

Mike Mayes

Mike Mayes was a 40-year-old benefits representative for the United Auto Workers at a major automobile manufacturing plant. His initial educational goal was to obtain a law degree. He completed a bachelor's degree at a small private college and attended law school for one term. He had no knowledge of having any learning disabilities. He had been diagnosed and had been receiving treatment for ADD for 10 years when I met him. His diagnosis and treatment began after he dropped out of law school, but he had taken some classes at the community college after that.

Dale Howard

Dale Howard was a 26-year-old computer technician for a state government agency at the time of our interviews. His initial educational goal was to obtain a bachelor's degree in music. Instead, he obtained a bachelor's degree in telecommunication from a major university. He had attended a community college for 3 years before transferring to the university. He reported that he may have been diagnosed with nonspecific learning disabilities during high school, but he was uncertain. His diagnosis for ADD occurred during his community college career--about 6 years before our interviews. He was receiving treatment for ADD during most of his college career.

Kathy Johnson

Kathy Johnson was a 41-year-old student in her third year of medical school during our interviews. Her initial educational goal had been to obtain a bachelor's degree from a private university. She dropped out just after beginning her second semester, got married, and had five children before returning to college. She was in her first year of medical school when she was diagnosed with learning disabilities and ADD. She had received treatment for ADD, and had been in school, for 2 years preceding our interviews.

In some ways the experiences that these seven individuals related to me were vastly different; in other aspects they were similar. There were some common themes that emerged when I talked with them, and those provided the basis for the assertions that I formulated. The data presented in Chapter IV produce the groundwork for greater understanding of the college experiences of ADD adults and the ways in which they deal with these experiences.

CHAPTER IV

DESCRIPTION AND INTERPRETATION OF MAJOR FINDINGS

The data presented in this chapter are derived from interviews with seven Attention Deficit Disorder (ADD) adults regarding the experiences they encountered in college and how they dealt with their experiences. Their descriptions of their encounters in college relate their emotional reactions and their perceptions of their learning. The ways they say they dealt with their experiences involve both day-to-day tactics and larger reactions and outcomes.

What They Encounter

Emotional Reactions

Self-esteem. The first assertion that I can make is that experiences in college often contributed to the diminishing of the self-esteem of these adults with ADD before they were diagnosed. All except one of the subjects related having low self-esteem sometime during their lives. For most of them, this was especially true during their times in college before they were diagnosed and treated.

Sally Smith went to a small private college right after she graduated from high school. Her goal was to get a degree in education and become a teacher.

After struggling academically for two years, she dropped out. Sally related to me the struggles that she went through during her two years in college. She told me:

> I really shouldn't have been accepted into college, but they take anybody where I went. And I really shouldn't have been accepted because I found, because of my poor English skills, I could not write a term paper. . . . I found that I was embarrassed, very embarrassed. . . . I just didn't have the skills to do it. So, it made me feel bad. . . .

Sally's final decision that she must leave was because she "couldn't do the book work."

I empathized with her frustration and reflected, "That's sad."

She said, "Yeah, I thought it was sad and I was embarrassed. . . ."

She talked a little more about how overwhelming it was, and I asked, "And how were you feeling about yourself by that time?"

"Um, emotionally?" she asked.

"Uh huh," I responded.

She thought a minute and then replied:

> Confused. Confused and not really knowing what I was going to do with myself and how I would support myself. I didn't know what I was going to do. I just decided that I would have to leave. So after two years, I moved back home.

Sally's voice echoed the despair that she must have felt at that time.

I asked, "Were you thinking you were not smart enough or questioning your ability at that point?"

Sally's reply was, "Yeah, I really didn't know what to do. I didn't know what was wrong with me."

A few minutes later in response to my query, she said,

> . . . I knew that I wasn't making it and I wasn't going to get better. I had two years into it and my class would graduate in two years and I wasn't even close to it. And, not only that, I couldn't do it. And I realized that it was an awful expensive playtime, so to speak. So, I realized I just couldn't do it.

She is an exceptionally attractive female physically and interpersonally, and she admitted that her looks and pleasing personality had carried her along. Her experience in college made it clear to her that those things couldn't sustain her in that environment. She left--confused and defeated. Even now, 14 years later, she still doesn't believe that she is capable of being successful in college. The impact on her self-esteem was crushing.

Tim Franklin also suffered some crushing blows to his self-esteem while he was in college, and he wondered if he was intelligent enough. Although Tim had shown enough academic promise to gain acceptance into a major state university with competitive admissions standards, he started college twice before he finally became motivated to get an associate's degree in law enforcement, and then a bachelor's degree many years later. Tim's first attempt at college was at a community college. He did so poorly there that they did not allow him to return for the third term. Then he went to a university out of state and flunked out of there, also. He told me he just "blew everything off."

As we talked about these struggles in his early years of college, Tim said to me, "There were times I would wonder if I was smart enough. You know, if this is something I'm capable of doing. Now, in retrospect, that's a stupid argument, but that's something going through your head, 'Can I do this?'"

He also related how he felt in relationship to other students: "Well, they must have something up on me because they're just picking everything right up and I'm struggling like hell and I'm treading water." It was obvious that Tim found the situation frustrating and that his self-esteem suffered.

Mike Mayes had a lot to say about the way that his self-esteem suffered in college. Mike sailed through high school fairly easily with a strong positive self-concept. He was an athlete; he did fine academically, and his parents provided a substantial amount of positive reinforcement. Then he went to college, and the story changed.

Mike aspired to be an attorney and attended a small Catholic college to get his bachelor's degree. As an undergraduate, he was aware of having to work longer and harder than other students (especially his roommates), but his grades were satisfactory, and he wasn't overly concerned about his situation. Then he attended law school for a year, and he really felt defeated. He related the following scenario to me:

> As things progressed at Woodrow [law school] and I started finding it harder and harder to even get the C's, that's where I really began to feel defeated. I think that's where I really felt defeated and I didn't know why. I thought, I'm putting in the time; I'm reading it--or at least I told myself I'm reading this material. I took the notes; I read; I studied; I did all the things I thought were going to help me, but I was not getting it.

Mike drew me a verbal graph to illustrate what happened to his self-esteem. He said,

> If I were to draw a graph, you'd start from kindergarten and obviously you work up and you progress. It probably would have peaked academically

> somewhere between the twelfth grade and my junior year in college and then you would be looking at a gradual decline.

"Of self-esteem?" I clarified.

"Um huh," Mike confirmed.

I said, "Okay. So, the first few years of college your self-esteem wasn't that bad. But law school really got to be the pits."

"It was the pits! It was extremely the pits!" Mike said emphatically.

With his self-esteem at an all-time low, Mike dropped out of law school and soon afterwards got diagnosed and began being treated for ADD. His diagnosis was approximately 10 years before my interviews with him. Since diagnosis and treatment, he has been very successful in some classes that he has taken at the local community college. These successes, he says, have reinstated his self-esteem. He was reflecting on these experiences when he said, "I'm convinced that, had I not had it stopped right after law school, I'd be a sour old man. . . ."

Dale Howard and Kathy Johnson both disclosed feelings of low self-esteem during high school and the early portions of their college careers. They, however, were diagnosed and treated for ADD during their college years. Dale was struggling through community college when he was diagnosed. He obtained medication and behavioral therapy, and went on to earn a bachelor's degree at a major university. Relatively early in our first interview, Dale told me,

> . . . I have always had very low self-esteem. . . . It's like, "How come you can't do this?" It was always, like, "What's wrong with you?" I knew something. I knew I was different. I always knew I was different as a kid,

> but I didn't know why. "What is up with me?" "Oh, I'm different. I'm not like the others. Something's wrong with me." And then I got real withdrawn.

In our second interview, Dale was telling me about his employment positions since he had graduated from college, when the self-esteem issue came up again. I observed and reflected to him, "You described yourself as quiet, shy, and withdrawn when you were younger. . . ."

"Uh huh," he confirmed.

"Now you have these two jobs since you've been out of college that require pretty high-level people skills. Do you think that your personality has changed or what?" I inquired.

"I think I've learned to be more confident in myself," Dale replied. He went on to explain in more detail:

> I think part of my insecurities--I still have insecurities, but I mask them pretty well, or at least try to. But I think the Attention Deficit Disorder was probably a very good facilitator of keeping me shy and somewhat withdrawn. I think that once I came to terms with what was going on with me--that I wasn't stupid or that I wasn't dumb--that there was actually something facilitating this process--then I could say, "Hey, these are the opportunities I have; now I understand where I'm coming from and what is the proper medication to help me focus." And it really helped improve my self-esteem. . . .

Dale said that he had always had low self-esteem, but that it improved after treatment for ADD.

Like Dale, Kathy felt "different" most of her life and related many stories connected to an economically deprived childhood. She told me, "I can remember being in high school and I really felt like everybody else walked around and knew

what they were doing all the time and I always felt like I was in a fog." She rarely felt like she fit in with classmates, and often felt ostracized.

She said that one of the things that led to her dropping out of college (the first time she went) was feeling ostracized by the other students. We were talking about the multiple reasons she had dropped out of college (i.e., the flu, a snow storm, finding out she was pregnant), when she said to me,

> I think I'd also begun to hit maybe a little bit of a stone wall, because I took a psych. class and we were doing some stuff that was hard for me to do and I think I felt one more time some of the ostracism that I couldn't keep up with everyone else in doing some things. And that was just another subtle little thing of, "Okay, you don't have to do this."

"So the fact that you felt different from other people motivated you to quit because you didn't have to do it?" I asked.

"Well, it was just one more thing on top of everything else," Kathy replied.

Feeling ostracized and inadequate (indications of poor self-esteem) was one of the reasons that Kathy dropped out of college. Fourteen years and five children later, she returned to college. She graduated with honors from a small state university and was in her first year of medical school when she was diagnosed ADD.

Keith James and Calvin Jones are possible exceptions to the assertion that experiences in college contributed to the diminishing of self-esteem in the ADD subjects whom I interviewed. Keith is relatively well-read in the field of ADD. We were discussing his knowledge of the subject when I said to him, "Do you see yourself as having more or less friends than the 'average Joe?'"

"Many more," was his quick response. "And I know everybody. I know everybody."

"Okay," I responded.

"Okay? That's what everybody says about me. No matter where I go, I run into somebody that I know."

"Um, I sense you feel real comfortable with yourself,and that you're not having any self-esteem problems," I observed out loud.

Laughingly, Keith responded, "How could you tell?"

I didn't respond to his rhetorical question, but just laughed knowingly, and went on, "We often talk about the self-esteem problems that ADD people have."

"They have extremely low self-esteem," Keith said.

"You see yourself as an exception to that?" I asked.

"Yes, I do," Keith said, and went on to explain why:

> I am very different. Because of my father. My father had this attitude, "You get knocked down; you get back up; you try something else. There's a ton of room in this world for you, Keith; you just find it." I mean, when somebody tells you that, that's pretty great. . . .

Keith James is self-confident and sees himself as having more friends than the average person, but realizes that there is much in the literature about the low self-esteem of people with ADD. He sees himself as an exception to this. There is nothing in the data which I collected to lead me to believe anything different.

Calvin Jones related to me that he had low self-esteem as a child. He related to me that he had had to repeat the second grade. I said, "Do you

remember how you did feel about yourself? Like, when people were making reference to you having been held back--to being stupid, to being lazy--those types of things, do you remember if you believed them or not?"

"Yeah. I believed them. I mean, at that age. I had very low self-esteem. I was overweight, too, and that didn't help any."

Calvin's college expectations and career were somewhat different than those of the other subjects. He did not finish high school, and did not go immediately to college to seek a degree. He was asked to leave high school. Some time later, he attended a machine shop class that his father was teaching at the local community college. This was a positive experience for him: his family owned a machining business, and he tells about "teaching the class."

Calvin's experiences in college were probably colored by the fact that he had expertise in the subject matter before he began the classes. Not only did he have work-related experience before he took the machining class, he also had work experience in the other field he pursued. A little later in his life, after he had been working as a police officer, doing volunteer emergency medical work for awhile, he completed emergency medical technician training at the community college.

Since Calvin told me that he had had low self-esteem as a youngster, I went on and asked about his self-esteem during his emergency medical technician (EMT) training. I said, "Now, what about your self-esteem during your EMT training?"

> Well, I would say it was pretty good, actually. I was extremely confident in what I was doing. I had a lot of support from co-workers and people that I worked with. They would let me do things that they wouldn't let other people do. They were confident in my abilities and I was, too. So, as far as that goes, I felt pretty good about that.

We didn't talk specifically about his self-esteem during other periods of his college career. (Later, Calvin dropped out of paramedic training and never went back.) Keith James and Calvin Jones are possible exceptions to the assertion that experiences in college contributed to the diminishing of self-esteem in the ADD subjects whom I interviewed.

Experiences in college often contributed to the diminishing of the self-esteem of these adults with ADD before they were diagnosed. All except one of them related having low self-esteem some time during their lives. For all but two of them, this was especially true during their times in college before they were diagnosed and treated.

Personality (attitude) of instructors. Like many students, most of the ADD adults whom I interviewed felt that the personality (attitude) of their instructors had an influence on their success in the classroom. Two of them directly stated that their success depended on the teacher. Two others indirectly indicated that instructors could influence success when they told of experiences about the types of instructors to whom they related positively. Two subjects did not discuss their opinions about college instructors, but supplied strong data in relationship to elementary and secondary teachers. One subject was somewhat

contradictory in her responses about whether or not instructors make a difference.

Keith James was satisfied with his academic success in college. Although he attended only one year, his reason for dropping out was not due to academic standing or struggle. As a matter of fact, he earned better grades at the university than he had in high school. He attributed his success to luck in getting certain professors. He said, "Considering what my high school was like, you know, I think I did quite well. I was really happy with it. I got lucky. Really lucky. I had some great professors up there. I had a professor that taught me how to read."

Keith then went on to describe two of his university teachers who made a keen impression on him. First he described a speed-reading teacher:

> This old bird took me under his wing and he taught me how to read. And . . . that's what I remember about college. I remember him and the physics teacher I had. And he taught me how to read and he taught me how to speed read. He taught me how to sort and pick and do everything that you needed to do to read. From then on, man, I was just a reading idiot.

A few minutes later, Keith elaborated: the instructor had taught him "to get the main topics and cull the information and just pass over the stuff that's trivial." He said that what the instructor had changed was his attitude about reading. He said that he used to hate to read, but "now I can't find enough to read. I read while I'm standing mixing feed. I read while I'm going down the road." To sum up his memories of his reading teacher, Keith said, "It was only six weeks, but it was the best six weeks I had."

Then Keith went on to tell about another teacher whose personality/ attitude made a real impression on him: his physics teacher, whom he had mentioned earlier. When Keith registered for the class, it had a rather vague course title and he didn't realize that it was a physics class until after the drop and add period was over. When he learned that it was a physics class that he had registered for, he exclaimed out loud in class, and the instructor told him to stay after class. Keith told me the story this way:

> So I stayed and he said, "What's the problem?"
>
> I said, "My God, I've never had physics before in my life; I just struggled my way through biology. What am I going to do? I can't get out of your class now; I paid all of this money. What am I going to do? This is physics, oh my gosh, oh my God."
>
> He said, "Do you live on campus?"
>
> I said, "."
>
> He said, "Well, I'm in this lab every night until 10:00. What I'd like you to do is, tomorrow, come on down. If you've got your readings, you've got your information. If you don't understand anything, come on down."
>
> . . . Well, it took about three weeks and I was setting up all the lab experiments for him, was doing everything in front of the class with him. What he did, he would teach it to me while we were setting up the project.

After Keith told me this story and the one about his reading teacher, he summed it up by saying, "It's exactly the same old thing of somebody not knowing exactly what they are doing for a student, but he took me under his wing and he said, 'These are the concepts. . . .'" He said that with both teachers, a difference was made in his life because they displayed a caring attitude and were able to extract and relate the most important basic concepts for him.

In a later interview, Keith again talked about the importance of the instructor's personality. This time he was talking about the type of lecturer he

thought made an impact: "What it takes is for someone to get up in front of class and have a little bit of stimuli to them--then we're 'suck city': anything that comes out of their mouth gets pulled right in." He related the physics instructor to this concept, also. He said, "He had tons of fire. That man was a walking firecracker--waiting for him to explode all the time. I learned a lot. He was good. We never had an empty seat in that class. Everybody came to that class." Keith definitely had some strong examples to support his opinion that the personality and/or attitude of instructors influences a person's success.

Dale Howard also stated directly that an instructor can "make or break" a class. He told several stories of high school teachers who made a direct negative impact on him. When I was asking him about his high school experiences, he said, "I found very few of the classes that I had were really interesting or inspiring. There were a few that, you know, the instructor really made a difference in the class and it was fun to learn."

A few minutes later he was telling me about his main interest, music, and I questioned him about what classes he had had. Dale said, "Oh, I played in symphonic orchestra and I played an acoustic bass. And I played in the jazz band as well."

I said, "And you did that throughout high school?"

Dale replied,

> Yep, I played for four years, actually three and a half years, for the orchestra, and then jazz band for one or two, and I quit that primarily just because of the instructor. I didn't feel he had the type of leadership and inspiration qualities that would pull people together, and this type of thing.

Dale went on talking about his interest and experience in music, but I brought him back to the issue of instructors: "A couple of times now, . . . you just mentioned something about an instructor. . . . I'm wondering if the kind of instructors you had made a difference in the courses you selected?"

Dale affirmed my suspicion:

> Oh, of course. I think that most people would probably say that in the college experiences an instructor can really make or break a course. They can have the same material--it's like telling a joke. One person can tell a joke one way and have the timing down and, oh, it's hilarious. But the other person can deliver the same lines and it falls on the floor. . . .

Throughout my interviews with him, Dale said, for the most part, the classes he enjoyed were based on the instructor. (However, he did tell about one college writing class where he liked the class because of the writing project he did, but he disliked and disrespected the teacher.) He was also very adamant about the negative impact that the unpleasant personality of instructors had on his college career. When he was struggling along at the community college, he had two classes that he flunked because he quit going to class. Ironically, the two classes that he failed because of lack of attendance were music classes, and Dale is gifted in music. His primary interest for most of his life had been music. He could play by ear, and he played in bands from the time he was 15 or 16 years old. His description of one teacher was, "The instructor in this case was a real asshole . . . was just real negative, a real cynic: 'What do you mean you don't know!' This type of thing. A real attitude."

Dale also attributed failing the other music class to instructor attitude. He reported that he had been getting about a 3.5 (on a 4.0 scale) in that class when he dropped it to play in a band. The teacher's attitude, he said, was derogatory. "What are you doing, dropping my class because you're playing in a rock band!" Then, the teacher just told him to sign a drop form, and it was his understanding that he would get a withdrawal grade based on his performance so far in the class. When his grades came, he received a failing grade, which he partially attributed to the teacher's attitude and partially to the fact that he never pursued an appeal for a grade change.

In a later interview, I asked Dale what advice he would give to college instructors who knew that they would have some ADD students in their classrooms. Part of his response to his question was that it is a matter of instructor personality. He said,

> From the classes I've had, there are good instructors and there are poor instructors. There's information and materials that needs to be disseminated--that needs to be taught. It's just like someone telling a joke. One person can tell a joke one way and have half the room laughing, and another person can tell the same joke and you've just got dead air."

Dale also mentioned that even in lab-based classes he liked the "human element." He didn't like classes that he thought treated students like cattle and just pushed them through. He definitely thought that the personality and attitude of instructors were important to his success.

Tim Franklin and Calvin Jones implied that instructors could influence success when they told experiences about the types of instructors to whom they

related positively. I asked Tim if the personality or methods of the instructors made any difference to him. He answered affirmatively by saying,

> The instructors that stayed with me were the ones that were more dynamic, would interact with the class, would ask you questions. . . . So, if they were moving around a lot in the classroom and keeping my attention on them. . . .

So, although he didn't come right out and say that the personalities (attitudes) of instructors influenced his success, he did agree when I asked him about it, and he gave examples of the types of behavior he liked in teachers.

Tim did so poorly academically that he had been withdrawn from college before he finally settled on law enforcement for a major and then completed his associate's degree. He thinks the reason that he was successful that time was because he was motivated by a career goal. Furthermore, he said that he thinks one of the reasons why he liked law enforcement classes was because they were taught by "ex-cops." He said,

> You're always taught by ex-cops and they always have these stories to tell. When they tell stories they get excited and they start moving around the classroom, and that would keep my focus. The guys that came out and stayed in one spot, and get their papers out and start talking, would lose me in a few minutes.

Cal had also struggled academically (was "kicked out" of high school) and didn't return to pursue training (other than one machine shop class) in college until he was older. He told me about the pressure that he felt in classrooms, which could either be exacerbated or alleviated by the personality of the instructor. He was implying that the personality/attitude of the instructor made

a difference to him in his success in the class, but he didn't acknowledge it quite that directly until I asked him.

When we were talking about the types of classes he preferred, he began to talk about how he felt pressured in some classes. He said,

> I felt pressured because I might get called on and not know the answer--I feel pressured because I don't know these students and I don't know this instructor. I'm uncomfortable and I'm thinking of all these things that could go wrong. . . .

In his emergency medical technician training, he said the class was made easier because he knew the instructor ahead of time and he didn't feel like he had to prove himself. Then, he went on to paramedic training and contrasted the way he felt in the presence of one instructor with the way he felt with another instructor.

During the middle of this discussion, I said to Calvin,

> Several people have told me that the personality or attitude of instructors they had in class made a big difference. It sounds like in this case it made a difference because you didn't feel the pressure or intimidation--you didn't have to prove yourself.

"Right, right," Calvin responded.

"Do you remember any other classes where the instructor made a difference?" I asked.

He told about his cardiology instructor: "She was one that, if you didn't know it, she'd just pick at you, chip at you. . . . It just made that, 'Oh, my God!' you know a hundred different things go zipping through my head." He said he had a lot of problems with her.

Another instructor's personality, Cal related, created a much more positive atmosphere for him to learn in. In describing that situation, he said,

> That was much more laid back because that was her personality. She was an R.N. and the whole nine yards, and she was a very easy person to get along with. . . . She wasn't so inclined to make you feel little because you didn't know it right then and there.

"And the other one, the one that picked at you?" I asked. "One of the feelings that you had, at least with her, was feeling belittled?"

"Yes, very much so, because then I'd feel inadequate and the whole nine yards. . . ," Calvin responded.

After I questioned them specifically, both Tim Franklin and Calvin Jones seemed to support the assertion that the personality/attitude of their college instructors influenced their success.

Sally Smith and Mike Mayes did not discuss their opinions about college instructors, but they supplied strong data in relationship to elementary and secondary teachers. Much of Sally Smith's academic life was a struggle. She told me that, from year to year throughout her entire life in school, her success depended on whether or not the teacher liked her and she liked the teacher. I asked her, "What kind of grades did you get in elementary school?"

"Each year it varied," she said, "depending on the teacher. One year I would just do terrible, and the next year if she believed in me and I liked her, then I would get B's."

A few seconds later she was talking about her college experiences and how terrible she was in English, when she said, ". . . although in freshman year,

I received a B in English class, which would be incredible, but I liked the teacher. . . ."

I asked her to try to generalize and tell me if the teachers she liked had anything in common. She said, "They paid attention to me. . . . They liked me as a person. They paid special attention to me. . . . They believed in me. That is so important."

Mike Mayes didn't relate much to me about the personality/attitude of his college instructors. He did, however, relate a story of a high school math teacher who intimidated him so badly that he never took math again. He was telling me about his academic achievement when he said, "My hardest courses, I think, were math."

"Were they?" I asked.

"Uh huh," Mike replied. "Algebra totally. . . . However, I feel the instructor was intimidating."

"Now, this was college math?" I asked for clarification.

"No, this was high school math," Mike clarified. "He was an intimidating figure to me, anyway. And, at that age, I still wasn't into the groove of asking questions or being in front of a class saying, 'I don't understand it,' when everybody else did."

"Sure," I supplied to indicate understanding.

"So, ultimately, I barely. . . ." Mike broke off and went on, "That was my weakest and it scared me to death from ever taking any further math class. . . ."

Next, I asked Mike, "Do you remember what he did to intimidate you?"

Mike said,

> I think it was his teaching methods more than anything, and maybe just his physical appearance. I know a lot of the girls in the class didn't like him, and some of them even dropped out of the class. He was the football coach . . . and he had that coaching demeanor with him in the classroom. . . . At that age I was intimidated.

"Do you think you had math trouble before?" I asked.

"No," Mike said without hesitating. "In fact, I did relatively well. I won't say I was an A student, but I was about in the B's."

Other than a modern math class that was required for college graduation, Mike never went near another math class after the teacher/coach experience.

Kathy Johnson was somewhat contradictory in her responses about whether or not instructors make a difference. When I asked her if she felt that the personality or attitudes of instructors had anything to do with her performance, she said no. But the context of her responses leads me to believe that she was just focusing on her current medical school instructors, because she said, "In medical school you are just a number." However, in a later interview she went into some detail telling me about a physician who had been one of her instructors the previous summer. Kathy stated that he was really good because he was a "down to earth" person. Furthermore, she mentioned an instructor she was scheduled to have in the future that she was really looking forward to because he had a similar reputation. So Kathy sees no relationship between her

success and the personality of her instructors, but she does enjoy the classes that some teach more than others.

Perceptions of Learning

Inadequacies in English or math. Most of the subjects in this study reported that they believe they have serious inadequacies in English or math or both. For the most part, these observations are their own (except where noted in the anecdotes below) and are not substantiated by standardized test results. These observations of theirs were unsolicited. I had no question in the interview guide about their performance in any specific course of study. Two of the subjects mentioned inadequacies in English; three of them mentioned weaknesses in math, and one mentioned weaknesses in both areas.

Kathy Johnson, the medical student, told me,

> One of the most difficult things that I find to do is composing. And that will probably never be easy for me. My vocabulary is--I had it tested--I think it was about a seventh-grade level. . . . I swear I'm going to keep records that a street person could read because I don't know if I'll ever be comfortable with all those Latin words and that kind of crap.

Kathy had recently undergone a complete series of testing and was well apprised of her learning disabilities. She was weak in verbal skills, and she knew it.

Tim Franklin said his reading and writing skills are good, but he hates to write and his spelling is terrible. Relatively early in our first interview, I asked Tim if he had ever sought out any support services in college--like study skills or reading classes. He responded, "My reading is excellent. When I went to State

and went through their entrance exam and all that and the reading exam, it came out way up. . . ."

Later on in the interview, I questioned him about his writing skills. I said, "I think you told me that you like to write."

Tim replied, "I hate to write, but I have good writing skills."

Later still, when we were talking about Tim's expertise with computers, he told me, "What got me started into computers is that I can't spell worth a damn."

"You cannot?" I queried.

"I cannot spell," Tim reaffirmed. "And I think that goes back to spelling means concentration, repetition. And I could never sit and do it. Computers have spell checkers. . . ."

It is interesting that Tim's current passion is desktop publishing--a skill he taught himself after being introduced to the wonders that computers could do to assist him with writing and spelling.

Mike Mayes, Dale Howard, and Calvin Jones all said that math was difficult for them. Mike Mayes wasn't sure why his math skills were weak, but he felt that they were. He told me: "My math was very weak. . . . I don't know if it was just my lack of interest, the instructor, a combination of my problems, or what. I didn't do well in algebra, and ultimately I avoided a lot of math classes. . . ." (He is the subject who was mentioned earlier as being intimidated by the football coach/math teacher in high school.)

Dale Howard attributed his lack of math skill to his dislike of the subject and his inability to focus long enough to practice the skills. He said, "I hated math. And the reason I hated math was practice; procedurally you have to go through, you know, the sequence of events, and you have to practice, practice, practice. And I could never keep my concentration on anything." Later he said, "I was very poor in math. And it wasn't because I don't have the mind for math or nothing like that; it was, 'I hate it; it's a pain in the ass. I can't concentrate on it and I don't want to do it.'" Dale, like Mike Mayes, had mentioned being intimidated by a football coach/math teacher in high school. Dale felt the inadequacy in math, but did not feel that it was an intellectual lacking.

Calvin Jones, who has become a very accomplished electronics technician, declared that he never could do math: "Math was one of my worst subjects. I've never been able to do it. My mother, we would spend hours and hours and hours, and I'd be accused of being dumb and lazy and don't want to do it. Oh, geez, it was really something." Calvin didn't attribute his lack of math to anything in particular, but at one point he did say that he now realizes that a lot of his high school problems were due to his impulsivity. Math was the worst part of a terrible entire K-12 educational experience that ended in his being expelled.

Sally Smith is convinced that she is terrible at both English and math. She is absolutely convinced that her lack of English skills was her nemesis in college.

She said that she never should have been accepted into college because of her poor English skills.

Throughout both of my interviews with her, Sally repeated over and over again that she failed at college because she could not write a term paper. At one point when she was expressing fear about having to go back to college to support herself, Sally said, "I couldn't write a term paper to save my soul!"

I tried to reassure her a little bit by telling her about some support services available at the community college where she plans to attend. She said, "I don't even know if I can do it. . . . I couldn't write a term paper. I haven't got the faintest idea. . . . I don't know."

I said, "I know you're really afraid of term papers."

"I am," Sally said. "My English is extremely poor."

Since I had heard this same theme several times, I said, "But you speak very well. You're very, very articulate."

She said, "Everybody tells me that, but I can't put it down on paper."

We went on talking about how overwhelming the thought of returning to college was for her, and she said, ". . . And math, you might as well forget that--I am terrible at math. I mean awful. I remember taking one elementary math class at Nesbitt and I could not do it." She dragged the words out for emphasis, and then went on, "I could not get it. All of my roommates were taking it. . . . I would study right along with them and get it and then go in and take a test and I flunked. . . ."

A short time later we were discussing her experience at the vocational school where she got her medical assistant training. I said, "But, I think maybe you're discounting your Rotman experience a little bit."

"Really?" she asked. As soon as I reaffirmed my thought for her, she said, "I didn't like it. They had record keeping, and I didn't like that because I also have dyslexia: I invert numbers. . . ."

Sally feels very inadequate about her abilities in both math and English.

Keith James is the one subject who never mentioned any feelings of academic inadequacy. This could be for a variety of reasons. It could be because the topic was never broached. It could be because he doesn't feel that he has any inadequacies, or it could be that he didn't want to disclose these weaknesses to me. I tend to think that he doesn't feel much inadequacy in the academic arena. He told me that he has thought about going back to college now to become a psychologist, and didn't mention any concern about his lack of ability. He also disclosed some pretty personal things to me. Near the end of our second interview, I prefaced a question about the relationship between ADD and his family relationships with, "This might be something you're not comfortable disclosing. If not, just tell me and we won't talk about it. . . ."

Keith responded, "Hey, this will probably be the last time I see you again the rest of my life or material written by you, or I might call you for guidance, but I'm never going to see you again and I'm not easily embarrassed. . . ." He went on to talk about some things that had gone on in his marriage/family life. I

believe that he wasn't trying to hide his weaknesses, that his self-esteem was positive.

Lack of focus. Not surprisingly, there was one assertion that all of the subjects substantiated resoundingly. They all related lack of focus--all of them in the classroom, and some while studying as well. All of them said that a problem they had was staying focused in the classroom. Seven of them said they fell asleep or daydreamed in classes. Four of them said that they had difficulty focusing while they were studying. Focus was definitely a problem for these ADD people while they were in school.

Much of what Dale Howard said about his lack of focus in the classroom related to his K-12 school experiences rather than his college experiences. This could be because he was diagnosed and treated relatively early in his college career so that maybe he didn't experience so much of a lack of focus during college, or it could be that my line of questioning didn't draw out his memories about college adequately in this area. He said, ". . . I had difficulty in concentration or focusing on anything. I didn't know it; I just thought I was just plain lazy." Later, when he was talking about how much he hated math, he said, "And I never could keep my concentration on anything. I really tried. . . ."

Calvin Jones also told me that his mind wandered in class, that he just got bored. He also told about how stress and fear in the classroom exacerbated the problem for him. When he told about one instructor whom he especially disliked, who "chipped away" at him if he didn't know an answer, he told about the type

of stress and lack of focus that created. When I asked him to describe that experience, he said, "Like, ah, what the other people in the class were thinking, will I ever get through this? A lot of stressful feelings that I can remember--my hands would start sweating and I'd almost start shaking." He explained that his reactions depended on the subject matter: "If I was into it, it was not a problem; if I kinda, like I don't know, it was a problem and I had all these things race through my head. . . ."

Sally Smith also talked about her head always racing. She said,

> And my mind, my mind was always racing, but I never wanted to look strange so I always had to be in control and appear very relaxed and, so to speak, and don't want to be stared at. I just had to learn that your head is always racing on to the next thing, on to the next, never enjoying the moment. Looking at the clock always; I only have to sit here an hour. If I can sit here for an hour, this will be over, this will pass. I'll be on to the next thing. And feeling that way after only about three or four minutes, it's difficult.

In a later interview, she said that she could only stay focused about ten minutes of an hour. When she discussed a data-processing class that she had taken at the community college after her vocational school experience, but before her diagnosis and treatment for ADD, she said, "It was beyond me; I couldn't stay focused." She did say that she had more success in staying focused at the vocational school because she was more interested in the subject matter.

Similar to Sally, Mike Mayes mentioned not paying attention in the classroom, but covering up for it well. He said,

> . . . Well, it wasn't that I was distracted formally. I mean I was doing one of these numbers: looking right at the instructor and he or she probably believed, "This boy's attentive," but it was going right through. I mean I

> wasn't hearing a word they were saying. I was hearing it, but I wasn't grasping it.

Later he explained this concept further:

> . . . I really looked attentive, but I'm watching the second hand on the clock behind you or I'm looking at the fly over there or I'm listening to anything--the clock ticking, the fan running. It could be any number of things. And, like I said, I was good at masking it.

Kathy Johnson also had a lot to say about her lack of focus in the classroom. She said that she didn't notice it so much as an undergraduate, but when she got to medical school, it became very apparent. She said, "I did experience some difficulty during my first year before diagnosis; I had begun to experience some difficulty in being able to really tune everything out. . . . My attention wanders really bad when I listen to lectures. I really have a hard time with that." She gave a specific example of what happens to her now that she is in the clinical portion of her training; she said, "People start talking and it's like the words run together, and there are times when I can just feel myself fade right out and come back. And I say, 'Okay, now, what are they talking about?'"

Tim Franklin and Keith James also complained of a lack of focus in the classroom. The examples they gave most specifically illustrate the problem that so many of them talked about--falling asleep or daydreaming. Tim said:

> I remember trying not to fall asleep a lot. Being bored . . . daydreaming a lot, not picking up on the instructor. It was very hard to focus on what he was saying and stay on track with him. This was probably the hardest thing in college or even high school. I'd get one of these guys that wanted to lecture and either I would start falling asleep or I'd start daydreaming or something else would happen. I was a great doodler when I was a kid. . . . Never really stayed on track with what the central focus should have been. I was off in different directions.

Keith James mentioned doodling and sleeping, also. When I was talking with him about his preferences in instruction, he began talking about boring lecturers. I said, "What happens when you get in a class like that?"

His reply was, "Zzzzzz [feigned a snoring sound and closed his eyes] . . . or draw or play--doodle."

Other subjects also mentioned falling asleep in the classroom. Calvin Jones said, "I'd sit there, and the prof would be talking or something, and I'd start nodding off. It wasn't because I was tired! I just can't sit through it. I lost interest in it or something."

Kathy Johnson said, "The second year it was really bad; sometimes I'd sleep through 15 minutes of an hour lecture."

Mike Mayes said, "Lecture classes literally would put me to sleep. . . ." (But then he reiterated that he wouldn't look asleep because of his Catholic school upbringing, which taught him to look attentive.)

Although Dale Howard was the only subject who did not complain about falling asleep in class, he did talk about daydreaming in the classroom and the problems that created. He said,

> My attention, you know in terms of listening skills, were pretty poor. . . . I mean like the instructor would be talking about something, and most of the time I'd end up daydreaming and then caught in the situation: "Okay, Dale, would you show us how to do this particular problem?" and I didn't know what he was talking about. I've been caught in that position a few times.

The situation of becoming inattentive in the classroom was definitely a problem expressed by all of the subjects. Most of them also expressed

frustrations over the related problem, losing focus while studying. Dale Howard recalled instances when he was supposed to be studying and something else would attract his attention. He intended just to delay momentarily, to be with a friend, read another book or magazine, or pay attention to some music, but his delays would be more than momentary.

Mike Mayes told poignant stories about the way that he would agonize over his studying, spending at least an hour each study session longer than his roommates, only to produce less. He said, "I didn't want to fail. I did not want to fail. So I found myself reading and rereading. And sometimes I didn't know if I knew what I just read." A little earlier he had told me he was distracted by every movement. He said if he sat by a window and even if he saw the shadow of a bird that flew by, it distracted him. In the final analysis, he compared his effectiveness while studying to that of a stockbroker. We were discussing the fact that he was working a lot harder than most people, but not doing as well. He said, "I wasn't getting a return on my investment. I mean, if I were a stockbroker, I was a failure. I was not getting a good return on my investment."

Kathy Johnson mentioned this same type of poor return on her investment when we were discussing her knowledge about ADD, and I asked her how she saw that it has affected her academic life. She said that it explained some of her difficulties with "staying on task." I could hear the frustration in her voice when she said, "I did spend a tremendous amount of effort making myself stay on task, and I just assumed that that was the way everybody was."

Keith James didn't complain of a lack of focus while studying as much as some of the other subjects did, but he did mention it. The context in which he mentioned it was that he had more difficulty studying in the dorm than he did when he was out on the road playing with his band. He said, "I did better on the road than in the dorm; in the dorm I'd get screwing around."

Since inattentiveness is one of the primary characteristics of ADD, we would be surprised if these subjects did not complain of a lack of focus in the classroom or while studying. All of them did issue this complaint in one way or another. Most of them related in great detail, over and over again, the types of problems this created for them.

Visual learners. Most of the subjects of this study said they are visual learners and they prefer hands-on instruction over lecture-type. As was discussed above, many of them reported falling asleep during lectures. Six of the subjects definitely stated a preference for visual, or even hands-on, learning. Three of them specifically mentioned preferring hands-on types of learning activities. A seventh subject possibly preferred the auditory, but was unclear about her preference.

Calvin Jones is definitely a visual learner, with a preference for hands-on experiences. When I asked him what types of classes he preferred in college, he said,

> The hands-on stuff--actually doing injections, actually drawing the fluids, things of that nature; the hands-on was much better than sitting through two hours of lecture on the pharmacology and that type of stuff. Cardiology was interesting because we got to do hands-on stuff--running

> strips, run EKG's--that was pretty interesting. Anything that was hands-on.

Calvin also told me about hands-on learning that he does even now in his career as an electronic technician. He said he rarely reads instructions when he assembles something, and when he designs something he often builds it before drawing it on paper.

Keith James also stated a preference for visual and hands-on learning. He attributed his preference to his poor reading skills when he was in school. He said, "If you're a poor reader, you have to have some way to take the material in." He also referred back again to the positive experience he had with his physics teacher, who had Keith assist with the laboratory demonstrations. Keith learned that way. Other subjects he had enjoyed were photography and graphic arts, project-oriented classes.

When Tim Franklin was relating to me the type of instruction he preferred, he told me that he liked the use of visuals. He said, "If they had something that they were showing me, describing--you know, pictures, . . . I guess I'm looking for stimulus, something to keep me interested." Tim also specifically mentioned a liking for hands-on learning. He said,

> In photography, we did a lot of hands-on, which, obviously, I was back in my element so I did well. In law enforcement we did a lot of hands-on . . . defense tactics, driving, search and seizure, approaching cars, approaching people. You know, a lot of different things they'd have you do, have you practice on.

As Tim said, he liked to be stimulated. Classroom activities that included hands-on or other visual learning stimulated him.

In response to questions about his learning style preference, Mike Mayes did not express so directly a preference for hands-on, but he did express a preference for the visual. He mentioned liking classes especially for that reason. When he talked about falling asleep during lectures, he said that illustrations helped keep him focused:

> Any time there were classes that, for instance on the blackboard there were illustrations, that would keep my attention. . . . Also, if I were distracted, I could come back and I had something there to put me right back on track. Where a lecture, if you've lost two or three minutes of his lecture, then try to focus, you've missed it because there is nothing there to bring you up to speed.

Mike also said, "Maybe that's one reason I liked accounting so much, because you could always read your book, but you always had your little problems on your forms--your paper set up to do that--and it was systematic and that's why I think I liked it." After discussion of his classroom preferences, Mike also mentioned preferences for hands-on and other visual experiences in his training for his current job.

Kathy Johnson knows she is a visual learner--the psychological testing she had done to diagnose her learning disability disclosed an auditory processing deficit. Kathy explained to me,

> I think I have always kind of noticed it, but it really became apparent in anatomy class, and that really threw me the first quarter because people would be talking to me, be rambling off these long words and everything, and they'd be two or more questions on down the road and I'd be still deciphering and putting together what that question was.

Later, she said, "I think I used my visual a lot." Obviously, she did; she was in her second year of medical school.

Dale Howard didn't go into a lot of detail about his learning style preferences, but he did say that he had poor listening skills, so I conclude that he prefers the visual. At one point I thought that perhaps he was going to say he didn't like hands-on learning because he expressed displeasure with a science laboratory he had experienced. However, upon close scrutiny, I found that it was not the hands-on activity that he objected to, but the lack of what he referred to as the "human element."

We were discussing the types of classes that Dale liked and disliked when he was in college, when he mentioned a certain science class that he had taken at the local community college, which has an independent learning lab as a part of it. I said to him, "Somebody else mentioned that very class to me earlier today, about liking it because it gave an opportunity for hands-on, you know, more of an experiential learning rather than. . . ."

"The lab, yeah," Dale said. "The physics class was like that, too. But actually, quite honestly, I thought the labs were a pain in the ass."

"Did you?" I stated, hoping for more information.

Dale went on,

> You know, I liked the idea of discovering and so forth, but the way it was presented was, "Here, go in here and scratch these rocks with a hardness tester, then go over here and. . . ." So it was, kind of like, I felt like, you know, cattle. "Come on, move through and finish the project and then move on; next!"

"How would you have liked it to have been?" I asked.

Dale said,

> Having the instructor there, going over the lab and then showing, providing example, and then after providing example, having everyone initiate it and going through and doing it. . . . But I just like the human element interaction when you can have someone there to demonstrate and then you can go through and discover stuff and have that interaction.

Dale seemed to prefer not only the visual, but also to have an instructor available with whom to interact.

Sally Smith related negative memories and extreme feelings of inadequacy. She said that she liked lectures, discussions, and paperwork, but she cheated on her labs. When she said this, she was referring to experiences at the vocational school, where she obtained certification as a medical assistant. However, the vocational school she referred to as "pretend school, not real college." I am not sure that she would view her preferred learning style in "real college" the same way that she described these. In any case, she was the one subject from whom I did not obtain clear data about this assertion. It could be that she prefers the auditory--or it could be that she just wasn't clear in her explanation.

How They Deal With Experiences

Day-to-Day Tactics

Seeking support services. Many, if not all, colleges and universities currently offer support services for students with special needs. This might or might not have been true when and where these individuals obtained their educations. However, it is true that most of them did not seek out special support services. Four of them didn't seek out the services, or didn't want to use

them. One individual said that support services didn't exist at the university he attended (my guess is that maybe services existed, but that he was unaware of them). One individual said she tried some support services and they didn't work. She later went to a vocational school and said she never used support services there. There is one definite exception to the assertion that these students did not use support services: one student had sought out and used every possible mechanism she could to enhance her success.

Calvin Jones did not elaborate about why he did not use any special support services while he was in college. I asked him, "Did you use any special accommodations as far as helping you with your studying, like tutoring or assistance with test taking or anything like that?"

He simply answered, "No," and I didn't pursue the line of questioning any further.

When I asked Tim Franklin a similar question, his response was, "I was not interested."

Later, within a different context, Tim and I were discussing whether or not his decision not to seek tutorial services was because he didn't want to feel singled out. He told me, "No, I didn't want to socialize with people. When you're dealing with tutoring, you're dealing one-on-one with somebody I don't know. I don't know how I'm going to react to it."

He paused a moment and then reiterated and clarified by saying, "I don't know how I'm going to react with it. I don't want to deal with it. . . . I remember

looking. I knew they were there, but just no. I didn't want to get into that situation."

Dale Howard had received special supportive services when he was in elementary school and high school, but did not use them in college. At one point, when he was telling me about having a math tutor in high school, I asked him if he ever used tutoring in college. His response was, "No."

I questioned him about support services further by asking, "Did you ever have a study-techniques class or reading class or anything like that?"

Again, his response was "No."

During my second interview with Dale, we were discussing what advice he would have for college instructors who have ADD students in their classes. His main theme was that, as an ADD student, he would not want to be singled out. He described to me his feelings of alienation from the other students that had been generated when he had to leave the classroom to obtain special learning assistance in elementary school. He wouldn't want others to have reason to feel like that. He said, rather sardonically, "I wouldn't feel like I'd want a press release sent to the instructor: 'Hey,'" raising his voice, he continued, "'I have a deficiency, so just in case I don't do well on a test it's because I have ADD.'" He was very adamant about not wanting to be singled out.

Following that discussion, I said to him, "I know you didn't use any accommodations because you didn't want to be different, but do you know if

there were any accommodations available at the community college or university when you went there to assist you if you had wanted them?"

Dale's response was, "Yes, I think there was like a Learning Resource Center. I think most universities have that. I think the community college had that. I never took advantage of it. I didn't feel like I needed it. The classes I was taking I was doing quite well in." My guess is that Dale might not have done quite as well in his classes if he had not been diagnosed and treated for ADD relatively early in his college career. Of course, there is no way of knowing whether or not that would have made any difference in his use of support services.

Mike Mayes made it all the way through undergraduate school and into law school without using any support services either. When I asked him about the availability of them, he said:

> I know there was tutoring, which I never took advantage of. And, I guess I was just like one of these people, for whatever reason, "I don't have a problem." I knew I did, but I wanted to deny it. And I didn't want to admit that maybe I'm not quite as smart as these guys. That was kind of my approach more than anything. I hid it.

Keith James didn't think that the university that he attended offered any support services. When I questioned him, he said, "I went to Southfield State University, and they never offered anything."

Perhaps some surprise was evident in my voice when I said, "They didn't?"

Keith replied, "No, at that time there were no support services."

When Sally first went away to the small private college to pursue a teaching degree, she felt like she tried all of the support services possible and still didn't succeed. She related the following:

> . . . I tried having tutors; I tried taking classes over, and I would fail them. And I couldn't do it. . . . I tried a type of, teaching you how to study, that type skill--it was a class--a four-week help type of class, but it didn't help me because I didn't have the background. I couldn't write a term paper. I couldn't try to get 12 years of school in four weeks in a self-help class. It wasn't going to work.

In a second interview, Sally and I were discussing her experiences at the vocational school where she received her certificate in medical assisting. When I asked her if she used any special accommodations there, she said she never tried them. She didn't say whether she knew if they were available or not.

Kathy, the subject I interviewed who was in medical school at the time, had used just about every special support service imaginable. She used tutoring, counseling, an MCAT preparation course, phonics instruction at Handicapper Services, extended time limitations, and support and tutoring from a special services assistant in the medical school. She is a distinct exception to the assertion that these individuals didn't usually seek special support services.

She took special preparation courses when they were available to her. Before Kathy took her MCAT exam for admission into medical school, she spent eight weeks during the summer on campus in a class preparing for it. Then, after acceptance but before beginning medical school, she attended another special preparation course to give her a head start in medical school.

During Kathy's first year in medical school, she was doing poorly in her classes and was diagnosed with a learning disability. This sparked a mild depression for her, and she sought assistance. She told me, ". . . I went down and talked with the assistant director down at the Southfield campus, and she put me in with a counselor. I began to do some work with a Ph.D. at the Southfield campus."

The next accommodation that Kathy took advantage of was extending the time that she took to complete her schooling. She said, "I went into Thanksgiving break saying, 'I'm going to quit.' And they're like, 'extend, extend.' . . . And I was like 'Okay.' So I extended, and it backed off my load tremendously."

Kathy told me also of other support services that she sought and used. She said, "I went to teachers sometimes if I needed a little bit extra, to get a little bit of something extra on the side if I needed it. . . . I worked with someone over in Handicapper Services and actually went back and did second-grade phonics."

During her second year of medical school, Kathy again had trouble and thought about quitting. Again, she went to the assistant director. This time the administrator referred her to someone for special assistance. Kathy said, "And at that time she hooked me up with someone at Southfield who does a lot of tutoring with students, and second semester was much better for me, much better."

This special tutoring assistant in the medical school has been extremely beneficial to Kathy. The person was doing some consulting out of the country at

the time of my second interview with Kathy, and Kathy told me, "When she comes back, I'll live in her lap." It is obvious that Kathy will go to any length to seek support services and to be successful.

It is interesting that Kathy, the person who has achieved the highest degree of academic success among the seven people whom I interviewed, is also the individual who has sought out and used the most support services. It is difficult not to wonder about cause and effect in these cases. Most of the other individuals didn't show the interest in support services and didn't want to use them, didn't think they needed them, or didn't think any existed.

Preferred study environment. Because these ADD adults have related such explicit stories about being easily distracted, we might jump to the conclusion that they prefer a study environment that is completely isolated and free of distractions. I found that this was not true for many of them. At least during the time period before they were diagnosed and treated, many of them preferred a study environment that was not completely quiet and isolated. Four of them expressed a desire for some extraneous stimuli while they were studying; two said they liked to be completely isolated, and incomplete data were obtained from the seventh subject.

When I first asked Kathy Johnson about her best study environment, she told me that when she first started college she couldn't study at home, but would go to the community college cafeteria to study. I thought from her comment that

she preferred complete isolation, so I clarified, ". . . I want to make sure I heard you clearly: your best study environment is to completely isolate yourself?"

Her response surprised me when she said, "Yes, but in a very busy environment. Because when I went from community college to Southfield, it took me awhile because I didn't find that it worked well in the library because everybody was quiet. . . . And what I ended up doing was, I had a restaurant where I'd go sit with a pot of coffee and the restaurant noise was the background noise, but I was focused on what I was doing, and that was what really centered down for me."

From this description I was about to infer that what she needed was some background noise, so I said, "So there has to be some background noise?"

She said, "Yeah. And it's not a TV; it's not music or anything like that. It's people noise, but noise that I don't have to think about--that really is not part of me and I don't have to respond to in any way."

She told me that she had never used music much as noise to study by--that she didn't think the radio was quite "where it's at" for her. She summed up her discussion of her ideal study environment by saying, "But I do know that I use that background as a way of, I don't know, walling myself off and really being able to concentrate."

When Keith James described his ideal study environment to me, he described his present situation. Even though he is not currently in school, he does a significant amount of reading and public speaking. Keith does not take

medication constantly--only when his daily activities seem to demand it. He described needing a different kind of study environment when he was off medication than when he was on medication. He said, "But if I really want to sit down and I want to get a presentation ready, I want to research a lot of information, and I want this something to be put together real well, I'll take my Ritalin; I'll sit down and read my information. . . ."

So I said to him, "So, no noise is better for you than noise?"

He said, "Yeah, well for me, when I'm on Ritalin. When I'm not, it doesn't matter. But, well, because, see you're not completely focusing when you're not on Ritalin, right? So outside noise is just stimuli for you."

I asked him how it was when he was in college (which was before he was diagnosed and treated): "You didn't try to have a quiet environment to learn things?"

"No," he said, "I couldn't take it. . . . I couldn't take a quiet environment."

Mike Mayes stated a preference for background noise when he was studying both before and after treatment with medication. The one difference that he has observed about himself is that he preferred louder music when he was younger and undiagnosed. He said:

> You know, my mother used to ask me, "How can you study with that loud music?" And right now I could not do that like I used to. But I think that loud music was a cover for all the outside distractions. Sitting in a quiet room where you could hear chairs squeak or if you were in a library for instance, without the meds, I was in a position to hear the squeaky chair or to hear the guy in the next study carrel turn a page. It was amazing the little things that would take my focus away from what I was reading. . . . You know, my mother couldn't understand it. And now, I'm not sure I

> could do that. I mean, when I do read, whether it's academic or the newspaper, I can have the TV on or the music, but it's not loud; it's kind of a background. Where then, it was loud. And it was kind of designed to put me in my own world--which it did to some extent. Because I wasn't hearing the lawnmower or the shouting in the dorm or two down or wherever it may be.

Dale Howard was diagnosed relatively early in his college career, and had just graduated four months before my first interview with him. When he responded to the question about study environment, I am fairly certain, he was speaking about his recent college experience--which was while he was taking medication. He didn't refer to his preferred study environment before. He also prefers some extraneous stimuli; he likes people around when he studies. Dale said:

> I like quiet, but I like to have other people around. When I'm by myself, especially when I'm in my apartment or at my parents' house or something by myself, I'm very easily distracted. It's hard for me to concentrate sometimes studying by myself because I daydream a lot. When I'm in an environment like the library where other people are around studying, it kind of inspires that mind set. When I'm by myself, I end up going off. . . . Sometimes I listen to music, but generally that's not a good idea because I end up losing focus.

Calvin Jones and Tim Franklin were two exceptions to the assertion that many of these subjects, before they were diagnosed and treated, preferred a study environment that was not completely quiet and isolated. Both of them told about having a terrible time trying to study, but said that they needed to be completely isolated if they were going to be successful at all. The first time I interviewed Calvin and asked him about his preferred study environment, he

said, "I really had no study environment. I mean, I didn't have any set way to study. Truthfully, I don't remember studying that much."

During my second interview with him, I pushed him a little harder to describe his ideal study environment. I said,

> If you had to study, do you remember where and what was most comfortable for you? Like some people say that they want absolute quiet; some people say they can't stand it to be real quiet--they have to have some background noise. Some people say they want to be isolated, but with people around. Can you relate to any of that?

To this, Calvin responded,

> . . . I needed to be alone by myself, quiet, no distractions, nothing--no TV, no nothing. Normally I'd go into the bedroom; I'd sit on the bed and try to read. I could never--and I tried it--sit at the kitchen table and try to work; that never worked.

"Why?" I asked.

"Distractions," Calvin responded.

"Other people around?"

"Other people," Calvin confirmed. "I'd hear something, and then I'd start thinking of something, and then I was lost on what I was doing."

Calvin wanted to be isolated to study; so did Tim. Furthermore, Tim didn't see any difference in his preference for an isolated environment either before treatment for ADD or after. When I asked him about his preference he said,

> I had to have complete quiet. . . . I even do now. Like I was working on a newsletter this morning, and I've got to have the radios off, the TVs off, everything off. If the radio is playing, it's going to catch my attention and I'm going to start listening to the song. If the TV is going, I'm going to want to go up there and see what's going on. I've got to be isolated. It's got to be totally quiet; the same thing if I was going to study.

I didn't obtain any data from Sally Smith that relate directly to this assertion, but she did tell me an amazing story about how she remembers trying to isolate herself in the first grade so that she could concentrate in her classroom. She told me,

> Even in the first grade, I remember putting up all my books around the desk to block myself in by myself to concentrate. But they wouldn't allow me to do that. But I remember doing that now, and I think back that it was because I was trying to keep everybody out so I could zero in on my papers. I just could not concentrate.

It's not clear from this which category Sally would fit into because she was telling me about classroom activity in elementary school, not about study environment during her college years. It is evident, however, that she thought isolation would be helpful.

The majority of these ADD subjects preferred a study environment that was not completely quiet and isolated--at least before they were diagnosed and treated. For some of them, being on medication made a difference in how much background noise they preferred. They seemed to want less background noise after diagnosis and treatment. There were two subjects, however, who definitely wanted complete silence and isolation for their ideal study environment. From one subject, there was not any precise information given about her favored study environment in college.

Larger Reactions and Outcomes

Changed original plan. A larger reaction of the subjects to their experiences in college was to change their original plan. All the subjects

changed their plan in one way or another. They either extended their completion time, some of them dropping out temporarily and returning later, or they dropped out altogether. One individual consistently persevered and accomplished an original goal. However, that goal, a bachelor's degree, took him eight years to complete. Two subjects dropped out of their bachelor's degree programs, but returned several years later to complete their degrees. Four dropped out of the degree programs they were pursuing and have not returned.

Dale Howard was the one individual who never dropped out after starting his college work. He began at the community college straight out of high school to embark upon the beginning of a four-year bachelor's degree. Actually, I'm not even sure it is accurate to say this was his goal. He didn't really want to go to college then, but he told me his parents made him do it. He said, ". . . I went right in. Of course, against my wishes. I wanted to do the old 'take a year off and try to get focused on what you want to do.'" He didn't have a selected major. He started off in music, then changed to media technology, then settled on telecommunications. However, the goal when he began was to get a bachelor's degree, and he never stopped persisting for eight years until this goal was accomplished. Dale's story, as he summed it up for me, was as follows:

> I started attending Capitol Community College in the fall of 1986 and was at CCC until 1989. Then, from there I transferred to Midwestern State University. I basically had a variety of different studies ranging anywhere from, originally what they had called their music block, music curriculum, to media technology. And once I got focused, I ended up transferring to Midwestern State in the telecommunications program. And just graduated actually last May.

Of all the people I interviewed, Dale is the only subject who has accomplished an initial out-of-high-school degree goal without dropping out. Even he, however, took about twice the traditional time for earning a bachelor's degree. He was telling me that he had played in bands and worked all the way through college, and he gave me the following example of a typical schedule of his:

> Our band would practice maybe two to four days a week, have gigs at least once a week, sometimes spaced out longer. I would work at least 20 to 25 hours and then take anywhere between 8 and 12 credits--usually 8. I'd take one or two classes. . . .

I asked him, "I wonder if just taking 8 to 12 credits helped you stay more focused?"

He responded, "It did." Then he went on to tell me about one time at the university when he had a very stressful experience in trying to take 12 to 14 credits at a time. Taking it slowly was an asset to Dale.

Kathy Johnson has also taken her course of study slowly, and she interrupted it by dropping out. In fact, she didn't make a really good start until 14 years after she graduated from high school. She began her college education in small private colleges--working toward a bachelor's degree. She said, ". . . I went from September to December at Anderson, and then in January I started at Alward. I only went like three or four weeks and had such a--it was like one comedy of errors after another. . . ."

I interrupted, "This was just after you were out of high school--like when you were 18 or 19 years old?"

She continued, "Yeah, yeah. I turned up being pregnant and I had the flu and I mean--I had the flu--and then there was a storm and then I found out that I was pregnant and I was just like, 'Enough is enough--the die is cast and this isn't yielding me anything!'"

Then she told me that 14 years later, after having five children, she began classes at Deerfield Community College in her home town. She spent two and a half years at Deerfield getting an associate's degree; then she went to Southfield State University and took three years to get a bachelor's degree with a double major. At the time of our interviews, she was in her third year of medical school at Midwestern State University. She had opted to extend the first two years of medical school into three years. Of this, she said, "Medical school is going to take me five years because I extended during the first two years, which is one of the options that they give you there at Midwestern State University--the first two years you can spread out over three years." Kathy, like Dale, used taking a lighter load as a way of dealing with some of the problems college presented.

Tim Franklin did not complete the original goal he set out to accomplish right after high school, but after an extended time period he did complete a bachelor's degree in a different area through a nontraditional program for adults. Tim originally thought he wanted a university degree in photography. He began at a community college and told me,

> I went to Capitol Community College because it was the only way they would release me in January from high school. I went there for awhile

> and basically just didn't do well. I got a letter the next spring saying, 'We'd like you to take a term off and see if you'd rather come back or not.' My major at the time was photography, so I tried Overhill State University, and maybe six months later I went down there for a term. Had a great time. . . . Didn't learn much--didn't do well academically, but had a real good time down there.

"You had a good time. Partying?" I asked.

"Partying, yeah. The dorm I got into was all the art students--they were all heavy partiers at the time, so we all just kind of got caught up in that scene."

At an earlier interview, Tim told me, ". . . I came back from Overhill, went to CCC again, finished up my associate's, and then 10 or 12 years later I went to Silver Springs and got my B.A."

I asked him if his associate's was in an art-related field, and he told me that it was not--it was in law enforcement. The Silver Springs bachelor's degree that he obtained several years later was in business. Silver Springs offers a nontraditional course for adults who have associate's degrees; they can get a bachelor's degree by just attending class one night a week. So Tim eventually did complete the bachelor's degree he began pursuing after high school, but it was not in photography, and it was almost 15 years later.

Mike Mayes intended to be an attorney. After he graduated from high school, he immediately went to a small liberal arts college to study pre-law. He made it through his bachelor's degree within the traditional four-year time frame, but dropped out of law school during his first year. He told the story this way:

> I attended college immediately after high school, which was 1971-75. Studied history, political science and the pre-law curriculum and graduated from St. John's College. . . . I think I really realized I had a

> problem when I went into law school. I went one year to Calvin Law School, . . . and the amount of reading was enormous. . . . Had I stayed another term, I would have flunked out.

Mike never completed his initial goal--to become an attorney.

Sally Smith went away to Nesbitt College, a small liberal arts college not too far from her home, with the goal of obtaining a teaching degree. She spent two years there, and then left because she felt certain that her goal was unattainable for her. College was too much pressure for her. She said, "I couldn't do it. I couldn't do it, so I decided after two years that I was spending a lot of money and I wasn't getting anywhere."

She said she had no choice but to leave. I asked her if it was because the college asked her to leave, or if she just knew she wasn't going to make it.

Sally replied,

> I knew I wasn't making it and I wasn't going to get better. I had two years into it, and my class would graduate in two years, and I wasn't even close to it. And, not only that, I couldn't do it. And I realized that and it was an awful expensive playtime, so to speak.

A few years later, Sally did attend a vocational school and obtained a certificate as a medical assistant, but she has never achieved her original goal.

Keith James didn't have a clearly established goal when he graduated from high school, but he did attend Southfield State University for one year--presumably to pursue a bachelor's degree. He went that one year and then left to accept employment. He never returned.

Calvin Jones's goal was less clear than Keith's when he left high school. Calvin had been expelled from high school for behavior problems. About two

years after he was expelled from high school, he took some machine shop classes at the community college. Then he completed emergency medical technician (EMT) training. After the EMT training, he began an associate's degree in paramedic training, but never finished it. Calvin told me the story like this:

> I went for a semester of machine shop type of stuff. My dad owned a machine shop, and he got a chance to teach down there at CCC, so I took a class with him and ended up teaching some of the class myself. I knew more than those people. . . . I went into emergency medical technician training in '78, I think. And then in 1980 I went into paramedic training. And at that point I was going through a divorce so I never finished. I got through one term, and that was about it.

Calvin did not complete the paramedic training program that he started.

All the subjects altered their original plan, either by extending their completion time or by dropping out and not returning. One individual, without interrupting his education, accomplished his original goal of getting a bachelor's degree, but it took him eight years. Two others completed their bachelor's degree programs, but only after dropping out and returning several years later. Four of them, having dropped out of their degree programs, have not returned.

Success and satisfaction outside initial college program. One of the outcomes that has resulted from the way the subjects in this study have dealt with their experiences is that most of them have found success or satisfaction in their careers. However, most of them are not in fields that require the college program they first pursued. All five of the males in the study have found a certain degree of success in their careers. All of them have found satisfaction at one

time or another, but two of them were beginning to get somewhat frustrated or bored at the time I interviewed them. One of the women was still in college at the time of the interviews, so her career success could only be measured in terms of academic success. The seventh subject, the other woman, was a discrepant case in relation to this assertion.

Mike Mayes's primary goal in life was to be an attorney. He went to a small liberal arts college because the attorneys his family knew had gone there. He got accepted into law school, but he only completed one year. He declared that he thought he would have flunked out if he had tried to complete his law degree. He began working in the paint department of an automobile assembly plant 15 years before I interviewed him. When I asked Mike about his current occupation, he said, "I am the benefits rep for the UAW at Major Motor Company at the proving grounds. Originally, I started as the training representative there, and I handled technical training. . . ."

When I asked him how he had reached this point in his career, he told me, "I had 15 years in August 7. . . . I started off in Paint at Washington Automotive Assembly. . . . I tried different things, and I knew I didn't want to do that kind of work."

In our first interview, I had asked him if he ever thought about going back to law school. He said, "I'm not sure I would be happy. . . . I've got a good job, I've got possibilities for advancement within the union, not so much within Major Motor Company, but within the union. . . ."

Also during that interview, but within a different context, he told me, ". . . I don't know for sure, but I believe this, if you were to talk to anyone I've ever worked for, they would say I was a good employee--as far as attitude and production and things like that--in anything I've done."

If those positive statements are not enough to convince us of Mike's success in a field outside of law, this question and response should confirm it. I said, "You like what you're doing now, don't you?"

He said, "I love it!"

He reiterated a similar sentiment the second time I interviewed him, when he was reflecting on the fact that he didn't complete law school and become an attorney. He said,

> I was disappointed, but looking back or saying would I be happier--no, and I think a lot of that is I have a job I enjoy; I have a family; I have a wife. I see a future in a new home and advancement in my present job. I have absolutely no remorse or regrets for the way things turned out. . . .

There is no doubt that Mike Mayes has found success and satisfaction in his career, which is not in the same field he began to prepare for in college.

Calvin Jones has also found success and satisfaction in a field that is different from the course of study he began in college. Calvin was expelled from high school and after a couple of years took a machining class at the community college. A few years after that, he became certified as an emergency medical technician, and then dropped out of college before completing his paramedic training. At the time of my interview with him, Calvin had been working in the

electronics field for about 12 years and had been employed by Midwestern State University for nine years. This is the way that he explained his occupation:

> I work with a lot of high-tech electronics computer-based equipment. Actually, my job title is a Two-way Radio Technician. Electronics has always been my hobby, and I got into the profession in 1981 doing it full time and I've just stayed in it ever since. And I went to work out here at the University; I'll be starting my ninth year. And I'm a senior technician, and I do a lot of trouble shooting with what other people can't figure out. I work a lot with computers. My department is a media-based department, so we do audio-visual things--video projectors, VCR, TV, set-up in the classrooms. Another portion of my department is a video production studio. So I do a lot, I maintain a lot of the equipment in the production studio; plus I do the--when we go out on sites to do production work--I'm the technical director. I set up everything. I make sure all the cameras are right.

It seems that Calvin has mastered a very complex job that is far from any of his initial goals of machining, emergency medical technician, or paramedic.

Not only has Calvin found success in what he does, he has found satisfaction. When we were talking about his current job, he said, ". . . I don't get bored with it. . . . I can sit down--beepers, pagers--you can bring me in 20 to 30 pagers, I average about 10 minutes a radio to repair it--and that's a complete strip-down, diagnose, replace, repair, whatever. . . ."

I reflected and told Calvin that it seems that many of the people I had talked with found something they really liked to do and are successful and focused within their fields.

Calvin agreed with my analysis. He said,

> I can sit--if I didn't have any other distractions or anything else--I could sit from the time I get up in the morning until the time I drop at night with my computer work or my electronics work, period, that's it. Now, you ask me to do something else, you might's well forget it 'cause I'm going to sit

> around and procrastinate 'til hell freezes over--not because I can't do it, because I just get into it and I'm into it and I cannot stay focused on it.

A few minutes later in this interview, Calvin made it perfectly clear that he is not only successful, but satisfied. He said, "My fortune is the fact that I have found something to make a profession out of, something I love to do. . . ."

Dale Howard began his college career majoring in music, ended up getting a degree in telecommunications, and is working in the latter field. My first interview question with Dale was, "Okay, tell me, first of all, about your experience in going to college--when you went, where you went, just a little background."

Dale's response was:

> A little background? I started attending Capitol Community College in the fall of 1986 and was at CCC until 1989. Then, from there I transferred to Midwestern State University. I basically had a variety of different studies ranging anywhere from, originally what they had called their music block, music curriculum, to media technology. And once I got focused, I ended up transferring over to Midwestern State in the telecommunications program. And just graduated actually this last May.

It was September and October of 1993 when I interviewed Dale, so it might be premature to conclude that he has found success and satisfaction in a field outside of the one he initially began in. He was successful in completing his degree in a field other than his first major, music. At the time of our interviews, he was employed by a State agency that uses a telecommunications network. He was working in the field that his degree was in.

Dale was feeling a certain amount of satisfaction in his work. During our second interview, he was describing to me the contrast between him and his siblings. (They had always been very athletic and had become successful in business professions. He was always very musically or creatively inclined, which didn't hold as high a premium in the family's values.) Dale's assessment of his current situation was: "At least at this point in my career I've found something that allows me to express my potential." It seemed that Dale was satisfied with his current career.

Keith James began a baccalaureate degree program at Southfield State University, but he never went back after the first year. At the time of our interviews, he was the owner/operator of multiple businesses. He owned a 50-acre farm, a rooming house, and a feed store and feed manufacturing company. Although he was currently a little bored with his feed company, by his own analysis, he was successful in what he was doing. He was talking about his feed business when he said, "I've been in it for four years now--I went from nothing to 15 ton a week; so, which is for one guy. . . ."

"Fifteen ton?" I interrupted for clarification.

Keith confirmed it: "Fifteen ton, a week, yeah. It's good; it's good money. I mean, I have a 40% profit margin--I make 40% on my feed. Elevators usually make 9%, 10%, 15%. . . ."

He went on to tell me how he is able to make so much profit, then reflected that he is getting a little bored with what he is doing. He told me,

> I love stimuli--it's not exciting any more. This is a great business; I have a tremendous income from it. The same thing--my rooming house does well, too--that's another one of my businesses, a rooming house--and that does real well. I'm just kind of in a rut, kind of bored.

Laughing, I said to him, "Time to start a new business, Keith."

He said, "Yeah, there ain't nothing I can't do."

As I mentioned earlier, Keith didn't see himself as having any self-esteem problems. When we were discussing the issue of being successful in life, he told me he thought he compared favorably to his siblings.

It was with pride in his voice that he told me,

> I had two sisters and two brothers. Two of them had masters', one a Ph.D., and one a bachelor's--all from Big Ten universities. I am the black sheep, okay? . . . When it comes to "You'll never get this and you're not smart enough, you know you can't do that, and geez, you're not going to be successful and on and on." Well, my income is twice what theirs is.

Although Keith wasn't completely satisfied with his current occupations, in his own eyes, he was successful.

Tim Franklin began his college career majoring in photography, changed his major to law enforcement, and is currently working in two careers: hospital security and desktop publishing. Although Tim is not currently enjoying his law-enforcement-related career ("It's not that I'm really enjoying it, but it permits me to do the things I enjoy doing"), he has worked in that field for 15 years. When I asked him if he was working in the law enforcement field now, he said, "I did for about, oh God, 15 years. I did security work plus law enforcement work, back to security work and now I'm working security at Mercy Hospital for three days a week in 12-hour shifts . . . and doing desktop publishing."

He also attributed his success at college to his switch to the law enforcement curriculum, which he found interesting. When I asked him if his associate's degree was in an art-related field, he said,

> It started out in photography, and that's what I went to Underhill State for was photography, and I did so, so there. I was invited not to return for a term so I could figure out which way I'm going, and then I changed over to law enforcement. And that's where I got my associate's is in law enforcement.

A few minutes later during this same interview he said to me, ". . . When I came back I switched into a law enforcement curriculum. And for some reason, I seemed to catch fire. My grades were not great, but they came up to around a 3.0--which was far better than I was doing before." And a few minutes after that, he said, ". . . I think going into law enforcement brought everything up. I think I left Capitol Community College with a 3.2 average or something like that." Tim Franklin was successful in studying the law enforcement curriculum, and did well enough in the field to remain in it for about 15 years.

Tim was relatively successful in law enforcement, but at the time of our interview, he was really enjoying his other career--desktop publishing. He told me, ". . . I'll get into manuals about computers or design manuals or things like this and I can get lost in them. . . ."

Later on in this first interview of ours, Tim gave me examples of the ways in which he becomes hyper-focused on the desktop publishing work that he does. He said,

> Last night I got another client with my publishing. So I spent the morning working on getting a presentation for her--to show things to her first thing

> for a newsletter. I was supposed to see Dr. Evers this morning. Well, I got focused over there and everything else was gone. I didn't think about it. And yet, when she [Dr. Evers] called me and I heard her voice, I went, "Oh, shit."

When I told him that there are some people who have ADD who speak about getting hyper-focused on some things, he agreed that is what happens to him. He said,

> That's what happens. Because like Deb will come home and I'll be working on the computer, and you know the house could blow up around me. And I'll block everything out. It's just like a tunnel. I have tunnel vision right now. And it's a safe world, maybe that might be part of it. It's a good way to describe it. It's hyper-focus. You know, the world blocks out at that point.

Considering the way that Tim becomes so absorbed in his computer work, it came as no surprise to hear him say that he finds it rewarding and is successful with it. He said,

> The desktop publishing to me is very rewarding--when you put something together and like I'm doing all the art work for the newsletters--all the headers (I call headers for the top) . . . to me that is very rewarding because when I'm done it's there, it's mine and I've done it. . . .

I said to him, "And you've become pretty successful at this?"

He responded, "So far it seems to be--yeah. I've got eight solid accounts now, and it looks like it's going to expand."

Tim began his college career majoring in photography, but he has found success and satisfaction in the fields of law enforcement and desktop publishing.

Kathy Johnson was still in college at the time of the interviews, so her career success could not be measured. It is clear, however, that she is on the road to successfully completing medical school--a goal she did not have when

she first began college right after high school. She told me about making her career decision when she went back to school after a 14-year lapse. During her first year, she told me she had a 3.75 grade point average, and then she spent the next summer thinking about what she wanted to do. She said,

> And it was at that point that I kind of set my sights on becoming a doctor. . . . And, so, that was kind of it, and I had a marvelous counselor at Deerfield. So when I decided I wanted to be pre-med, the counselor, he was a marvelous man, he didn't look at my age as a deterrent. . . .

A few minutes later, she shared with me some of the success she has experienced in that academic decision: ". . . I graduated with a double major. And I graduated cum laude."

Shortly after that in our interview, she again reflected back to her motivation during her undergraduate days. She said, ". . . I just dug my heels in so hard that when I got to school, I was going to do it, by hook or by crook. . . . Whatever it took, I was going to do it." Data that were related earlier in relation to the use of support services substantiate the fact that Kathy did do whatever it took. At the time of our interviews, she was in her third year of medical school. It would be premature to say that she is successful and satisfied with her occupation, but she certainly has been successful in the academic preparation for it.

The seventh subject, Sally Smith, was a discrepant case in relation to this assertion that most of these individuals have found success and satisfaction in their careers and that most of them are not in fields requiring the college program they first pursued. Sally, like the others, is not in a field requiring the college

program she first pursued, but she has not found satisfaction in the field she now pursues. She wanted to be a teacher, and she is a homemaker. I have no data to support whether or not she is successful as a homemaker, but she is not satisfied with it.

Sally talked to me at length about her unhappy personal life at the time of our interviews. (I have some hesitancy about going into too much detail because of her expressed concern that it not be shared. I will only relate those things which I am sure that she would not object to.) She has two children who are both ADD also. Concerning her parenting responsibilities she said, "Even now, it's very difficult. Very difficult, I should say."

She told me about her response to her son's diagnosis by saying, "I went through a period of depression after that." Then she said,

> There's no escape from ADD for me. There's no escape for me. I sometimes resent that. . . . I have to deal with it all the time. Of course having it and then having the children, there's no escape. My whole life exists around ADD, and sometimes I resent that.

Sally also feels dissatisfied with the way that she is unable to maintain her home. She said, "The disorganization . . . my house is a mess."

She also related current difficulties in her marriage. She was talking to me about differences in herself when she started on Ritalin, and she said, ". . . He [her husband] sees a difference, but I notice that it irritates him terribly. . . . He's a disaster, and I didn't know it. . . . But I was so far beneath him, we weren't on the same level, I didn't seem to notice."

During our second interview, she talked at length about the current state of her marriage. It was not positive. There did not seem to be much, if anything, about her role as a homemaker that Sally found satisfaction in.

With Sally as a definite exception, most of the subjects in this study have found success and satisfaction in their careers--or at least (in the case of Kathy Johnson) in the academic preparation for their career. Dale Howard has not been in his career very long, but expressed satisfaction by saying that he feels that he is using his potential. Tim Franklin and Keith James were becoming somewhat bored with parts of their current occupations, but overall, felt satisfied. Mike Mayes and Calvin Jones both said they "love" their jobs.

College after diagnosis. Most of the subjects in this study feel that they could be/were more successful if/when they went back to college after diagnosis. Three of them had not taken any college courses after they were diagnosed with ADD. Of these three, two felt they would be more successful if they went back; the third one is an exception to this assertion. Two other subjects had completed most of their college classes before diagnosis and treatment, but have taken some classes since, and feel that they have done better. Another two of the subjects were actively pursuing their college degrees at the time of their diagnosis and treatment. Both of these individuals felt that they did better after treatment. Six of them definitely felt that the treatment they received for ADD would/did enhance their college success.

Keith James had been away from college for approximately 15 years when his ADD was diagnosed and his treatment began. He was not speaking of college specifically when he was describing the benefits of diagnosis and treatment of ADD, but I believe that his comments are applicable. He said,

> If you go into treatment and you start treating yourself for this, then all of a sudden all of these doors open. All of these doors open for interests that geez, "I can do this now, I can do that now, I can do that now." You can do all of these other things. . . .

A few minutes later in the same interview, Keith said, "See, I would love to go back to college."

I responded, "Would you?"

He said, "Hell, yes. Oh, yeah. First thing I'd like to try, I'd like to try a broadcasting course. . . ."

A few minutes later he said, "I'd love to do what Dr. Evers does. I'd love to be a psychologist or a child psychologist, you know. I don't think I'd want to be a psychiatrist, I don't have enough years left in my life to complete the studies. . . . Thirty-five years old, man."

When I reflected that he had a long time to work ahead of him and lots of energy, he said, "That's right. I've got all kinds of time to be successful in a number of different things."

Keith feels that "doors opened" up for him after he got treatment, and that he could be successful if he went back to college.

Calvin Jones had also been away from college for about 15 years when his ADD was diagnosed. He had experienced problems all the way through

school, and didn't complete high school with his class. Reflecting on the loss that he feels about not being diagnosed earlier, he said,

> I mean, I look back and if I would have been on Ritalin or any medication at that time when I was coming up through school, I know I would not have had any problems in school. I would probably have been able to go to college and get a degree in something. . . .

A few minutes later, I summarized what I thought I had heard him expressing. I said,

> I sense that what you're thinking now is that you wouldn't have any problem. I mean, if you could drop everything, if time and money were no object and you could go to school now, you could do whatever you want to do. Is that what you're feeling?

Calvin replied, "Yeah, I feel I could accomplish at least a four-year, easy."

I asked, "Whereas before?"

"No way! Overwhelming," Calvin responded.

Mike Mayes had finished his bachelor's degree and had dropped out of law school before his ADD was diagnosed and treated, but he has taken some courses at the community college since treatment. When he was telling me about how easily distracted he had been in classrooms, he reflected on the difference treatment had made for him. He said,

> . . . I was taking classes at CCC off and on; I still had the difficulty. After I had seen Dr. Evers and I was placed on the medication, it made a world of difference, and it did so by keeping me focused, on task, if you will. . . . I found I learned more in less time, if you will. And part of it was not reading and rereading.

During our first interview, I had asked Mike how he thought his undergraduate experience might have been different if he had been diagnosed

and treated at that time. He said that he thought it would improve his self-esteem. He explained it this way:

> I think I would have the self-esteem. I wouldn't have the loss of self-esteem or at least the deterioration of it, the gradual deterioration, that I experienced. I would also be more apt to seek out the assistance of the people around me, whether it be my roommates, instructors, or whatever. . . .

During the second interview, I posed the question to Mike more directly. I asked, "Do you feel you could be more successful if you went back to college after your diagnosis and treatment?"

He responded emphatically, "Oh, I know I would. I would bet everything I own on it!"

His response was clear, but I probed some more anyway. I said, "Tell me more about that."

Mike told me more:

> In my mind--and, in fact, I feel that I've proven it substantially (since I've seen Dr. Evers) in my college classes and in the classes that I've got that are work-related. I'm more apt to participate; I'm more apt to stay on-task when you have projects. I know I participate more; there is no doubt in my mind. I know that if I started today in any program, I would do better.

Mike certainly feels strongly that he did better in college after his diagnosis and treatment for ADD.

Tim Franklin is uncertain about whether or not he had any college classes after his diagnosis and treatment, but if he did they were in a nontraditional degree program, which he saw as quite different from "regular" college classes. During our second interview, I asked him, ". . . If you went back now--now that

you've received treatment and are on medication, do you think that anything would be different?"

Tim replied, "I think I'd do better. I think I'd do a lot better."

"Tell me what 'better' means to you," I asked.

"Well, now I have a better direction of what I want to do, which would help. And I know that I have better concentration level and I'm a lot calmer. . . ."

Dale Howard was one of the subjects who was diagnosed relatively early in his college career. He was in treatment for six of the eight years that he was working on his degree. When I asked him what difference the Ritalin made in his life, he told me about the way that it positively affected his college career.

I said, "What kind of differences did you notice?"

"After taking it?" Dale asked.

"Um huh," I affirmed.

He replied,

> Um, elevation of mood. Most definitely, elevation of mood. Felt good, felt happy. . . . And I could focus and then get inspired. I mean it made me feel, "Hey, I feel really good. I'm going to get this done; I'm going to do it." And I would get it done. And I'd say, "I did it! I got it done!" Where before, I'd be kind of like, you know, kind of uninspired. But it really provided a platform to allow me to concentrate, most definitely, most definitely. I think that it was the catalyst for getting the change. 'Cause I was just, I didn't know what I wanted to do, I was wasting time, taking classes, wasting my parents' money. Finally, I said, you know, "You get your shit together." And I said, "Okay." . . . I got focused, and if anything what it did, it put me on the right track and I got focused. . . .

Dale felt that his treatment for ADD made him more successful in college than he had been before.

Kathy Johnson was the other subject in this study who was diagnosed and treated while she was still pursuing her course of study in college. She was in her first year of medical school at the time. I asked her, "After you were diagnosed and got on Ritalin, did you see differences then in your performance in school?"

"Yes," Kathy replied, "from the standpoint that I could stay on-task longer. I could get a little bit more out of studying--stay on studying a little bit longer."

Kathy also felt that the psychotherapy that she did as part of her treatment helped her with self-management in group dynamics in her classes. She told me,

> I did a lot of work with Dr. Evers about handling disruptiveness, as far as being in a group . . . impulsiveness in talking in a group--impulsiveness to just butt in. I was not truly aware of what I was doing until I started to address just what ADD meant.

Another benefit that Kathy gained from her diagnosis was that she had the option of requesting individual testing, with unlimited time, rather than taking her tests with a whole group. She described how that was helpful to her:

> . . . and then, when I got the diagnosis, the one thing they offered me was I can take my tests by myself. I have unlimited time. And I thought, "Umph, I don't need that." Well, I've been through two tests now, and I've gone to them and said, "This is the way I want it to be." During this past year, taking the tests by myself, that has begun to be the way I function the best. . . . Some of it is that I can sit there and read questions out loud to myself, less distractibility. I don't have to be worried about tuning out everybody else.

I also asked Kathy if she thought there would have been any differences had she been diagnosed and treated before her bachelor's degree. She answered affirmatively.

There was one exception to the assertion that these subjects felt that they could be/were more successful if/when they went back to college after diagnosis. Again, Sally is the exception. However, Sally's situation might have been skewed at the time of the interviews. She was undergoing some personally traumatic times, which probably influenced to some degree her self-concept and her response to my questions. She was feeling that her livelihood was threatened and that she had no choice but to go back to college to prepare herself for a career. She told me that she had to go back to college now--that she had no choice.

I tried to encourage her by saying,

> Well, the good news is that the people I've been talking to that started out poorly in college and then got focused and decided what they wanted for a career were able to really focus on it and do well in school, so I'm hoping that will be true for you, too.

She didn't sound very hopeful when she said, "I have no idea." Then she went on talking about how desperate she feels, and how inadequate she thinks she is for college. She said, ". . . I don't even know if there is anything up here in this brain."

Again, I tried to encourage her and referred her to the Women's Resource Center at the college she was talking about attending. But I don't think that my words made an impact. Her voice was full of desperation when she said,

> I don't know if I can do it. I don't know if I can do it. Not drive--I have the drive; I don't know if I have the brains. I mean, what I find when I go back to do this type of thing is that--for one thing my test-taking ability. I don't know--I really don't--because of all those years I missed. I mean, I couldn't write a term paper--I don't have the faintest idea--I don't know. I don't know, but I don't have a choice!

It didn't seem at this point that Sally was rationally reflecting on the fact that she had been diagnosed for ADD since she was in school last, or that some of the problems she experienced previously might be alleviated by the treatment she was receiving. Emotionally, she was distraught, so I am not sure how valid these data are as a discrepant case in relation to this assertion.

Six of the subjects in this study definitely felt that the treatment they received for ADD would/did enhance their college success. The ones who were not in college at the time of their diagnosis felt that they would do better if they went back now. The ones who received treatment while they were pursuing college programs felt benefits from the treatment. The seventh subject did not express any hope that her treatment for ADD might help her if she went back to school now. She, however, was suffering emotional trauma, and it is not certain whether her response was an entirely rational one.

Summary of Description and Interpretation

These seven ADD adults who had attended college shared with me what they encountered in college--their emotional reactions and perceptions of their learning. One emotional reaction that many of them shared was that their college experiences often contributed to a diminishing of their self-esteem.

Another that most of them shared was that they felt the personality (attitude) of their instructors had an influence on their success. One perception of their learning that most of them mentioned was that they have serious inadequacies in English or math or both. They all resoundingly related a lack of focus in the classroom and/or while studying. Most of them say they are visual learners: they prefer hands-on instruction over lecture-type.

These same adults shared with me the ways in which they dealt with their experiences--day-to-day tactics and larger strategies and outcomes. When relating the day-to-day tactics, most of them told me that they usually did not seek out support services, or they thought they didn't exist. Many of them also told me that during the time period before they were diagnosed and treated for ADD, they preferred a study environment that was not completely quiet and isolated. When they told me about the larger strategies and outcomes in relation to dealing with their experiences, I found that none of them completed their initial college program within a traditional time frame. Most of them also told me that they had found success and satisfaction in their careers--most of them not in fields requiring the college program they first pursued. Most of them also felt that they could be/were more successful if/when they went back to college after diagnosis. All of their experiences were unique, but there were certainly some common threads in many of them.

CHAPTER V

SUMMARY AND CONCLUSIONS

Seven individuals who had all been diagnosed and treated for Attention Deficit Disorder (ADD) by the same psychiatrist were interviewed for this study. All of the individuals had attended or were attending college. The experiences they related to me described their emotional reactions and their perceptions of their learning in college. They also related to me how they dealt with their experiences--the day-to-day tactics and the larger reactions and outcomes.

When we look at these individual case studies, we might at first think that the subjects are not much different from many other college students we have encountered. In many ways, this is true. People with ADD do not have a major psychiatric diagnosis, nor do they all even have learning disabilities. What these seven do have in common is that they all have been diagnosed with Attention Deficit Disorder, Residual Type. This means that they once met the criteria for Attention Deficit Hyperactivity Disorder, and that signs of hyperactivity are no longer present but other signs have persisted, as is evidenced by both attentional deficits and impulsivity.

Taken individually, the characteristics that are listed as symptoms of inattention and impulsivity are not uncommon in many, if not most, people. It is the combination and the intensity of these characteristics that lead to a clinical diagnosis of ADD. **The individuals in this study are clinically more inattentive and impulsive than is developmentally appropriate. This is what makes them different from the average college student.**

Summary of Individual Case Experiences

These seven individuals represent a wide range of experiences and educational levels. At one end of the educational spectrum was Calvin Jones, who was expelled from high school and has completed about a year of college. At the other end of the spectrum is Kathy Johnson, who scored high enough in academic achievement on the American College Test (ACT) to earn a competitive scholarship in her state. She was in the third year of medical school when I completed these interviews.

To summarize the findings, I will first capsulize the individual case studies.

Calvin Jones

When I first interviewed him, Calvin Jones was a 38-year-old white male who had been diagnosed as having ADD and had begun treatment approximately 3 months earlier. About 20 years earlier he had been expelled from high school, and he had not gone immediately to college to seek a degree. A year or two later he attended a machine shop class that his father was teaching at

Capitol Community College. Later yet, he completed Emergency Medical Technician training at the community college, but, because of personal problems, he dropped out of paramedic training and never went back. Calvin discussed his experiences in college and how he has dealt with them.

Concerning his emotional reactions to college, the machine shop class was a positive experience for him: his family owned a machining business, and he tells about "teaching the class." Aside from this, we didn't talk specifically about his self-esteem during college. Calvin did relate to me that he had low self-esteem as a child. It could be that his self-esteem didn't fluctuate much one way or the other during those periods, or it could be that my queries did not elicit responses that provided this information. He told me about the pressure that he felt in classrooms, which could either be exacerbated or alleviated by the personality of the instructor. He said he felt pressured because he might get called on and not know the answer and be embarrassed because he didn't know the instructor or the students.

In discussing what he encountered in college, Calvin also related his perceptions of his learning. He declared that he never could do math. He also told me that his mind wandered in class, that he just got bored. He is definitely a visual learner, with a preference for hands-on experiences.

We discussed the day-to-day tactics that Calvin did or did not use while he was in college. He did not use special support services and did not elaborate about why. Calvin preferred a study environment that was completely quiet and

isolated. His case might be an exception to the assertion that these individuals either did not complete their initial program of study or did not complete it within traditional time frames. Calvin didn't really have an "initial program of study," so I can't say that he didn't complete one. On the other hand, he did not complete the paramedic training program that he started.

Calvin Jones has found success and satisfaction in a field that is different from the course of study he began with in college. At the time of my interview with him, Calvin had been working in the electronics field for about 12 years and had been employed by Midwestern State University for 9 years, working with high-technology electronics-based equipment. His title is Two-Way Radio Technician, and he is the senior technician. He is self-taught, and he really enjoys his work. He was diagnosed and began treatment for ADD just 4 months before my first interview with him. He said that, if he had been on Ritalin or any medication when he was coming up through school, he knows he would not have had any problems in school. He said he probably would have been able to go to college and get a degree.

Keith James

When I interviewed him, Keith James was a 35-year-old white male who had been diagnosed and had begun treatment about 6 to 9 months earlier. When Keith graduated from high school, he didn't have a clearly established goal, but he did attend Southfield State University for a year--presumably to pursue a bachelor's degree. He went for 1 year and then left to accept

employment. He never returned. Although he attended only 1 year, his reason for dropping out was not low academic standing or struggle. As a matter of fact, he earned better grades at the university than he had in high school. Keith discussed with me his reactions to college and how he has dealt with his experiences.

Keith is self-confident, and sees himself as having more friends than the average person. He is relatively well-read in the field of ADD and realizes that there is much in the literature about the low self-esteem of people with ADD. He sees himself as an exception to this. Keith was satisfied with his academic success in college, and he attributes his success to luck in getting certain professors.

He is the one subject who never mentioned any feelings of academic inadequacy. Keith James didn't complain of a lack of focus while studying as much as some of the other subjects did, but he did mention it. He mentioned doodling and sleeping in class. When I was talking with him about his preferences in instruction, he talked about boring lecturers. Keith James also stated a preference for visual and hands-on learning.

When we discussed day-to-day tactics that help students deal with academic life, Keith said he didn't think that the university he attended offered any support services. Keith had been diagnosed and treated for ADD less than a year when we talked. Although he had been out of college for numerous years at the time, he has done a considerable amount of preparing presentations for

public speaking. He described needing a different kind of study environment when he is off medication than when he is on it. When he is on Ritalin, he likes a quiet environment. Without Ritalin, he can't take the quiet.

At the time of our interview, Keith was the owner/operator of multiple businesses. Financially he is very successful. With pride he told me that his income is twice that of his three siblings, all of whom have graduate-level degrees from major universities. He is feeling a little bored with his current businesses, but by his own assessment, he feels that he is successful and there is nothing that he can't do. Keith feels that "doors opened" for him after he got treatment, and that he could be successful if he went back to college.

Sally Smith

Sally Smith was a 34-year-old white female at the time of my interview with her. She had been diagnosed and treated for ADD for about 8 or 9 months. Right after she graduated from high school she had gone to Nesbitt College (a small private school). Her goal was to get a degree in education and become a teacher. After struggling academically for 2 years, she dropped out. Sally never completed her initial program of study to become a teacher. A few years after dropping out of Nesbitt, she did attend a vocational school and obtained a certificate as a medical assistant. (She didn't consider the vocational school "real college.") Sally discussed her experiences in college and since that time.

The emotional reactions that Sally experienced in college have had a long-lasting effect on her. Even now, 14 years after dropping out of Nesbitt, Sally

still doesn't believe that she is capable of being successful in college. The impact on her self-esteem was crushing. Sally did not discuss her opinion about college instructors, but she told me that from year to year throughout her entire life in school, her success depended on whether or not the teachers liked her and she liked them.

Sally is convinced that she is terrible at both English and math. She said that she is dyslexic in math, that she inverts numbers, and that she flunked elementary math twice. But she is absolutely convinced that her lack of English skills was her nemesis in college. In regard to a lack of focus while in the classroom or while studying, Sally talked about her head always racing. She said that she could stay focused only about 10 minutes out of an hour. She did say that she had more success staying focused at the vocational school because she was more interested in the subject matter. I did not obtain clear data from Sally about whether she is a visual learner. It could be that she prefers the auditory, or it could be that she just wasn't clear in her explanation.

When Sally was at Nesbitt College, she felt like she tried all of the support services possible and still didn't succeed. When she went to vocational school to get her medical assistant certification, she never used any special accommodations. She didn't say whether or not she thought any were available. I didn't obtain any data from Sally Smith that relate directly to the type of study environment she preferred in college before diagnosis, but she did tell me a story about trying to isolate herself in the first grade so that she could concentrate.

Sally is a homemaker. I have no data to support whether or not she is successful as a homemaker, but she is not satisfied with it. Sally did not feel that she could be more successful if she went back to college after diagnosis and treatment. However, Sally's situation might have been a little skewed at the time of the interview. She was undergoing some personally traumatic times, which probably influenced to some degree her self-concept and her response to my questions.

Tim Franklin

When I interviewed him, Tim Franklin was a 39-year-old white male who had been diagnosed about 2 years earlier. Although Tim had shown enough academic promise to gain acceptance into a major state university with competitive admissions standards, he didn't attend there. He started other colleges twice before he finally became motivated to get an associate's degree in law enforcement, and then a bachelor's degree many years later. Tim's first attempt was at Capitol Community College. He did so poorly there that they did not allow him to return for the third term. Then he went to a university out of state, where he flunked out. His beginning major was photography. He returned to the community college to earn an associate's degree in law enforcement. Several years later, he earned a bachelor's degree in business through a nontraditional degree program for adults. Tim shared his experiences with me during two separate interviews.

He told me about some crushing blows to his self-esteem that he suffered while he was in college, and about wondering if he was intelligent enough. Tim also indicated that instructors could influence success. He said it was easier to stay focused in law enforcement classes because the instructors were ex-police officers and they told stories and moved around the room when they lectured.

Tim said that his reading and writing skills are good, but that he hates to write and his spelling is terrible. He complained about lack of focus in the classroom, and he told about falling asleep a lot and daydreaming. Tim said he preferred the use of visuals in instruction and liked hands-on learning.

Tim said that he wasn't interested in support services while in college. To him, that meant socializing or dealing one-on-one with people--things he didn't like to do. He didn't see any difference in his preference for an isolated study environment either before treatment for ADD or after. He said he always has had to be totally isolated to study. Tim did not complete the original goal he set out to accomplish right after high school, but after an extended time he did complete a bachelor's degree in a different area.

Tim Franklin is currently working in two careers: hospital security and desktop publishing. He has worked in law-enforcement-related careers (law enforcement or security) for 15 years. He has been relatively successful in the law enforcement field, but at the time of our interview he was really enjoying his other career--desktop publishing. Tim was uncertain about whether or not he had any college classes after his diagnosis and treatment, but if he did they were

in the nontraditional degree program, which he saw as quite different from "regular classes." He felt that if he went back to college now that he has had treatment for ADD, he would do a lot better. He said that he not only has better direction for what he wants to do, but he also has a better concentration level and is calmer.

Mike Mayes

Mike Mayes, at the time of my interview with him, was a 40-year-old white male who had been diagnosed with ADD about 10 years before. He had sailed through high school fairly easily. He was an athlete, and he did fine academically. He aspired to be an attorney and attended St. John's College, a small Catholic college, and got his bachelor's degree. Then he attended Calvin Law School for a year, ran into personal and academic problems, and never returned.

As Mike told me about his experiences, he had a lot to say about the way his self-esteem suffered while he was in college--at St. John's, but particularly in law school. When we discussed his emotional reactions in college, Mike didn't relate much to me about his college instructors. He did, however, relate a story of a high school math teacher who intimidated him so badly that he never took math again.

Aside from the fact that his high school math teacher intimidated him, Mike felt sure that his math skills were weak. In describing his experiences in college classrooms, Mike mentioned not paying attention in class, but covering up for it

well. He said that lecture classes would put him to sleep, but that he covered up for it. He also talked about how distractible he was both in class and while studying. He agonized over his studying, spending tremendous amounts of time reading and rereading things so that he could understand them. He did not express a preference for hands-on instruction, but he did express a preference for the visual.

Mike made it all the way through undergraduate school and into law school without using any support services. He indicated that he knew there were some available, but that he was into denial about needing any extra help. Mike stated a preference for background noise when he was studying, both before and after treatment with medication. However, he said he preferred louder music when he was younger and undiagnosed.

Mike never completed his initial goal of becoming an attorney. He has worked for Major Motor Company for 15 years and is currently a benefits representative for the United Auto Workers union. He sees himself as successful both in his career and in his family life and states that he loves his job. Mike has taken some personal-interest and job-related classes at the community college since he was diagnosed and treated for ADD, and he says that treatment has made a world of difference. He said he would bet everything he owns that he would have done better if he had been diagnosed and treated before he ever attended college.

Dale Howard

When I interviewed Dale Howard, he was a 26-year-old white male who had been diagnosed about 6 years earlier. Dale began going to Capitol Community College in pursuit of a bachelor's degree as soon as he graduated from high school. His initial primary reason for attending college was to satisfy his parents. He was struggling through community college when he was diagnosed and began treatment for ADD. His major was music, but he later changed his major, and he consistently pursued his bachelor's degree. Eight years after he began at the community college, Dale Howard earned a bachelor's degree in telecommunications from Midwestern State University.

As he talked with me about his emotional reactions to college, Dale said that he always had low self-esteem, but that he felt more confident after treatment. Dale also stated that he feels an instructor "can make or break" a class. He was very adamant about the negative impact that the unpleasant personalities of instructors had on his college career.

Dale said that math was difficult for him. He attributed his lack of math skill to his dislike of the subject and his inability to focus long enough to practice the skills. Much of what Dale said about his lack of focus in the classroom related to his K-12 school experiences rather than his college experiences. This could be because he was diagnosed and treated fairly early in his college career, or it could be that my line of questioning didn't draw out the college memories.

Dale didn't go into a lot of detail about his learning style preferences, but he did say that he had poor listening skills, so I concluded that he prefers the visual.

Dale had received special supportive services when he was in elementary school and high school, but he did not use them in college. He thought that they probably were available, but didn't think that he needed extra help. When Dale talked about his preferred study environment, I think he was talking about his preference after medication. He likes it quiet, but he does like some extraneous stimuli; he likes people around.

At the time of our interviews, Dale had been employed in the telecommunications field for just a few months. He was employed by a state agency and felt satisfaction in his work. Dale felt that his treatment for ADD made him more successful in college than he had been before.

Kathy Johnson

At the time I interviewed her, Kathy Johnson was a 41-year-old white female medical student. She had been diagnosed and had begun treatment for ADD while she was in her first year of medical school, about 2 years before I interviewed her. She had begun her college education in small private colleges--working toward a bachelor's degree. She dropped out after a little more than a semester. Then, 14 years later, after having five children, she began taking classes at Deerfield Community College. She spent 2-1/2 years at Deerfield getting her associate's degree; then she went to Southfield State University and took 3 years to complete her bachelor's degree with a double major. At the time

of our interviews, she was in her third year of medical school at Midwestern State University.

Kathy Johnson said that one thing that led to her dropping out of college the first time she went was feeling ostracized by the other students. Her self-esteem was not good. Kathy was somewhat contradictory in her responses about whether or not the personalities or attitudes of instructors had anything to do with her performance. She seemed to say that she sees no relationship between her success and the personalities of her teachers, but she seemed to be focusing only on her medical school experiences when she was responding. And she did say that she enjoys the classes that some instructors teach more than others.

Kathy underwent a complete series of testing and was well apprised of her learning disabilities. She was weak in verbal skills. Although she was in her third year of medical school, she said that her current vocabulary level was about seventh grade. Kathy had a lot to say about her lack of focus in the classroom. She said she didn't notice it so much as an undergraduate, but when she got to medical school, it became very apparent. She also complained of sleeping through parts of lectures, and she discussed difficulties with staying on task. Kathy knows she is a visual learner--the psychological testing she has done to diagnose her learning disabilities disclosed an auditory-processing deficit.

When Kathy discussed with me the day-to-day tactics that she had employed to deal with her experiences, it became apparent that she has used

just about every support service imaginable. She also described her best study environment. It is to isolate herself, but to have some background noise. The noise that she prefers is not television or music, but what she refers to as "people noise." The "people noise," however, can't be the type she has to think about. She liked to study in a restaurant.

Kathy took her course of study slowly. She did not finish her original post-high-school goal. She had opted to extend the first 2 years of medical school into 3 years. She used taking a lighter load as a way of dealing with some of the problems college presented. It would be premature to say that she is successful and satisfied with her occupation, but she has been successful in the academic preparation for it. She saw differences in her performance in school after she was diagnosed and treated.

Summary of Data

As their individual cases were examined, I began to see some common qualities emerge in what these ADD adults said about their college experiences. Academic underachievement is characteristic of most children with this disorder, so it is not surprising that we would find difficulties in adults who have ADD and attended college.

What They Encounter

The signs of both attentional deficits and impulsivity are evident in some of the experiences that these subjects have encountered and have in common.

These signs are apparent in both the emotional reactions and the perceptions of learning that they discussed.

Emotional reactions.

Low self-esteem: Low self-esteem is listed as an associated feature of attention deficit disorders in both the DSM-III and the DSM-III-R, so it is not surprising that these subjects describe themselves as having low self-esteem. When we add the fact that it is characteristic of ADD individuals to underachieve academically, we can understand why college might lead to a further diminishing of their self-esteem.

Experiences in college did often contribute to diminishing the self-esteem of the interviewed adults. All except one of the subjects related having low self-esteem sometime during their lives. For most of them this was especially true during their times in college before they were diagnosed and treated.

Personality (attitude) of instructors: Many students, regardless of whether they have ADD or not, would probably say that the personalities (attitudes) of their instructors make a difference in their performance. Since school is generally a fairly negative experience for these individuals (both the DSM-III and DSM-III-R list school failure as the major complication of attentional disorders), it is not surprising that they might support the assertion that the teacher's personality (attitude) makes a difference.

Most of the ADD adults whom I interviewed felt that the personalities (attitudes) of their instructors had an influence on their success in the classroom.

Two of them directly stated that their success depended on the teacher. Two others implied that instructors could influence success when they told of experiences about the types of instructors to whom they related positively. Two subjects did not discuss their opinions about college instructors, but supplied strong data in relation to elementary and secondary teachers. One subject was somewhat contradictory in her responses about whether or not personalities (attitudes) of instructors make a difference.

Perceptions of learning.

Inadequacies in English or math: Proficiencies in both English and math are definitely the basis for much other academic performance. If people have difficulty in school, it stands to reason that they would feel they have a deficiency in one of these basics. It is also true that there is a high correlation between ADD and learning disabilities (Barkley, 1990). Learning disabilities often manifest themselves most prominently in language or computational skills or both. (In this study only two of the individuals reported having been tested for learning disabilities. Kathy Johnson and Sally Smith reported a positive diagnosis. Dale Howard had been tested, but he was unsure of the results. The others had never been tested.)

Most of the subjects in this study reported that they believe they have serious inadequacies in English or math or both. For the most part, these observations are their own and are not substantiated by standardized test results. These observations of theirs were unsolicited. I had no question in the

interview guide about their performance in any specific course of study. Two of the subjects mentioned inadequacies in English, three of them mentioned weaknesses in math, and one mentioned weaknesses in both areas.

Lack of focus: The two major symptoms that ADD adults must exhibit are inattention and impulsivity. The criteria in the DSM-III that were used to diagnose these individuals include five characteristics of inattention (three of which must be present to confirm the symptom). These are: (a) often fails to finish things he or she starts; (b) often doesn't seem to listen; (c) easily distracted; (d) has difficulty concentrating on schoolwork or other tasks requiring sustained attention; and (e) has difficulty sticking to a play activity. To confirm the symptom of impulsivity, at least three of the following must apply: (a) often acts without thinking; (b) shifts excessively from one activity to another; (c) has difficulty organizing work (this not being due to cognitive impairment); (d) needs a lot of supervision; (e) frequently calls out in class; and (f) has difficulty awaiting turn in games or group situations. With these as the diagnostic symptoms, if the subjects of this study did not complain of a lack of focus in the classroom or while studying, we would question either their diagnosis or their truthfulness in the interview.

All of the subjects resoundingly related a lack of focus in the classroom, and some while studying as well. All seven of them said that they fell asleep or daydreamed in class. Four of them said that they had difficulty focusing while

they were studying. Focus was definitely a problem for the ADD adults while they were in school.

Visual learners: "Often doesn't seem to listen" is one of the listed characteristics for the criterion of "inattention" in the diagnostic manual. "Easily distracted" is another characteristic of "inattention." If they don't seem to listen, if indeed they do not listen much of the time, and if they are easily distracted, it is not surprising that many of them would report that they are visual learners.

Most of the subjects of this study say they are visual learners and that they prefer hands-on instruction over lecture-type. As was discussed above, many of them report falling asleep during lectures. Six of the subjects definitely stated a preference for visual, or even hands-on, learning. Three of them specifically mentioned preferring hands-on-type learning activities. A seventh subject possibly preferred the auditory, but was unclear about her preference.

How They Deal With Experiences

It is interesting that there also are some common features in the way that the subjects of this study have dealt with their experiences. There are some common features both in their day-to-day tactics and in their larger reactions and outcomes.

Day-to-day tactics.

Seeking support services: Many, if not all, colleges and universities currently offer support services for students with special needs. This might or might not have been true when and where these individuals obtained their educations. However, it is true that most of them did not seek out special support services. Four of them did not seek out the services or didn't want to use them. One individual said that support services didn't exist at the university he attended. (My guess is that maybe services existed, but he was unaware of them.) One individual said that she tried some support services and they didn't work. She later went to a vocational school and never used support services there. There is one definite exception to this assertion: one student has sought out and used every possible mechanism she could to enhance her success. (Interestingly, this is the student who has the highest level of academic achievement, the medical student.)

There is little data to explain why most of these individuals did not seek support as they were going through college; we can only speculate. One individual said that he didn't like to have to "socialize" with tutors one-on-one. "The symptoms of inattention and impulsivity result in some impairment in social or occupational functioning" (American Psychiatric Association, 1987). Possibly, it is this lack of social functioning that would inhibit these individuals from seeking help or knowing that it was available. Perhaps this is also an issue related to their self-esteem: they may have lacked the confidence to think that they were

worthy of help, or that their problems could be addressed. On the other hand, in some cases they didn't perceive themselves as needing help. It is also very possible that the colleges that these individuals attended did not offer, or did not adequately publicize, support services for students.

Preferred study environment: Because these ADD adults have related such explicit stories about being easily distracted, we might jump to the conclusion that they prefer a study environment that is completely isolated and free of distractions. I found that this was not true for many of them. At least during the time period before they were diagnosed and treated, many of them preferred a study environment that was not completely quiet and isolated. Four of them expressed desire for some extraneous stimuli while they were studying; two said they liked to be completely isolated, and incomplete data were obtained from the seventh subject.

Again, there are insufficient data to explain why the majority of these subjects prefer extraneous stimuli while they are studying. One speculation might be based on a hypothesis that researchers are beginning to converge on: that the fundamental problem in attentional disorders lies in the failure of those with ADD to regulate behavior by its consequences (Barkley, 1990). Another speculation might be based on a hypothesis of other researchers: that those with attentional disorders have higher than normal thresholds for arousal by stimulation; as environmental stimulation decreases, hyperactivity and inattention increase as means of compensating for this reduction. They need the stimulation

to maintain an optimal level of central nervous system arousal (Zental, 1985). If this hypothesis has foundation, we could speculate that studying in an isolated environment decreases stimulation, and consequently inattention increases. Therefore, studying in an environment that has some stimulation, but is not distracting, might help to maintain the optimal level of central nervous system arousal and facilitate concentration for these students.

Larger reactions and outcomes.

Change original plans: One of the larger reactions by the subjects of this study to deal with their experiences in college was that they changed their original plans. All of them changed their plan in one way or another. They either extended their completion time, some of them dropping out temporarily and returning later, or they dropped out altogether. One individual consistently persevered and accomplished an original goal. However, that goal, a bachelor's degree, took him 8 years to complete. Two subjects dropped out of their bachelor's degree programs, but returned several years later to complete their degrees. Four dropped out of degree programs they were pursuing and have not returned.

It is not surprising that one of the reactions to their difficulties was to change their plans. Since "often fails to finish things he or she starts" and "easily distracted" are two of the characteristics of inattention that are symptomatic of ADD, it is obvious that many would not complete an original program of study or would take longer to complete one. The fact that "shifts excessively from one

activity to another" is a characteristic of impulsivity also provides a foundation for speculation about why the subjects in this study dropped out or extended the time period in which they earned their degree.

Success and satisfaction outside initial college program: One outcome of the way the subjects in this study have dealt with their experiences is that most of them have found success or satisfaction in their careers. However, most of them were not in fields that require the college program they first pursued. All five of the males in the study have found a certain degree of success in their careers. All of them have found satisfaction at one time or another, but two of them were beginning to get somewhat frustrated or bored at the time I interviewed them. None of them were in career fields that use the college course of study that they entered shortly after the completion of their high school experiences. One of the women was still in college at the time of the interviews, so her career success could only be measured in terms of academic success. The seventh subject, the other woman, was a discrepant case in relation to the assertion that they have found success or satisfaction in their careers.

These seven individuals are not necessarily representative of the entire population of adults who have ADD. They might not even be representative of those who are fortunate enough to have been diagnosed and treated for ADD. There are simply not enough data to lead to speculation about why most of these individuals feel satisfied and successful in their careers. Perhaps they have

other qualities in common that were not researched (e.g., appropriate parental intervention and motivation, quality treatment by the psychiatrist who referred them, and so on). We can't guess why it is so, but it is gratifying to know that despite the obstacles encountered by people with ADD, some career satisfaction and success is attainable for those with this diagnosis.

College after diagnosis: Most of the subjects in this study feel that they could be/were more successful if/when they went back to college after diagnosis. Three of them had not taken any college classes after they were diagnosed with ADD. Of these three, two felt they would be more successful if they went back; the third one is an exception to the assertion. Two other subjects had completed most of their college classes before diagnosis and treatment, but have taken some classes since, and felt that they have done better. Another two of the subjects were actively pursuing their college degrees at the time of their diagnosis and treatment. Both of these individuals felt they did better after treatment. Six of them definitely felt that the treatment they received for ADD would/did enhance their college success. The seventh subject did not express any hope that her treatment for ADD might help her if she went back to school now. She, however, was suffering emotional trauma, and it is not certain whether her response was an entirely rational one.

It stands to reason that most of these individuals felt that there is a positive correlation between treatment for ADD and academic performance. The treatments that these individuals have received have included a combination of

behavior modification, psychotherapy, and psychopharmacology. Most clinicians agree that a multi-modal approach to treatment is necessary in the case of ADD (Barkley, 1990).

At the time of the interviews, these subjects were all taking medication--six of them were on a central nervous system stimulant, methylphenidate (Ritalin), and one was on an anti-depressant, imipramine (Tofranil). One of the effects of central nervous system stimulants is that they help sustain attention to tasks--decrease the inattentiveness and impulsivity. The anti-depressant reduces inattentiveness, but it does not affect impulsivity. These subjects have responded positively to the medication that they are taking. It is reasonable to assume that they would perform better academically if they were more attentive and less impulsive. It is also reasonable to assume that behavior modification and psychotherapy would enhance their treatment and its effect on school performance. It is not surprising that these individuals felt that they could be/were more successful if/when they went back to college after diagnosis and treatment.

These seven adults with ADD are all unique individuals with different backgrounds and experiences. They encountered different experiences in college and dealt with them in a variety of ways. There were, however, some common patterns in the narratives they related--most of which were not surprising, considering the characteristics of ADD.

Conclusions About Subjects and Data

The individuals in this study might not appear to the reader to be much different from the average college student, but they are more unique than they first appear. Taken individually, many of the characteristics that are listed as symptoms of inattention and impulsivity are not uncommon to many, if not most, people. It is the combination and the intensity of these characteristics that leads to a clinical diagnosis of ADD. **The individuals in this study are clinically more inattentive and impulsive than is developmentally appropriate. This is what makes them different from the average college student.**

All seven of the individuals studied have ADD, but I am not attempting to generalize about the whole universe of ADD college students. The purpose of this study is to describe and analyze the college experiences of these seven adults and the ways in which they dealt with them. I have found and summarized some common patterns in their experiences.

The following assertions can be made about what experiences they encountered in college:

1. College experiences often contributed to a diminishing of their self-esteem before they were diagnosed.

2. Most of them feel that the personality (attitude) of their instructors has an influence on their success in the classroom.

3. Most of them feel that they have serious inadequacies in English or math or both.

4. They all resoundingly related a lack of focus in the classroom and/or while studying.

5. Most of them say that they are visual learners and that they prefer hands-on instruction over lecture-type.

The following assertions can be made about how they dealt with their experiences:

1. They usually did not seek out special support services--or they thought they didn't exist.

2. During the time period before they were diagnosed and treated, many of them preferred a study environment that was not completely quiet and isolated.

3. They changed their original plans.

4. Most of them have found success and satisfaction in their careers; however, most of them are not in fields requiring the college program they first pursued.

5. Most of them feel that they could be/were more successful if/when they went back to college after diagnosis.

Because of the in-depth study, we now know more about the college experiences of these individuals. We know more about the subjects than if we had only superficial understanding of any one or all seven of them. While human beings are unique and difficult to generalize about, and while it is not the purpose of ethnographic research to generalize, the nature of this study has been to identify some common experiences among some or all of these subjects.

Recommendations for Further Study

It is apparent that further research would enhance or supplement the findings of this study. Three major categories of additional research are these: types of data, types of subjects, and type of researcher.

Types of Data

Types of questions. The data obtained from the types of questions asked in the interviews in this study covered the subject fairly adequately. However, other significant topics could be covered. For example, one characteristic of impulsivity that was not covered specifically deals with difficulties related to organization. Many ADD individuals have difficulty organizing their work (American Psychiatric Association, 1980), and there were no questions in the interview that asked whether or not this had posed difficulties for them in their college experiences.

Time of data collection. Most of the subjects in this study were not currently attending college. Therefore, the data collected rely largely on their memories of their experiences. A further study could interview subjects who were currently attending colleges or universities.

Documents to substantiate facts. A further study could be enhanced by asking the subjects to provide documents to substantiate facts or to aid their memories. In some cases, the subjects were not sure exactly when they had been diagnosed and whether or not they had attended any college classes after diagnosis. This uncertainty led to their being more speculative than they could have been if they had documents (even access to clinical records) that substantiated their memories.

Types of Subjects

More subjects. The results of this study would be enhanced if more adult ADD patients were interviewed. To preserve the consistency of the research, the additional subjects should be individuals who had been diagnosed by the same psychiatrist who referred the subjects in this study. The greater the size of the data base, the more credibility the study would have.

Subjects diagnosed by other clinicians. To maintain consistency, this study was restricted to subjects who had been diagnosed for ADD by the same psychiatrist. A different study could use subjects who had been diagnosed by other qualified clinicians.

Subjects attending the same or similar type of institution. There might be some variability in the types of experiences students have who attend different institutions or different types of institutions. For example, those attending community colleges might have different experiences than those attending private colleges or major universities. Some institutions might be more accommodating than others. A study that separated the subjects according to the type of institution they attended, or according to the specific institution they attended, might yield different results.

Type of Researcher

Researcher with no bias. I think that my personal experiences in dealing with ADD within my family and my counseling practice increased my empathy with the subjects and my understanding of them, and thus yielded more intimate

data than might have been otherwise possible. However, researchers with no bias about ADD might produce some useful data because of their greater objectivity.

Implications of the Study

This research provides new information about the college experiences of some ADD adults. As the introduction to this study indicated, the information is important to college educators for humanitarian reasons, legal reasons, reasons related to the missions of many colleges and universities, community leadership reasons, and reasons related to societal needs. In essence, the assertions developed in this study (listed on pages 175 and 176) have positive implications for individuals, institutions, and society. However, this new information also poses some problematic questions.

College Students

There are many implications in this study for college students who have ADD or think that they might have it. To enhance their college experiences, this study implies that ADD students need to take responsibility for their own self-knowledge and their own learning. They would be wise to seek visual rather than auditory learning opportunities. Because focus is a problem, they might want to tape lectures so that if they miss something they will have another opportunity to obtain it. They might want to learn or apply alternative strategies for note taking (e.g., mapping). They should try different study environments and identify and

use the one that is most conducive to their own concentration. This study implies that individuals can enhance their educational opportunities through awareness of their ADD and their individual needs.

This research also suggests that college students would be wise to select their classes and instructors with care. They might want to consult with others to find out what teachers have reputations for being accommodating to students with special needs, and for being dynamic and stimulating in the classroom. They might also want to sign up for developmental English and math classes to improve their skill or confidence in those areas. Individuals might plan to spread the times of their classes out so that they do not have to maintain focus for long blocks of time. They also might consider taking a reduced course load. Results of this study suggest that the experiences that college students encounter are related to the teachers they interact with, their perceptions about their English and math skills, and their lack of focus. The implications are that there are things they can do to enhance these experiences.

This research also implies there are various types of support services that ADD individuals might want to seek. They might want to seek counseling services that could help them improve their self-esteem, establish goals, and identify and accentuate their strengths. Individuals would be wise to seek out basic skills assessment if they think that their English and/or math skills are weak. And, if they have not received diagnosis and treatment for ADD, they should consider doing so.

Another important implication for individuals is attitudinal: maintain hope and a positive attitude. The subjects in this study thought that they could be/were more successful if/when they went back to college after diagnosis and treatment. Also, most of them had found success and satisfaction in their careers. These are important factors for college students to know if they are experiencing difficulty in college. They need to know that others have faced similar impediments and have become successful in spite of them.

Educational Institutions

As was stated, the primary implications of this study are for individuals, but the results also have implications for educational institutions. Institutions' legal obligations toward ADD individuals are quite clear. Those individuals are covered under various laws regarding disabilities and civil rights. For example, as was outlined in the introduction to this study, there are federal laws (IDEA, Section 504 of the Rehabilitation Act, ADA) mandating that educational institutions meet the needs of people with ADD.

In addition to the legal implications for institutions, the specific mission statements of many colleges reflect philosophies that indicate the need for understanding ADD. A goal in many mission statements is to make services accessible to a diverse population of students. Growing understanding of ADD argues strongly for including ADD students in that diversity.

This study also has implications related to institutions' educational purpose. It implies that helpful educational attitudes, teaching strategies,

services, and accommodations can be developed on the foundation of ADD awareness. This study has many practical applications for educators--academic administrators, providers of student development services, and classroom faculty.

For many educators, new awareness about ADD adult learners can produce new attitudes that can support the educational purpose of their institutions. They can be supportive of ADD advocacy, so that erroneously adverse preconceptions of ADD adults' abilities do not jeopardize their educational and occupational opportunities. The educators can be alert for ways to contribute to the ADD students' self-esteem. They can also be alert for ways to motivate these students and reinforce their efforts to learn, e.g., by communicating a caring attitude, treating the students with respect, avoiding intimidation, and being approachable. Methods that might motivate ADD students and develop their self-esteem are probably those that have been identified as effective methods for students in general, but possibly ADD students might need them more than the average student.

Various classroom strategies that can be helpful to ADD students also can be employed. Faculty can provide stimuli in the classroom by being dynamic, animated, and expressive, e.g., by telling stories, moving around the room, and interacting with the students. They can vary their instructional methods. Instructors can provide visual and hands-on learning opportunities when they are

needed and reasonably possible. Also, they can reinforce basic skills by such approaches as incorporating reading and writing across the curriculum.

Awareness about ADD college students can also be the basis of many services and accommodations that can enhance their educational experience. Educators can be alert for symptoms of ADD and provide appropriate counseling and referral, possibly leading to treatment, including medication. They can provide and publicize support services such as diagnosis of basic skills, classes in study techniques, and developmental instruction in English and mathematics. Educators also can provide academic advising and career counseling based on awareness of the strengths and limitations of people with ADD. Alternative environments and facilities for study and learning can be provided for ADD students when they are needed and reasonably possible. Also, the students can be given extended time for testing upon request.

Society

The results of this study also have societal implications. Society is affected because colleges are seen as community leaders and because they are contributors to economic development. Because academic institutions are seen as community leaders, advocates look to education to provide advocacy for ADD. ADD advocates expect the same type of institutional awareness that has been provided to ethnic minorities and women.

Awareness of ADD college students also is tied to societal needs in the area of economic development. Much has been written in the past decade about

providing the best possible education to our workforce to enhance productivity, and therefore the national economy. ADD individuals are a significant part of the workforce, and society benefits from their being educated optimally.

This study has many positive implications for individuals, educational institutions, and society. The possibilities for improving the college experiences of ADD students, through heightened awareness and committed effort, appear to be substantial. However, we should not underestimate the difficulties, uncertainties, and dilemmas that are involved.

Dilemmas

For individuals. Dilemmas arise for the individual with ADD. Without substantial financial resources, it is often difficult to obtain diagnosis and treatment for ADD. College students many times do not have much discretionary income. How do they obtain services if they do not have these resources? If they cannot afford the medication and treatment they need, how can they optimize their experiences? To seek out and receive support services, they would have to identify themselves as having ADD, and thus risk being "labeled" and being the objects of discrimination or prejudice. Should they identify themselves or not? How can they get the help they need if they do not identify themselves to educators?

For educational institutions. Questions also arise for educational institutions. There are questions related to classroom instruction, support services, and the definition of student success.

Educators might face various dilemmas related to classroom instruction. Many of the strategies suggested in this study are those employed by the most effective classroom teachers, but should we assign all of the ADD students to the best teachers, thereby depriving other students of the opportunity to interact with those teachers? Would matching ADD students with the best instructors create a "tracking system" which has proven nonproductive in classrooms? Would having many ADD students in the same classrooms create distracting dynamics that would exacerbate their inattentiveness and impulsivity? Would having to deal constantly with a number of these students lead to teacher burnout and thus be counterproductive? Is it better for instructors to know that a student has ADD so they can accommodate him/her, or not to know so they can avoid inadvertently applying a "self-fulfilling prophecy"?

There are questions for educators also about support services. How can we ensure that students receive appropriate support services? How can we facilitate the removal of students' emotional blocks created by their denial of their situation and needs? Do we need to change institutional paradigms that place stigmas on the use of support services, and if so, how can we do that? Should we assume that those who use support services will be more successful?

There are questions about the way that educators define success. It is interesting that most of the ADD adults in this study consider themselves successful, but most of them probably would not be defined as successful by the educational institutions they first attended. Have they found career success

despite the academy and its assumptions? Are there things that could have been done to facilitate their success without diminishing their self-esteem?

For society. There also are societal questions concerning success and the use of resources. Is society defining success through the eyes of educators? Are there effective ways of educating and training adults outside of traditional college settings? How much money do we want to allocate to provide services and accommodations for students with special needs? What is the appropriate balance between developing human resources and spending economic resources?

Formidable questions and problems arise as we contemplate universal and comprehensive application of the data in this study. However, it seems desirable to individuals, institutions, and society to act gradually and cautiously on the information they have, while trying to get more information, resolve the unanswered questions, and solve any problems that may arise. There is nevertheless substantial justification for applying the results of this study in immediate and practical ways, and for supporting the pursuit of further research that addresses the enduring dilemma of providing equitable educational opportunities to those with ADD, as well as to our citizenry more generally.

POSTSCRIPT

I have alluded in the main text several times to my personal experiences with, and thereby interest in, the issues of ADD and education. Here, I would like to share more explicitly what this experience has been and how it led me to do this study.

As I finish this dissertation and look back into my daughters' records to account for my history in relation to Attention Deficit Disorder (ADD), I smile at my naivete of 20 years ago, and I am intrigued by how classic their clinical records are. I am also sad that the mental health and medical professionals did not know then what we know now, but I feel gratitude for what I have learned in the past few years.

I was a high school teacher, working on my master's degree, when my older daughter began school. I believe that objective observers considered her an exceptionally beautiful child physically. Renee had a truly beautiful face, was tall and strong. She had developed quickly (e.g., had walked when she was 9 months old), and through my parental eyes she appeared to be "obviously" destined for something extraordinary.

I took it for granted that she would do well in school. School had always been easy and enjoyable for me. So it was rather surprising when her first-grade teacher said she was not doing quite as well as expected. But that was nothing compared to the shock I felt when a friend of mine--a special education

consultant--told me that she had met Renee's teacher at a conference. What? My child in special education! After I nearly raised the roof off the superintendent's office, organized a "concerned parents" group of other parents whose children had been placed in this classroom without receiving the legally mandated diagnostic testing, and contacted the State Board of Education, Renee received the appropriate testing to diagnose her specific problems.

After the school psychologist had finished with her report, and Renee was diagnosed as having a borderline learning disability, we took her to a neurological M.D. The physician's report stated, "She has been described as being hyperactive in school but 'not really' at home." (Everything is relative--she didn't act much differently than many other members of my family! I now know that ADD is hereditary.) He also reported, "She has been on Ritalin . . . for several mon[th]s & seems to help but mother 'does not believe' in giving med." (This was 1975. I had been a high school teacher for 6 years. I did not want my daughter to develop the attitude at an early age that it was acceptable to use drugs to alter one's consciousness. I had seen too many dysfunctional young people with that attitude using marijuana, LSD, and other street drugs.)

The neurologist agreed with me that Renee could "try without med as hyperactivity appears not to be a major problem at this time." Whew, I was relieved--I wouldn't have to encourage this little psyche into drug abuse! The neurologist's diagnosis: "Mild Brain Dysfunction--a good candidate for a learning disability or perceptual development program." (We know now that "Mild Brain

Dysfunction" was a term that was a precursor to what we now call "Attention Deficit Disorder [ADD]" or "Attention-deficit Hyperactivity Disorder [ADHD]." In Renee's case it was attributed to the possibility that she had damaged her brain when she suffered a skull fracture in an automobile accident at the age of 2.)

At the time of this diagnosis, Renee was in second grade in a rural school district, which was located outside a university town. We discontinued the Ritalin and continued with the assistance of the special education teacher through second, third, and part of fourth grade. During the middle of her fourth-grade year, we moved to a more rural school district, which was even further from any sophisticating influences of the university.

I was a school counselor in this district where Renee would be going to school; I knew what types of children were in that special education classroom--largely mentally impaired and a rather severely emotionally impaired child. The special education teacher was also an elementary counselor. He and I decided that the damage to Renee's self-esteem by having to be in that classroom would probably outweigh any benefits she would receive from the specialized instruction. Renee's use of special education services ended at that point, when she was in the fourth grade. She made it through the rest of grade school, middle school, and high school, avoiding the most demanding classes, and got average grades. She was pretty, personable, and athletic. She did not encounter any major obstacles.

It was not until Renee was about 20 or 21 and attending community college that she began to have difficulties. She had boyfriend problems, moved in and out of our home, did not sustain attention in her classes, and impulsively spent money. At this point she was diagnosed as an adult with ADD and began treatment--Ritalin and counseling.

My other daughter, Michelle, is 6 years younger than Renee. She was a freckled-nose cutie--bright, fun-loving, and energetic. She seemed "normal" to me, but by the time she was in first grade (1980), her teacher suspected that she was "hyperactive." (We now know that "Hyperactivity" is a term that was used to describe what we call "ADD" or "ADHD" today.) We consulted with a pediatrician, who confirmed the diagnosis and started Michelle on Ritalin. Her teacher reported a "miraculous transformation" in Michelle's behavior.

Despite the apparent benefits, I discontinued giving her the Ritalin before long, probably at the end of her first-grade year. (I was probably still worried about developing in my children values that would promote substance abuse when they got older.) Between first and second grades, I sent Michelle to a special reading clinic, and in second grade the school tested her for special education services. The school psychologist's report said that Michelle seemed to have a learning disability in reading and perhaps also in listening comprehension. She stated, "Michelle has many of the other characteristics of a learning disability such as distractibility, excessive activity, fluctuations in performance and difficulty in attending to a task until it is completed." (These are

all classic symptoms of ADD/ADHD; we know that now.) Michelle was placed in the special education resource room for reading assistance. She continued in that mode--no Ritalin, but special assistance an hour or two a day--through second, third, and fourth grades.

Fourth grade was a crisis: she and her teacher were not compatible. He thought she was "unladylike," and was lacking in supervision because she came from a "broken home." His suggestion was to retain her in the fourth grade. I had been told repeatedly by professional educators in the past that retention would not be good for her--that her deficits were because of a learning disability, not a lack of intelligence. The school principal said that the decision was up to me.

It was at this point, when I was trying to decide whether to have her repeat fourth grade or not, that we were referred to Dr. Evers. (Dr. Evers is the psychiatrist who subsequently has treated both of my daughters and whose patients I interviewed for this study.) She diagnosed the ADD, encouraged me to let Michelle go on into fifth grade, and educated me about the necessity for drug therapy. At my protestations concerning my daughter developing attitudes that would lead to substance abuse, she said, "If your daughter had epilepsy, would you deny her medication?" Of course I wouldn't! She reasoned with me that ADD is a neurological disorder and similarly responds to medication. That was 11 years ago, and it put an end to my misgivings about Ritalin. Michelle is almost 21 now, and she is still taking the drug.

The ways in which I responded to ADD in my two daughters were quite different for a variety of reasons. First of all, Renee was older, and mental health and medical practitioners did not know as much when she was young. Furthermore, during Renee's early years we lived in a much more rural setting and were not fortunate enough to have access to knowledgeable professionals like we did with Michelle.

Renee's and Michelle's experiences in college have also been quite different. Renee registered for classes and dropped out without completing them several times, and then got diagnosed as an adult with ADD when she was 20 or 21. Michelle's experience has been quite different. She had had 8 years of treatment for ADD before she began college. She has consistently been a full-time college student for the last 3 years, and hopes to have her bachelor's degree in 2 more years. I have no data to prove that there is a correlation between when their treatment began and how they have experienced college. Obviously, they are distinct personalities and have been influenced by a variety of environmental factors, but I do believe that the Ritalin and counseling that Michelle has received have had a positive impact on her academic success.

The experiences I shared with my daughters in relation to ADD have created plenty of motivation for me in doing my research. Bogdan and Biklen (1982) said, "Self-discipline can only take you so far in research. Without a touch of passion you may not have enough to sustain the effort to follow the work to the end, to go beyond the ordinary" (p. 57). It was the experiences that my

daughters have had that provided the passion I needed to do this research. It was their experiences that motivated me to look for an answer to the question of this research project: How do adults with ADD experience this disorder in their college life and deal with the problems the disorder presents to them in college? My research findings are the beginning of an answer, one that I hope and assume will be strengthened by others' research projects in the near future.

APPENDICES

APPENDIX A

APPROVAL LETTER FROM THE UNIVERSITY COMMITTEE ON RESEARCH INVOLVING HUMAN SUBJECTS

MICHIGAN STATE
UNIVERSITY

June 7, 1993

TO: Jennifer Bramer
362 Hitching Post Road
DeWitt, MI 48820

RE: **IRB #:** 93-266
TITLE: ADULT ATTENTION-DEFICIT HYPERACTIVITY DISORDER: THE COLLEGE EXPERIENCE
CATEGORY: 1-C
REVISION REQUESTED: N/A
APPROVAL DATE: June 7, 1993

The University Committee on Research Involving Human Subjects' (UCRIHS) review of this project is complete. I am pleased to advise that the rights and welfare of the human subjects appear to be adequately protected and methods to obtain informed consent are appropriate. Therefore, the UCRIHS approved this project including any revision listed above.

UCRIHS approval is valid for one calendar year, beginning with the approval date shown above. Investigators planning to continue a project beyond one year must seek updated certification. Request for renewed approval must be accompanied by all four of the following mandatory assurances.

1. The human subjects protocol is the same as in previous studies.
2. There have been no ill effects suffered by the subjects due to their participation in the study.
3. There have been no complaints by the subjects or their representatives related to their participation in the study.
4. There has not been a change in the research environment nor new information which would indicate greater risk to human subjects than that assumed when the protocol was initially reviewed and approved.

There is a maximum of four such expedited renewals possible. Investigators wishing to continue a project beyond that time need to submit it again for complete review.

UCRIHS must review any changes in procedures involving human subjects, prior to initiation of the change. Investigators must notify UCRIHS promptly of any problems (unexpected side effects, complaints, etc.) involving human subjects during the course of the work.

If we can be of any future help, please do not hesitate to contact us at (517) 355-2180 or FAX (517) 336-1171.

Sincerely,

David E. Wright, Ph.D.
UCRIHS Chair

DEW:pjm

cc: Dr. Douglas Campbell

OFFICE OF
RESEARCH AND GRADUATE STUDIES
University Committee on Research Involving Human Subjects (UCRIHS)
Michigan State University
225 Administration Building
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APPENDIX B

PARTICIPANT CONSENT LETTER AND CONSENT FORM

Dear (interviewee's name):

As a doctoral student at Michigan State University I am studying the college experiences of Attention-deficit Hyperactivity Disorder (ADHD) adults. I am interested in how you have experienced this disorder in your college life and how you deal with the academic problems that you have been presented with. I hope that I will develop a fuller and more refined understanding of ADHD college students that could be shared with other educators.

I have worked closely with _____ (a local psychiatrist) in developing the proposal for my study and will be interviewing patients of hers who have consented to do so. You have signed a consent form with _____ (psychiatrist's name) agreeing for her to provide me with your name as a possible participant in my study. I will be calling you within a week to see if we can set up a time to meet.

If you agree to meet with me, I will interview at a time that is most convenient for you. We will meet in a location of your choosing where you will feel as comfortable as possible. We will meet one or two times for approximately an hour at a time. To get an accurate record of interviews, I will ask you if I can audio tape our discussion.

On the form on page two of this letter, would you please indicate whether or not you are willing to participate in the study? Because your participation should be completely voluntary, you can decide that you will not be a part of this study at all, or you can withdraw from the study at any time, without penalty. If you do participate in the study, you can choose not to answer any particular interview questions. For any audio taping that I might do, you have the right to have me stop the recording at any time. If you do not give permission to be taped, I will not record you.

All of the data that I collect will be treated with strict confidence; your name will not be used in any reports about this project, and any identifying characteristics of you will be disguised. As indicated on the attached form, you can restrict the uses I make of the materials I collect which include you.

I hope you will agree to participate in this study. While no specific benefits can be guaranteed, I believe that the knowledge I gain will be valuable to me and other professionals who are trying to understand the academic experiences of ADHD college students. If you have any questions or concerns about this study, please feel free to call me at (517) 483-1184 (at work) or 669-5234 (at home).

Thank you very much for considering participation in my study.

Sincerely,

Jennifer S. Bramer, Ph.D. Candidate
Licensed Professional Counselor

CONSENT FORM

The goals of this study and the nature of my involvement in it have been explained to me in the attached letter. I understand that the data from the study will be maintained indefinitely, to be used for documenting Jennifer S. Bramer's study of ADHD college student experiences and for sharing with others the information learned from her study.

The data will be used in meeting the requirements for Jennifer Bramer's doctoral degree, in reports about the study, in published articles, in presentations at conferences, and in the planning and implementation of educational programs. I have been assured that in any such uses, my identity will not be revealed. I do understand that in audiotapes in which I am recorded, I might be recognizable even though no names will be used. I may choose to have any segment of an audiotape in which I am identifiable not used in the study or in presentations.

I have also been assured that I can decline to participate in any or all of the activities listed below, including declining to answer any particular questions. I can withdraw from any of these activities at any time, without penalty.

I agree to participate in the activities I have indicated below (please use your initials):

_____ You may talk to me about my experiences as an ADHD college student, covering my understanding of the disorder, my personal history, and the impact of these on my academic life.

In addition: _____ You may audiotape these interactions.

_____ You may use (in presentations, publications, and reports) audiotapes and other data from observations and interviews that include me as long as you do not identify me by name or through other background information about me.

Name_____
(please print)

Signature:_____ Date:_____

APPENDIX C

INTERVIEW GUIDE

INTERVIEW GUIDE

I. Purpose of the study

To describe how adults with ADD experienced this disorder in their college life and how they dealt with the experiences this disorder presented to them in college. In order to provide me with the appropriate background for my questions about your college experiences, I will also ask you questions about your understanding of the disorder and your early recollections of ADD.

II. My interest in this study

I am a Licensed Professional Counselor who has been working in that role for 18 years, primarily in high schools and colleges. I have two adult daughters who are ADD and who have attended college--one who has dropped in and out and one who has attended continuously. They have been treated by Dr. Evers for the last 10 years, so I have had an opportunity to observe both personally and professionally the effects of ADD. I am now completing my doctoral degree in Adult Education. This topic is one that I've become very interested in and look forward to learning more about as we talk.

III. Anonymity and confidentiality

I have obtained from you a release form allowing me to interview you and to audiotape these interactions. However, to ensure your anonymity, I have chosen not to begin recording until after I have obtained your name, age, and other identifying information. The person who will be transcribing these tapes is a secretary at DeWitt schools who is used to dealing with confidential information. If you think you might know her and that she might recognize your voice, I will find another typist for your tape. Dr. Evers will probably read my completed study, and there is high likelihood that she will be able to figure out who said what in the interviews. Do you have any concerns about your anonymity or confidentiality?

IV. Format

I might have explained to you on the phone that I am uncertain about how long my interviewing will take. After about an hour today, I will tell you how far we are on the list of topics, and we can decide if we want to continue for another half hour or so, or schedule another meeting. Because of my schedule, I will have to end our session today no later than _____.

V. Topics for the interview

1. Demographics

   a. Age
   b. Gender
   c. Race
   d. When individual attended college
   e. Where individual attended college
   f. How long individual attended college
   g. DSM III-R characteristics
   h. Current educational or occupational status

2. Understanding of Attention Deficit Disorder

   a. Individual's understanding of ADD
   b. Source of the individual's knowledge

3. Feelings about ADD

   a. Feelings about having it
   b. Feelings about the label
   c. Feelings of being different from others

4. Personal history

   a. ADD diagnosis experience
   b. Diagnosis for learning disabilities
   c. History with receiving medication
   d. Elementary or high school experiences that might be related to ADD
   e. Experiences with and feelings about repeating any grades in school
   f. Description of relationships with friends and family
      (1) Reactions of others to problems
      (2) Telling friends about ADD (when, where, how)
      (3) Experiences of difficulties with people dated/spouses that can be attributed to ADD

5. Selection of college and admission

   a. Factors in selecting a college
   b. Problems encountered in being admitted to college

6. College teaching/learning preferences

    a. Types of classes preferred (lecture, discussion, etc.; self-paced, regular classroom, laboratory, etc.; small, large)
    b. Types of instructional delivery preferred (auditory, visual, etc.)

7. Study techniques and support mechanisms in college

    a. Description of study habits/environments
    b. Coping mechanisms employed
    c. Special services obtained
    d. Accommodations available at the college to assist in studying, test-taking, etc.
    e. Special assistance sought (tutoring, special instruction)

8. General problems in college

    a. Problems encountered while in college
    b. Problems with struggling to concentrate or focus
    c. Awareness of variability in performance from time to time

9. Relationships with instructors

    a. Personality/attitude of instructors
    b. Instructors' reactions
    c. Disclosing diagnosis to instructors (when, where, how)

10. Advice

    a. Advice you have for college instructors
    b. Advice you have for ADD college students

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