

Lindenwood University

Digital Commons@Lindenwood University

Theses

Theses & Dissertations

1999

Career Maturity: A Comparative Study of Adults with Attention-Deficit Disorder and Adults Without Attention-Deficit Disorder

Christine L. Mason

Follow this and additional works at: <https://digitalcommons.lindenwood.edu/theses>



Part of the Business Commons

Thesis
M381c
1999

**CAREER MATURITY: A COMPARITIVE STUDY OF ADULTS
WITH ATTENTION-DEFICIT DISORDER AND ADULTS
WITHOUT ATTENTION-DEFICIT DISORDER**

A comparative study was conducted to explore the differences in career maturity in adults with a diagnosis of Attention-Deficit-Hyperactivity Disorder (ADHD) and those without a diagnosis of ADHD. The study included thirty-two adults with ADHD and thirty-three adults without ADHD. Data were collected using the Career Decision-Making Difficulties Questionnaire (CDMQ) and My Vocational Situation (MVS). The control group also completed a career question screening instrument for ADHD. The data was statistically analyzed using a dependent sample t-test for equality of means.

Cristine L. Mason, B.A.



An Abstract Presented to the Faculty of the
Graduate School of Lindenwood University in
Partial Fulfillment of the Requirements for the
Degree of Master of Art
1999

CAREER MATURITY IN ADULTS WITH ATTENTION-DEFICIT DISORDER AND ADULTS WITH ATTENTION-DEFICIT DISORDER

Abstract

A comparative study was conducted to explore the differences in career maturity in adults with a diagnosis of Attention-Deficit/Hyperactivity Disorder (AD/HD) and adults without a diagnosis of AD/HD. Thirty adults with AD/HD and thirty-three adults without AD/HD completed a personal data questionnaire and My Vocational Situation (MVS). The control group also completed a twelve question screening instrument for AD/HD. The data was statistically analyzed using independent sample t-test for equality of means

An Abstract Presentation of the Faculty of the
Graduate School of Concordia University in
partial fulfillment of the Requirements for the
Degree of Master of Art
1993

CAREER MATURITY: A COMPARITIVE STUDY OF ADULTS
WITH ATTENTION-DEFICIT DISORDER AND ADULTS
WITHOUT ATTENTION-DEFICIT DISORDER

Associate Professor: Marilyn Patterson, Ed.D.
Chairperson and Advisor

Assistant Professor: Bill A. ...

Assistant Professor: Bill A. ...

Cristine L. Mason, B.A.

A Thesis
An Abstract Presented to the Faculty of the
Graduate School of Lindenwood University in
Partial Fulfillment of the Requirements for the
Degree of Master of Art
1999

COMMITTEE IN CHARGE OF CANDIDACY:

Associate Professor Marilyn Patterson, Ed.D.
Chairperson and Advisor

Assistant Professor Anita Sankar

Assistant Professor Toni Isenhour M.A.

Dedication

To my parents, Norma Jean and George Marvin Mason, for their tireless love, encouragement and prayers which made this thesis a reality.

To my two sons, Timothy Joseph and Thomas James Dennis, whose wisdom, love, laughter and tears kept my spirit soaring. Thank you for being my sons, I would not have made it without you.

To my brother Reverend DR Michael M. Mason for starting me on this path, and pushing me forward when I did not have the courage.

TABLE OF CONTENTS

ABSTRACT.....	ii
LIST OF TABLES	viii
CHAPTER I INTRODUCTION	1
Statement of Purpose	4
Research Questions	4
Hypotheses	5
CHAPTER II - REVIEW OF THE LITERATURE	6
Clinical Definition	7
History	10
Neurobiological Research	12
Learning Disabilities.....	18
Career Maturity Theory	21
CHAPTER III - METHOD	27
Subjects...	27
Instruments	27
My Vocational Situation	28
12 Question Pre-Qualifier	26
CHAPTER IV - RESULTS	32
CHAPTER V - DISCUSSION	38
Limitations and Future Considerations	41
References	43
Appendices.....	48
Vita Auctoris.....	52

LIST OF TABLES

Table I Frequency Table of annual income 33

Table 2 Frequency Table - management positions 34

Table 3 Frequency Table-marital status 35

Table 4 Frequency Table- job termination 35

Table 5 t-test for equality of means 37

CHAPTER I

INTRODUCTION

It is estimated that 3% to 5% of school age children and up to one third of their biological family are affected by AD/HD (Jackson, & Farrugia, 1997). Recent studies indicate 30% to 50% of children will continue to be affected throughout their life (Barkley, Fischer, Edelbrock, & Smallish, 1990). Although symptomatology appears to lessen with learned coping strategies, data from clinical and criminal sources show it continues to be disruptive socially, economically, and personally throughout adult life (Guevremont, 1990).

Although the records show (Nadeau, 1995) there are many variations of persistent symptoms, the common characteristics of AD/HD at any age are immaturity, poor interpersonal relationships, impulsivity, difficulty with change or the unstructured, and low frustration or stress tolerance which is manifested in inappropriate worries, temper tantrums, rages or major catastrophic reactions (Nadeau, 1995). The individual is constantly distracted, easily bored and may display hyperactivity

or complete disassociation with their surroundings. This behavior leads to the general opinion the individual is lazy, stupid or crazy (Kelly, & Ramundo 1995).

In some cases as the individual matures, the symptoms of AD/HD may disappear. This has led to the conclusion in many cases that the AD/HD is outgrown. The changes in cognitive and behavioral responses as the individual matures are due largely to the inherent primordial instinct for survival. These learned adaptations tend to remain relatively difficult and costly in terms of energy, and also tend to break down under stress (Ellison, 1994). Unfortunately this situational capacity for unusually good attention masks the person's inability to attend to basic life skills. Bills do not get paid, tax deadlines go by and many important school functions for the children are completely forgotten (Ellison, 1994).

It may be explained as luck or intuition, (Nadeau, 1996) for some adults with AD/HD that are enormously successful in their careers. But for many adults with AD/HD their struggles become glaringly noticeable in the work place. Work often places the

greatest demands on the capacity for planning, memory, organization, teamwork, and precision. For many adults with AD/HD, careers are chosen haphazardly. These patterns are constantly repeated as they encounter difficulties or dissatisfaction on the job. They may leave suddenly, only to take another position with little planning or forethought (Nadeau, 1996).

Some adults with AD/HD have excellent work records until they are moved into a management position, and the demands for organization and time management become overwhelming and unmanageable. But a greater percentage of adults with AD/HD are reportedly chronic underachievers. They may have talent, and intelligence, yet lack the career maturity, defined as consistent motivation, organization, and timely follow through, to achieve career satisfaction. In sum, many adults with AD/HD have far from ideal careers, and resulting in chronic feelings of discouragement and dissatisfaction (Nadeau, 1996).

Statement of Purpose

The purpose of this study is to compare the differences in career maturity of adults with AD/HD and adults without AD/HD. Kathleen Nadeau, Ph.D. (1997) pointed out in her book ADD in the work place, an enormous amount of literature has been written about helping children function better with ADD but very little has been written on how ADD affects the adult. Are there differences in vocational situations between adults with AD/HD and without AD/HD? How are these differences apparent, and why should anyone care?

Dr. Lynn Weiss (1992) summarizes her opinion in Attention Deficit Disorder in Adults stating "loss of potential through underachievement, drug and alcohol abuse, and delinquent behavior caused by untreated ADD, costs taxpayers millions of dollars every year, wrecks the lives of innocent people, breaks up marriages, and carves a path of destruction and pain for the victims and their family members" (Weiss, 1992, p.150). Hence, the following research questions were addressed in this study:

1. How do adults with AD/HD compare in income to adults without AD/HD?

2. Do adults with AD/HD have a higher rate of job changes than adults without AD/HD?

3. Do adults with AD/HD differ significantly in measures of vocational identity compared to adults without AD/HD?

4. Do adults with AD/HD differ significantly in occupational information resources to adults without AD/HD?

5. Do adults with AD/HD differ significantly in numbers of perceived or real career barriers compared to adults without AD/HD?

6. Do adults with AD/HD differ significantly from adults without AD/HD on career satisfaction?

Hypotheses. The null hypotheses is that there are no significant differences in vocational situations between adults with AD/HD and adults without AD/HD. The alternate hypotheses, if accepted, is that there is a significant difference in the vocational situation between adults with AD/HD and adults without AD/HD.

CHAPTER II

Review of the Literature

The definition of Attention Deficit Disorder has undergone a metamorphose since approximately 1937. The terminology used to categorize the syndrome has ranged from Minimal Brain Dysfunction, Minimal Brain Damage, Hyperkinetic Syndrome of Childhood, and currently by Attention-Deficit/Hyperactivity Disorder (AD/HD), combined type AD/HD predominately over-attentive type and AD/HD predominately hyperactive-impulse type.

The disorder is now recognized as a neurobiological disorder with defects in attention, executive functions, self-regulatory mechanisms, and output systems which are responsible for planning and executing motor activity, including written and oral language (Ellison, 1994) and can cause or exacerbate learning, communication, social and/or cognitive problem (August, & Garfunkel, 1993).

The recognition of the continuance of AD/HD in adults has only recently been affirmed after three decades of longitudinal studies of a population of ADD diagnosed children (Nadeau, 1995). Before a diagnosis of AD/HD is confirmed, clinical documentation indicates

severe social and/or emotional problems, consistent feelings of inadequacy, multiple divorces and/or unhappy relationships, frequent legal, societal and family problems in adults with AD/HD (Herrero, Hechtman, & Weiss, 1994). After the diagnosis of AD/HD, clinical records indicate the clients are relieved at first, but the relief is soon followed by anger, confusion, and frustration over AD/HD (Kaplan, & Schacter, 1991). Both the patient and professional, according to literature are left with few resources to help them change and/or adapt (Carroll, Christopher, & Ponterotto, 1998). The attachment of a diagnosis of AD/HD to societal rejection can be easily understood by reviewing the history of the disorder.

Clinical Definition of Adult

Attention-Deficit/Hyperactivity Disorder

The Diagnostic and Statistical Manual of Mental Disorders, 4th ed (DSM-IV) defines AD/HD as follows:

a persistent pattern of inattention and/or hyperactivity-impulsivity that is more frequent and severe than is typically observed in individuals at a

comparable level of development (Criterion A). Some hyperactive-impulsivity or inattentive symptoms that cause impairment must have been present before age 7 years, although many individuals are diagnosed after the symptoms have been present for a number of years (Criterion B). Some impairment from the symptoms must be present in at least two settings (e.g. at home and at school or work) (Criterion C) (American Psychological Association, 1994, p.78)."

Inattention is further defined as failure to give close attention to detail, carelessness, messiness, and inconsiderate behavior. These individuals often appear spacey, and disinterested or hyper-focused, jumping from task to task, frequently failing to complete any one of them. They have difficulty with organization and tend to have difficulty with or avoid situations that require sustained attention, concentration, and/or detail. As a result "work habits are often disorganized and the materials necessary for doing the

task are often scattered, lost, or carelessly handled and damaged" (American Psychological Association, 1994, p.78-79).

Hyperactivity in adults often manifests itself in feelings of restlessness, complaints of boredom, and the inability to engage in concurrent daily life tasks for extended periods of time. Impulsivity manifests itself as, but not exclusive to, excessive talking, risky behavior, (e.g. speeding, running into the street without looking) and poor large motor skills, (e.g. bumping into objects, knocking objects over).

Although most individuals manifest symptoms of both hyperactivity-impulsivity and inattention, some individuals display a predominance in one pattern. The subtypes that address these different patterns are Attention-Deficit/Hyperactivity Disorder, Combined Type; Attention-Deficit/Hyperactivity Disorder, Predominately Inattentive Type; and Attention-Deficit/Hyperactivity Disorder, Predominately Hyperactive Impulsive Type (American Psychological Association).

A Brief History of AD/HD

One of the first studies on hyperactive and impulsive behavior by Still (1902), an English pediatrician, linked the behavior to brain damage caused by tumors, infectious diseases or injuries. Still described these children as having defects of moral control, characterized by temper tantrums, disobedience, restlessness, and impulsivity (Gerber, 1994). However further studies reported children with such characteristic behavior tested within the normal range of intelligence (Ingersoll, & Goldstein, 1993).

The lack of concrete scientific explanation for the impulsive, hyperactive, difficult child led the researchers to a hypothesis of a defect in the brain or mild cerebral injury during birth causing minimal brain damage. The conclusion from the early studies noted, even if there was no evidence of problems during birth, a diagnosis of minimal brain injury would be necessary because the child displayed persisting or gradually diminishing behavior signs (Ellison, 1994). The medical diagnostic terms, Chronic Brain Damage and Child Behavior Disorder were still in use in the 1980's.

A universal question, according to the literature (Mannuzza, Klein, Bessler, Malloy, & LaPadula, 1993) in the last seven years is, why the diagnosis of AD/HD is increasing in such large numbers and, if there is no concrete evidence through a blood test or x-ray, is AD/HD an excuse for laziness, immaturity and bad moral conduct?

Joseph H. Rosenthal, M.D. (1972), explained the emergence of AD/HD as the effect of global demand for higher levels of literacy, unending hours in front of a computer, changing social demands and an exploding population. Rosenthal gives an example of societal change in one little known statistic from the United States Post Office Department, showing that in the middle eighteenth hundreds on the average, each person in the United States read only about four one-page letters per year.

Written accounts of individuals having difficulty with inattention, hyperactivity, and poor impulse control have appeared throughout history. "Shakespeare made reference to a malady of inattention in one of his characters in *King Henry VIII*. A later description specifically of a hyperactive child can be found in the

poem *Fidgety Phil*, published by the German physician Heinrich Hoffman in the mid-1800s" (Barkley, 1997, p.4). The English physician George Still (1902) presented a study of 20 children from his private practice describing associated features of AD/HD that research has continued to support for more than 90 years. Still described the children as having a deficit in volitional inhibition and/or a defect in moral control (Barkley, 1997). His research included the correlates of increased alcoholism, criminal behavior, and depression among the biological relatives (Barkley, 1997).

Paul L. Nichols and Ta-Chuan wrote a collective study of the early research on learning difficulties and hyperactive behavior in their prospectus: *Minimal Brain Dysfunction* (1981). The collective research showed that children displaying ADD behavior and poor academic performance tested within the range of normal intelligence. Therefore, poor academic performance appeared to be related to the inability to express ideas as the result of brain damage.

Neurobiological Research and Executive Function

In the early 1960's computers, electron microscopy and the study of brain chemistry spurred research in physiological conditions as opposed to environmental influences on AD/HD (Nichols, 1981). Imaging studies suggested that the pathogenesis of the disorder in typical cases may result from an abnormality in brain chemistry or physiology, possibly related to some abnormality of neuroanatomic organization (Ellison, 1990). The data collected over the past 20 years has been sufficient in quantity and fact to link disorders such as depression, learning disabilities and AD/HD as the result of neuroanatomical or neurochemical difference (Nadeau, 1995).

In order to understand how the mental and physical process works in the human brain, it is necessary to understand the "Catacholamine Hypothesis" (Nadeau, 1995, p.19). The brain consists of an internet of single cells called neurons. These are tiny electrical chemical transmitters of nerve impulses. Just like the heart's electrical chemical activity must be in perfect balance to continue to pump normally, the chemical balance in the brain determines which road the neuron will take and how fast it will move. A

neurotransmitter is a chemical compound secreted by a neuron, that either stimulates or inhibits the flow of an impulse between neurons. Positron-emission tomography, a noninvasive technology, has allowed researchers and scientist the ability to study the brain in tact and working, locating specific transmitter systems and their functions (Nadeau, 1995). This research has provided information on the particular behavior and cognitive symptoms seen in the AD/HD.

The impaired or deficient mechanisms in learning and motor hyperactivity and the operand-reward mechanisms are the residual effect of the decreased levels of specific neurotransmitters in the limbic structures. The limbic system in the mid-brain receives the sensory information and simultaneously compares it to stored information. This system is the memory processor and the emotional center which receives, compares, processes and sends the response or action. It is responsible for alerting the brain's emergency response center, and simultaneously sends the bundle of interpreted information to the pre-frontal cortices of the frontal lobes. This is where past

experience is suppose to come into play to monitor present behavior, inhibit inappropriate responses, and to organize and plan for the attainment of future goals.

This process, defined as the executive function, is the ability to devise and maintain an appropriate problem-solving set in order to attain a future goal. This is further defined as the ability, to initiate, sustain, inhibit and shift attention which enables the individual the ability to respond and behave appropriately and consistently as well as the capacity to be deliberate, responsible and flexible. An imbalance created by overproduction, underproduction, or absorption difficulty of the neurotransmitter can lead to dysfunction of attention, production, impulse control and/or cognition (Amen, 1997).

A simplified integrated model of the neurochemical and neuroanatomical findings relative to AD/HD could be summarized as a dysregulation of certain neurotransmitters, perhaps originating in the lower brain and limbic structures, which influences the

adequate processing of internal and external stimuli. These neurotransmitters, particularly dopamine and norepinephrine, probably affect the production, use and regulation of other neurotransmitters, as well as maturation or functioning's of some brain structures (Nadeau, 1995, p.25-26). The imbalanced system obstructs the ability of the frontal lobes to inhibit or control input from the lower brain structures. Studies show a distinct correlation of the behavior exhibited in the individual with AD/HD.

Distractibility and the inability to stay on task are the failure to put on the brakes on attention and thought; emotional liability and hypersensitivity are the failure to modulate the limbic input; behavior impulsivity and motor hyperactivity are the failure to delay gratification and inhibit actions. These symptoms, in turn, frequently influence learning, memory and information processing (Nadeau, 1995, p. 26).

Although researchers have mentioned behavior, self control, executive function and its association with AD/HD, Russell A. Barkley Ph.D. (1997) is purportedly the first to develop a theoretical model of AD/HD that makes a critical distinction between two forms of sustained attention. "One is context-dependent and only contingency-shaped (externally controlled). The other is rule-governed, goal-directed, and internally guided and motivated. It is the latter that is impaired by AD/HD" (Barkley, 1997, p. ix).

According to Barkley this explains the apparent inattention of those with AD/HD and why it fluctuates so much as a function of the task and context. Barkley further explains that as long as the environment provides the ongoing reinforcement needed to sustain the appropriate response, those with AD/HD will have little known difficulties in doing so. It is when minimal or no reinforcement is available and behavior must be created, organized, and self-sustained toward a future goal that those with AD/HD will be found to be "inattentive" (Barkley, 1997). For instance, the student who does superior work in high school while living at home, but has a disastrous freshman year in

college, or the employee who excels in the field and gets promoted to a managerial position, only to fall. Many of the skills required in the vocational situation are acquired in the classroom. The lack of the appropriate skills, e.g., reading, communication, completion of assignments and organization are not only detrimental to the individual but increasing research is showing societal impact apart under the increased organizational demands (Ellison, 1994). While children with AD/HD frequently display motor actions, the adult pattern presents as impulsivity. These behavioral tendencies fall into "the neurocognitive realm of the executive functions, which are mediated by the frontal networks of the brain" (Ellison, 1994, p.183). In simpler terms this means the individual's mind races on with no thoughtful pause or reflection on the past.

Learning Disabilities

Nadeau (1995) affirmed the absence of guidelines for counseling the adult with AD/HD about careers and has suggested that until more specific research is undertaken, the research in the area of adults with learning disabilities (LD) offers some direction. LD is a lifelong problem, and individuals with AD/HD share

the same common characteristics and difficulties, including problems with attention, academic skill deficiencies, and poor self-concept.

Many of the difficulties experienced by adults with AD/HD may be understood by examining learning disabilities. Although everyone has difficulty from time to time performing as expected on the job, or are confused about a job task, the frequency of these and other problems can be directly tied to the concept of the individuals' learning patterns. Ron Hume MS, (1999) of Washington Learning Disabilities Association defines learning disabilities (LD) as a neurological condition that impedes a person's ability to store, process, or produce information. LD can affect one's ability to read, write, speak, or compute math and can impair socialization skills. Many of these skills have been documented as being deficient in the adult with AD/HD. Also, individuals with LD are generally of average or above average intelligence, but the disability creates a gap between ability and performance.

The lack of social, and cognitive skills can be further understood through Larry B. Silvers', MD (1992)

definitions of LD. The first is, input, this is a visual perception disability where the difficulty is in recognizing the position and shape of what is seen, for example, letters may be reversed or rotated. Integration disabilities correspond to sequencing, abstraction, and organization. Individuals with this disability find it difficult to make bits of information form into concepts. They may learn a series of facts without being able to answer general questions that require the use of these facts. Memory disabilities usually affect short-term memory only. Individuals with these disabilities need many more repetitions than usual to retain information. Finally, output disabilities include both language and motor skills. The individual with a language disability may speak normally when initiating conversation but respond hesitantly in demand situations, give a confused answer or fail to find the right word.

A computer analogy helps to conceptualize how the disability affects the learning function. The hardware, the brain is intact, when data are entered into memory, storage occurs because the hard disk (the memory circuitry of the brain) is not damaged. The

problem lies in the software program, the process of registering the information into memory, which relies on concentration and organizational skills, both are documented as lacking in the adult with AD/HD (Ellison, 1990). Incoming information is occluded or scattered onto many different files, retrieval then, may be fragmented, missing pieces, or returned in random order. Hence the adult with AD/HD may have all the needed career counseling assessment tools completed and yet continue to be unable to integrate the pieces into coherent concepts (Amen, 1997).

Career Maturity Theory

Determination of career maturity in individuals theoretically has been measured by extrinsic means in accordance with societal standards. Holland, (1985) and Crites, (1978) defined a measure of career maturity as the ability to make career choices that are realistic and consistent over time (Ohler, Levinson, & Hayes, 1996). Career maturity and psychological maturity (Savickas, 1990) are equal, both are based on experience, self-knowledge and the environment (Ohler, et.al..., 1996).

Longitudinal studies show that although adults with AD/HD are economically self-sufficient, they have poorer work records than their peers. They also change jobs and are laid off more frequently, have lower career aspirations and are rated by their employers as inferior to their co-workers (Jackson, & Farugia, 1997). Secondary characteristics can include substance abuse, learning disabilities, low self-concept, incarceration, inconsistent work records and addictive disorders (Jackson, & Farugia, 1997). Many adults with AD/HD suffer with a chronic inner sense of underachievement and intense frustration. Failure is rarely due to incompetence or poor ability but is attributed to unsuitable vocational situations (Murphy, 1995).

Everyone has problems at one time or another making career decisions. It is when the decision making process seems stuck on one level that it creates a lifetime of dissatisfaction, confusion, and underachievement (Nadeau, 1997). Career maturity is a difficult construct to define. The most prominent theorist on career maturity (Super, 1990) defines it:

to succeed in a wide variety of occupations, providing

as a group of physical, psychological, and social characteristics that represent the individual's readiness and ability to deal with the developmental problems and challenges that face him. These personal aspects have both emotional and intellectual components that produce the individual's response to the situation. When the person's maturity is equal to the problem, he probably resolves it with minimal difficulty or concern. When maturity is not sufficient for the task, inadequate responses of procrastination, ineptness, or failure are likely to occur (Isaacson & Brown, 1997, p.32).

A comparison of Super's *Life Span Theory* to the diagnostic features in the AD/HD adult helps to illustrate the issue of career maturity in adults with AD/HD. Super states that people differ in their abilities, personalities, needs, values, interests, traits and self-concepts which contribute to their strengths and weaknesses. People also have the ability to succeed in a wide variety of occupations providing

there are no serious physical or emotional impairments. Occupations require characteristic patterns of abilities and personality traits (Isaacson & Brown, 1997).

AD/HD has an early onset with characteristic behavior of over-activity, irritability, difficulty maintaining attention and poor mastery of social skills. These early deficiencies contribute to large amounts of attention to the individuals weakness' and poorly developed or undeveloped strengths (Barkley, 1994). Self-esteem/self-concept in a large number of individuals with AD/HD is seriously impaired from a lifetime of poor behavior, low academic achievement, and career failures (Nadeau, 1997). Most of the life-skills developed throughout the school years, are the same skills needed for the work world. These are usually deficient in the adult with AD/HD and are apparent when career problems occur .

Super's (1984), theory of self-concept includes the individuals internalized personal view of self, and the situation in which they exist. "This is a significant factor because the situation surrounding the individual always bears on the person's behavior

and self-understanding" (Isaacson and Brown, 1997, p.30). Dr. Amen (1997) states, in "Windows into the ADD Mind" the self-understanding in the AD/HD adult shows patterns of low self-esteem, self-loathing, poor personal relationships, and a sense of underachievement.

Super's life stages are growth, exploration, establishment, maintenance, and decline, further divided into minicycles of fantasy, tentative, and realistic (Isaacson, & Brown, 1997). The exploration stage is defined as a fantasy phase with frequently unrealistic choices relating to the world of play. "Some adults have not advanced beyond the fantasy phase. Often, the understanding of themselves or of the world of work needed to make more effective choices is either missing or is disregarded (Isaacson, & Brown, p. 30)". Clinical documentation has shown the adult with AD/HD frequently remains in the fantasy stage, unable to connect the responsibilities and job tasks, to the imagined (Wender, 1995).

The literature exhaustively points out deficits, character defects and problems faced by the adult with AD/HD and offers little research on career maturity and

work-place issues. " Although occupational underachievement and job dissatisfaction are commonly reported in the studies of adults with AD/HD, that are no controlled studies examining the roles of employment counseling and career development in the treatment of the adult with AD/HD" (Carroll, et.al..., 1998, p. 79).

The occurrence of AD/HD in adults is a complex and controversial issue, and has received increasing attention in the popular media, long with professional journals and texts. "Nadeau (1995) pointed out that 'the manifestations of attention deficits in adults are most evident in the workplace environment' (Carroll, et.al..., 1998, p. 79) Hence, she proposed that the career counselor function as the integrator of a variety of services needed by the AD/HD adult. But as Carrol, Christopher, & Ponterotto, (1998) point out, the need far exceeds the availability of counselors skilled in addressing AD/HD issues.

CHAPTER III

Method

Subjects

A total of sixty-three subjects between the ages of 28 and 61 participated in the study. Participants were contacted through networking referrals, area support groups throughout the St. Louis metropolitan area, and a yearly conference of the Missouri Chapter of Children and Adults with Attention Deficit Disorder (CHADD). The demographic data was collected from a personal data questionnaire formulated by the researcher. The participants in the AD/HD group (n=30) ranged in age from 27-61 with 17 females and 13 males with a mean age of 41.20, and SD of 9.28. The non AD/HD group, (n=33) ranged in age from 28-60 with 22 females and 11 males with a mean age of 41.79, and a SD of 7.99.

Instruments

Personal Data. Each of the packets distributed to participants contained a personal data questionnaire compiled by the researcher. The questions include items such as age, employment, income, marital status,

and level of education. Answers were used to compile the demographics of this study.

My Vocational Situation (MVS). This study used My Vocational Situation (MVS) (Holland, Daiger, Power, 1980) to measure vocational identity, occupational information, and barriers. The MVS is a brief self-administered form completed by most people in ten minutes or less. It may be used in group or individual settings and has been developed to implement the diagnostic approach to career issues. The Vocational Identity scale consists of eighteen true or false items; the total score is the total number of false responses. The Occupational Information and Career Barrier Information sections consist of four yes or no statements; the total number of no responses is the score. In all three sections the high score is in the favorable direction.

Construct validity of the MVS scales lies in the origin of the items, the scale development, and the original study performed to test multiple hypotheses about the relation of vocational identity to age, educational aspirations, external ratings, and other criteria. The MVS was administered to 824 individuals

in high schools, colleges, and businesses. The sampling encompassed a wide range in age, kind of work, and level of training. The sample characteristics included ranges in age from 16 to 69, the average age was 25.4 for males and 23.0 for females. Educational level ranged from high school freshmen through Ph.D.'s in engineering and the social sciences. The sample included factory workers, office workers, scientists, personnel workers, and others.

The reliability of the MVS is measured by the KR 20's. The Vocational Identity scale has a high degree of internal consistency for all samples .86-.89. the Occupational Information and Barriers scales have a relatively low degree of internal consistency .23-.79. The diverse content and low reliability of the Occupational Information and Barrier scales indicate that they resemble check lists more than scales.

The MVS appears to be useful in assessing a person's sense of career identity. However, the Occupational Information and Barrier sections should be regarded as useful check lists for indicating needs and problems that generally remain unrecognized. The overall strengths and weakness of the MVS include:

1. The norming sample was not well defined (average age 23), indicating a bias from the volunteer aspect, limiting its generalizability to an older population.

2. The MVS was devised to reduce inherent difficulties of distinguishing degrees of maladjustment into a single construct of vocational identity, but the development of local norms is needed to improve generalizability.

3. The MVS demonstrates strong reliability and construct validity for the sample population in the area of Vocational Identity (Holland, et.al...., 1980).

12 Question Pre-qualifier. Persons in the control group were given a 12 item questionnaire, based on Russel Barkley's (1994) diagnostic criteria for adults with AD/HD. If the subject checked 5 or 6 symptoms the possibility of the disorder is very likely, those whose answers were consistent with an AD/HD diagnosis were excluded from the study (Barkley, 1994).

Procedure

Two types of subjects were sought from the study, adults with a clinical diagnosis of AD/HD and adults

without a clinical diagnosis of AD/HD. Questionnaires were distributed to adult participants with AD/HD and adult participants without AD/HD during the CHADD conference, AD/HD monthly support meetings and through referred volunteers.

The questionnaire packets were separately labeled with a symbol for participants with a clinical diagnosis of AD/HD and participants without AD/HD. Each contained a cover letter explaining the purpose of the study, a personal data questionnaire, My Vocational Situation, and, for the non-AD/HD group, a 12 question pre-qualifier. The participants were instructed on how to fill out the questionnaires and instructed to return the questionnaires at the end of each conference day, the end of the support meeting, or after completing the questionnaire to the researcher. Participation in this study was voluntary, and the cover letter informed the participants that all responses would be confidential.

CHAPTER IV

Results

The following analysis examines the data on the income (I), number of job changes (NOJ), vocational identity (VI), occupational information (OI), career barriers (CB), and career satisfaction (CS). These dependent variables were examined in relation to the dichotomous nominal independent variable of adults with AD/HD and adults without AD/HD. The results were analyzed using the (SPSS). T-tests were conducted to assess the significance of mean differences between adults with AD/HD and adults without AD/HD on the VI, OI, and CB scores.

Descriptive statistics were computed and examined for the dependent variables of, income number of job changes and career satisfaction. Table 1 illustrates the percentage of income of adults with AD/HD and adults without AD/HD. For the adults with AD/HD (n=21) 70% reported an income level of \$24,000 or below and only two reported an income of \$35,000.or above. In contrast, adults without AD/HD only (n=3) 9.1% reported an income level of \$24,000 or below, while approximately 80% (n=26) reported an income of \$35,000

or above. Comparatively, adults with AD/HD have a significantly lower annual income.

TABLE 1 Frequency Table of annual income

Group	annual income	frequency	percent
ADD	1-\$24,999-below	21	70.0
	2-\$25,000-34,999	7	23.3
	3-\$35,000-44,999	1	3.3
	4-\$45,000-54,999	0	0.0
	5-\$55,000-74,999	1	3.3
	6-\$75,000-above	0	0.0
non AD/HD	1-\$24,999-below	3	9.1
	2-\$25,000-34,999	4	12.1
	3-\$35,000-44,999	9	27.3
	4-\$45,000-54,999	5	15.2
	5-\$55,000-74,999	7	21.2
	6-\$75,000-above	5	15.2

The comparative frequencies of jobs held between the two groups also showed differences. 40% of adults

with AD/HD reported they had held between 6-10 jobs in the last 10 years. In contrast, 84% of the adults without AD/HD reported they had held 0-5 jobs in the last 10 years.

Table 2 illustrates the percent of management positions held by each of the two groups. Adults with AD/HD (n=5) 16.7% reported that they held a management position, while (n=23) 69.7% of adults without AD/HD reported that they held a management position.

Table 2 Frequency Table-management positions

Group	Management		Non-management	
	N	%	N	%
1-AD/HD	5	16.7	25	83.3
2-non-AD/HD	23	69.7	10	30.3

It has been mentioned throughout the literature that adults with AD/HD suffer from significantly more problems in personal relationships (Barkley, 1994). Table 3 illustrates adults with AD/HD (n=10) 33% reported being divorced at least once, while adults without AD/HD only (n=5) 15% reported being divorced at least once.

Table 3 Frequency Table-marital status

	<u>sngl</u>	<u>mrđ</u>	<u>div</u>	<u>re-mrd</u>	<u>wid</u>
<u>Group</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
1-AD/HD	13	40	33	6	3
2-non-AD/HD	12	67	15	6	0

Table 4 shows the frequencies of job termination for adults with and without AD/HD. For adults with AD/HD, (n=19) 64% had been terminated at least once. However for the non AD/HD group only (n=2), 9% reported being terminated at least once.

Table 4 Frequency Table-job termination

<u>Variables</u>	<u>Group 1</u>		<u>Group 2</u>	
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
never	7	23	28	85
quit first	4	13	2	6
one time	11	37	3	9
more than once	8	27	0	0

Table 5 shows the t-test for the variables VI, OI, CB and CS. Scores on the VI were calculated by totaling the number of false responses, with a maximum score of 18 exhibiting a positive correlation of vocational identity to career maturity. The adults with AD/HD had an average of only 37% false responses, whereas, the adults without AD/HD had an average of 84% false responses. The results were assessed through an independent sample t-test. Taking into account unequal variances, there was a significant difference between the mean scores of adults with AD/HD and adults without AD/HD ($t=-9.96$, $sig=.00$). Hence the null hypothesis was rejected.

Occupation information was assessed through an independent t-test, with responses between the adult with AD/HD and the adult without AD/HD resulting in a ($t=-761$, $sig=.00$), again the null hypothesis was rejected. The t-test results for career barriers, equal variances assumed was ($t=-6.11$, $sig=.00$) showing a significant level of real or perceived career barriers for adults with AD/HD as opposed to the adults without AD/HD.

The independent t-test for career satisfaction resulted in ($t=-5$, $sig=.00$) showing a significantly higher number of adults with AD/HD were dissatisfied with their careers as opposed to the non AD/HD adults.

Table 5 t-test for Equality of Means

Variables	Adult AD/HD (n=30)		Adult non AD/HD (n=33)		t	sig.
	Mean	SD	Mean	SD		
VI	6.17	3.97	15.15	3.18	-9.96	.00
OI	1.17	1.29	3.42	1.06	-7.62	.00
CB	1.90	1.32	3.52	.71	-6.11	.00
CS	2.47	1.41	3.97	.95	-5.00	.00

CHAPTER V

Discussion

This study assessed differences in vocational situations between adults with and without AD/HD. The analysis of the data showed statistically significant differences in each of the individual domains of vocational identity, occupational information, career barriers and career satisfaction. These results appear to support the professional consensus and historical data formerly reported (Nadeau, 1995, 1997, 1998,).

The first question in this study addressed whether adults with AD/HD differ significantly in annual income from adults without AD/HD. Murphy (1998) found that although adults with AD/HD are usually self sufficient they usually rank in a lower income bracket. In this study 70% of the adults with AD/HD reported an annual income of \$24,000 or less while only 9% of the adults without AD/HD reported an income of \$24,000 or less. Since the two groups were convenience sampling this may explain the large difference in income.

Since the participants at the CHADD conference lived throughout the state of Missouri it may be assumed the attendees were probably motivated to attend

the conference either due to a family member with a diagnosis of AD/HD or recently being diagnosed themselves and/or seeking solutions for working with AD/HD in a professional setting.

The second research question addressed job frequency. Current projections for the number of careers an individual can expect to have in a life time can be as high as three. 40% of the adults with AD/HD in the study reported having as many as 10 jobs in the past decade. However, only 6% of the adults without AD/HD reported having as many as 10 jobs in the past decade. These results could be attributed to the particular type of attendee at the CHADD conference or local support groups. The participants may have come to the conference because of their career indecision or social difficulties.

The third research question addressed the first of the three constructs in MY Vocational Situation, vocational identity. Vocational identity is directly correlated with the career maturity construct. Career maturity is defined as the ability to make decisions based on past experiences and understanding the information, and resources given for a particular

career path. The literature points out that These skills appear to be lacking in the adult with AD/HD (Barkley, 1995). The larger total score (n=18) reflected a positive correlation with a well developed vocational identity. The adult participants with AD/HD scored significantly lower (m=6.17) in comparison to the adult participants without AD/HD (m=15.15).

Research question number four addressed occupational information. Again the higher score reflected the participants knowledge of available careers and what skills were necessary to obtain them. This section also allowed the subject to make notes for further discussion in a clinical setting. The scores for the adult participants with AD/HD were 57% lower, as compared to the adults participants without AD/HD.

Research question number five addressed perceived or real barriers. The participant was asked to explain ways in which they felt restrained for further discussion in a clinical setting. The adult participants with AD/HD reported 40% more career barriers than the adult participants without AD/HD.

Research question number six addressed career satisfaction. In Super's theory of career maturity the

individuals that remain in the imagination stage fail to connect their imagined career with the reality of the work world. This appears to cause repetitive dissatisfaction with career choices. The research of Nadeau (1996) appears to support the findings of lower levels of career satisfaction in adults with AD/HD. The adult participants with AD/HD reported 30% less satisfaction with their careers than the adult participants without AD/HD.

Limitations and Future Considerations

There are several limitations to this study that should be noted. As already discussed, the participants represented a convenience sample and many of the AD/HD group were selected at the state conference or support groups. The control participants were also attendees of the conference or were solicited purely at random throughout the St. Louis area. There were no qualifications other than a minimum age of 26. This may explain the resulting significant differences in career maturity and may limit the generalizability of the study to the general adult AD/HD population.

Previous studies with adults with AD/HD, as was noted throughout the literature, (Nadeau, 1997) have

been limited to compilations of professional experience (Wender, 1995; Amen, 1997). This has left little former research or discussion of effective assessment tools to measure the construct of career maturity in the adult with AD/HD (Carroll, & Ponterotto, 1998).

Another factor that may have influenced this study is the length of time the participants may have had a diagnosis. The more informed the adult with AD/HD becomes about the anomaly, the less symptomology is evident in every day life and the world of work. A few of the AD/HD participants, stated they had developed better coping skills after they were diagnosed with AD/HD and began to learn how to help themselves.

The diagnosis of adult AD/HD has been around for less than a decade. Research on the differences is in its infancy. Identifying areas of strengths and weakness can facilitate interventions and enhance individual functioning.

References

- ADDult support of Washington for adults with ADD (1997). A collection of short, easy to read articles by nationally-prominent authorities and ADD adults, Adult A.D.D. Reader. Tacoma, WA.
- Amen, D. G. (1996). All about adult attention deficit disorder. Fairfield, CA: Mind Works Press.
- Amen, D. G. (1997). Windows into the A.D.D. mind. Fairfield, CA: Mind Works Press.
- American Psychiatric Association. (1994). Diagnostic and statistical manual of mental disorders (4th ed.). Washington, DC: Author.
- Amundson, N. E. (1995). Action planning thorough the phases of counseling. Journal of Employment Counseling, 32, 147-153.
- August, G. J., & Garfinkel, B. D. (1993). The nosology of attention-deficit hyperactivity disorder. Journal of the American Academy of Child and Adolescent psychiatry, 32, 155-165.
- Barkley, R. A. (1997). ADHD and the nature of self-control. New York: The Guilford Press.

Barkley, R. A. (1994). Program manual, ADHD in adults. New York: The Guilford Press.

Barkley, R. A., Fischer, M., Edelbrock, C. S., & Smallish, L. (1990). The adolescent outcome of hyperactive children diagnosed by research criteria: An 8 year follow up study. Journal of the American Academy of Child and Adolescent Psychiatry, 29, 546-557.

Bellak, L. (1987). Psychiatric aspects of attention-deficit disorder in adults. In F. Flach (Ed.), Diagnostics and Psychopathology, 140-159. New York: Norton.

Carroll, C. B., & Ponterotto, J. G. (1998). Employment counseling for adults with attention-deficit/hyperactivity disorder: Issues without answers. Journal of Employment Counseling, 35, 79-96.

Ellison, J. M. (1994). The psychotherapist guide to neuropsychiatry. Washington, DC: American Psychiatric Press.

Fifth annual Missouri CHADD conference on attention-deficit/hyperactivity disorder. (1999) St. Louis South County CHADD P.O. Box 25173 St. Louis, MO 63125.

Garber, S. W., Garber, & Spizman, R. F. (1996). Beyond ritalin. New York: Harper Collins Publishers, Inc.

Gerber, P. J. (1994). Researching adults with learning disabilities from an adult development perspective. Journal of Learning Disabilities, 27, 6-9.

Guevremont, D. C. (1990). Social skills and peer relationship training. In R. A. Barkley (Ed.), Attention deficit hyperactivity disorder: A handbook for diagnosis and treatment (p.540-572). New York: Guilford Press.

Hechtman, L. (1991). Resilience and vulnerability in long term outcome of attention deficit hyperactive disorder. Canadian Journal of Psychiatry, 36, 415-421.

Herrero, M. E., Hechtman, L., & Weiss, G. (1994). Antisocial disorders in hyperactive subjects from childhood to adulthood: Predictive factors and characterization of subgroups. American Journal of Orthopsychiatry, 64, 510-521.

Holland, J. L., Daiger, D. C., & Power, P. G. (1980). My Vocational Situation. Palo Alto, CA: Consulting Psychologists Press Inc.

- Ingersoll, B. D., & Goldstein, S. (1993). Attention deficit disorder and learning disabilities: Realities, myths, and controversial treatments. New York: Doubleday.
- Isaacson, L., & Brown, D. (1997). Career information, career counseling, and career development. Needham, MA: Allyn & Bacon.
- Jackson, B., & Farrugia, D. (1997). Diagnosis and treatment of adults with attention deficit hyperactivity disorder. Journal of Counseling & Development, 75, 312-317.
- Kaplan, C., & Schachter, E. (1991). Adults with undiagnosed learning disabilities: Practice considerations. Families in Society: The Journal of Contemporary Human Services, 72, 195-201.
- Mannuzza, S., Klein, R. G., Bessler, A., Malloy, P., & LaPadula, M. (1993). Adult outcome of hyperactive boys: Educational achievement, occupational rank, and psychiatric status. Archives of General Psychiatry, 50, 565-576.
- Nadeau, K. G. (1995). A comprehensive guide to attention deficit disorder in adults: Research, diagnosis, and treatment. New York: Brunner/Mazel.

Nadeau, K. G. (1997). ADD in the workplace: choices, changes, and challenges. Bristol, PA: Brunner/Mazel, Inc.

Nadeau, K. G. (1996). Adventures in fast forward: Life, love, and work for the ADD adult. New York: Brunner/Mazel, Inc.

Nichols, P. L., & Chen, T. (1981). Minimal brain dysfunction. New Jersey: Hillsdale.

Ohler, D. L., Levinson, E. M., & Hayes, G. M. (1996). The relationship between career maturity and congruence, consistency, and differentiation among individuals with and without learning disabilities. Journal of Employment Counseling, 33, 50-60.

Rosenthal, J. H. (1973). Hazy? Crazy? and/or Lazy? SanRafael, CA:

Silver, L. B. (1992). Attention-deficit hyperactivity disorder. Washington, DC.

Weiss, L. (1992). Attention deficit disorder in adults. Texas: Taylor Pub.

Wender, P. H. (1995). Attention-deficit hyperactivity disorder in adults. New York: Oxford University Press.

Appendix A

PERSONAL DATA QUESTIONNAIRE
PLEASE CIRCLE THE APPROPRIATE ANSWER OR FILL IN
THE BLANK WHERE NECESSARY.

Dear Participant,

I am a graduate student at Lindenwood University, St. Charles Missouri, and I am conducting a comparative research study on vocational situations of Adults. The thesis is partial fulfillment for the requirements of a Master of Arts degree in Professional Counseling. Your participation will be greatly appreciated, and by completing the enclosed materials, you will be granting your permission for me to use your responses in this study. The packets are completely anonymous and all information will be held in strictest confidence.

5-Widowed
Please complete all of the questionnaires in your packet. Please return the completed questionnaire packet to the designated area any time before the end of the conference.

3-Some college
I appreciate your support and am thanking you in advance for your participation. If you would like a copy of the results or have any questions, please do not hesitate to contact me.

YEARLY INCOME:
1-4 999 or below
2-5 1,000-34,999
3-6 35,000-44,999
4-7 45,000-54,999
5-8 55,000 or above

Sincerely,

Cristine L. Mason
250 Oakborough Dr. above
O'Fallon, MO 63366
314-561-1082 JOBS HELD IN THE PAST TEN YEARS
Email masden12@aol.com

Appendix B

PERSONAL DATA QUESTIONNAIRE

PLEASE CIRCLE THE APPROPRIATE ANSWER OR FILL IN THE BLANK WHERE NECESSARY.

1. AGE: _____
2. SEX:
 - 1-M
 - 2-F
3. MARITAL STATUS:
 - 1-Single
 - 2-Married
 - 3-Divorced
 - 4-Re-married
 - 5-Widowed
4. EDUCATION: (indicate highest level achieved)
 - 1-Some high school
 - 2-High school graduate/GED
 - 3-Some college
 - 4-Trade School
 - 5-Bachelor's Degree
 - 6-Graduate Degree or above
5. YEARLY INCOME:
 - 1-24,999 or below
 - 2-25,000-34,999
 - 3-35,000-44,999
 - 4-45,000-54,999
 - 5-55,000-74,999
 - 6-75,000 and above
6. NUMBER OF JOBS HELD IN THE PAST TEN YEARS
 - 1-0-5
 - 2-6-10
 - 3-11-15
 - 4-16 and above



7. HAVE YOU EVER BEEN TERMINATED FROM EMPLOYMENT

- 1-no, never
- 2-no, quit before being terminated
- 3-yes, once
- 4-yes, more than once

8. HOW SATISFIED ARE YOU WITH YOUR CURRENT JOB/CAREER

- 1-not at all satisfied
- 2-somewhat satisfied
- 3-moderately satisfied
- 4-satisfied
- 5-very satisfied

9. ARE YOU IN A MANAGEMENT OR SUPERVISORY POSITION

- 1-yes
- 2-no

Appendix C
Pre-Qualifying Questionnaire

PLEASE CIRCLE THE APPROPRIATE ANSWER TO THE FOLLOWING QUESTIONS

Throughout life have you had

1. trouble sustaining attention
yes no
2. difficulty completing projects
yes no
3. easily overwhelmed by tasks of daily living
yes no
4. trouble maintaining an organized work/living area
yes no
5. inconsistent work performance
yes no
6. lack attention to detail
yes no
7. make decisions impulsively
yes no
8. difficulty delaying gratification, stimulation seeking
yes no
9. restless, fidgety
yes no
10. make comments without considering their impact
yes no
11. impatient, easily frustrated
yes no
12. frequent traffic violations
yes no

my vocational situation

Name _____ Date _____ M F Age _____

Education completed _____ Other _____

List all the occupations you are considering right now.

Try to answer all the following statements as mostly TRUE or mostly FALSE. Circle the answer that *best represents your present opinion*.

In thinking about your present job or in planning for an occupation or career:

1. I need reassurance that I have made the right choice of occupation. T F
2. I am concerned that my present interests may change over the years. T F
3. I am uncertain about the occupations I could perform well. T F
4. I don't know what my major strengths and weaknesses are. T F
5. The jobs I *can do* may not pay enough to live the kind of life I want. T F
6. If I had to make an occupational choice right now, I am afraid I would make a bad choice. T F
7. I need to find out what kind of career I should follow. T F
8. Making up my mind about a career has been a long and difficult problem for me. T F
9. I am confused about the whole problem of deciding on a career. T F
10. I am not sure that my present occupational choice or job is right for me. T F
11. I don't know enough about what workers do in various occupations. T F
12. No single occupation appeals strongly to me. T F
13. I am uncertain about which occupation I would enjoy. T F
14. I would like to increase the number of occupations I could consider. T F
15. My estimates of my abilities and talents vary a lot from year to year. T F
16. I am not sure of myself in many areas of life. T F
17. I have known what occupation I want to follow for less than one year. T F
18. I can't understand how some people can be so set about what they want to do. T F

(over)



For questions 19 and 20, circle the Y if your answer is YES, the N if your answer is NO.

19. I need the following information:

- | | | |
|--|---|---|
| How to find a job in my chosen career. | Y | N |
| What kinds of people enter different occupations. | Y | N |
| More information about employment opportunities. | Y | N |
| How to get the necessary training in my chosen career. | Y | N |

Other: _____

20. I have the following difficulties:

- | | | |
|--|---|---|
| I am uncertain about my ability to finish the necessary education or training. | Y | N |
| I don't have the money to follow the career I want most. | Y | N |
| I lack the special talents to follow my first choice. | Y | N |
| An influential person in my life does not approve of my vocational choice. | Y | N |

Anything else? _____

Other comments or questions: _____

CPP

Consulting Psychologists Press, Inc.

www.cpp-db.com 800-624-1765

Published by Consulting Psychologists Press, Inc. ("CPP"), 3803 E. Bayshore Road, Palo Alto, California 94303.

My Vocational Future Inventory Test Booklet © 1980 by John L. Holland, Denise C. Draiger, and Paul G. Power. This copyrighted publication is not offered for sale; it is for licensed use only. CPP reserves all rights beyond the limited scope of this license, including, without limitation, all rights under U.S. and international copyright and trademark laws. No portion of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or media or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior written permission of CPP. This copyrighted publication may not be resold, sublicensed, exported, redistributed, otherwise transferred, or used in any manner by any party other than the person or entity to whom it is licensed for use by CPP, any violation of these restrictions may infringe CPP's copyright under 17 U.S.C. §106(3), and any such violation shall automatically terminate any license to use this publication.

Printed in the United States of America. 02 01 00 99 98 25