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Assessing an Individual with Coexisting Disabilities: Traumatic Brain Injury, Attention Deficit Hyperactivity Disorder, & Substance Use

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ASSESSING AN INDIVIDUAL WITH CO-EXISTING DISABILITIES: TRAUMATIC
BRAIN INJURY, ATTENTION DEFICIT HYPERACTIVITY DISORDER, AND
SUBSTANCE USE

by

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B.S., Southern Illinois University, 2009

A Research Paper
Submitted in Partial Fulfillment of the Requirements for the
Master of Science degree

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in the Graduate School
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RESEARCH PAPER APPROVAL

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Approved by:

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CHAPTER 1

INTRODUCTION

This is an exploration of individuals with coexisting disabilities, specifically Traumatic Brain Injury (TBI), Attention Deficit Hyperactivity Disorder (ADHD), and Substance Use. There are many issues that individuals with single disabilities face but the reality of having three is much more difficult. From everyday living to achieving certain goals which is why assessing individuals with coexisting disabilities is important. Rehabilitation professionals must be aware of the many functional limitations, psychosocial factors and vocational rehabilitation of each of these disabilities as well as coexisting disabilities. Some individuals are unaware of how these particular coexisting disabilities may arise. At times we fail to realize that people with disabilities appear to be at greater risk for substance abuse due to physical, emotional, or cognitive problems that may be attributed to their disability (Donnelly, Janikowski, & Lawrence, 2007).

According to Shannon (2009), “one early theory was that attention disorders were caused by brain injury. Some children suffering from brain injury may show some signs of behavior similar to that of ADHD, but only a small percentage of children with ADHD have been found to have suffered a traumatic brain injury” (p. 167). There seems to be an overlap between ADHD and substance use disorders (Wilens et al., 2005). According to Schubiner (2005), “studies show that between one quarter and one third of substance abusing adolescents meet diagnostic criteria for ADHD” (p. 645).

In some cases, substance abuse has played a major role in individual’s suffering from a TBI social relationships and may have been the contributor to the cause of the

accident, which cause the brain injury (Falvo, 2009). Individuals may have maintained the same pattern of substance abuse behavior they followed prior to the injury. For others, substance abuse may be a way of coping with the stress or depression they experience following the brain injury. The effects of alcohol and other drugs will affect the already impaired functions and can interact with medications they are currently taking (Falvo, 2009). According to Corrigan and Deuschle (2008), “a study conducted at the University of Washington found 61% of 142 consecutive admissions to their brain injury rehabilitation unit had recent histories of at risk alcohol consumption or illicit drug use” (p. 224). There is also evidence of the co-occurrence of TBI and substance use disorders in the caseloads of substance abuse treatment providers (Corrigan & Deuschle, 2008).

I have reviewed a number of sources to obtain the information necessary to assess an individual with these three disabilities. After addressing each of these disabilities in separate sections, I will discuss the assessment process and measurement tools needed to assess individuals with these problems. I will also discuss the vocational evaluation process and tools needed to assess these individuals vocationally. Finally I will discuss necessary recommendations/referrals that may be needed for individuals diagnosed with these coexisting disabilities.

CHAPTER 2

REVIEW OF LITERATURE

What is Traumatic Brain Injury (TBI)?

According to Falvo (2009), traumatic brain injury is defined as an injury to the brain from external forces, such as vehicular accidents, falls, violence, or sports or recreational injury, or penetration of the skull by a foreign object. TBI can be either an open or closed head injury. An open head injury is when a force of impact causes scalp injuries and skull fractures, along with blood clots and bruising (Harris & Turkington, 2002). An open head injury usually affects one place in the brain, causing specific problems. A closed head injury can cause more damage due to the fact that the force of impact causes the brain to smash against the opposite side of the skull, tearing nerve fibers and blood vessels (Harris & Turkington, 2002). Table 1 shows data on percentages of TBI by its cause.

Table 1 Causes of Traumatic Brain Injury

Cause	Percentage
Motor Vehicle Accidents	48.9
Falls	25.8
Firearms	9.7
Other Assaults	7.5
Other/Unknown	8

From CDC (1999).

According to Cecil et al. (2011), “TBI is the leading cause of death and disability in patients from ages 1 to 44 years old and accounts for 1.4 million reported injuries and

52,000 deaths each year in the United States” (p. 26). TBI can result in any combination of cognitive impairment, emotional and/or behavioral change, or physical manifestations and affects every aspect of an individual’s life, often resulting in significant disability (Falvo, 2009, p. 59). According to Shannon (2009), “the term TBI is used for head injuries that can cause changes in one or more areas, such as: thinking and reasoning, understanding words, remembering things, paying attention, solving problems, thinking abstractly, talking, behaving, walking and other physical activities, seeing or hearing, and learning” (p. 233-234).

An individual may seem to be alright following a TBI, but it is important to know that these head injuries can get worse over time. There are many warning signs to be aware of during this time as well as certain behaviors that may appear long after the TBI occurs. According to Turkington and Harris (2002), these warning signs and behaviors include: lethargy, confusion, severe headaches, bleeding, vomiting, seizure, coma, overeating or drinking, excessive talking, restlessness, and disorientation (p. 230).

Psychosocial Factors Associated with TBI

There are a number of psychosocial factors associated with TBI. Emotional adjustment is influenced by a number of factors after brain injury. Damage to the brain can have an impact on an individual’s life due to the fact that the brain is responsible for numerous functions. The brain damage can have an impact on motor control and perception, communication effects, cognitive changes, and personality changes and affective response (Kendall, 2003). Motor control and perception affects of the brain depend on whether the damage was diffuse or local. The impact to the brain can also affect individual's movement, coordination/balance, visual-spatial relations, perception,

vision, hearing, touch, taste, smell, eating/swallowing, endurance, or bowel or bladder function (Falvo, 2009).

Communication effects are affected by brain damage in all forms of communication such as: the ability to speak, comprehend, or written and verbal communication. According to Kissinger (2008), there are a number of cognitive and personality changes that are affected by brain damage and can be the most difficult challenges for family and friends to face, these affects include: memory, attention, concentration, self-awareness, problem solving, decision-making, information processing, concept formation, judgment, personality changes, anger and irritability, nonconformance to social norms, apathy and depression, loss of self-esteem (p. 310).

The reactions experienced by an individual with TBI can be intense with many symptoms varying from depression to mood swings to psychosis. The way individuals view the brain injury as how it happened and the extent to which they blame themselves or others can greatly have an effect on their emotional reactions (Falvo, 2009).

Personality changes are another issue associated with TBI. Personality traits that were present prior to brain injury may become exaggerated after the damage has occurred. There may also be feelings of frustration due to difficulty with memory or difficulty performing certain tasks that they were once able to perform before the injury. An individual who was once self-directed and took initiative may become apathetic and unable to complete tasks independently (Falvo, 2009). Although symptoms will vary from individual to individual, there are a number of disturbances that can occur such as: irritability, impulsivity, aggression, poor motivation, poor judgment and insight, risk taking, and sexual disturbances (Kendall, 2003).

Severity of TBI

TBI can range from death to a full recovery. The severity of the TBI can be measured by the Rancho Los Amigos Scale, which assigns a number to represent the degree to which patients can open their eyes, move or speak (Turkington & Harris, 2002). Another way to measure the severity of TBI is the Glasgow Coma Scale (GCS, Table 2) which measures level of consciousness based on eye opening, capacity for purposeful movement, and verbalization (Dixon, Layton, & Shaw, 2005, p. 131). The Glasgow Coma Scale scores range from 3, profound coma, to 15, normal awareness and orientation. There is also the Glasgow Outcome Scale (GOS) which is a measure for classifying global outcome following TBI. Dixon et al. (2005) described the classification of the GOS as follows:

- (a) death
- (b) persistent vegetative state (no conscious awareness or purposeful activity)
- (c) severe disability (conscious but physically or cognitively dependent on others for daily care)
- (d) moderate disability (disabled but independent in self-care and basic access to community)
- (e) good recovery (mild, persistent residual sequelae but capable of normal social life) (p.130).

Table 2 Glasgow Coma Scale

Eye Opening (E)	
Spontaneous	4
To speech	3
To pain	2
Nil	1
Best motor response (M)	
Obeys	6
Localizes	5
Withdraws	4
Abnormal flexion	3
Extensor response	2
Nil	1
Verbal response (V)	
Oriented	5
Confused conversation	4
Inappropriate words	3
Incomprehensible sounds	2
Nil	1

Coma Score (E+M+V)=3 to 15

From Teasdale & Jennett (1974)

What is Attention Deficit Hyperactivity Disorder (ADHD)?

Attention deficit hyperactivity disorder (ADHD) is one of the most common childhood disorders and can continue through adolescence and adulthood. According to the American Psychiatric Association (APA, 2000), the essential feature of ADHD is a persistent pattern of inattention and/or hyperactivity-impulsivity that is more frequently displayed and more severe than is typically observed in individuals at a comparable level of development. ADHD has become a common diagnosis in the United States, with reported rates in school-aged boys and girls of approximately 10% and 4% (Furman, 2005, p. 994). Individuals with ADHD have trouble paying attention, controlling impulsive behaviors, and in some cases, are overly active. There are three different

subtypes of ADHD which are based on the predominant symptom pattern for the past 6 months (APA, 2000, p. 87).

Predominantly Inattentive Type: This subtype should be used if six (or more) symptoms of inattention and six (or more) symptoms of hyperactivity-impulsivity have persisted for at least six months. It is hard for the individual to organize or finish a task, to pay attention to details, or to follow instructions or conversations. The person is easily distracted or forgets details of daily routines.

Predominantly Hyperactive-Impulsive Type: This subtype should be used if six (or more) symptoms of inattention (but fewer than six symptoms of hyperactivity-impulsivity) have persisted for at least six months. The person fidgets and talks a lot. It is hard to sit still for long. Smaller children may run, jump or climb constantly. The individual feels restless and has trouble with impulsivity. Someone who is impulsive may interrupt others a lot, grab things from people, or speak at inappropriate times. It is hard for the person to wait their turn or listen to directions. A person with impulsiveness may have more accidents and injuries than others.

Combined Type: this subtype should be used if six (or more) symptoms of hyperactivity-impulsivity (but fewer than six symptoms of inattention) have persisted for at least six months. Symptoms of the above two types are equally present in the person.

According to the APA (2000), the diagnostic criteria for ADHD is “having either six (or more) of the following symptoms of inattention or six (or more) of the following symptoms of hyperactivity-impulsivity persisted for at least six months to a degree that is

maladaptive and inconsistent with developmental; some hyperactive-impulse or inattentive symptoms that caused impairment were present before the age of 7 years; some impairment from the symptoms is present in two or more settings (school, work, home, etc.); there must be clear evidence of clinically significant impairment in social, academic, or occupational functioning; and the symptoms do not occur exclusively during the course of a Pervasive Developmental Disorder, Schizophrenia, or other Psychotic Disorder and are not better accounted for by another mental disorder (Mood Disorder, Anxiety Disorder, Dissociative Disorder, or a Personality Disorder)” (pp. 92-93).

Symptoms of inattention include (APA, 2000, p. 92):

- (a) often fails to give close attention to details or makes careless mistakes in schoolwork, work, or other activities
- (b) often has difficulty sustaining attention in tasks or play activities
- (c) often does not seem to listen when spoken to directly
- (d) often does not follow through on instructions and fails to finish school work, chores, or duties in the workplace
- (e) often has difficulty organizing tasks and activities
- (f) often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort
- (g) often loses things necessary for tasks or activities
- (h) is often easily distracted by extraneous stimuli
- (i) is often forgetful in daily activities

Symptoms of hyperactivity-impulsivity include (APA, 2000, p. 92):

Hyperactivity

- (a) often fidgets with hands or feet or squirms in seat
- (b) often leaves seat in classroom or in other situations in which remaining seated is expected
- (c) often runs about or climbs excessively in situations in which it is inappropriate
- (d) often has difficulty playing or engaging in leisure activities quietly
- (e) is often “on the go” or often acts as if “driven by a motor”
- (f) often talks excessively

Impulsivity

- (g) often blurts out answers before questions have been completed
- (h) often has difficulty awaiting turn
- (i) often interrupts or intrudes on others

Psychosocial Factors Associated with ADHD

There are a number of psychosocial factors associated with individuals with ADHD. Individuals with ADHD experience an inability to sit still and pay attention. They experience peer rejection and engage in a broad array of disruptive behaviors. Their academic and social difficulties have far-reaching and long-term consequences. As they grow older, children with untreated ADHD in combination with conduct disorders experience drug abuse, antisocial behavior, and injuries of all sorts (Gjervan & Nordahl, 2010). Individuals with developmental disabilities are at increased risk for a range of health problems, including mental health problems (Falvo, 2009). Depression is another issue these individuals face with ADHD. Communication problems are also common in individuals with ADHD. Some individuals are unable to communicate adequately so a

change in behavior or a demonstration of challenging behaviors may be the first sign of a medical or psychiatric problem (Falvo, 2009, p. 212).

What is Substance Use?

According to the APA (2000), Substance Use is divided into two categories: Substance Dependence and Substance Abuse. Substance Dependence is defined as “a maladaptive pattern of substance use, leading to clinically significant impairment or distress, as manifested by three (or more) of the following seven symptoms, occurring at any time in the same 12-month period” (p. 197).

1. Tolerance, as defined by either a need for increased amounts of a substance to achieve intoxication or a desired effect, or diminished effect with continued use of the same quantity of substances;
2. Withdrawal, as characterized by specific withdrawal syndromes defined for each substance, or using a substance in order to relieve or avoid withdrawal symptoms;
3. The substance is taken in large amounts or over a longer period than was intended;
4. A persistent desire or unsuccessful efforts to reduce or control substance use;
5. A great deal of time spent in activities necessary to obtain, use and recover from the effects of the substance;
6. Important social, occupational or recreational activities are given up or reduced because of the substance use; and

7. The substance use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance.

Substance Abuse is defined by the APA (2000) as “a maladaptive pattern of substance use leading to clinically significant impairment or distress, as manifested by one (or more) of the following four symptoms, occurring within a 12-month period and the symptoms have never met the criteria for Substance Dependence for this class of substance” (p. 199).

1. Recurrent substance use resulting in a failure to fulfill major role obligations at work, home, or school;
2. Recurrent substance use in situations in which it is physically hazardous;
3. Recurrent substance-related legal problems; and
4. Continued substance use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of the substance.

Psychosocial Factors Associated with Substance Use

According to Corley, Lawton, & Gray (2005), “the abuse of and dependence on recreational, medicinal, and otherwise harmful substances have been noted historically for centuries, accompanied by a wide range of explanations of casualties” (p. 675). Major nutritional deficits as well as changes in the skin and hair can result from chronic alcoholism (Kinney & Leaton, 1991). Using these harmful drugs regularly can have adverse affects. These affects include medical, psychological, psychiatric, economic, and social consequences. Medical complications of substance abuse can affect almost every body system (Kinney & Leaton, 1991). There are a number of psychological and

psychiatric consequences associated with the misuse of alcohol and/or other harmful substances (Kinney & Leaton, 1991). Some medical issues that may arise include: cardiovascular, gastrointestinal, genitourinary, endocrine, nervous, musculoskeletal, and immune system. Psychological/Psychiatric issues that may arise include: intoxication, craving, depression/mood swings, anxiety, paranoia, hallucinations/delusions, organic brain syndromes, flashbacks, and suicide.

Terms associated with substance use

Tolerance: occurs with the regular consumption of a substance over an extended period and is one of the defining characteristics of alcohol addiction (Kinney & Leaton, 1995).

Addiction: A psychological process in which the person with an addiction craves one or more substances, uses the substance compulsively, and continues using the substance despite a range of adverse consequences (Beasley, 1990).

Withdrawal: Results in the development of adverse physical symptoms when the use of a substance is stopped (Beasley, 1990).

Assessment Process

Before assessing the individual we would want to look at the individuals Minnesota Multiphasic Personality Inventory-2 (MMPI-2). The MMPI-2 is used to look for personality and psychosocial disorders in adults as well administered as part of a neuropsychological test battery to evaluate cognitive functioning (Friedman, 2001). This will give us the information we need to know about the diagnosis treatment of the disorders of this individual. The test is also used to evaluate the effectiveness of treatment programs, including substance abuse programs. The information from the

MMPI-2 will inform us about the individual in certain areas such as: hypochondriasis, depression, hysteria, psychopathic deviate, masculinity/femininity, paranoia, psychasthenia, schizophrenia, hypomania, and social introversion (Friedman, 2001). Most importantly, the MMPI-2 provides clinically relevant information regarding the presence of psychiatric illness, adaptation to the injury, and potential interpersonal strengths or liabilities that may affect the rehabilitative process (Arbisi & Ben-Porath, 1999).

The results of the MMPI-2 will not give us all the information we need so there are some other tests that need to be administered. We need to assess these individuals intellectual functioning as well as their personality of this individual so in order to obtain this information; the Wechsler Adult Intelligence Scale-IV and the Personality Assessment Inventory will be given (Gregory, 2011). Below you will find a detailed description of the measurement tools that will be used.

Measurement Tools

The Wechsler Adult Intelligence Scale-IV. One measurement tool used to assess intelligence is the Wechsler Adult Intelligence Scale-IV (WASI-IV). The WASI-IV was designed to evaluate intellectual functioning of adults ages 16 to 90. The assessment measures cognitive ability using a core battery of ten unique subtests and five supplemental subtests that focus on four specific domains of intelligence (Gregory, 2011).

The four specific domains of intelligence include: Verbal Comprehension Index (VCI) (a measure of verbal concept formation, verbal reasoning, and knowledge acquired from one's environment), Perceptual Reasoning Index (PRI) (a measure of perceptual and fluid reasoning, spatial processing, and visual-motor integration), Working Memory

Index (WMI) (a measure of working memory abilities that require the ability to temporarily retain information in memory, perform some mental operation on, or manipulation of it, and produce a result), and Processing Speed Index (PSI) (a measure of the ability to quickly and correctly scan, sequence, or discriminate simple visual information) (Gregory, 2011).

There are ten unique subtests that focus on a specific domain which are:

Similarities (VCI) (abstract verbal reasoning), vocabulary (VCI) (the degree to which one has learned, been able to comprehend and verbally express vocabulary), information (VCI) (degree of general information acquired from culture), and block design (PRI) (spatial perception, visual abstract processing and problem solving), matrix reasoning (PRI) (nonverbal abstract problem solving, inductive reasoning, and spatial reasoning), visual puzzles (PRI) (non-verbal reasoning), digit span (WMI) (attention, concentration, mental control), arithmetic (WMI) (concentration while manipulating mental mathematical problems), symbol search (PSI) (visual perception, speed), and coding (PSI) (visual motor coordination, motor and mental speed) (Gregory, 2011).

The five supplemental subtests which focus on a specific domain are:

comprehension (VCI) (ability to deal with abstract social conventions, rules and expressions), picture completion (PRI) (ability to quickly perceive visual details), figure weights (PRI) (quantitative and analogical reasoning), letter-numbered sequencing (MWT) (attention and working memory), and cancellation (PSI) (visual-perceptual speed) (Gregory, 2011).

The WAIS-IV features a normative sample of 2,200 adults and was stratified by age, gender, education level, ethnicity, and region to provide the highest reliability of

results (Benson, Hulac, & Kranzler, 2010). Trained psychologists using a combination of verbal and performance tasks individually administer the assessment. Once completed, the assessment may be hand scored using paper and pencil forms or electronically scored using the new WAIS-IV Scoring Assistant software which automatically converts raw scores to scaled scores and provides score analysis in the form of tables and graphs (Benson et al., 2010).

Although the main purpose of the WAIS-IV is to be used for intelligence assessment, the WAIS-IV is used in neuropsychological evaluation, specifically with regard to brain dysfunction (Sattler, 2009). Large differences in verbal and nonverbal intelligence may indicate specific types of brain damage. The WAIS-IV is also administered for diagnostic purposes. Intelligence quotient (IQ) scores reported by the WAIS can be used as part of the diagnostic criteria for mental retardation, specific learning disabilities, and attention-deficit/hyperactivity disorder (Benson et al., 2010).

Personality Assessment Inventory. The Personality Assessment Inventory (PAI) is a self-administered, objective inventory of adult personality designed to provide information on critical clinical variables (Morey, 1996). The PAI provides information relevant for clinical diagnosis, treatment planning and screening for psychopathology. The inventory contains 344 items that comprise 22 non-overlapping full scales covering the constructs most relevant to a broad-based assessment of mental disorders: 4 validity scales, 11 clinical scales, 5 treatment scales, and 2 interpersonal scales (Morey, 1996, p. 3):

Types of scales

Validity Scales: Measure the respondent's approach to the test, including faking good or bad, exaggeration, or defensiveness.

Clinical Scales: Correspond to psychiatric diagnostic categories.

Treatment Scales: Assess factors that may relate to treatment of clinical disorders or other risk factors but which are not captured in psychiatric diagnoses.

Interpersonal Scales: Provide indicators of interpersonal dimensions of personality functioning.

Vocational Evaluation

There are a number of vocational issues involved in the evaluation process for an individual with TBI, ADHD, and substance use. When determining the capabilities of this individual we have to know what their limitations are as well as factors that will affect them while working. Cognitive deficits and psychosocial difficulties may have more implications for this individual's ability to return to work than any physical limitations. Individuals who retain average to above average intellectual abilities and interpersonal skills are often able to compensate for other limitations (Falvo, 2009, Chapter 3). In order to obtain this information, the Wechsler Adult Intelligence Scale-IV (WAIS-IV) will evaluate the individual. There are also drastic changes in personality and personal ability, which is why this individual needs to undergo the Myers Briggs Type Indicator (MBTI) (Kennedy & Kennedy, 2004). This individual needs to be assessed to obtain adequate information that will be used to make necessary recommendations and establish plans to help this individual meet their objectives. We need to know where they stand academically so they will receive the Woodcock Johnson III Tests of Achievement

(Gregory, 2011). It is most important to assess the strengths and weaknesses to know what type of work this individual is capable of so we will be testing their aptitudes using the O*NET Ability Profiler (O*NET AP) (U.S Department of Labor, 2010). In order to help this individual obtain the best outcome in job placement, we must know what their interests and skills are so the individual will complete the O*NET Career Interests Inventory (O*NET CII) (U.S department of Labor, 2010). Below you will find a detailed description of the tests that will be administered to the individual.

Woodcock Johnson III Tests of Achievement (WJ III ACH): Academic

Achievement. The WJ III ACH is a battery of tests that measure academic performance and levels of achievement (Gregory, 2011). The norming sample ranges in age from 2 to over 90 years old. The WJ III ACH can be used to determine a person's current academic strengths and areas that need improvement. Other uses of the tests include: establishing an individual's present performance levels in achievement; determining an individual's present performance levels in achievement; comparing an individual's level of attainment to his or her peers; exploring eligibility for special programs; monitoring educational progress across school years; investigating the effectiveness of curricula; and assisting with recommendations for specific curricular adaptations (Mather, Wendling, & Woodcock, 2001, p. 22). As shown in appendix A, there are 22 tests that make up five clusters. These clusters include reading, oral language, math, written language, and academic knowledge (Mather et al., 2001).

O*NET Ability Profiler: Aptitudes. The O*NET Ability Profiler (AP) is a career exploration tool that helps clients plan their work lives. The O*NET AP consists of subtests for measuring nine abilities that can help you do well in most jobs. Abilities

are individually measured and reported in percentile scores and then patterns of abilities are linked to a set of occupations that have been grouped into five job zones (U.S. Department of Labor, 2010). Each job zone contains occupations that require roughly the same amount of education, training, and experience. The results of the O*NET Ability Profiler can be used to identify strengths and areas for which they might want to receive more training and education and identify occupations that fit their strengths. The job-relevant abilities include: verbal ability (understanding the meaning of words and using them correctly), arithmetic reasoning (ability to use several math skills and logical thinking to solve problems in everyday situations), computation (ability to use arithmetic operations to solve everyday problems involving numbers), spatial ability (ability to form pictures of real objects in your mind and correctly imagining how parts fit together), form perception (ability to see details in objects, pictures, or drawings quickly and correctly), clerical perception (ability to see details in written materials quickly and correctly), motor coordination (ability for different parts of your body to work well together, such as coordinating eyes, hands, or fingers), finger dexterity (ability to move fingers skillfully and easily), and manual dexterity (ability to move the hands skillfully and easily) (U.S. Department of Labor, 2010).

O*NET Career Interests Inventory: Interests. According to the U.S. Department of Labor (2010), the O*NET Career Interests Inventory (O*NET CII) is a self-assessment career exploration tool that can help clients discover the type of work activities and occupations that they would like and find exciting. Clients identify and learn about broad interest areas most relevant to them. They can use their interest results to explore the world of work. The O*NET CII helps to explore interests for the 1,000

jobs found in the O*NET database by indicating likes or dislikes for 180 activities. The O*NET CII uses six vocational types in which the scores identify career areas that match interests and pinpoint specific jobs to explore. The vocational types include (U.S Department of Labor, 2010):

Realistic: Like work activities that include practical, hands-on problems and solutions. Enjoy dealing with plants, animals, and real world materials, such as wood, tools, and machinery. Enjoy outside work, and do not like occupations that mainly involve paperwork or working closely with others

Investigative: Like work activities that have to do with ideas and thinking more than with physical activity. Like to search for facts and figure out problems mentally rather than persuade and lead people.

Artistic: Like work activities that have to do with the artistic side of things, such as forms, designs, and patterns. They like self-expression in their work. They prefer settings where work can be done without following a clear set of rules.

Social: Like work activities that assist others and promote learning and personal development. They prefer to communicate more, than work with objects, machines, or data.

Enterprising: Like work activities that have to do with starting up and carrying out projects, especially business ventures. They like persuading and leading people and making decisions.

Conventional: Like work activities that follow set procedures and routines. They prefer working with data and detail more than with ideas. They prefer work in which

there are precise standards rather than in work in which you have to judge things by yourself.

Myers Briggs Type Indicator (MBTI): Personality. The purpose of the Myers-Briggs Type Indicator (MBTI) personality inventory is to make the theory of psychological types understandable and useful in people's lives (Kennedy & Kennedy, 2004). The MBTI assessment is a psychometric questionnaire designed to measure psychological preferences in how people perceive the world and make decisions. The individual's responses reflect preferences for extraversion, sensing, feeling, and judging (ESFJ) as well as introversion, intuition, thinking, and perceiving (INTP). The identification and description of the 16 distinctive personality types result from the interactions among the preferences; introversion (focusing on the inner world of ideas and impression), extraversion (focusing on the outer world of people and things), sensing (focusing on the present and concrete information gained from the senses), intuition (focusing on the future with a view toward possibilities), thinking (tending to base decisions on logic and objective analysis of cause and effect), feeling (tending to base decisions on values and subjective evaluation of person-centered concerns), judging (liking a more settled, planned and organized approach to life), and perceiving (liking a more flexible, spontaneous approach to life) (Kennedy & Kennedy, 2004).

CHAPTER 3

CONCLUSION

After the psychological assessment of this individual, it is likely that he or she would need mental health treatment (Falvo, 2009). This treatment would assist this individual in meeting any goals he or she currently has. Mental health treatment would benefit this individual by helping to better manage the disabling conditions for successful education and employment. It may also be a good idea for this individual to seek counseling services as a means to improve self-evaluation and self-concept (Hood & Johnson, 1997). I would also recommend this individual to attend substance abuse support groups to help manage the amphetamine use and to continue going to these groups even after this individual is substance free (Falvo, 2009).

After the vocational assessment, it appears that there may be certain limitations that would suggest that this individual would have an easier time at a job where he/she is able to sit for much of the time at work or where there is flexibility for him/her to alternate between sitting, standing, and walking (Falvo, 2009). This individual should also avoid heavy lifting, climbing, balancing, and so on (Kendall, 2003). As with many occupations, job stress may lead to fatigue. Individuals may experience poor motor speed or decreased processing ability as a result of their condition, which may cause them to feel rushed or stressed when trying to perform tasks (Falvo 2009). Another important issue is communication in the workplace. Communication skills may be affected so alternative means of communicating or job modifications may be necessary (Kendall, 2003).

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APPENDICES

Appendix A

1. Letter-Word Identification: Identifying printed letters and words
2. Reading Fluency: Reading printed statements rapidly and responding with true or false (yes or no)
3. Story Recall: Listening to and recalling details of stories
4. Understanding Directions: Listening to a sequence of instructions and then following the directions
5. Calculation: Performing various mathematical calculations
6. Math Fluency: Adding, subtracting, and multiplying rapidly
7. Spelling: Spelling orally presented words
8. Writing Fluency: Formulating and writing simple sentences rapidly
9. Passage Comprehension: Identify a missing keyword that makes sense in the context of a written passage
10. Applied Problems: Performing math calculations in response to problems presented orally and visually (or by reading)
11. Writing Samples: Writing meaningful sentences for a given purpose
12. Story Recall–Delayed: Recalling previously presented story elements
13. Word: Reading phonically regular non-words
14. Picture Vocabulary: Identifying objects
15. Oral Comprehension Listening Comprehension: Identifying a missing keyword that makes sense in an oral passage
16. Editing Writing Skills: Identifying and correcting errors in written passages
17. Reading Vocabulary: Reading words and supplying appropriate meanings
18. Quantitative Concepts: Identifying math terms and formulae; identifying number patterns
19. Academic Knowledge: Responding to questions about science, social studies, and humanities
20. Spelling of Sounds: Spelling letter combinations that are regular patterns in written English
21. Sound Awareness: Providing rhyming words; removing, substituting, and reversing parts of words to make new words
22. Punctuation and Capitalization: Applying punctuation and capitalization rules

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Major Professor: Dr. William Crimando