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Alcoholism and ADD: A Comparative Study of Male Adults with Alcoholism and Attention Deficit Disorder

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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
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ABSTRACT

A comparative study was conducted to conclude the subtype of alcoholism and ADD/Hyperactivity in adult males. Thirty one diagnosed male alcoholics and thirty one non-diagnosed male adult alcoholics were screened for ADD/Hyperactivity. All sixty two subjects were asked to complete a personal data questionnaire and a brief self-administered form using MHS QuikScore forms, relating to the Conners' Adult ADHD Self-Screening Rating Scale (CAARS-S). The data was statistically analyzed using transformation tables from raw scores to standardized t-scores for equality of means by use of the SPSS Analytical Program.

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COMMITTE IN CHARGE OF CANDIDACY

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

Assistant Professor John Beckenbach, Ed.D

Professional Counselor Meloyde Harris-Juelfs, M.A.

DEDICATION

To my son Isaiah Wesley Bell, who was diagnosed with Attention Deficit Disorder at the age of 4. He has made every day a learning experience, and his life has given me a purpose and has made this thesis a reality.

To my husband Ronald Bell, and my parents Wesley and Elsie Becker, who without them, I could not have achieved my goals.

To my loyal friend Tracy Nelson-Dees, whose wisdom, endurance and encouragement made this thesis possible, through all of her dedication and typing skill. I would not have made it without you.

To Jesus Christ for pushing me forward on this path, when I did not have the courage or patience to continue.

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To John Brodie, for being supportive and providing me the opportunity to become a professional counselor.

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CHAPTER I

INTRODUCTION

The link between Alcoholism and ADD/Hyperactivity among adult males has been explored in numerous studies revealing a positive, though weak, relationship between these two disorders. Evidence indicates that sons of alcoholic fathers show an increased incidence of hyperactivity (Schuckit, Sweeney, & Huey, 1987). Evidence indicates that sons of alcoholic fathers show an increased incidence of hyperactivity (Morrison & Stewart, 1971) and that hyperactive boys may be at increased risk of becoming adult alcoholics (Gittelman, Mannuzza, Shenker, & Bonagura, 1985; Mannuzza, Klein, Bonagura, Malloy, Giampino, & Addalli, 1991). ADD/Hyperactive men appear to be especially at risk if they experience continuing hyperactive symptoms or conduct disorders (Newcorn, Halperin, Jensen, Abikoff, Arnold, Cantwell, et al., 2001; Greensfield, Hechtman, & Weiss, 1988), and who also have a family history of alcoholism. Adult male hyperactivity may be associated with a more severe, highly inheritable form of alcoholism (Goodwin, 1979).

The nature of the relationship between adult hyperactivity and adult alcoholism has not been clearly established. Some researchers have focused on the risk of alcoholism among male adults who were hyperactive as children (Gittelman, Mannuzza, Shenker, & Bonagura 1985; Mannuzza, Klein, Bonagura, Malloy, Giampino & Addalli, 1991). This research has sought to investigate whether ADD/Hyperactive men, because

of their social difficulties, impulsivity and, in some cases, conduct disorder, are more likely to abuse and become addicted to alcohol and/or other drugs when they become adults.

In contrast, other researchers have historically focused on the genetic link between hyperactivity and alcoholism (Cadoret & Gath, 1978; Goodwin, Schulsinger, Heransen, Guze, & Winokur, 1975; Morrison & Stewart, 1973). Researchers have generally relied upon the study of adopted children in an attempt to establish if childhood hyperactivity is a characteristic of children who carry a gene for alcoholism (or addiction in general). Whereas the "at risk" studies sought to establish that hyperactivity led to adult substance abuse, the genetic studies have attempted to show that a common gene underlies both disorders and that childhood hyperactivity is a possible indicator of the presence of an "alcoholic gene"(Goodwin, Schulsinger, Heransen, Guze, & Winokur 1975; Gittelman, Mannuzza, Shenker, & Bonagura, 1985; Greensfield, Hechtman, & Weiss, 1988, Gilligan, S., Reich, T. & Cloninger, C. 1988).

The most promising research distinguishes between different types of alcoholics. Researchers have compared the adult histories of hyperactivity of the respective alcoholic. This research is based on the assumption that different types of alcoholic substance abuse result, from genetic disposition of behavioral temperament (Cloninger, 1987).

Cloninger's (1987) Type I and Type II alcoholism is the most comprehensive example of research on alcoholism. According to Cloninger (1987); Blum, Cull,

Braverman, & Comings (1996), alcoholism does not represent discrete disease, but is associated with polar extreme personality variables, which vary continuously. The three personality variables are Novelty Seeking, Harm Avoidance, and Reward Dependence. It is these personality variables and not the alcoholism, which are inherited.

Statement of Purpose

The purpose of this study defined groups as treatment and non-treatment and was based on the relationship between Attention Deficit Disorder and Hyperactivity (ADD/Hyperactivity). ADD/Hyperactivity was measured by hyperactivity, impulsivity and inattention.

Hypothesis

The null hypothesis is that there are no significant differences in measuring alcoholism and ADD/Hyperactivity between male adults being treated for alcoholism, and male adults which are not being treated for alcoholism. The alternate hypothesis, if accepted, is that there is a significant difference in measuring alcoholism and ADD/Hyperactivity between male adults undergoing treatment for alcoholism, and male adults which are not undergoing treatment for alcoholism.

CHAPTER II

REVIEW OF THE LITERATURE

Attention Deficit Disorder (ADD) refers to a family of related chronic neurobiological disorders that interfere with an individual's capacity to regulate activity level (hyperactivity), inhibit behavior (impulsivity), and attend to tasks (inattention) in developmentally appropriate ways. It has been shown that medication is the only treatment that has been effective (Hunsucker, 1998, 1992). The core symptoms of ADHD include an inability to sustain attention and concentration, developmentally inappropriate levels of activity, distractibility, and impulsivity. Children with ADHD have functional impairment across multiple settings including home, school, and peer relationships. ADHD has also been shown to and peer relationships. ADHD has also been shown to have long-term adverse effects on academic performance, vocational success, and social-emotional development (National Institute of Mental Health).

Children with ADHD experience an inability to sit still and pay attention in class and negative consequences of such behavior. They experience peer rejection and engage in a broad array of disruptive behaviors. These children have higher injury rates. As they grow older, children with untreated ADHD, in combination with conduct disorders, experience drug abuse, antisocial behavior, and injuries of all sorts. For many individuals, the impact of ADHD continues into adulthood (National Institute of Mental Health).

Research shows that ADHD tends to run in families, so there are likely to be genetic influences. Children who have ADHD usually have at least one close relative who also has ADHD. At least on-third of all fathers who had ADHD in their youth have children with ADHD. Even more convincing of a possible genetic link is that when one twin of an identical twin pair has the disorder, the other is likely to have it to. The causes of ADD are not as important as is the treatment. It has been shown that medication is the only treatment that has been effective (Hunsucker, 1988, 1992).

ADD/Hyperactive children have problem areas such as physical, academic, behavioral, emotional and social (Hunsucker, 1992). The Diagnostic and Statistical Manual of Mental Disorders (DSM-IV TR, 2002) (American Psychiatric Associations [APA] 2002) states that seventy-five percent children exhibit combined symptoms of inattention. ADHD affects six percent to nine percent of children and adolescents, and up to five percent of adults. Data suggests that seventy-five percent of ADHD persists into adolescence, and fifty percent into adulthood (Wilens, 1998;DSM-IV TR, 2002). Subjects who were repeat criminal offenders and patients who were undergoing treatment for psychiatric and addictive disorders have been identified as having comorbid ADHD disorders. Comorbid ADHD occurs in approximately twenty-five to thirty percent of certain adolescents with alcohol and other drug use disorder (AODD), and fifteen to twenty-five percent when adolescents reach adulthood. This data suggests that the risk of AODD over an adult life span is twice that of adults without Attention Deficit Disorder/Hyperactivity (Wilens, 1998; Biederman, Wilens, Mick, Milberger, Spencer & Faraone, 1995).

Genetic Research

In a study by Morrison & Stewart (1971), it was concluded that adopted hyperactive children could carry a genetic link, which may be responsible for the observed relationship between childhood hyperactivity and adult alcoholism. They examined the foster parents of thirty-five adopted hyperactive children and compared their history of alcoholism, sociopath and hysteria to those of the previously studied biological parents of hyperactive children. The children in all three groups were predominantly male. The researchers found that the incidence of alcoholism or sociopath was no higher among foster parents of hyperactive children that it was among biological parents of hyperactive children. In contrast, the biological fathers and male relatives of hyperactive children demonstrated significantly more alcoholism than either the biological or adoptive fathers did. No difference in sociopath was reported between the two groups.

Similarly, a genetic link between childhood hyperactivity and adult alcoholism was suggested in a retrospective study of 133 Danish male adoptees study (Goodwin, Schulsinger, Hermansen, Guze, & Winokur, 1975). Goodwin and his colleagues reported that as children, alcoholic adults were more hyperactive, antisocial, disobedient truant and friendless. Ten of the fourteen diagnosed alcoholics in this study had alcoholic biological fathers. Their findings suggested that both childhood hyperactivity and conduct disorder predict adult alcoholism, and that the relationship was genetic.

In another study, Cadoret and Gath (1978), failed to find a significant relationship between alcoholism and heavy drinking among biological parents and subsequent

hyperactivity and/or conduct disorder in adopted children. These findings were based on a study comparing forty-two adult adoptees with an alcoholic biological parent with forty-two matched adoptees without an alcoholic biological parent. Subjects were matched based on age, sex, and age of biological mother at the time of birth, and time spent in foster care prior to permanent placement. The diagnosis of alcoholism was based on records, which indicated that a parent had, or more social or medical complications associated with alcoholism or had been hospitalized for detoxification. Diagnosis of childhood disorders was based on interviews with one or both adopted parents. Because the subjects were adults, these interviews took place many years after childhood.

Cadoret's (1982) adoptee study included the method whereby psychopathology in biologic family members and matched controls was established (Murray Research Center, 1988). The findings were established from the Iowa Children & Family Services and Lutheran Social Services. The research consisted of 460 participating families and was much more intense than the 1978 study. Review of adoption records dating from the years 1939 through 1965 of 1,646 adoptees were obtained from the Iowa Children's and Family Services Agency in Iowa. Records dating from 1938 through 1962 and data collected from 1981 and 1982 came from Lutheran Social Services. Also, data which was collected from 1979 and 1980 from the Lutheran Social Services Antisocial project during 1979 and 1980 were adoption records from the Lutheran Social Services in Iowa was also used, as was the data which was in Cadoret & Gath's (1978) study.

Examinations of the genetic factors which contribute to the etiology of substance abuse were much more detailed and extensive. Telephone interviews, structured questionnaires and interview schedules were given to the adoptees and adoptive parents. The findings of the study were favorable for Cadoret (Murray Research Center, 1982). Participants were found to have biologic family members who displayed problems with alcohol and psychiatric problems.

One possible explanation for the discrepancy between the findings of Goodwin, who based his study on the 133 Danish male adoptees, and those of Cadoret & Gath's (1978) study, is the failure to consider severity of alcoholism and/or typology (Cloninger, 1987). Whereas, in Cadoret's (1982) study, a different approach seemed to work more effectively with adoptees', which would give more favorable results?

Childhood ADHD and the Development of Alcoholism

Studies have examined the extent to which childhood hyperactivity places individuals "at risk" for the development of alcoholism. The following studies have consistently shown that substance abuse and antisocial behavior are characteristics of adults who were hyperactive a children only if they experienced residual symptoms of hyperactivity. In a study of 101 young adult males (ages sixteen to twenty-one) diagnosed hyperactivity children, Gittleman, Mannuzza, Shenker, & Bonagura (1985), found that sixteen percent of the hyperactives, had an ongoing non-alcohol substance abuse disorder. However, twenty-seven percent of the hyperactive males had either conduct disorder or antisocial personality disorder. Further, thirty-one percent of the hyperactive males had Attention Deficit Disorder Disease along with Hyperactivity

(ADD/Hyperactivity). Those with ADD/Hyperactivity demonstrated a significantly higher rate of antisocial/conduct disorder. When subjects with ADD/Hyperactivity were removed from the comparison, there was no significant difference between groups in antisocial/conduct disorder behavior or substance abuse. In almost all cases of individuals with substance abuse, also occurred ADD/Hyperactivity and antisocial/conduct disorder.

In an attempt to replicate these findings, Mannuzza, Klein, Bonagura, Malloy, Giampino, & Addalli (1991), compared ninety-four males who had been diagnosed between 1971 and 1977 with alcoholism and hyperkinetic disorder as children, and then compared them to a group of seventy-eight control subjects. Their findings were similar to those of Gittleman et al., (1985). Subjects who were diagnosed as hyperactive as children but without having ADD/Hyperactivity, there was no significantly higher rate of substance abuse. However, subjects with ADD/Hyperactivity showed significantly higher rates of both antisocial/conduct disorder and substance abuse. Thus, in both of these studies, the drug and alcohol abuse disorder was significantly associated with ADD/Hyperactivity and an ongoing antisocial/conduct disorder.

The researchers (Manuzza et al., 1991, Gittleman et al., 1985) determined that in all cases, the onset of conduct disorder either preceded or coincided with the onset of substance abuse. They concluded that it was the conduct disorder, which accounted for the observed relationship between hyperactivity and substance abuse. They proposed that hyperactive children are "at risk" to develop conduct disorder and that conduct disorder individuals are “at risk" to develop substance abuse problems as adults.

These studies are especially noteworthy because of their controlled designs. The subjects in the hyperactive group had all been diagnosed hyperactive as children, rather than being assigned a diagnosis based on a retrospective report. Furthermore, psychologists who were blind to group membership based the follow-up diagnoses on the National Institute of Mental Health Diagnostic Interview Schedule (Robbins, Helzer, & Croughan, 1981).

In another well designed study, Greenfield, Hechtman and Weiss (1988) reported similar findings. The authors conducted a fifteen year follow-up, in which they compared sixty-one predominantly male subjects, previously diagnosed as hyperactive with forty-one matched controls. Drug and alcohol abuse and antisocial behavior were assessed using Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (American Psychiatric Association [APA], 1988) criteria. Antisocial behavior was further assessed by documented court appearances. The results indicated a slight trend toward increased alcohol abuse among previously diagnosed hyperactive subjects, but no significant differences between hyperactive and control subjects. Likewise, there was a slight but insignificant trend toward increased antisocial behavior on the part of hyperactive subjects.

As in the two previously discussed studies (Manuzza et al., 1991; Gittleman et al., 1985), further analysis of the hyperactive sample revealed two distinct subgroups (Greenfield, Hechtman, & Weiss, 1988), one with moderate or severe ADD/Hyperactivity symptoms; and another with none or only mild ADD/Hyperactivity symptoms. The subgroups with persisting symptoms showed significantly more

antisocial/conduct disorder and substance abuse. Thus, this study joins with the two previously cited studies in implicating the presence of ADD/Hyperactivity to antisocial behaviors and substance abuse. These studies suggest that hyperactive children who "outgrow" their hyperactive symptoms appear to differ very little from normal controls in adulthood.

The association between ADD/Hyperactivity and alcohol abuse is further supported by Wood, Wender, and Reimber (1983). Using structured interviews and questionnaires, they assessed a variety of psychiatric disorders in thirty-three alcoholic male inpatients under the age of forty. They found that these alcoholic males evidenced a significantly higher rate of ADD/Hyperactivity (thirty-three percent of the sample) than would be expected based on childhood prevalence rates.

Hyperactivity Conduct Disorder and a Subtype of Alcoholism

Several researchers have suggested that hyperactivity and conduct disorder are characteristic of a subtype of male alcoholics. As noted earlier, Cloninger (1987) put a comprehensive typology forth. The inheritance patterns associated with Types I and II alcoholism were established in a large scale adoption study conducted in Sweden (Cloninger, Bohman, and Sigvardsson, 1981). The authors examined the alcohol abuse and criminality of 862 Swedish men of known paternity who were adopted by non-relatives between 1930 and 1949. The drinking patterns and criminality of adoptees were compared to that of their biological and adoptive parents. Alcoholism was classified as none, mild, moderate, or severe based on registrations with the local temperance board and records of treatment.

The authors identified two types of alcohol abuse, which had different environmental causes. Moderate alcohol abuse among adoptees was associated with the less common Type II alcoholism in biological parents. This type of alcoholism was found in adoptees whose biological parents had undergone extensive treatments for alcoholism and who had a record of criminality. Type II alcoholism was highly inheritable, even in the absence of alcohol abuse in the adoptive environment.

In contrast, Type I alcoholism, the more common of the two types, was associated with alcoholism without criminality in the biological and adoptive families. Type I alcoholism was labeled "milieu dependent" because it was rarely expressed in the absence of exposure to alcoholism in the adoptive environment (Cloninger, Bohman & Sigvardsson, 1981).

The stability of the underlying personality traits of Novelty Seeking, Harm Avoidance and Reward Dependence, and their utility in predicting adult alcohol abuse based on childhood ratings were established in another study. Cloninger, Sigvardsson, and Bohman (1988) retrospectively evaluated 431 children (233 boys and 198 girls) who had received an extensive behavioral assessment at age eleven. A child psychologist who was blind to adult outcome rated the children on their levels of Novelty Seeking, Harm Avoidance and Reward Dependence. The ratings were then compared to the rates and severity of alcohol abuse at age twenty-seven.

Consistent with Cloninger's (1987) Type I and Type II theory of alcoholism, children scoring at the extremes of these three personality variables were hypothesized to be at higher risk for the development of alcoholism. The results supported their

hypothesis. Children who were rated in the high and low extremes on Novelty Seeking, Harm Avoidance and Reward Dependence demonstrated several times the prevalence of alcohol abuse than those scoring closer to the mean. High Novelty Seeking and low Harm Avoidance, both associated with Type II alcoholism, were especially strong predictors of alcohol abuse. This is not surprising since Type II alcoholism is associated with early onset and would therefore be more prevalent than Type I among twenty-seven year-old subjects. Both of these studies established the utility of Cloninger's (1987) understanding in the nature of alcoholism. Nevertheless, no studies have directly examined the types of alcoholism and hyperactivity in the alcoholics' childhood history.

Several studies have examined the relationship between childhood hyperactivity and other theoretical typologies of alcoholism, which resemble those established by Cloninger. Tarter (1981), distinguished between "Primary" and "Secondary" alcoholics. Like Cloninger's (1987) Type II Alcoholics, Primary alcoholics have an earlier and a more severe from of alcoholism. Tarter found that more Primary alcoholics retrospectively had symptoms of childhood hyperactivity than did secondary alcoholics.

In a retrospective study of seventy-five detoxified male alcoholic inpatients at a private treatment facility, Tarter (1982) found that essential, but not reactive alcoholics reported both high levels of childhood hyperactivity and a family history of alcoholism. Reported symptoms of hyperactivity were also significantly associated with the severity of the drinking behavior as evidenced by self report on the Alcohol Use Inventory . Although well designed, the principal weakness of this study was its reliance on self-reports of childhood behavior many years after childhood. It may be that Essential (Type

II as defined by Cloninger) alcoholics were more prone to report negative childhood symptoms such as those associated with hyperactivity.

Similarly, Alterman, Petraulo, Tarter and McCowan (1982) found that alcoholics who reported a large number of childhood hyperactivity symptoms demonstrated drinking and behavior patterns which resemble those associated with Type II alcoholism. They experienced more severe emotional and physical effects associated with alcohol use, demonstrated more psychopathology on the Minnesota Multiphasic Personality Inventory (MMPI) and were more likely to have a family history of alcoholism than alcoholics reporting few childhood hyperactivity related symptoms. However, in addition to relying on retrospective self-reports, this study had a limited sample size.

In a more comprehensive study, Alterman, Tarter, Baughman, Bober, and Fabian (1985) found that alcoholics who reported more hyperactivity as children had more sociopathology. They compared fifty alcoholic Veterans Administration (VA) patients reporting a high number of childhood hyperactivity symptoms with forty-nine reporting a low number. Consistent with the hypothesis that Type II alcoholism is related to childhood hyperactivity, VA alcoholics with a history of hyperactivity "tended to be more sociopathic and had more interpersonal difficulties, ... and reported less ability to control their impulses to consume alcohol" (Alterman et al., 1985, p. 119).

Other typology studies such as Frances, Timm & Bucky (1980) and McKenna & Pickens (1981), have distinguished between alcoholics with and without a family history of alcoholism. These studies have provided further support for the heredity of Type II

like drinking and behavior patterns, and their possible association with childhood hyperactivity. Frances, Timm & Bucky (1980) conducted a study of over 7,000 Navy enlisted men, and reported that alcoholics with a family history of alcoholism tended to have more antisocial behavior, poorer academic performance, and less stable employment histories. Also, in a sample of middle-class chronic alcoholic inpatients, McKenna & Pickens (1981) reported similar findings. Like Type II alcoholics, those with a family history of alcoholism reported significantly more antisocial behavior (as evidenced by school suspensions and time in jail), earlier onset of drinking, and more severe alcoholism than alcoholics without a family history of alcoholism. The principal weakness of these studies is the reliance on self-reports of familial alcoholism.

Based on the previously discussed adoption study (Goodwin, Schulsinger, Hermansen, Guze, & Winokur, 1975), as well as other studies (Morrison & Stewart, 1973, Goodwin 1979) proposed that the subcategory "familial alcoholism" be characterized by having at least one close relative with alcoholism, early onset of alcoholism, severe symptoms, and a tendency toward antisocial behavior. His description resembles Cloninger's (1987) Type II alcoholism.

The research studies provide evidence for an association between Type II adult alcoholism and a history of childhood hyperactivity. However, these studies did not investigate impulsivity, inattention and hyperactivity separately. Furthermore, the research did not assess the level of ADD/Hyperactivity in the adult alcoholics.

The "at risk" studies have consistently demonstrated that hyperactive children who retain their hyperactive symptoms into adulthood have a significantly increased

incidence of antisocial behavior and alcohol/substance abuse. The behavior of these ADD/Hyperactivity subjects is consistent with, that associated with Type II alcoholism. Thus, these studies support an association between childhood hyperactivity and Type II alcoholism.

These "at risk" studies, also did not address typology of alcoholism. Several of the adoption studies examined hyperactivity in the offspring of alcoholic males, but failed to consider the typology of alcoholism. Of these, only Morrison and Stewart (1972) assessed the alcoholic's history of childhood hyperactivity but did not address the issue of typology of alcoholism. Nor did it examine the currently recognized components of ADD-Impulsivity, Hyperactivity and Inattention (APA, 2002). The adoption study conducted by Cloninger et al., (1982) focused on typology of alcoholism, but did not directly examine hyperactivity.

CHAPTER III

METHOD

Subjects

A total of sixty two male subjects between the ages of 21 and 56 participated in the study. Participants were contacted through the general population and through a drug and alcohol clinical counseling center. The demographic data was collected from a personal data questionnaire, which was prepared by the researcher. The male participants in the treatment group (n=31) ranged in age from 22-56 with a mean age of 35.13, and a SD of 8.73. The non-treatment group (n=31) ranged in age from 21-56 with a mean age of 34.39, and a SD of 9.82.

Question Pre-qualifier

All subjects were given a questionnaire prepared by the researcher, which simply asked "have you ever been in treatment for alcoholism." All of the subjects in the treatment group were at the present time undergoing treatment at a local community counseling center, had been diagnosed as alcoholics. Those in the non-treatment group simply answered that they had never been in treatment of alcoholism.

Personal Data

Each of the packets distributed to participants contained a personal data questionnaire compiled by the researcher. The questions included age, employment, income, marital status, and level of education. Answers were used to compile the demographics of this study.

The Conners' Adult ADHD Self-Screening Rating Scale (CAARS-S)

This study used the Conners' Adult ADHD Self-Screening Rating Scale (CAARS-S) (Conners, Erhardt, Sparrow, 1999) to measure hyperactivity, impulsivity, and inattention. The CAARS-S is a brief self-administered form completed by most people in 10 minutes, and is administered using MHS QuikScore forms. The forms contain transformation tables from raw scores to standardized t-scores. The CAARS-S information section consist of 26 multiple choice questions and contain four subscales. The CAARS-S QuickScore forms contain special aids that make scoring the various scales quick and accurate.

Procedure

Two types of subjects were included in this study. The first sets of questionnaires were distributed to adult male alcoholics who were currently undergoing treatment at a local community clinical counseling center. The second sample, which was non-treatment adult men from the general population, was given questionnaires that identified themselves as never having been treated for alcoholism.

Each questionnaire packet contained a cover letter explaining the purpose of the research study, a personal data questionnaire, the Conners' Adult ADHD Rating Scales (CAARS-S), and for each group a one question pre-qualifier to determine alcoholic or non-alcoholic. The participants were instructed on how to fill out the questionnaires and instructed to return the questionnaires upon completion. Participation in this study was

voluntary, and the cover letter informed the participants that all responses would be kept confidential.

The CAARS Adult ADHD Rating Scales yielded scores on an overall level of symptomatology. ADHD symptoms and the patterning of the symptoms measure: 1.) the ADHD index; 2.) the three DSM-IV ADHD symptom subscales (Inattentive Symptoms, Hyperactivity Impulsive Symptoms, Total ADHD Symptoms); and 3.) the four factor-derived subscales (Inattention/Memory Problems, Hyperactivity-Restlessness, Impulsivity/Emotional Lability, and problems with Self-Concept). The ADHD Index represents a measure of the overall level of ADHD related symptoms.

CHAPTER IV

RESULTS

T-score (percentiles) norms are used to compare the individual's responses to population norms. Normative comparisons are compared by gender and age for a large normative sample. The scores compare adults of the same age range and gender from the normative sample, and are approximate guidelines. High t-scores represent a problem; lower t-scores suggest that the individual does not present particular symptoms. T-scores have a mean of 50 and a standard deviation of 10.

The following analysis examines the data on the Age (AGE) of the subjects, (all subjects were male), Marital Status (MARITAL); and Education (EDU). These dependent variables were examined in relation to the nominal independent variable of diagnosed male alcoholics and non-diagnosed male alcoholics. The results were analyzed, computed and examined using the SPSS analytical test for the dependent variables of the age, marital, and the education of the treatment and non-treatment male alcoholics.

Table 1 illustrates the percentage of age of the male diagnosed alcoholics versus the non-diagnosed male alcoholic. For the male diagnosed alcoholics (n=31), the mean age of the alcoholic group was 35.13, with a SD of 8.728, whereas the non-diagnosed mean age was 34.39 with a SD of 9.824.

Table 1 Frequency Table – Age

	N	Minimum	Maximum	Mean	Std. Deviation
Treatment	31	22	56	35.13	8.728
Non-Treatment	31	21	56	34.39	9.824

Comparatively, there was no significant difference in the ages of the two groups.

Table 2 illustrates the marital status of the two groups. The men in treatment for alcoholism (n=9) 29.0%, stated that they were single, versus the (n=12) 38.7% of the non-treatment alcoholics. As far as being married, (n=12) 38.7% of the treatment alcoholics were married, whereas (n=11) 35.5% of the non-treatment men reported as being married. In contrast the treatment alcoholic reported a (n=7) 22.6% divorce rate, whereas the non-treatment alcoholic report was at a mere (n=3) 9.7% on the same scale.

The treatment alcoholic is showed to have an increase in divorce and an increase in being re-married.

Table 2 Frequency Table of Marital Status

	Sngl	Mrd	Div	Re-mrd
Group	%	%	%	%
Treatment Alcoholic	9	12	7	3
Non-Treatment Alcoholic	12	11	3	2

Table 3 illustrates the education level of the male alcoholics. For the treatment alcoholics, (n=14), 45.2 % reported that they attended some high school, whereas, the non-treatment alcoholic (n=12), 38.7% reported that they had attended some high school. Also, the treatment male alcoholics (n=5) 16.1% were prone to attend Trade School at a higher level, where the non-treatment male, only (n=1) 6.5% attended Trade School. In contrast, the treatment male alcoholic (n=2) 3.2% reported that they had completed a Bachelor's Degree, versus the non-treatment alcoholic (n=2) 6.5% reported that they had completed their Bachelor's Degree.

Thus, the percents were much higher across the boarder on almost each level of education variable for the alcoholic in treatment, except for the earning of a Bachelor's Degree. The treatment alcoholics in this case, seem to be more blue-collar workers.

Whereas, obtaining a Bachelor's Degree among the non-treatment alcoholic was double that of the alcoholics in treatment.

Table 3 Frequency Table of Education

Group	Treatment Alcoholic		Non-Treatment Alcoholic	
Variables	N	%	N	%
Some High School	14	45.2	12	38.7
High School/GED	5	16.1	13	41.9
Some College	6	19.4	3	9.7
Trade School	5	16.1	1	3.2
Bachelor's Degree	1	3.2	2	6.6

Table 4 shows the following variables assessed through an independent t-test, with responses between the treatment and non-treatment alcoholics. ($t = 50$, $p \leq 0.05$). T-test for the Equality of Means include the variables: INATT (Inattention/Memory Problems); HYPE (Hyperactivity-Restlessness); IMPULSE (Impulsivity/Emotional Lability); SELF (problems with Self-Concept); and ADHD (Index represents a measure of the overall level of ADHD related symptoms). The 2-tailed (p) significance level of (0.05) reveals that in this researcher's study, there is no significance between the treatment and non-treatment male alcoholics.

Table 4 Independent t-test for Equality of Means

	Treatment (n=31)		Non-Treatment (n=31)		
Variables	Mean	SD	Mean	SD	t
INNATT	3.29	60	3.32	57	1.23
HYPE	1.71	60	1.71	60	.68
IMPULSE	.35	60	.35	59	.15
SELF	2.81	60	2.81	48	1.08
ADHD	3.29	60	3.29	57	1.08

*Significant @P=.05

Therefore, one can reject the null hypothesis, and that in this research study, there is no mean score difference on the CAARS Self-Report Adult ADHD Rating Scale.

CHAPTER V

DISCUSSION

This study examined the results of the CAARS Attention Deficit Disorder Scale which had been administered to thirty one diagnosed male alcoholics in treatment and thirty one non-diagnosed men who had never been in treatment. The purpose of this study was to investigate the relationship between Alcoholism and Attention Deficit Disorder. Although the study did associate the link between Alcoholism and Attention Deficit Disorder, the data showed no significant difference in Alcoholism and Attention Deficit Disorder between the Treatment and Non-Treatment Alcoholics. The outcomes of the results were the same. Therefore, Alcoholism and Attention Deficit Disorder was associated in both the Treatment and Non-Treatment Alcoholic.

It is important therefore, to screen adults with ADD/Hyperactivity for comorbid disorders. Professionals and paraprofessionals in the field of substance abuse treatment need to be sensitized to the symptoms of ADD/Hyperactivity. In addition, further research needs to explore the incidence of ADD/Hyperactivity among alcoholic males and its implications for treatment.

The present study did not directly examine the risk for ADD/Hyperactivity. Nor did it support the conclusions of the "at risk" studies (e.g., Greenfield, Hechtman & Weiss, 1988) that hyperactive males who retain their symptoms into adulthood are at high risk for alcoholism.

Limitations and Future Considerations

Another important finding of the present research was the failure of the CAARS Self-Report to predict ADD/Hyperactivity with the drinking related behavior. When the sample was divided between diagnosed and non-diagnosed male alcoholic based on the CAARS, the scales showed no significant differences between the diagnosed and non-diagnosed male alcoholic. Because the overall CAARS failed to predict ADD/Hyperactivity and Alcoholism, further studies and refinements are needed before it should be used in the classifications of diagnosis and treatment of clinical populations.

In the interpretation of these findings, several limitations should be noted. All of the variables are self-reported and have not been validated against actual levels of behavior. As such, they lack validity that may be found in more direct behavioral measures. This weakness is further compounded by the lack of insight common among patients who have only been alcohol free for several weeks. Even behaviorally oriented questions (e.g., age of onset) suffer from these self-report limitations.

Furthermore, the assessment of childhood history was entirely retrospective and, may be less reliable than contemporary reports and especially subject to the previously noted lack of insight. Many of the subjects had been abusing alcohol for much of their adult lives and, as such, had difficulty distinguishing their natural behavior from their alcohol-induced behavior.

Consequently, future research could benefit from more direct measures of childhood and adult behavior, including examinations of childhood school or clinical records. This could be accomplished by adding the administration of a measure of

alcoholism identified as part of longitudinal studies of hyperactive adults (e.g., Gittleman et al., 1985).

Finally, the categorization if subjects based on drinking related behavior was based on only two questions. Future research needs to focus on developing measures of alcoholism and ADD/Hyperactivity with more items in order to provide a continuum of scores. A measure which includes more items would enable the researcher to place drinking related behavior on a continuum and exclude fewer subjects. By placing subjects on a continuum, future research would be able to include a greater proportion of alcoholics, making it possible to apply the CAARS Rating Scale to the majority of alcoholics whose behavior does not lie in the extreme.

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APPENDIX A

LETTER TO PARTICIPANTS

Dear Participant:

I am a graduate student at Lindenwood University, St. Charles Missouri. In order to fulfill the partial requirements of a Master of Arts degree in Professional Counseling, I am conducting a comparative research study on the association between Adult Alcoholism and ADD/Hyperactivity.

By completing the enclosed materials, you will be granting me your permission to use your responses in this research study. The packets are completely anonymous and all information is held in the strictest confidence.

Please complete all of the questionnaires in your packet and return them to me upon completion. Your participation and support is greatly appreciated.

Sincerely,

Brechanna C. Bell

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
   6- Bachelor's Degree
   7- Graduate Degree or above

APPENDIX C

PRE-QUALIFYING QUESTIONNAIRE

HAVE YOU EVER BEEN IN TREATMENT FOR ALCOHOLISM?

YES _____

NO _____

APPENDIX D

CONNERS' CAARS-SELF-REPORT: SHORT VERSION (CAARS-S:SV)

CAARS–Self-Report: Short Version (CAARS–S:S)

by C. K. Conners, Ph.D., D. Erhardt, Ph.D., & E. P. Sparrow, M.A.

Name:_____ **Gender: M F** (Circle One)

Birthdate:____/____/____ (Month Day Year) **Age:**_____ **Today's Date:**____/____/____ (Month Day Year)

Instructions: Listed below are items concerning behaviors or problems sometimes experienced by adults. Read each item carefully and decide how much or how frequently each item describes you recently. Indicate your response for each item by circling the number that corresponds to your choice. Use the following scale: 0 = Not at all, never; 1 = Just a little, once in a while; 2 = Pretty much, often; and 3 = Very much, very frequently.

	Not at all, never	Just a little, once in a while	Pretty much, often	Very much, very frequently
1. I interrupt others when talking.	0	1	2	3
2. I am always on the go as if driven by a motor.	0	1	2	3
3. I'm disorganized.	0	1	2	3
4. It's hard for me to stay in one place very long.	0	1	2	3
5. It's hard for me to keep track of several things at once.	0	1	2	3
6. I'm bored easily.	0	1	2	3
7. I have a short fuse/hot temper.	0	1	2	3
8. I still throw tantrums.	0	1	2	3
9. I avoid new challenges because I lack faith in my abilities.	0	1	2	3
10. I seek out fast paced, exciting activities.	0	1	2	3
11. I feel restless inside even if I am sitting still.	0	1	2	3
12. Things I hear or see distract me from what I'm doing.	0	1	2	3
13. Many things set me off easily.	0	1	2	3
14. I am an underachiever.	0	1	2	3
15. I get down on myself.	0	1	2	3
16. I act okay on the outside, but inside I'm unsure of myself.	0	1	2	3
17. I can't get things done unless there's an absolute deadline.	0	1	2	3
18. I have trouble getting started on a task.	0	1	2	3
19. I intrude on others' activities.	0	1	2	3
20. My moods are unpredictable.	0	1	2	3
21. I'm absent-minded in daily activities.	0	1	2	3
22. Sometimes my attention narrows so much that I'm oblivious to everything else; other times it's so broad that everything distracts me.	0	1	2	3
23. I tend to squirm or fidget.	0	1	2	3
24. I can't keep my mind on something unless it's really interesting.	0	1	2	3
25. I wish I had greater confidence in my abilities.	0	1	2	3
26. My past failures make it hard for me to believe in myself.	0	1	2	3