

AN ABSTRACT OF THE THESIS OF

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The purpose of this study was to assess self-concept differences or similarities between children who are diagnosed attention deficit/hyperactivity disorder (ADHD) Predominantly Inattentive, ADHD Predominantly Hyperactive or Combined Inattentive and Hyperactive, and children not diagnosed with ADHD. Data were obtained from 48 children of whom 16 had been diagnosed with ADHD Predominantly Inattentive, 16 had been diagnosed with ADHD Predominantly Hyperactive or Combined, and 16 did not have a diagnosis of ADHD. Two-thirds of the sample were boys and the remaining girls. All children with ADHD had been assessed for at least a year and were being treated for their ADHD via medication and/or therapy. The age range of the sample was 9 to 11 years.

After obtaining parental and child consent for participation in this study, each child was given the Piers-Harris Self-Concept Scale and the Draw-A-Person task. A multivariate analysis of variance was used to assess differences between the three groups on the subtest scores of the Piers-Harris found significance. Significance was found between the three groups on the Perception of School Ability subtest. A Tukey post-hoc procedure revealed that the inattentive group had a significantly lower self-concept than the non-ADHD group on this particular measure. An analysis of variance also showed a significant difference existed between the three groups on the overall scores of the DAP. A Tukey post-hoc test revealed the difference lies between the inattentive and non-ADHD groups. A multivariate analysis of variance assessed differences between the subtest

scores of the DAP and revealed differences existed between the three groups on height of figure. A Tukey post-hoc test indicated the inattentive group members drew their figures smaller than the non-ADHD group. In conclusion, this study indicates children with ADHD (hyperactive or inattentive) who have been treated for at least a year for their ADHD and the children with no ADHD are quite similar in regards to self-concept. The study also shows the inattentive group drew figures significantly smaller than the non-ADHD group. Suggestions for future research include a larger sample size per group, standardization of the DAP, and investigating the effects of treatment on the self-concept of the child with ADHD.

SELF-CONCEPT DIFFERENCES
BETWEEN THE INATTENTIVE AND HYPERACTIVE
ADHD CHILD

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CHAPTER 1

INTRODUCTION

Attention-deficit/hyperactivity disorder (ADHD) and self-concept are topics of discussion today, particularly in the educational arena. Although a great deal of research has been done in these separate areas (Gilberts, 1983; Lahey, Schaughency, Strauss, & Frame, 1984; Maurer & Steward, 1980; Searcy, 1988; Weinhold & Hilferty, 1983), little research has actually investigated if self-concept differences exist between the child with inattentiveness and hyperactivity. This would appear to be a topic of importance since more and more children are being identified as having ADHD (Goldstein & Goldstein, 1990). According to DeQuiros, Kinsbourne, Palmer and Rufo (1994), ADHD is the most prevalent psychopathology of childhood. Kwasman, Tinsley and Lepper (1995) also stated it is the “most common neuro-behavioral problem in children and represents challenges to children, families, schools, and pediatricians with respect to children’s ability to function” (p. 1211).

What is ADHD and how is it identified in an individual? Attention-deficit disorder (ADD) or attention-deficit/hyperactivity disorder (ADHD) is a chronic disorder primarily of children and adolescents, characterized by inattentiveness, impulsivity, and for some patients, hyperactivity. An understanding of this disorder has grown and developed along with its diagnostic name. Health professionals in the 1920s observed children with hyperactive and attention difficulties who were recovering from encephalitis. It was thought that the hyperactive/inattentive behaviors were caused by the encephalitis. Therefore, the diagnostic description, post-encephalitic disorder, was created. Since that time, a growing understanding of what it is and its probable causes have resulted in a

variety of diagnostic descriptions. It has evolved from post-encephalitic disorder to minimal brain impairment to minimal brain dysfunction to hyperkinetic reaction to attention/deficit disorder and finally to its current description: attention-deficit hyperactivity disorder with three types: hyperactive, inattentive and combined (Goldstein & Goldstein, 1990). According to the Diagnostic Statistical Manual-IV (American Psychiatric Association, 1994), impairments in at least two areas (e.g., school and home) as well as the existence of a specific number of symptoms must be present for the diagnosis ADHD (combined, predominantly inattentive or predominantly hyperactive-impulsive type). According to DSM-IV criteria, in order to be classified as ADHD, Predominantly Inattentive Type, the child must have at least six of the following symptoms which have persisted for at least six months to a degree that is maladaptive and inconsistent with developmental level: (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 schoolwork, chores, or duties in the workplace (not due to oppositional behavior or failure to understand instructions); (e) often has difficulty organizing tasks or activities; (f) often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort (such as schoolwork or homework); (g) often loses things necessary for tasks or activities (e.g., toys, school assignments, pencils, books, or tools); (h) is often easily distracted by extraneous stimuli; and (i) is often forgetful in daily activities. In order to be classified as ADHD, Predominantly Hyperactive-Impulsive Type, at least six of the following symptoms must exist and have persisted for at least six months to a degree that

is maladaptive and inconsistent with the child's developmental level: (a) often fidgets with hands or feet or squirms in seat; (b) often leaves seat in classroom or in other situations in which sitting is expected; (c) often runs about or climbs excessively in situations in which it is inappropriate (in adolescents or adults, may be limited to subjective feelings of restlessness); (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; (g) often blurts out answers before questions have been completed; (h) often has difficulty awaiting turn; and (i) often interrupts or intrudes on others (e.g., butts into conversations or games). To be classified as ADHD, Combined Type, both criteria for the ADHD, Predominantly Inattentive and ADHD, Predominantly Hyperactive-Impulsive Type must be met.

How prevalent is this disorder and who does it seem to primarily effect? It is estimated 3% to 5% of children in the United States meet the current diagnostic criteria for ADHD (Elia, 1994; Kwasman et al., 1995; Stoner, Carey, Ikeda, & Shinn, 1994). Barkley (personal communication, May 21, 1996) found this disorder affects boys at least three times the rate of girls, and ADHD crosses all social barriers since it is present in all ethnic groups and social classes.

Investigations into when and to what extent this disorder impacts the lives of children with ADHD show "typically beginning in childhood, symptoms may become manifest at home, school or social settings, frequently leading to academic and social impairments" (Elia, 1993, p. 863). Loof (1990) found "onset is typically by the age of three, although frequently the disorder does not come to professional attention until the child enters distractible situations and are decreased in highly structured and supervised settings"

(p. 863). Other features characteristic of a child with ADHD include obstinacy, stubbornness, negativism, bossiness, bullying, increased mood liability, low frustration tolerance, temper outbursts, low self-esteem, and a lack of response to discipline (Elia, 1993).

In respect to how this disorder affects childrens' ability to function in their environment, "children with this diagnosis typically experience school related difficulties in the areas of academic achievement, including completing assignments, following teacher directions, and mastering basic literacy skills" (Stoner et al., 1994, p. 101). "Over the past decade, numerous studies of hyperactive children's interpersonal difficulties have yielded convincing evidence that these children's social problems are both pervasive and durable, reliably distinguishing them from their contemporaries" (Granger, Whalen, & Henker, 1993, p. 535).

Background on Self-Concept

What is self-concept and does this specifically differ from self-esteem? Several theories of self-concept have developed over the years. William James (1890) is noted for his model of self-concept where self worth/ self-concept is dependent upon abilities and achievements. Since that initial theory, other models have taken in other perspectives. Cooley (1902) looked at self-concept as a reflection of how people feel others perceive them. Later theories took a more multi-dimensional approach to self-concept.

Weinhold and Hilferty (1983) defined self-concept as "an overall theory of self where self-esteem is one component of self-concept" (p. 244). Gilberts (1983) defined self-concept by stating it is an organized, multifaceted, hierarchical, variably stable, developmental and descriptive/evaluative construct and is differentiable from other

constructs. According to Gilberts, (1983), “authors of self-concept tests appear to agree that common ingredients of self-concept include physical, social, personal, family, school, peer and behavioral aspects” (p. 30).

According to these later theories, many factors play a part in the development of a child’s self-concept. It is also important to note children probably begin to develop their own ideas of self worth/self-concept from the day they are born. It is a developmental process where all interactions with the environment play a part in the development of self. Consequently, it is possible that when there are poor interactions between the child and the personal, family and school environment, self-concept is perhaps impaired or negatively affected. Weinhold and Hilferty (1983) stated certain core skills need to be in place for the development of a healthy self-concept. First, the child needs to be accepted by adults, parents, and teachers. Second, the child must have clearly defined limits and third, adults should respect the needs of the child.

Unfortunately, children with behavioral and attention difficulties are likely to have difficulty with all of the above areas. These children are often unaccepted, and they often have difficulty staying within limits. Children with ADHD are also less likely to receive respect due to their behavior. They are often unaccepted by adults, teachers, and parents because they are seen as different and more problematic than their “normal” peers.

Although limits need to be set with these children, it is usually difficult for them to stay within those limits and this causes great frustration and annoyance by those who set them. These children are consistently reprimanded for their behavior and inability to complete tasks, thereby limiting the possibility that their needs will be met when they are expressed. Therefore, the stage is set for the development of an impaired self-concept.

In addition to the interaction effects with peers and adults, the “young child defines himself by concrete abilities, achievements, and physical characteristics” (Searcy, 1988, p. 456). Consequently, if a child has difficulty or impairments in any of these areas, self-concept may be affected. Again, this is supportive of a multi-dimensional approach to self-concept. A child’s assessment of the ability to interact with others, and other achievements play a part in the development of self-concept. Children also tend to compare themselves with same age peers. This comparison process plays a vital part in the formation of a child’s self-concept (Craft & Hogan, 1985).

Review of ADHD and Self-Concept Literature

As previously noted, three diagnostic subtypes currently exist for ADHD according to the DSM-IV (1994): ADHD Predominantly Inattentive Type (code 314.00), ADHD Predominantly Hyperactive-Impulsive Type (code 314.01) and ADHD Combined Type (code 314.01). ADHD Predominantly Hyperactive-Impulsive Type and ADHD Combined Type are similar in that they share hyperactive qualities. Barkley (1995) reported the DSM-IV task force created the Predominantly Hyperactive-Impulsive diagnosis for preschoolers as their behavior is characteristically more active than older children. Therefore, 9, 10, and 11 year olds are more likely to have the diagnosis ADHD, Combined Type.

One current research project on ADHD is investigating whether children with ADHD of the hyperactive and inattentive type share the same disorder with simply different patterns of behaviors or whether they are separate entities with distinguishable psychological and/or behavioral differences. One group of researchers (Quiros, Kinsbourne, Palmer & Rufo, 1994) support the notion that ADHD is one clinical

disorder by stating, “ADD is properly viewed as one disorder, albeit with several distinct patterns of clinical presentations” (p. 318). One way to assess this is by researching these two groups to determine if significant differences or similarities do exist between them on a variety of measures.

Research reveals conflicting results regarding comorbidity issues with the child with inattentive and hyperactive ADHD. Maurer and Stewart (1980) found the inattentive group overlapped with the hyperactive group in the area of conduct disorders. Both groups were found to have a high comorbidity rate with the conduct disorder diagnosis.

Lahey, Schaughency, Strauss and Frame (1984) criticized Maurer and Stewart’s study for identifying the child with hyperactivity/inattentiveness using criteria that were not empirically stringent. In their follow up study, Lahey et al. found no evidence to support Maurer and Stewart’s premise and concluded children with inattentiveness did not have conduct disorders but the children with hyperactivity children did. These studies support differing views on inattentive and hyperactive comorbidity issues with children.

Lahey et al. (1984) found differences between the hyperactive and inattentive groups using a self-concept construct identified by the Piers-Harris Self-Concept Scale. The Piers-Harris measures include self-rated behavior, academic proficiency, self-perceived attractiveness, anxiety, self-perceived popularity, and happiness/satisfaction. Results indicated the children with hyperactivity tended to be more overactive, more aggressive, less popular, less socially withdrawn, and exhibited greater conduct problems as compared to the children with inattentiveness. The children with inattentiveness were found to be more passive. They exhibited no conduct problems, did poorer in school and sports, were more anxious and unhappy, and felt more unattractive. Therefore, although

both groups of children (the inattentive and hyperactive) had comparably low self-concept scores, differences existed between the groups on several self-concept measures. Quiros et al. (1994) also found teachers reported children with inattentiveness as being more sluggish and drowsy as compared to the children with hyperactivity.

Comparing children with ADHD to children without ADHD reveals obvious differences between these groups as well. Slomkowski, Klein and Mannuzza (1995) examined the relationship between low self-concept and children with ADHD as adolescents and concluded, “compared to controls, the hyperactive group had lower self-rated self-esteem, lower interviewer-rated psychosocial adjustment, lower Full Scale IQ, lower educational achievement, lower occupational rank attainment, and more self-rated ADHD symptoms” (p. 309). Therefore, according to this study, self-concept differences existed between the child with ADHD (hyperactive type) and the child who does not have ADHD where children with ADHD score lower in self-concept.

Further support for low self-concepts in children with ADHD is provided by Slomkowski et al. (1995), who stated “it is clear that children with the disorder suffer impairment in many functional areas that extend beyond the prototypical symptoms of the disorder and often include difficulties in fundamental development domains such as academic performance and peer relationships” (p. 304). Slomkowski et al. also expressed the actual symptoms of the original hyperactive syndrome are less problematic relative to other psychosocial outcomes in adolescence. For example, more common complaints among adolescents who had been hyperactive as children include low self-esteem, poor school performance, and poor peer relationships. (p. 304)

A salient feature of the child with ADHD, both the inattentive and hyperactive type, is the prevalence of low self-esteem and self-worth when compared to matched controls. It is probable this low self-esteem exists because of academic difficulties as well as social difficulties within the school and/or home setting. Slomkowski et al. (1995) supported this by stating “it is likely that decrements in performance lead to impaired self-esteem” (p. 314). In conclusion, differences exist between children with hyperactivity and those with inattentiveness on self-concept measures, and both groups of children may or may not share similar types of comorbidity. Research also supports self-concept differences between the child who does not have ADHD and the child with ADHD (particularly the hyperactive).

Review of the Draw-A-Person Literature

Investigators have studied drawings done by children as well as adults since the late 1880s (Harris, 1963). Three primary phases of investigation have transpired. Initially, descriptive investigations of children’s drawings looked at developmental stages. This occurred between 1885 and 1920. In 1926, Florence Goodenough assessed the intellectual component of childrens’ drawings which set the trend towards looking at drawings as indicators of intelligence. Third, the introduction and use of projective techniques in the 1940s allowed for a different perspective regarding the characteristics of drawings. Its focus has been on the intuitive, impressionistic qualities versus the scientific analysis of the drawings (Harris, 1963). Regardless of the perspective or intent, the Draw-A-Person (DAP) or human figure drawing has undergone a great deal of research throughout the years.

In regard to the DAP test’s ability to reveal self-concept, “researchers and

clinicians have posited a relationship between children's human figure drawings and their self-concepts" (Spiga, Mindingall, Long-Hall & Blackwell, 1986, p. 956). Machover (1949) said the human figure drawn by an individual relates intimately to that person's anxieties, conflicts, and compensations via the drawing. It also appears the DAP is useful in obtaining information about an individual by providing an exercise that allows the tester to easily obtain information (Wald, 1989). The drawing process is a non-threatening procedure that provides additional information about an individual. According to Coopersmith, Beardslee, and Coopersmith (1976), "the underlying presumption is that a person will project salient aspects of his own self-image when asked to draw a person" (p. 370).

Coopersmith et al. (1976) completed a construct validity study to determine which characteristics of figure drawings correlated with self-esteem. Fifteen variables were assessed. Those 15 variables were divided into formal, content, and global-interpretation categories. The formal variables included horizontal and vertical placement on paper, eyes, body extension, footing stability, hands, size, and clothing. The content variables included social role, playfulness, affect (positive, intermediate, negative), movement (activity and tension levels), and compensation (through exaggerated size, skill or power). The global-interpretative variables involved ratings of pathology and the "likeableness" of the child. The participants included 97 fifth and sixth grade boys. They were chosen by their responses to the Self-Esteem Inventory (SEI) and a teacher's rating of their self-esteem behavior as shown on the Behavior Rating Form (BRF). Five levels of self-esteem were formed based on the SEI and BRF. These ranged from low-lows to high-highs.

Results revealed the hands were the only formal characteristic to differentiate between

the groups with high to medium self-esteem and those with low self-esteem. High scores were given for realistic looking hands and for the correct number of fingers drawn. The groups with the high and medium behavioral esteem had the highest hand scores while those with low behavioral esteem had significantly lower hand scores. No significant differences were found in regard to size of figure, placement, eyes, body extension, footing and clothing (Coopersmith et al., 1976).

Significant differences were found for affect and social role. The two groups with lower esteem were much more likely to express such negative emotions as sadness, fright, and hostility than the groups with high or medium esteem. According to Coopersmith et al. (1976), the most differentiating features of figure drawings when assessing self-concept involve the figure's hands, affect, and social role in the drawing. This is consistent with Machover's (1949) earlier suppositions regarding the importance of hands, as she stated "the hands are weighted with psychological meanings referring primarily to ego development and social adaptation" (p. 60). Coopersmith et al. concurred by stating "it thus appears that hands which are an important avenue for dealing with the world, are more accurately depicted by persons whose behavior is confident and assured than by persons who are apprehensive and unsure" (p. 372).

Ottenbacher (1981) investigated the relationship of self-concept to body image using the Piers-Harris Self-Concept Scale and drawings of self. Results showed the participants with smaller self-drawings tended to have poorer self-attitudes (Ottenbacher, 1981). This is consistent with other studies which have found the size of the drawing relates to the self-concept, or self-esteem of the individual (Bennet, 1966; Bowdin & Bruck, 1960; Machover, 1949).

In addition, Prytula, Phelps, Morrissey, and Davis (1978) stated, “large figures are taken as evidence of a high energy level of self-esteem; whereas small figures reflect a lowered energy level, low self-esteem” (p. 207). Gordon, Lefkowitz, and Tesiny (1980) used the Goodenough-Harris Draw-A-Person Test for assessing depressive symptoms in children. Structural characteristics of the drawings such as size of figure drawn, vertical placement on page, and intensity of lines were examined. A significant negative relationship was found between size of figure drawn and teacher-rated depression.

Oas (1985) looked specifically at impulsivity as an index to be evaluated by the Draw-A-Person Test. Criteria used for a quick assessment of impulsivity/non-impulsivity included (a) completion time; (b) Harris quality scores less than 36; (c) overlapping lines on at least two of five body parts; (d) reproduction of non-symmetrical figures; (e) lack of details, and (f) the omission of certain features. Results showed 93% of the psychiatric participants, 95% of the school sample, and 100% of the juvenile delinquents were correctly identified using these criteria.

In a study that examined adolescent runaways and their figure drawings, “human figure drawings were identified as sensitive indicators of thoughts and associations, particularly reflective of perceptions of the body image” (Howe et al., 1987, p. 35). This study assessed figure-completion, integrity of line quality and use of color in the drawings. Omissions were “broadly viewed as avoidant techniques that serve to deny or eliminate the anxiety-provoking body-part(s)” (Howe et al., p. 38). The pressure of stroke was associated with level of drive energy. Color responses were measured as the emotional state of the individual indicating depression and emotional impulsivity. Although it is noted that no statistical information was available to support the above

suppositions, the study concluded the human figure drawing test (DAP) can indicate personality factors.

Nvolgi, Maiol, Ferrari, Pala and Chearetti (1989) looked at the self-perception of diabetic individuals as expressed through the Draw-A-Person Test. The directives for the diabetics were to respond to a questionnaire and then draw a picture of a sick person. The questionnaire asked specific questions such as how they dealt with being diabetic. A content analysis was used in evaluating the drawings.

A control group of individuals who were not diabetic was used as a comparison group. The control group tended to draw the “sick person” in the middle of the page, whereas the sick individual drew the “sick person” in the lower part of the sheet. The study concluded with diabetics, the “sick person” drawing indicated depressive self-retreat and self-devaluation (Nvolgi et al., 1989). Again, no statistical information was available to support the stated conclusions.

Glassock (1986) examined youth with disabilities and how their self-concept is expressed in their drawings. This paper commented on the human figure drawings of youth with disabilities. It used interpretative analysis to understand the meaning of the drawings. Glassock (1986) concluded “human figure drawings obtained from adolescents who are hospitalized for illness, reflect the disturbed body-image that they are experiencing” (p. 22).

Draw-A-Person Contraindications

Fu (1981) investigated the relationship between self-concept and figure drawings. The study’s premise was that a low self-concept would be associated with the omission of body parts in the figure drawings. Participants included 9, 10 and 11 year old girls. A

modified version of the Self-Concept Self-Report Scale was used for measuring self-concept. One point was assigned for the presence of the following body parts: head, neck, trunk, arm, hand, leg, and foot. The participants were divided into three groups according to the number of body parts included in the drawing: Group 1 with four or fewer parts, Group 2 five to seven parts, and Group 3 eight or more parts.

Results showed there were no self-concept differences between group one (those with the most omissions) and groups two and three across all three age groups. Therefore, results do not provide consistent support for the hypothesis that omission characteristics of figure drawings correlate with self-concept. Fu (1981) stated one explanation for the group one anomaly is that, “normal children tend not to be emotionally involved in their production of the human drawings” (p. 942). This might explain the low degree of involvement in their figure drawings. Although, this confounds his earlier supposition that low self-concept scores are associated with a greater number of omissions on the DAP.

Purpose of the Study

After reviewing the research, it appears children with ADHD have lowered self-concepts as compared to “normal” same age peers. Research also supports self-concept differences between children with inattentiveness and hyperactivity on several measures. What has not been addressed are self-concept differences as indicated by structural differences on the DAP.

This study investigated two issues. One issue examined self-concept differences between the identified and treated (behaviorally and/or psychotropically) child with inattentiveness, the identified and treated (behaviorally and/or psychotropically) child

with hyperactivity and the child who does not have ADHD via the Piers-Harris Self-Concept Scale. The hypothesis was that children with ADHD (both the inattentive and hyperactive) would have a lower self-concept than children without ADHD.

The other issue examined drawing differences on the DAP among the three above mentioned groups. The hypothesis was that the children with ADHD (both the inattentive and hyperactive) would have smaller drawings than the children without ADHD. By assessing differences and similarities on the DAP, additional information can be gained in regards to understanding differences and similarities between the child with ADHD (Predominantly Hyperactive), the child with ADHD (Predominantly Inattentive), and the child without ADHD.

CHAPTER 2

METHOD

Participants

The participants were 48 children between the ages of 9 and 11. Sixteen children were identified as having ADHD, inattentive type. Sixteen were identified as having hyperactivity either ADHD predominantly hyperactive-impulsive or combined Type, and the remaining 16 children had not been identified as having ADHD symptoms. Boys between the ages of 9 and 11 constituted 62.5% of the participants. Girls between the ages of 9 and 11 constituted the remaining 37.5%. In regards to age, 37.5% were 9 year olds, 37.5% were 10 year olds and 25% were 11 year olds. Of the hyperactive group, 62.5% were 9 year olds and 37.5% were 10 year olds. Of the inattentive group, 12.5% were 9 year olds, 56.3% were 10 year olds and 31.3% were 11 year olds. The control group consisted of 37.5 % 9 year olds, 18.8 % 10 year olds and 43.8% 11 year olds.

Table 1 shows 20% of the children with inattentiveness have a comorbid diagnosis with learning disabilities according to parental report in comparison to the .06% of the children with hyperactivity. Both the inattentive and hyperactive groups used medication as a primary method of treating the ADHD. The hyperactive group had a 100% rate of treatment by medication and the inattentive group had an 80% rate of treatment by medication. The length of time the children have been taking medication for their attention difficulties is also quite similar between the two groups. The average length of use in months for the inattentive group is 28 months. The overall mean length of use for the hyperactive group is 30 months.

The children with ADHD were obtained through a psychologists' private practice

Table 1

Descriptive Characteristics of Children with ADHD

	Inattentive	Hyperactive or Combined
Comorbidity with Tourette's Syndrome	0%	.06%
Comorbidity with Learning Disabilities	20%	.06%
Taking Medication for ADHD	80%	100%
Medication Improves Behavior via Parent Report	100%	100%
Medication Improves Self-Concept via Parent Report	92%	80%
Receiving Therapy at Mental Health Setting for ADHD	33%	20%
Therapy Improves Behavior via Parent Report	80%	100%
Therapy Improves Self-Concept via Parent Report	80%	75%
Receiving "Alternative Treatment" for ADHD	13%	0%
"Alternative" Treatment Improves Behavior via Parent Report	100%	NA
"Alternative" Treatment Improves Self-Concept via Parent Report	66%	NA

office, a mental health facility and three elementary schools. Records from the private practice and mental health facility were available to the examiner due to a professional association with them. Staff from the elementary schools were responsible for identifying and making the initial contact with potential participants due to confidentiality issues.

Children from the elementary schools taking psychotropic medication for ADHD were potential participants for this study. Their parents were asked, via a questionnaire that was taken home by the child along with a letter explaining the study, if their child had been diagnosed with ADHD and if so, if the child could participate in this study. Up to this point, the examiner had no contact with the parents. Only when the examiner received the returned consent forms, did she know who would be participating. To be eligible for participation in the study, it was necessary for the children with ADHD to have been identified for approximately a year and have received some form of behavioral and/or psychotropic treatment. The parents were offered a copy of the finished paper as an incentive for participating in the study.

The children without ADHD were selected from one of the elementary schools. Parental consent to participate in the study was obtained from all participants.

Instruments

Piers-Harris Scale. The Piers-Harris Children's Self-Concept Scale (The Way I Feel About Myself) (PH; Piers & Harris, 1969) is a self-report measure assessing the way children feel about themselves. According to Piers (1984), "self-concept, as assessed by this instrument, is defined as a relatively stable set of self-attitudes reflecting both a description and an evaluation of one's own behavior and attributes" (p. 1).

The test is a unitary measure used to describe the child's global self-concept.

There are six cluster scales: 1) Behavior; 2) Intellectual and School Status; 3) Physical Appearance and Attributes; 4) Anxiety; 5) Popularity; and 6) Happiness and Satisfaction (Piers, 1984). The instrument consists of 80 self-descriptive, declarative statements which describe functioning in the six areas. Items are written at the third grade reading level. The Piers-Harris may be administered individually or in groups. An alternative response item is employed to describe how children feel about themselves most of the time (Piers & Harris, 1969).

The Piers-Harris was standardized on a group of 1,183 school children, Grades 4 through 12, from a public school system in a small town in Pennsylvania. Test-retest reliability ranged from .71 to .77 with a median test-retest reliability of .72 for a four month interval. The internal consistency or homogeneity of the test was judged using the Kuder-Richardson Formula 20. Resulting coefficients ranged from .88 to .93 (Piers, 1984). A split-half procedure corrected by the Spearman-Brown formula was also employed by Piers and Harris (1969) for a portion of their sample. Coefficients ranged from .87 to .90.

The Draw-a-Person Test. Goodenough's (1926) original scoring system created for this test was not used for this study. The researcher specified four characteristics indicative of self-concept supported by research (Coopersmith, Beardslee & Coopersmith, 1976; Gordon et al., 1980; Machover, 1963; Oas, 1985; Ottenbacher, 1981) that was examined and scored. First, the interval data included the affect of the figure drawn. A smiling face would be given a high score of three. A frowning face would be given a low score of one. The higher the score, the greater the self-concept of the child. Second, the height of the figure was measured. The greater the height of the figure, the greater the

self-concept of the child. Third, the time taken to complete the drawing was assessed. A child who spent less time on drawing than another child is hypothesized to have a poorer self-concept. Fourth, the structural characteristics of the hands were assessed where detail and accuracy reflected a higher self-concept. Individual scores for the four characteristics as well as an overall score was obtained for each drawing. The children's overall DAP scores and four variable scores were compared across the three groups to examine any significant differences.

Procedure

Permission was obtained from the Emporia State University Institutional Review Board for the Treatment of Human Subjects. Permission was also necessary from the district's superintendent of schools and the director of both the mental health facility and private practice facility.

The following describes the procedure used for obtaining children with ADHD from the private practice and mental health facility. Records from a private practice in an average sized metropolitan community and a mental health facility from a rural mid-western community were available for selecting the age appropriate children for the study. The parents of the children identified through the private practice and mental health facility were contacted by phone. The parents and their identified children were asked if they would be willing to participate in this study (see Appendix A for consent form). They were told this is a study assessing characteristics of children with ADHD. It was not mentioned that the study would look specifically at self-concept. A copy of the finished study was offered to the parents for their child's participation. If the parents agreed, and their children were eligible to participate, they were told approximately 20 to

25 minutes would be needed for their child to complete the assessment. The assessment took place at the facility where the child completed the initial ADHD assessment. They were told the assessment involves a paper and pencil test and a drawing.

Since the Piers-Harris can be given in a group setting, testing was administered in small groups or individually, depending upon the ability to schedule the children at similar times. A large group room was available for testing the children in each of the facilities. Before beginning the assessment, the children and their parents signed a consent to participate form (see Appendix B). The children were then brought into the group room to begin the assessment while their parent(s) completed the form(s) requesting additional information about their children (i.e., type of medication use, whether they feel the medication has improved their children's behavior and academic performance, how their children feel about themselves and if they have participated in other types of treatment). The parents also indicated if they would like a copy of the study.

Three elementary schools located in an averaged sized mid-western community were also utilized in obtaining children with ADHD. A letter explaining briefly the purpose of the study, parental consent forms, and student consent forms along with the request for additional information were sent home with children in the fourth, fifth and sixth grade who were taking medication during school for attention difficulties. The parents identified whether their children had been diagnosed with attention difficulties with or without hyperactivity. Up to this point, the examiner did not know the names of these children. Upon the signed consent of both the child and the parent(s), the children returned the consent forms and additional information to the principal at the school they

attend or mailed it to the examiner in an enclosed envelope. The examiner contacted the principal after several days in order to schedule a testing time for participating children. The children were tested in groups of four to six.

The children were told there were two parts to the activity. They were first asked to answer questions about how they felt about themselves as accurately as they could. They were told to ask the examiner if they did not understand a question, and it would be explained to them. Every child was provided a number two pencil and a Piers-Harris question sheet. Children worked at evenly spaced chairs around the room. The examiner read each question aloud at which time the children responded. When the children completed the Piers-Harris questionnaire, the examiner took the sheets from them and gave them each an 8 ½ x 11 inch piece of paper. The children were then asked to draw a picture of a person using their number two pencil.

The examiner scored the Piers-Harris Self-Concept scale and trained two master's level art therapists to objectively score the DAP according to the examiner's criteria. The training facilitated consistent and accurate scoring.

In order to obtain the self-concept scores of children who do not have attention difficulties, a local elementary school was utilized to obtain such children. A letter briefly explaining the study and parental and child consent forms were sent home with children who did not have attention difficulties. The principal of the school arbitrarily contacted the parents of 16 children who were either in the fourth, fifth or sixth grade. After several days, the examiner contacted the school's principal to schedule a testing time for the participating children. These children were tested in groups of four to six using the same testing procedures used with the children who have attention difficulties.

They were also assessed at the school site.

Research Design

This study was a correlational study looking at three groups on several measures. One group consisted of children who had been diagnosed inattentive ADHD. Another group had been diagnosed hyperactive ADHD and the third group consisted of children with no diagnosis of ADHD.

The groups were measured on self-concept. They were also measured on characteristics of the Draw-A-Person drawing.

CHAPTER 3

RESULTS

A oneway analysis of variance (ANOVA) was used to analyze the overall Piers-Harris self-concept scores of the control, inattentive, and hyperactive groups. No significant differences were found between the three groups in regard to the Piers-Harris overall self-concept scores. A multivariate analysis of variance (MANOVA) analyzed six subscale measures for the three groups. A significant difference, $F(2,45) = 3.85, p < .05$, was found between the three groups on the intellectual and school status subscale as shown in Table 2. The Tukey post-hoc analysis revealed that the inattentive group had significantly lower self-concept in how they view their school ability/performance than the non-ADHD group. The hyperactive group did not differ from either group. See Table 3 for means and standard deviations.

A composite DAP score was derived from each drawing based upon the four drawing characteristics assessed. A oneway ANOVA was used to analyze the overall DAP scores of the control, inattentive and hyperactive groups. A MANOVA analyzed the four subscales. Table 4 shows significance when comparing the three groups' overall DAP scores, $F(2, 45) = 4.09, p < .05$. A Tukey post hoc test revealed the inattentive group scored lower than the non-ADHD group. The hyperactive group did not significantly differ from either group. The MANOVA performed on the four DAP variables revealed significance only with the height of figure measure, $F(2, 45) = 3.41, p < .05$ (see Table 5). The Tukey post hoc test revealed that the inattentive group scored significantly lower than the non-ADHD group. The hyperactive group did not significantly differ from either group.

Table 2

Multivariate Analysis of Variance for Piers-Harris Subtest Scale Scores

Source	df	SS	MS	F
Behavior				
Groups	2	270.04	135.02	1.59
Error	45	3829.94	85.11	
Intellectual and School Status				
Groups	2	568.67	284.33	3.83*
Error	45	3787.00	84.16	
Physical Appearance and Attributes				
Groups	2	244.54	122.27	1.08
Error	45	5114.94	113.66	
Anxiety				
Groups	2	84.54	42.27	0.60
Error	45	3179.94	70.66	
Popularity				
Groups	2	216.50	108.25	1.13
Error	45	4302.81	95.62	
Happiness and Satisfaction				
Groups	2	103.87	51.94	1.23
Error	45	1889.38	41.99	

*p < .05

Table 3

Descriptive Statistics for Piers-Harris Self-Concept Scale

Variables	Hyperactive		Inattentive		Non-ADHD	
	M	SD	M	SD	M	SD
Behavior	54.44	11.60	54.50	8.49	59.50	6.99
Intellectual and						
School Status	55.00	9.58	54.00	10.11	61.75	7.65
Physical Appearance						
and Attributes	54.50	11.21	54.56	10.26	58.75	10.48
Anxiety	57.19	9.83	55.63	8.24	58.88	6.90
Popularity	47.81	8.72	52.44	12.12	52.19	8.00
Happiness and						
Satisfaction	57.44	6.54	55.19	7.87	58.75	4.61
Piers-Harris						
Self-Concept						
Total score	57.88	11.05	57.75	9.72	63.00	8.99

$n = 16$ for all three groups (hyperactive, inattentive and control)

Table 4

Analysis of Variance for Draw-a-Person Overall Score

Source	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>
Groups	2	50.04	25.02	4.09*
Error	45	275.63	6.13	

* $p < .05$

Table 5

Multivariate Analysis of Variance for Draw-A-Person Subtest Scores

Source	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>
Affect				
Diagnosis	2	0.89	0.44	2.05
Error	44	9.54	0.22	
Hands				
Diagnosis	2	1.52	0.75	0.39
Error	44	85.12	1.93	
Impulsivity				
Diagnosis	2	5.59	2.80	1.86
Error	44	66.11	1.50	
Height of Figure				
Diagnosis	2	16.23	8.11	3.41*
Error	44	104.62	2.38	

* $p < .05$

For interrater reliability on the scoring of the DAP, both raters agreed 97% of the time on the affect measure. Rater agreement for quality of hands was 76%. Rater agreement on height of figure was 100%. No agreement was necessary for time taken to complete drawing as the examiner was responsible for recording it at the time of testing.

According to parent report, 100% of the children with hyperactivity and 80% of the children with inattentiveness were receiving or had received medication for their ADHD (see Table 1). The parents of the children with hyperactivity report 80% have increased their self-esteem, and 100% have improved their behavior at home and at school due to taking medication. The parents of the children with inattentiveness report that 92% have increased their self-esteem and 100% have increased their behavior due to the medication.

Treatment for ADHD via therapy was lower with 20% of the hyperactive group and 33% of the inattentive group receiving therapy solely or in conjunction with treatment by medication. Seventy-five percent of the children with hyperactivity receiving therapy were reported to have increased their self-esteem due to the therapy. One hundred percent are reported to have improved their behavior at home and at school due to the therapy. Eighty percent of the children with inattention receiving therapy were reported to have increased their self-esteem due to the therapy. Results also show that 80% were reported to have improved their behavior due to the therapy.

Treatments other than medication and therapy were used by 13% of the inattentive group and none of the hyperactive group. According to the parents' reports, this form of treatment positively affected the behavior of this group but did not have as strong an impact on their self-concept.

CHAPTER 4

DISCUSSION

The results from this study indicate very few self-concept differences exist between the child with hyperactivity, the child with inattentiveness, and the child who does not have ADHD. Except for the one significant difference between the children with inattentiveness and the children without ADHD on self-perceived school ability, no significant differences between the three groups were found. This runs somewhat contrary to previous research, in that Quiros et al. (1994) found self-concept differences between the three groups on several measures, specifically between the non-ADHD group and the ADHD groups.

One possible difference in results could be explained by the fact that 80% to 100% of the children with ADHD improved their self-concept and behavior due to psychotropic and/or therapy treatment according to their parents' report. This supports the hypothesis that when a child has difficulty interacting with the environment, self-concept is bound to be adversely affected. When children are able to appropriately manage themselves in a socially appropriate fashion, positive interactions are to be expected which help develop a positive self-concept. These children with ADHD who have had treatment for an average of 29 months (approximately 2 ½ years) may have been able to develop positive self-concepts and counteract any earlier negative self-concepts through the continued attention and treatment of their ADHD.

Past research indicates treatment for ADHD improves self-concept. Granger, Whalen and Henker (1993) used observation rating scales to show that after children with ADHD were given medication, identified rates of aggressive, disruptive and non-compliant

behaviors were reduced and the frequency of passive behaviors increased. According to Klein (1993),

placebo controlled studies of mother-child interactions have consistently documented improved social behavior on the part of both mother and child when the latter is treated with methylphenidate. Specifically, when children receive methylphenidate, mothers are less critical, less directive or controlling, and more attentive. (p. 89)

Similar findings were found with the childrens' teachers and peers in regards to improved social interactions. Klein (1993) also stated recent studies have shown academic productivity, academic task involvement, and accuracy significantly improved by administering methylphenidate to children with ADHD.

These previous studies indicate the effectiveness of medications in modifying the central behaviors of ADHD, inattention, hyperactivity, and impulsivity, and also improving social behavior with peers and adults as well. Therefore, the children in this study may have been able to develop positive interactions and relationships with others which in turn positively affected their self-concept.

The analysis of the DAP overall scores indicated a significant difference exists between the inattentive and non-ADHD groups. Additional analysis comparing the four variables found the inattentive participants drew their figures significantly smaller than the non-ADHD group. It is possible this difference exists because of a lower self-concept in the children with inattentiveness. The fact that the Piers-Harris Scale found the inattentive group significantly lower in self-concept than the non-ADHD group on a particular measure gives credence to this hypothesis.

Limitations

The sample size is acceptable for this thesis but for a more powerful or definitive statistical conclusion, a larger sample size would be more appropriate. The small sample size could arbitrarily inflate differences that may or may not exist.

Another consideration when assessing the results is that the DAP scoring method and criteria used for this study have not been standardized in any way. The examiner relied upon previous DAP research in developing the procedure and scoring criteria.

Another limitation to this study is the fact the race of the participants was severely limited. All but .02 % of the children were Caucasian. Social desirability may also be a factor to consider. Due to the nature of the self-report questionnaires, the participants may have answered in a way so as to present themselves in an overly favorable light.

However, the Piers-Harris states it accounts for this through the standardization of its scoring procedure and its two validity scales.

Suggestions for Future Research

Future studies might study children with ADHD who have been either on medication and/or have participated in therapy for their ADHD in comparison to same age peers who have been recently diagnosed and do not have a history of treatment. By researching the self-concept of these two groups, information can be found to support the efficacy of treatment in aiding the development of a positive self-concept in children with ADHD.

Conclusion

Overall, this study indicates children with ADHD (hyperactive and inattentive) who have been treated for at least a year for their ADHD and children with no ADHD are quite similar groups in regards to self-concept. The only difference was the inattentive group

scoring lower in self-concept on the school status measure. This group difference is similar to the group differences on the DAP. The inattentive group scored significantly lower than the non-ADHD group on the overall drawing score and the height of figure measure. Previous research indicates children with ADHD who are treated for their ADHD have improved self-concepts which could explain the group similarities on self-concept in this study as these children have been treated for their ADHD for an average of 2 ½ years.

REFERENCES

- American Psychiatric Association. (1994). Diagnostic and statistical manual of mental disorders (4th ed.). Washington, DC: Author.
- Barkley, R. (1995). Hyperactivity in younger children. ADHD Report, 3, 997-999.
- Buitelaar, J. K., Van Der Gaag, R. J., Swaab-Barneveld, H., & Kuiper, M. (1995). Prediction of clinical response to methylphenidate in children with attention-deficit hyperactivity disorder. Journal of the American Academy of Child Adolescent Psychiatry, 34, 1025-1032.
- Burnett, P. C. (1994). Self-concept and self-esteem in elementary school children. Psychology in the Schools, 31, 164-171.
- Cooley, C. H. (1902). Human nature and the social order. New York: Charles Scribner's Sons.
- Coopersmith, S., Beardslee, B., Coopersmith, A., & Sakai, D. (1976). Figure drawing as an expression of self-esteem. Journal of Personality Assessment, 40, 370-375.
- Craft, D. H., & Hogan, P. I. (1985). Development of self-concept and self-efficacy: Considerations for mainstreaming. Adapted Physical Activity Quarterly, 2, 320-327.
- DeQuiros, G. B., Kinsbourne, M., Palmer, & R. L., Rufo, D. T. (1994). Attention deficit disorder in children: Three clinical variants. Journal of Developmental and Behavioral Pediatrics, 15, 311-319.
- DuPaul, G. J., Barkley, R. A., & McMurray, M. B. (1993). Response of children with ADHD to methylphenidate: interaction with internalizing symptoms. Journal of American Academy of Child Adolescent Psychiatry, 33, 894-903.
- Elia, J. (1993). Drug treatment for hyperactive children. Drugs, 46, 863-871.

- Fu, V. (1981). Analysis of children's self-drawings as related to self-concept. Psychological Reports, 49, 941-942.
- Gadow, K. D., Nolan, E., Sprafkin, J., & Sverd, J. (1995). Developmental and Behavioral Pediatrics, 16, 167-175.
- Gilberts, R. (1983). The evaluation of self-esteem. Family and Community Health, 29-48.
- Glassock, G.T. (1986). Youth and disability: Its effect on the person (Report No. PS 015 783). Kensington, Australia: Foundation for Child and Youth Studies. (ERIC Documentation Reproduction Service No. ED 270 202)
- Gordon, N., Lefkowitz, M. M., & Tesiny, E. P. (1980). Childhood depression and the Draw-A-Person test. Psychological Reports, 47, 251-257.
- Granger, D. A., Whalen, C. K., & Henker, B. (1993). Perceptions of methylphenidate effects on hyperactive children's peer interactions. Journal of Abnormal Psychology, 21, 535-548.
- Grizenko, N., Papineau, D., & Sayegh, L. (1993). Effectiveness of a multimodal day treatment program for children with disruptive behavior problems. Journal of the American Academy of Child Adolescent Psychiatry, 32, 127-134.
- Gurney, P. (1987). Self-esteem enhancement in children: A review of research findings. Educational Research, 29, 130-136.
- Harris, D. B. (1963). Children's drawings as measures of intellectual maturity. New York: Harcourt Brace Jovanovich
- Hechtman, L., Weiss, G., & Perlman, T. (1984). Young adult outcome of hyperactive children who received long-term stimulant treatment.

Journal of the American Academy of Child Psychiatry, 23, 261-269.

Howe, J. W., Burgess, A. W., & McCormack, A. (1987). Adolescent runaways and their drawings. The Arts in Psychotherapy, 14, 35-40.

James, W. (1890). The principles of psychology vol. 1. New York: Henry Holt.

Klein, R.G. (1993). Clinical efficacy of methylphenidate in children and adolescents. L'Encephale, 19, 89-93.

Kwasman, A., Tinsley, B. J., & Lepper, H.S. (1995). Pediatricians' knowledge and attitudes concerning diagnosis and treatment of attention deficit and hyperactivity disorders. Archives of Pediatric Adolescent Medicine, 149, 1211-233.

Klein, R. G. (1993). Clinical efficacy of methylphenidate in children and adolescents. L'Encephale, 19, 89-93.

Lahey, B. B., Schaughency, E. A., Strauss, C. C., & Frame, C. L. (1984). Are attention deficit disorders with and without hyperactivity similar or dissimilar disorders? Journal of the American Academy of Child Psychiatry, 23, 302-309.

Larned, D. T., & Muller, D. (1979). Development of self-concept in grades one through nine. The Journal of Psychology, 102, 143-155.

Looff, D. H. (1990). Recognizing and treating attention deficit disorders in chemically dependent adolescents. Journal of Adolescent Chemical Dependency, 1, 5-30.

Machover, K. (1949). Personality projection in the drawing of the human figure. Springfield, IL: Charles C Thomas.

Maurer, R. G., & Steward, M. A. (1980). Attention deficit without hyperactivity in a child psychiatry clinic. Journal of Clinical Psychiatry, 41, 232-233.

Nvolgi, G., Mario, M., Ferrari, C., Pala, G., & Cheraetti, G. (1989). Diabetes and

illness image: Analysis of diabetic early-adolescents' self-perception through a draw-a-person test. Psychological Reports, *65*, 83-93.

Oas, P. (1985). Clinical utility of an index of impulsivity on the Draw-A-Person test. Perceptual and Motor Skills, *60*, 310.

Ottenbacher, K. (1981). An investigation of self-concept and body image in the mentally retarded. Journal of Clinical Psychology, *37*, 415-417.

Prytula, R. E., Phelps, M. R., Morrissey, E. F., & Davis, S. F. (1978). Figure drawing size as a reflection of self-concept or self-esteem. Journal of Clinical Psychology, *34*, 207-213.

Rapport, M. D., Denney, C., DuPaul, G. J., & Gardner, M. J. (1994). Attention deficit disorder and methylphenidate: Normalization rates, clinical effectiveness, and response prediction in 76 children. Journal of the American Academy of Child Adolescent Psychiatry, *33*, 882-893.

Searcy, S. (1988). Developing self-esteem. Academic Therapy Publications, *23*, 453-460.

Spiga, R., Mindingall, M. R., Long-Hall, C., & Blackwell, M. W. (1986). Effects of differences between self and others' ratings on childrens' human figure drawings. Perceptual and Motor Skills, *62*, 956-958.

Stoner, G., Carey, S. P., Ikeda, M. J., & Shinn, M. R. (1994). The utility of curriculum-based measurement for evaluating the effects of methylphenidate on academic performance. Journal of Applied Behavior Analysis, *27*, 101-113.

Slomkowski, C., Klein, R.G., & Mannuzza, S. (1995). Is self-esteem an important outcome in hyperactive children? Journal of Abnormal Child Psychology, *23*, 303-315.

Vinson, D. C. (1994). Therapy for attention-deficit hyperactivity disorder. Archives of Family Medicine, 3, 445-451.

Wald, J. (1989). Severe head injury and its stages of recovery explored through art therapy. In H. Wadeson, J. Dunkin, & D. Perach (Eds.), Advances in art therapy (pp. 181-203). New York: Wiley

Weinhold, B. K., & Hilferty, J. (1983). The self-esteem matrix: A tool for elementary counselors. Elementary School Guidance and Counseling, 18, 231-251.

APPENDICES

APPENDIX A

Letter and Consent Form for Parent of Child who is Not ADHD

September, 1996

Dear Parents,

I am a graduate student at Emporia State University, Emporia, Kansas. I am designing and conducting a research study to examine different factors about children's lives comparing those with attention-deficit/hyperactivity disorder and those without. This information will help parents, teachers and other professionals who work directly with children plan ways of improving upon factors that influence academic performance. Please note, your child **has not** been identified as having ADHD. This study happens to be comparing those who do not have ADHD against those who do.

I have obtained permission from Barbara Condra, the Assistant Superintendent for Elementary Instruction of the Lee's Summit School District as well as Mary Bartram, the Principal of Greenwood Elementary.

Emporia State University requires I obtain written parental permission for the participating children in my study. Your child, along with all other participating children will be asked to complete a questionnaire as well as a drawing of a person. The questionnaire and the drawing will measure how the child feels about him/herself. It will take approximately 25 minutes of your child's class time.

There are no known discomforts expected from your child's participation in this study. Your child may choose not to answer any question that may make him/her feel uncomfortable in any way. You and your child's participation is voluntary and you or he/she may discontinue your participation at any time.

All information on your child will be totally confidential. Names will not be reported on the questionnaires. Only group results will be used.

Thank you very much for your help and cooperation in this project. If interested in participating, please sign below and return it with your child when he/she comes to school tomorrow. If you have any questions regarding this survey, you may contact me at (816) 623-3156.

Deanna York
Graduate Student
Emporia State University

Mary Bartram
Principal
Greenwood Elementary

I have read and understand the explanation provided to me and agree to allow my child to participate in the study.

Child's Name

Signature of Parent/Guardian

Date: _____

APPENDIX B

Letter and Consent Form for Parent of Child with ADHD

September, 1996

Dear Parents,

I am a graduate student at Emporia State University, Emporia, Kansas. I am designing and conducting a research study to examine different factors about children's lives comparing those with attention-deficit/hyperactivity disorder and those without. This information will help parents, teachers and other professionals who work directly with children plan ways of improving upon factors that influence academic performance.

Emporia State University requires I obtain written parental permission for testing the children in my study. Your child, along with all other participating children, will be asked to complete a questionnaire as well as a drawing of a person. The questionnaire and the drawing will measure how the child feels about him/herself. It will take approximately 30 minutes of you and your child's time.

There are no known discomforts expected from your child's participation in this study. Your child may choose not to answer any question that may make him/her feel uncomfortable in any way. You and your child's participation is voluntary and you or he/she may discontinue your participation at any time.

All information on your child will be totally confidential. Names will not be reported on the questionnaires. Only group results will be used.

Thank you very much for your help and cooperation in this project. Please sign the form below and return it to me. If you have any questions regarding the survey, please feel free to ask me.

Deanna York
Graduate Student
Emporia State University

I have read and understand the explanation provided to me and agree to allow my child to participate in the study.

Child's Name _____

Date: _____

Signature of Parent/Guardian _____

APPENDIX C

Informed Consent Form for Parents of Children With ADHD in Schools

October, 1996

Dear Parents,

I am a graduate student Emporia State University, Emporia, Kansas. I am designing and conducting a research study to examine different factors about children's lives comparing those with attention-deficit/ hyperactivity disorder and those without. This information will help parents, teachers and other professionals who work directly with children plan ways of improving upon factors that influence academic performance.

I have obtained permission from Barbara Condra, the Assistant Superintendent for Elementary Instruction of the Lee's Summit School District as well as Barbara Holder, the Principal of Prairie View Elementary. Both have been extremely helpful in finding children with ADHD in the Lee's Summit school system for this study.

Emporia State University requires I obtain written parental permission for the participating children in my study. Your child, along with all other participating children, will be asked to complete a questionnaire as well as a drawing of a person. The questionnaire and the drawing will measure how the child feels about him/herself. It will take approximately 20 minutes of your child's time during the school day.

There are no known discomforts expected from your child's participation in this study. Your child may choose not to answer any question that may make him/her feel uncomfortable in any way. You and your child's participation is voluntary. You or he/she may discontinue your participation at any time. All information on your child will be totally confidential. Names **will not** be reported on the questionnaires. Only group results will be used.

Please return the two signed consent forms and the completed request for additional information in the return envelope with your child when he/she comes to school tomorrow as I would like to begin the survey next Monday. If you have any questions regarding this study, please feel free to call me at (816) 623-3156. Thank you very much for your help and cooperation in this project.

Deanna York
Graduate Student
Emporia State University

I have read and understand the explanation provided to me and agree to allow my child to participate in the study.

Child's Name _____

Date: _____

Signature of Parent/Guardian _____

APPENDIX D
Student Consent Form

INFORMED CONSENT DOCUMENT
Student Form

The purpose of this document is to inform you about a research study. This information is given so you can decide if you want to participate in the study.

- 1) The purpose of this study is to look at characteristics of children.
 - 2) You will be asked to complete a short questionnaire and to draw a picture of a person. This will take approximately 25 minutes.
 - 3) Your name will never be used on the questionnaires and no one will know how you answer the questions.
 - 4) Even if you agree to participate in the study, you may stop at any time. No one will be angry or punish you if you decide not to complete the questions.
-

I have read the above statements and agree to participate in the study.

Student's Name

Date

APPENDIX E

Additional Information From Parents of Children With ADHD

Additional Information from Parents

- 1. In addition to ADHD, does your child have a diagnosis of Tourette’s syndrome?
___ Yes ___ No
- 2. In addition to ADHD, has your child been diagnosed with any learning disabilities?
___ Yes ___ No
- 3. Does your child take medication for his/her ADHD?
___ Yes ___ No
- 4. Does your child receive therapy from a mental health setting for his/her ADHD?
___ Yes ___ No
- 5. Does your child receive any “alternative” kinds of treatment for his/her ADHD (i.e. vitamin therapy, diet restrictions, etc.)?
___ Yes ___ No

If applicable, complete the following

- 4. How long has your child been taking medication for his/her ADHD?
- 5. Do you feel the medication has improved your child’s performance/behavior at home or at school? ___ Yes ___ No
- 6. Do you feel your child feels better about him/herself and his/her abilities since being on medication? ___ Yes ___ No

If applicable, complete the following

- 7. How long has your child been receiving therapy for his/her ADHD?
- 8. Do you feel the therapy has improved your child’s performance/behavior at home or at school? ___ Yes ___ No
- 9. Do you feel your child feels better about him/herself and his/her abilities since he/she began receiving therapy? ___ Yes ___ No

If applicable, complete the following

- 10. How long has your child been receiving “alternative” treatments?
- 11. What kind of treatments has he/she received?
- 12. Do you feel it has improved your child’s performance/behavior at home and at school? ___ Yes ___ No
- 13. Do you feel your child feels better about him/herself and his/her abilities since receiving these treatments? ___ Yes ___ No

THANK YOU FOR YOUR PARTICIPATION IN THIS STUDY

Would you like a copy of the paper when it is completed?
___ Yes ___ No

If yes, please give your name and phone number so that you can be contacted.

APPENDIX F

Additional Information From Parents of Children With ADHD in Schools

Additional Information from Parents

Does your child have a diagnosis of :

ADHD, with primarily inattentive features; or

ADHD, with hyperactive features.

1. In addition to ADHD, does your child have a diagnosis of Tourette's syndrome?
 Yes No
2. In addition to ADHD, has your child been diagnosed with any learning disabilities?
 Yes No
3. Does your child take medication for his/her ADHD?
 Yes No
4. Does your child receive therapy from a mental health setting for his/her ADHD?
 Yes No
5. Does your child receive any "alternative" kinds of treatment for his/her ADHD (i.e. vitamin therapy, diet restrictions, etc.)?
 Yes No

If applicable, complete the following

6. How long has your child been taking medication for his/her ADHD?
7. Do you feel the medication has improved your child's performance/behavior at home or at school? Yes No
8. Do you feel your child feels better about him/herself and his/her abilities since being on medication? Yes No

If applicable, complete the following

9. How long has your child been receiving therapy for his/her ADHD?
10. Do you feel the therapy has improved your child's performance/behavior at home or at school? Yes No
11. Do you feel your child feels better about him/herself and his/her abilities since he/she began receiving therapy? Yes No

If applicable, complete the following

12. How long has your child been receiving "alternative" treatments?
13. What kind of treatments has he/she received?
14. Do you feel it has improved your child's performance/behavior at home and at school? Yes No
15. Do you feel your child feels better about him/herself and his/her abilities since receiving these treatments? Yes No

THANK YOU FOR YOUR PARTICIPATION IN THIS STUDY

Would you like a copy of the paper when it is completed?

Yes No

If yes, please give your name, address and/or phone number so that you can be contacted.

APPENDIX G

Draw-A-Person Scoring Criteria

Draw-A-Person Scoring Criteria

Circle the appropriate number and total each structural characteristic. After obtaining the subtotals add them together to get the grand total (composite DAP) score.

Affect

- 1 Negative Affect (figure is frowning, looks sad, angry etc.)
- 2 No Affect (figure is neither happy or sad)
- 3 Positive Affect (figure is smiling etc.)

Subtotal=

Hands

- 1 Hands are drawn
- 1 Hands have five fingers per hand
- 1 Hands are clearly defined (not sketchy and hard to see)
- 1 Hands look realistic (are proportional to body)

Subtotal=

Impulsivity (Drawing is completed in ..)

- 1 0-2 minutes
- 2 >2-4 minutes
- 3 >4-6 minutes
- 4 >6-8 minutes
- 5 >8-10 minutes

Subtotal=

Height of figure

- 1 0-2 inches
- 2 >2-3 inches
- 3 >3-4 inches
- 4 >4-5 inches
- 5 >5-6 inches
- 6 >6 inches and up

Subtotal=

Grand Total:

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Deanna York
Signature of Author

12/18/96
Date

Self-Concept Differences Between the
Inattentive and Hyperactive ADHD Child
Title of Thesis/Research Project

Wendy Cooper
Signature of Graduate Office Staff Member

1-6-97
Date Received