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Effects of the Diagnostic Label "ADHD " on Peer Judgment

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EFFECTS OF THE DIAGNOSTIC LABEL "ADHD" ON PEER JUDGMENT

by

Jared Toone

A thesis submitted in partial fulfillment
of the requirements for the degree

of

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(School Psychology)

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ABSTRACT

Effects of the Diagnostic Label “ADHD” on Peer Judgment

by

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Utah State University, 2006

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Diagnostic labels are frequently used with children exhibiting symptoms of learning and behavioral disorders. The effect that such labels have on the labeled children as well as their peers is not completely understood. In the present study, the effects of the label “ADHD” on peer acceptance were examined. Fourth- and fifth-grade boys and girls viewed a video of a peer listening to teacher instruction and working on a worksheet. For half of the participants, the child in the video was labeled as having ADHD, while the other participants were told nothing about the child. After viewing the video, the children responded to a questionnaire assessing the likelihood that they would befriend the peer in the video. An analysis of variance revealed that the label resulted in significantly lower friendship ratings. Gender of the participant was not found to impact peer ratings. These results indicate that parents, professionals, and children need to be educated about the effects that labels may have and that labels need
to be used with caution. Labeled children may also benefit from counseling about how others may respond to their label.
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Comparison of Friendship Activity Scale average ratings by gender for participants who watched the child with the ADHD label to those who watched the child without the ADHD label.
CHAPTER I
INTRODUCTION

Much attention has focused on the effects of diagnostic labels on children. Some believe that labels are beneficial and help professionals communicate with one another, provide a focus for intervention, and increase public awareness of problems. Others feel that such labels have negative consequences for those being labeled such as lowered teacher expectations and poor peer relationships (Bak, Cooper, Dobroth, & Siperstein, 1987; Levin, Arluke, & Smith, 1982; Stinnett, Bull, & Koonce, 1999). These negative perceptions have been confirmed as researchers have studied the effects that labels such as learning disabled, emotionally disturbed, or educable mentally retarded have on teacher, professional, and peer expectations (Foster & Ysseldyke, 1976; Thelen, Burns, & Christiansen, 2003).

One diagnostic label that has received attention is attention-deficit/hyperactivity disorder (ADHD). ADHD is one of the most common psychiatric disorders among children (Willoughby, 2003), and is conservatively estimated to occur in 3%-7% of school-aged children in the United States (American Psychiatric Association, 2000; APA). ADHD is defined by maladaptive and increased levels of inattention and/or hyperactive-impulsive behaviors that occur before the age of seven and that cause impairment in two or more settings (APA). ADHD is a chronic disorder that begins in early childhood and often continues throughout the life of the individual. Three subtypes of ADHD are currently used for classification: predominantly inattentive, predominantly hyperactive-impulsive, and combined (APA).
Researchers who have studied the effects of an ADHD diagnostic label have looked at perceptions of teachers, paraprofessionals, and professionals who work with children with ADHD. Researchers looking at how teachers are influenced by an ADHD label have found mixed results. In one study, teachers rated children with an ADHD label as having more attentional and social problems than children without any label (Koonce et al., 2004). In two other studies, there was no effect for a diagnostic label of ADHD on teacher ratings of attention and behavioral problems (Cornett-Ruiz & Hendricks, 1993; Fairbanks & Stinnett, 1997).

Researchers who have examined professionals' (school psychologists, pediatricians, and social workers) opinions of ADHD have also found mixed results. In one study, physicians were more likely than psychologists to favor the use of psychostimulant medication for children labeled with ADHD (Vivian & O'Leary, 1980). Differences were not seen between physicians and psychologists on the assessment and treatment methods each would use for a child with an ADHD label. Fairbanks and Stinnett (1997) found that psychologists and social workers were more likely than teachers to view positive interventions as acceptable for children labeled with ADHD, while teachers were more likely to rate negative interventions as acceptable for children with an ADHD label.

In addition to the research on professionals' opinions and perceptions of children with certain labels, concern has been raised as to what effect labeling children as having ADHD has on peers' perceptions and reaction toward these children. Currently, the impact of an ADHD label on peers has been examined in only a few studies. In one such study (Cornett-Ruiz & Hendricks, 1993), children viewed a video in which a male child
displayed either normal behaviors or behaviors stereotypical of ADHD. The children participating in the study were told that the child they were watching either had a diagnostic label of ADHD or were not told anything about the child. The researchers found that the ADHD behavior, and not the label, increased the likelihood of negative ratings on a first impression measure, predictions about future success, and evaluation of a written essay.

In two other studies, researchers also evaluated the impact that behaviors typical of ADHD have on peer relationships (Harris, Milich, Corbitt, Hoover, & Brady, 1992; Harris, Milich, Johnston, & Hoover, 1990). In these studies, a "normal" child interacted with a child who the normal peers were either told had behavioral problems consistent with ADHD or were given no expectancy. The results revealed that the participants’ expectancy negatively influenced the children’s relationships in that the normal peers were less friendly towards their partner and talked less with their partner if they were told the child had ADHD.

These previous studies on the effects of a diagnostic label of ADHD have looked primarily at the effect that such a label has on a male rater. Gender has been found to be a factor influencing peer relationships with females generally being more positive in their rating of peers and better able to identify behavioral differences (Warden, Cheyne, Christie, Fitzpatrick, & Reid, 2003; Whalen, Henker, Dotemoto, & Hinshaw, 1983). Given these differences it seems likely that ADHD labels may differentially influence the ratings of peers based on gender.

As only three studies have looked at the effects of an ADHD diagnostic label on peer perceptions, there is an incomplete understanding of peers’ perceptions of children
with ADHD. Therefore, a better understanding of how both male and female children perceive peers labeled as having ADHD is needed to identify if such labels have negative effects on peer relationships. This knowledge may allow us to better understand how an ADHD diagnostic label affects peer perceptions and develop ways to mediate these effects.

The purpose of this study was to evaluate the effects that an ADHD diagnostic label has on peer ratings. In addition, this study investigated if differences exist between males and females in their ratings.
CHAPTER II
REVIEW OF RELATED LITERATURE

Attention Deficit/Hyperactivity Disorder

Attention-deficit/hyperactivity disorder (ADHD) is one of the most common psychiatric disorders among children (Willoughby, 2003), and is conservatively estimated to occur in 3%-7% of school-aged children in the United States (APA). ADHD is defined by maladaptive and increased levels of inattention and/or hyperactive-impulsive behaviors that occur before the age of seven and that cause impairment in two or more settings (APA).

ADHD is a chronic disorder that begins in early childhood and often continues throughout the life of the individual. It is estimated that about 40%-80% of children diagnosed with ADHD will have ADHD into adolescence (Barkley, Fischer, Edelbrock, & Smallish, 1990) and that about 30% will have the disorder into adulthood (Klein & Mannuzza, 1991). Although symptoms of ADHD can continue throughout an individual’s life, the diagnosis of ADHD often does not. The decline of ADHD in adults may be due to the diagnostic criteria for ADHD in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; APA) being developed for school-aged children and not adults, as well as the fact that hyperactive-impulsive symptoms tend to decline with age (Schroeder & Gordon, 2002).

Three subtypes of ADHD are currently used for classification: predominantly inattentive, predominantly hyperactive-impulsive, and combined (APA). According to the DSM-IV (APA) a child needs to experience, for at least 6 months, six or more
symptoms of inattention and/or hyperactivity-impulsively to receive an ADHD diagnosis. Impairment from the symptoms also needs to occur in two or more settings.

Individuals with the inattentive type of ADHD often have problems with distractibility, alertness, arousal, and their ability to focus and sustain attention (Barkley, 1988). Due to these problems, children with the inattentive type of ADHD have difficulties persisting during tasks, especially those that may be boring, tedious, or lengthy. Additionally, these children may not be able to concentrate on tasks that may lead to not completing tasks, an increased number of errors, slower performance, an inability to return to a task once interrupted, and frequent changing of tasks (Schroeder & Gordon, 2002).

Individuals with the hyperactive-impulsive type of ADHD have difficulty controlling and inhibiting inappropriate impulses. Children with the hyperactive-impulsive type of ADHD also have difficulty maintaining the appropriate activity level for situations. Behaviors for these children are governed less by rules. These children tend to display more motor activity, are unable to control behavior, have difficulty stopping a behavior, talk more, and respond too quickly when waiting is required (Schroeder & Gordon, 2002).

Children diagnosed with ADHD typically do not display age-appropriate social skills and have poorer peer relationships than children without ADHD. These problem areas tend to become evident when the child begins elementary school. In elementary school, students are expected to follow socially appropriate rules, sit still, pay attention and participate in activities for longer periods of time (Hersen & Ammerman, 2000). Poor peer relationships are generally due to problems that children diagnosed with
ADHD have with taking turns, interrupting others, and not being able to complete activities (Schroeder & Gordon, 2002).

The various subtypes of ADHD are typically referred to simply as "ADHD." Professionals use this label to communicate the symptoms that an individual may have, which may include any of the symptoms listed above. However, using an ADHD label, may lead to certain expectations about the child that may or may not be accurate.

Diagnostic Labels

Diagnostic labels are frequently used with children and it is important to understand what affect these labels will have on children and their relationship with others. The following section reviews a representative sample of studies on how diagnostic labels influence teachers', professionals', and peers' perceptions of labeled children.

Teachers

Diagnostic labels are typically used in educational settings for children in need of special services. Some feel that the use of such labels is desirable as they help students obtain needed services and promote communication between professionals (Eggert, 1988; Franco, 1982). Although positive aspects of labeling do exist, labeling has been criticized for lowering teachers' expectations (Moberg, 1995; Rolison & Medway, 1985), being harmful to children's self esteem (Jones, 1972), and creating learned helplessness and self-fulfilling prophecies (Burns, 2000; Quicke & Winter, 1994).
One concern with labeling children is how the label may affect teachers’ expectations. Moberg (1995) looked at the influence of a label of “mentally retarded” on 135 special education teachers’ ratings of middle-school children’s academic performance. The teachers rated a student’s performance, who they were told was either normal or mentally retarded, on a sentence completion task. The study found that teachers gave lower scores to labeled children than to unlabeled children. Similar results were found by Rolison and Medway (1985) when they compared the influence of the labels “learning disabled” and mentally retarded on the expectations of teachers. The teachers were presented with written information about the student’s academic history and placement history. The presented information was the same for both conditions with the only variation being the labels. The teachers were then asked to predict the number of times they felt the student would exceed the school district average on achievement tests for the next 20 attempts made by the labeled child. The study found that the teachers had lower expectations for the group labeled as mentally retarded than the group labeled as being learning disabled. The ratings were not compared with a nonlabeled group.

Foster and Ysseldyke (1976) looked at teachers’ expectations towards elementary school children labeled as “emotionally disturbed,” “learning disabled,” or “mentally retarded” as compared to children without a label. The teachers were shown a video of a fourth-grade male taking a test, engaging in perceptual/motor tasks, and playing during free time. Although all the teachers watched the same video, the child’s label varied by group. After viewing the video, the teachers responded to a questionnaire assessing their expectations of the child in areas such as academic skills, activity level,
perceptual/motor development, and personal/social adjustment. The results indicated that teachers held lower expectations in all areas for the labeled children when compared with the nonlabeled child. Although all three labels produced lower expectations, when compared to the emotionally disturbed and learning disabled labels, the mentally retarded label resulted in significantly lower ratings in all areas assessed.

In a recent study, elementary school teachers read vignettes of a male student described as not having a disability or having one of three labels (learning disabled, mild mental retardation, or emotional disturbance; Thelen et al., 2003). The vignettes also included a vague description, common for all groups, about the student (no age or grade) and his behaviors. It was stressed in the vignette that the student was an average male with behaviors typical for his age. The teachers then completed a survey developed to assess interpersonal, behavioral, and academic expectations. Thelen and colleagues found that the labeled student was rated as having more behavioral problems (e.g., problems with law enforcement authorities) as well as academic problems (e.g., held back a year in school) than the student without a label. On the interpersonal domain, which looked at development of peer relationships, the labeled student was rated significantly more favorably on interpersonal, behavioral, and academic expectations than the unlabeled student for all label conditions. The teachers rated the student with an emotional disturbance label lower on interpersonal, behavioral, and academic expectations than the student with a learning disabled or mild mental retardation label.

The finding that labeled children are rated more favorably on interpersonal domains is similar to findings from another study. When assessing acceptance of students' social situations, Foley (1979) found that elementary school children labeled as
mentally retarded were rated more favorably by teachers than children labeled as having a learning disorder or having no label. One possible reason for this is that the label mentally retarded may help peers understand why a mentally retarded peer looks and behaves differently than other peers (Bak & Siperstein, 1986; Foley, 1979; Siperstein, Budoff, & Bak, 1980).

A study conducted by Stinnett and colleagues (1999) not only looked at the influence of a label but also included how gender and race influence raters’ perceptions. Undergraduates enrolled in a teacher education program were given a vignette containing information about an elementary-aged child with behavior problems. This information was held constant for all participants, but gender, race (African American vs. Caucasian), diagnostic label, definition of the disorder (present vs. absent), and educational placement (special education in a self-contained classroom vs. special education with inclusion in regular education classroom) varied between groups. The diagnostic labels used in the study were: behavior disorder (BD), emotional-behavioral disorder (EBD), and serious emotional disorder (SED). The raters then responded to a questionnaire that assessed the likelihood of further behavioral disruptions, likelihood of interpersonal relationship difficulties, and overall adjustment level.

Stinnett and colleagues (1999) found that the children with the SED and EBD labels were rated as being more disruptive than those with the BD label, but this was only observed when the labeled child was Caucasian, not African American, and with the inclusion condition. The authors hypothesized that the difference may be that the SED and EBD labels imply that the child has emotional problems, which could reflect a more debilitating internalizing problem. The authors’ hypothesized that the Caucasian
child may have been seen as significantly more disruptive than their African American peers due to the expectation that minorities have more negative behaviors. Thus the teachers rating the African American child labeled as SED or EBD may have had lower expectations than the teachers rating the Caucasian child labeled as SED or EBD. Gender of the labeled was found to have a moderate effect such that females were rated as more likely to form and keep interpersonal relationships. It was also found that when the definitions of the disorders were not present, children with SED were rated as more disruptive than those with other labels. The difference may be because when definitions are not present, participants must rely upon their own stereotypes of labeled children that may include negative expectations of children labeled with SED.

An additional area that has been looked at is whether regular education teachers and special education teachers are affected differently by diagnostic labels. In a study by Fox and Stinnett (1996), both regular and special education teachers were presented with a vignette describing a male child in elementary school with behavior problems. The vignette was constant for all groups, but the label provided at the end varied. The labels used in this study were conduct disorder (CD), socially maladjusted, SED, and a no-label condition. After reading the vignette, the teachers responded to a questionnaire assessing the child’s likeliness of future behavioral disruptions, difficulties with interpersonal relationships, and overall level of adjustment.

All teachers rated the child labeled as SED as more negative on interpersonal relations than the children with the other labels. There were no other statistically significant differences. The results suggest that labels do not have a uniform effect on judgments of others, but that different areas may be more or less affected by different
labels (Fox & Stinnett, 1996). There were no differences between regular and special education teachers on their ratings of the child in the vignette.

**Professionals**

Research on labeling bias among professionals has found mixed results. In a study discussed earlier on the effects of labels on school-age children on teachers, Fox and Stinnett (1996) also presented school psychologists with vignettes of elementary-aged school children. Each vignette was held constant except for the endings in which three labels were varied: CD, socially maladjusted, and SED. After reading the vignette, the school psychologists responded to a questionnaire assessing the child’s likeliness of future behavioral disruptions, difficulties with interpersonal relationships, and overall level of adjustment. Children labeled as SED were rated more negatively on the likelihood of success in interpersonal relations than children labeled as CD or socially maladjusted. No differences were found related to behavior disruptions or overall adjustment.

Alford and Locke (1984) presented psychologists of varying orientations with brief therapy transcripts that either contained the label of “mental retardation” or a transcript with no label. The psychologists then rated the severity of the psychopathology, preferred treatment choices, as well as the effect of the client’s intelligence on their assessment decisions. The presence of a diagnostic label of mentally retarded resulted in a less severe rating of psychopathology. The label also resulted in treatment choices that were more behavioral and a greater importance was placed on the level of intelligence of the labeled individual in the assessment process.
Fairbanks and Stinnett (1997) looked at how labels influence treatment acceptability. School psychologists, social workers, and school teachers were presented with a written vignette of a third-grade boy displaying disruptive problem behaviors and were told that the child was diagnosed with one of three disorders: ADHD, learning disability, or behavior disorder. The participants were then given a description of either a positive intervention for the child or a negative intervention. The positive intervention consisted of a token economy program and verbal praise, while the negative intervention consisted of time-out from both reinforcement and verbal praise. The results of the study indicated that the label given did not have an effect on ratings of treatment acceptability. The researchers found that the position of the professional did have an effect upon treatment acceptability. Teachers rated the negative intervention as more acceptable compared to school psychologists and social workers who rated the positive intervention as more acceptable.

Berman and Berman (1984) looked at how experience level affected professionals' perception of labeled individuals. First- and second-year social work students and professional social workers were presented a clinical interview of a 31-year-old graduate student. Although the information presented was held constant for all groups, the label presented to each group varied. The clinical interview stated that the client was either "normal" or "psychotic." After reading the interview, the participants were to respond to two questions assessing the client's level of adjustment and prognosis. The researchers found that individuals described as psychotic were rated lower on level of adjustment and prognosis by all participants. It was also found that the participants who had been working longer gave more negative ratings. The researchers
hypothesize that this difference may be due to the increased experience that comes with working longer, which may lead professionals to make quicker judgments based on less information.

Peers

Children with learning and behavior problems often have significant difficulties with peer relationships (Milich & McAninch, 1992). Few classroom peers are willing to indicate that they like these children, and many actively dislike them (Forness & Kavale, 1991). Although it has been shown that behaviors play a role in peers’ reactions to children with learning and behavior problems, other factors, such as diagnostic labels, can also contribute (Bickett & Milich, 1990).

One area that has been researched is how labels can lower peers’ expectations of the labeled individuals. An example of how labels can lower expectations was found when a video of a normal child working on a puzzle was shown to third-, sixth-, and ninth-grade children (Bromfield, Weisz, & Messer, 1986). Half of the participants were told that the child in the video was mentally retarded, while the other half was told nothing about the child. It was found that for sixth- and ninth-grade children, the label affected their ratings such that they felt less of a need to urge the labeled child to persist at the task and perceived effort to be a less important cause of failure.

In another study, discussed earlier, researchers presented high school students, teachers, and college students with a vignette of a male student (no age or grade) without a disability or with one of three labels: learning disability, mild mental retardation, or emotional disturbance (Thelen et al., 2003). The vignette contained a vague description
about the student and his behaviors. The study found that all three groups rated the
labeled student lower on scales measuring interpersonal success than the nonlabeled
student. It was also found that high school students, when compared to both teachers and
college students rated the interpersonal success of the labeled student significantly
lower.

Being labeled has also been found to be associated with protective factors. Bak
and Siperstein (1986) showed fourth- through sixth-grade students a video of a mildly
retarded individual reading aloud. For half of the participants, the child in the video was
labeled as “mentally retarded” and for the other half, no label was used. After viewing
the video, the participants described the child using a list of positive and negative
adjectives. The study found that raters used fewer negative adjectives to describe the
child with the label.

Foley (1979) also found that a label of mentally retarded resulted in more
positive interpersonal ratings by peers. In the study, fourth graders were presented with a
video of a normal child and were told nothing about the child or that the child was
mentally retarded. The children then rated their acceptance of the child in the video.
Foley found that the child labeled as mentally retarded received higher ratings of peer
acceptance than the nonlabeled child.

In another study, Siperstein and colleagues (1980) presented an audiotape
vignette of boys and girls in a spelling bee to fifth- and sixth-grade students. One group
was told that the child on the tape had been found to be mentally retarded by a doctor.
The other group was told nothing about the child on the tape. The participants then
responded to a worksheet that allowed them to choose adjectives to describe the child
and an activity preference scale on which they could list activities they would like to participate in with the child on the tape. The results indicated that the label did not have any detrimental effects on children's attitudes towards mentally retarded children. The authors suggest that in the case of children with mental retardation, the label may help peers to understand a child's poor behaviors and performance (Siperstein et al.). Although the label was found to not have any detrimental effects on the children's attitudes, it was found that boys' ratings towards the labeled child were significantly more negative than were girls' ratings towards the labeled child. No differences were reported for the gender of the labeled child.

ADHD Diagnostic Label

The diagnostic label of interest for this study is ADHD. The research that has been conducted looking at the affect of an ADHD diagnostic label on teachers, professionals, and peers is reviewed below. The review includes all of the studies that were found within each area.

Teachers

Of the studies reviewed looking at the effects of an ADHD diagnostic label, only three were found that involve teachers. Koonce and colleagues (2004) looked at the effect of an ADHD label on perceptions of preservice teachers. The teachers were randomly assigned to either an ADHD label condition or a nonlabel condition. The groups were presented with one of three vignettes via a written case, a video clip, or a written case with a video clip. Half of the members of each condition were told that the
child in the written case or video clip had been diagnosed with ADHD. The remaining half of each group was told nothing about the child. The written case described an elementary school-aged child displaying behaviors typical of children with ADHD, and the video clip showed a male child displaying behaviors typical of a child with ADHD in a classroom. The disruptive behaviors that were displayed on the video and in the written case included talking in class while the teacher provided classwide instruction, fidgety behavior, making fun of others, and engaging in off-task behaviors. After viewing the video and/or reading the vignette, the teachers filled out the Teacher Attitudinal Scale (TAS). The TAS is a measure that consists of 17 items that reflects teachers’ perceptions of attention and social problems.

Koonce and colleagues (2004) found that both the “video-only” and “vignette and video” conditions influenced the ratings such that children in these conditions were labeled as having more social problems, regardless of an ADHD label. This suggests that the stereotypical behaviors of ADHD influence ratings more when they are seen versus just read about. The study also found that children labeled with ADHD were rated as having more attention problems than children not labeled with ADHD across all three conditions. From this study, it appears that when behaviors associated with ADHD are presented to teachers visually rather than as a written vignette, ratings of behaviors are influenced.

Additional studies looking teacher ratings of labeled children have found no effect for the label. Cornett-Ruiz and Hendricks (1993) showed primary education teachers a 4.5-minute video in which a child displayed behaviors stereotypical of ADHD or normal behaviors and was either labeled as having ADHD or noted to be an average
student. The teachers then completed a scale that measured first impressions and predictions of the child’s long-term success. The researchers found that behaviors typical of children with ADHD influenced teacher ratings, with teachers rating first impressions and prediction of future success more negatively for children who displayed symptoms of ADHD than those who did not. However, a label of ADHD had no effect on teachers’ ratings. An additional study, reviewed earlier (Fairbanks & Stinnett, 1997), presented teachers with a vignette describing a third-grade student exhibiting problem behaviors. The vignette was constant in each condition, but diagnostic labels of learning disorder, behavior disorder, and attention deficit disorder as well as the interventions used (verbal praise and a token economy verses time out from reinforcement) for the vignette were varied. The teachers then filled out a measure of the acceptability of school-based behavioral interventions. The results were that labeling had no effect upon teacher ratings of treatment acceptability, although teachers did rate negative interventions as more acceptable than positive interventions for all conditions.

Professionals

Often professionals such as psychologists, physicians, and social workers work with children diagnosed with ADHD. Professionals receive training on aspects of ADHD such as its diagnostic criteria, characteristics, and intervention approaches, although this training varies significantly by profession and even within professionals in the same group. The training that professionals receive may reduce the effect of a diagnostic label upon ratings (Madle, Neisworth, & Kurtz, 1980).

One theory (Cattell, 1957) suggests that because of training some groups are
influenced by an ADHD label, while others are not. Studies have shown that individuals trained on disorders, and given precisely defined behaviors to be observed, as well as behaviorally oriented individuals tend to be less affected by diagnostic labels (Cattell; Madle et al., 1980). Madle and associates evaluated the effect of training on the influence of an ADHD label. College students enrolled in an upper-division child development class were selected and assigned to two groups; one group received training on “hyperactivity” and the rating scale that was to be used (treatment group), and the other group was used as a control group and received no training. Each group viewed a tape of a male child engaging in several school activities and was told that the child was “hyperactive.” These researchers found that individuals in the treatment group gave lower hyperactivity scores to the child in the video compared to individuals in the control group, thus supporting the researchers’ hypothesis that training reduces the effect of a label.

Research on the influence of an ADHD label on professionals has found that different professional groups respond differently to diagnostic labels. A study conducted by Vivian and O’Leary (1984) looked at the effect that an ADHD label has on the approach psychologists and pediatricians take when working with a child. Participants received a survey that included a case description of a 9-year-old child displaying behaviors typical of a hyperactive child. Half of the professionals were told in the description that the child was diagnosed with hyperactivity and the other half were not provided with a diagnosis. No label effects were seen on recommended assessments by psychologists and pediatricians. However, a significant difference did exist between the two groups on the recommendation of psychostimulant medication, such that
pediatricians, when compared with psychologists, recommended medication more frequently when told the child was hyperactive. With regards to assessment, it was found that pediatricians recommended physical examinations and neurological examinations more often than psychologists, and psychologists recommended the use of observations of the child and psychological testing more often than pediatricians.

The label influence upon behavioral treatment approaches has also been studied. In a study reviewed earlier, conducted by Fairbanks and Stinnett (1997), it was found that none of the labels of ADHD, Learning Disability, or Behavior Disorder had an effect on school psychologists’ or social workers’ ratings of treatment acceptability. However, professional position did have an effect upon treatment acceptability with teachers rating the negative intervention as more acceptable compared to school psychologists and social workers who rated the positive intervention as more acceptable. The researchers felt that the differences seen may have been due to the amount of time that teachers interact with children who exhibit externalizing behavioral problems. Perhaps because teachers spend more time with these children in their classrooms they are less tolerant of the behavior and more accepting of interventions that they view as effective.

Peers

An additional area of concern is the potential negative impact of an ADHD label on peer relationships. In a study previously reviewed when looking at the effects of an ADHD label on teachers, Cornett-Ruiz and Hendricks (1993) also looked at the effect of an ADHD label on peer ratings by having elementary school-aged children view a video
clip of a child either displaying stereotypical ADHD behaviors or "normal" behaviors. Regardless of the behavior displayed in the video, before viewing the video tape, the participants were told that the child in the video was either diagnosed with ADHD or was an average student, with a verbal explanation of ADHD given to those children in the ADHD label conditions. After viewing the video tape, the children rated the child in the video on day-to-day interactions with the peers, how well the child would get along with peers, the child's disposition, and predictions about the child's long-term success.

Cornett-Ruiz and Hendricks (1993) found that stereotypical ADHD behavior had a significant negative impact upon peer ratings in all areas assessed. However, no significant effect on peer rating was seen for an ADHD label. One possible explanation for the lack of an ADHD label effect may be due to the authors' explanation of the label to the children. The authors stated that the explanation given may have "minimized the impact of this label in these instructions" by emphasizing that children with ADHD are similar to other children. Another possible reason for no label effect could be due to the phrasing of the questions. The questions on the scale related to "how well this child would get along with peers, the likelihood that the child would complete tasks, and the child's disposition." These areas are good areas to assess, but fail to measure how the respondent would interact with the child and what personal feelings the respondent has towards the labeled child. The lack of effect of an ADHD label may also be due to the fact that actual behaviors are more salient than a label.

Harris and colleagues (1990, 1992) took a different approach to evaluating the influence of an ADHD label upon peer ratings. In the first study (Harris et al., 1990), 40 unacquainted boys in grades 3-6 were put into pairs. Half of the boys were told that their
grade partner was in a special class for children with hyperactive behavior problems. The labeled boys did not know that they were labeled. The boys were then videotaped while playing together and then were asked questions regarding their interaction. The researchers found that compared to the nonlabeled children, the children labeled as hyperactive tended to report that the task they performed was harder and that they were not good at the task. It was also found that the partners of the labeled children were less likely to report that their partners were good at the task. In addition, it was found that for younger children the partners of the labeled children were less friendly towards their labeled peers (e.g., not talking with them).

In a follow-up study, Harris and colleagues (1992) paired half of the boys in their study with normal peers and half with peers with an actual ADHD diagnosis. Half of the normal pairs and half of the ADHD pairs were then told that their partner was in a special class for problem behaviors as well as the ADHD symptoms the child exhibited. The other half of each group was told nothing about their peer. After interacting, the boys responded to a questionnaire inquiring about how well they thought the other boy did during the task, how much they liked the task, how much they liked their partner, and the appropriateness of their partner's behaviors.

It was found that interactions between the children were effected by the ADHD perceivers’ expectations that their peer was hyperactive. The ADHD perceivers were less friendly, talked less, and reported that the task was easier (which may be due to the ADHD perceivers decreased involvement in the task; Harris et al., 1992). The researchers also found that receiving a label of ADHD had several negative effects, even if the child did not know he was labeled with ADHD. Children who had been described
to their peers as having symptoms typical of ADHD reported that they enjoyed the interaction less than their peers, took less credit for good performance, felt that their group did not do as well, and that their peer was “meaner” towards them.

Purpose and Objectives

Diagnostic labels are frequently used with children exhibiting symptoms of learning and behavioral disorders, but the effect that these labels have on children is not fully understood. Some argue that labels are beneficial and help professionals communicate with one another, provide a focus for intervention, and increase public awareness of problems. Others feel that such labels have negative consequences for those being labeled such as lowered teacher expectations and poor peer relationships (Bak et al., 1987; Levin et al., 1982; Stinnett et al., 1999). Researchers have studied the effects that labels such as learning disabled, emotionally disabled, mentally retarded, and ADHD have on teacher, professional, and peer expectations for individuals and have found that, in general, labeled individuals are rated as having poorer peer relations, and negative academic and interpersonal expectations (Foster & Ysseldyke, 1976; Thelen et al., 2003). However, there remains a lack of studies looking at specific disorders such as ADHD and how such a label influences peers’ perceptions.

The purpose of the current study is to evaluate the effects of an ADHD diagnostic label in children on peer ratings. Specifically, peer ratings of children labeled with ADHD will be assessed. Also, the effect of the gender of the rater will be evaluated.
Due to the lack of research on the influence of an ADHD diagnostic label, research looking at the effects an ADHD label will have on children could have important implications for peer relationships. A better understanding of whether or not such a label has a negative influence on peer relationships will allow professionals to develop ways to mediate negative effects if present. For example, education on disorders could be used in schools to help peers better understand what it means to be diagnosed with ADHD. Such education would inform children about disability conditions that may decrease children's reliance on negative stereotypes.

This study will attempt to answer the following questions:

1. How does an ADHD diagnostic label affect peer ratings on a scale measuring behavioral intentions and commitment to befriend a new peer? It is hypothesized that peer ratings of children labeled with ADHD, when compared to a nonlabeled child, will indicate that raters are less likely to befriend a labeled child. This is expected as previous research has found that peers are less likely to befriend a labeled peer than a nonlabeled peer (Bromfield et al., 1986; Harris et al., 1990, 1992; Thelen et al., 2003).

2. Do males and females differ in their ratings of peers with and without ADHD labels? It is hypothesized that females will be more likely to indicate that they would befriend a labeled child than male raters. This is expected as research has shown that males tend to be more critical in their ratings of labeled peers than do females (Siperstein et al., 1980).
CHAPTER III

METHODS

Participants

Participants included 115 grade-school children: 55 females and 60 males. Participants were recruited through one school district, and were selected from the fourth (56%; $n = 144$) and fifth (44%; $n = 129$) grades. This age range was selected because the diagnosis of ADHD typically occurs during elementary school years and fourth and fifth graders would be able to read and comprehend the questionnaire. The mean age of the participants was 10 years old ($SD = .72$). The predominant ethnicity of the participants was reported to be Caucasian (92%; $n = 106$) but also included Hispanic (4%; $n = 5$), African American (3%; $n = 3$), and Native American (1%; $n = 1$).

Instrumentation

Participants used the Friendship Activity Scale (see Appendix A) to rate their perceptions of the child viewed. This scale was developed to measure behavioral intentions and commitment to befriend a new peer (Selman, 1980). The Friendship Activity Scale has been used in many studies to assess acceptance of peers (Bak & Siperstein, 1987; Inderbitzen & Best, 1986; Siperstein & Bak, 1985; Siperstein, Bak & O’Keefe, 1988). The Friendship Activity Scale consists of 17 items scored via a 4-point Likert scale (yes, probably yes, probably no, no) and contains five subscales: helping behaviors, sharing behaviors, physical propinquity, common activities, and intimacy level. The scale was developed through interviews with children in which they revealed
what it meant to be a friend and how they make friends. The scale includes questions such as “I would play with them after school” and “I would lend them a pencil after school.” Scores on the Friendship Activity Scale range from 0 to 68, with a higher score indicating that the participant would be more likely to befriend a peer. The scale does not have a recommended age range, but does have a Flesch-Kincaid grade level of 4.4. The Friendship Activity Scale has been found to have a high internal consistency reliability with a Cronbach’s alpha of .91 (Slininger, Sherrill, & Jankowski, 2000).

Included with the Friendship Activity Scale were questions assessing the participants’ knowledge and experience with ADHD (see Appendix A). The questions asked if the participant had ever heard of ADHD, know what ADHD is, and if they know anybody with ADHD.

In order to be able to describe the sample, demographics were also collected via a short form (see Appendix B). This information was filled out by the children when they responded to the Friendship Activity Scale.

Procedures

Two experimental conditions were included: ADHD label present and ADHD label absent. Gender of the rater was also evaluated. This created four groups: females rating labeled males, females rating nonlabeled males, males rating labeled males, and males rating nonlabeled males.

Participants were recruited through one school district. Consent forms (see Appendix C) were sent home with all fourth- and fifth-grade classrooms in two elementary schools (n = 11). Classroom teachers were given 280 forms to send home, of
which 131 (47%) were returned. Of the returned forms, 115 (41% of all sent home) of them had parental consent to participate in the study. Children who returned the form with parental consent and provided assent (see Appendix D) were allowed to participate in the study. All children who had received parental consent assented to participate. An incentive (e.g., candy, pencil, stickers) was offered for those children who returned their informed consent, whether or not their parents consented to allow them to participate.

Testing was conducted in a separate room within the participating schools. Students who had parental informed consent and had assented to participate were randomly assigned to a condition and were presented a 2-minute video clip portraying a similar-aged male peer. The participants were presented the video in groups of about 6-8 children. Before the clip was shown, students in half of the groups were told that the child in the video had “ADHD.” The other half were told no other information about the child and no label was provided. All children were told that they were going to watch a video of a classroom similar to theirs and that they were going to be watching a male about their same age. The child in the video portrayed typical school activities including listening to a teacher during math instruction and working on a math worksheet. No attempt was made to display specific behaviors associated with ADHD or other problem behaviors as this was not an area of interest for this study. The video was viewed by two school psychologists, who were instructed to look for behaviors that may be associated with ADHD, and it was determined that the child in the video was not displaying such behaviors. Once the participants had viewed the video they were given time to respond to all questions on the Friendship Activity Scale.
CHAPTER IV
RESULTS

Instrument Validation

The Friendship Activity Scale used in this study to evaluate whether participants would befriend a peer has been used in many studies to assess peer acceptance. However, there are little psychometric data available for this measure. In order to evaluate the reliability of the Friendship Activity Scale, Cronbach’s alpha was calculated. The internal consistency reliability for the Friendship Activity Scale was quite high (Cronbach’s alpha = .904). This is consistent with the findings reported by Slininger and colleagues (2000) who a reported Cronbach’s alpha of .91.

Principal factor analysis with a Varimax rotation was used to determine whether the five subscales identified by Siperstein and colleagues (1988), the developer of the Friendship Activity Scale, were supported in this sample. The five-factor solution did not support Siperstein and colleagues’ subscales because there was not a clearly defined set of items matching their subscales. In order to see if having a different number of factors would help clarify the subscales, two-, three-, and four-factor models were run. Similar to the five-factor model, the two- and three-factor models did not give clearly defined factors. The four-factor model however, gave more defined factors. Four factors were initially chosen based on the number of eigenvalues greater than one. This was confirmed to be a sufficient maximum number of factors, given that only 25% of the residuals between the original correlation matrix and the reproduced correlation are
greater than .05, and none are greater than .25 (Johnson, 1998). This indicates that there was no reason to increase the number of factors.

The results of the four-factor solution are shown in Table 1 with all loading of .30 or greater in italicized print. In the four-factor solution, the first factor measures the willingness to participate in common activities with the items including “I would sit next to him on a bus on a fieldtrip,” “I would help him with a class project,” and “I would choose him as a partner in a game.” The second factor measures the level of social intimacy such as “I would invite him to my house” and “I would play with him after school.” The third factor can be described as the level of social interactions with items such as “I would go up to him and say hello” and “I would compliment him on things he does well.” The fourth factor includes items dealing with physical proximity such as “I would stand next to him while waiting in line” and “I would sit next to him in class.”

Three of the factors that were identified are similar to three of the five subscales identified by Siperstein and colleagues (1988), although they do not match on all items. These three factors are physical proximity, willingness to participate in common activities, and level of social intimacy. All items on Siperstein and colleagues’ physical proximity subscale match the items on the fourth factor. As for the “common activities” subscale, only three items overlapped: “talk with during freetime,” “play with during freetime,” and “choose as partner in a game.” Lastly, “level of social intimacy” matched on two of Siperstein and colleagues’ four items: “tell about myself” and “invite home.”

Although a four-factor solution was determined to be the best fit for the data, the interpretation of the factors was not very clear with many items overlapping several factors and some factors having few items. Because of the lack of clarity regarding the
Table 1

*Friendship Activity Scale Items and Item Factor Loading*

<table>
<thead>
<tr>
<th>Friendship Activity Scale item</th>
<th>1 (40.8%)</th>
<th>2 (8.2%)</th>
<th>3 (6.9%)</th>
<th>4 (6.2%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choose as partner in game</td>
<td>0.69</td>
<td>0.27</td>
<td>0.21</td>
<td>0.19</td>
</tr>
<tr>
<td>Share lunch</td>
<td>0.63</td>
<td>0.17</td>
<td>0.19</td>
<td>0.18</td>
</tr>
<tr>
<td>Talk with during free time</td>
<td>0.52</td>
<td>0.17</td>
<td>0.22</td>
<td>0.19</td>
</tr>
<tr>
<td>Lend pencil</td>
<td>0.37</td>
<td>0.25</td>
<td>0.27</td>
<td>0.13</td>
</tr>
<tr>
<td>Help with math</td>
<td>0.34</td>
<td>0.19</td>
<td>0.25</td>
<td>0.15</td>
</tr>
<tr>
<td>Invite home</td>
<td>0.50</td>
<td>0.63</td>
<td>0.08</td>
<td>0.19</td>
</tr>
<tr>
<td>Play with during free time</td>
<td>0.42</td>
<td>0.51</td>
<td>0.16</td>
<td>0.16</td>
</tr>
<tr>
<td>Play with after school</td>
<td>0.23</td>
<td>0.60</td>
<td>0.01</td>
<td>0.20</td>
</tr>
<tr>
<td>Tell about homework</td>
<td>0.00</td>
<td>0.39</td>
<td>0.15</td>
<td>0.05</td>
</tr>
<tr>
<td>Tell about self</td>
<td>0.39</td>
<td>0.49</td>
<td>0.35</td>
<td>0.08</td>
</tr>
<tr>
<td>Say hello</td>
<td>0.34</td>
<td>0.12</td>
<td>0.70</td>
<td>0.26</td>
</tr>
<tr>
<td>Help with a class project</td>
<td>0.69</td>
<td>0.14</td>
<td>0.44</td>
<td>-0.03</td>
</tr>
<tr>
<td>Introduce to friends</td>
<td>0.66</td>
<td>0.15</td>
<td>0.38</td>
<td>0.03</td>
</tr>
<tr>
<td>Compliment</td>
<td>0.24</td>
<td>0.18</td>
<td>0.58</td>
<td>0.06</td>
</tr>
<tr>
<td>Sit next to on bus on field trip</td>
<td>0.75</td>
<td>0.21</td>
<td>0.07</td>
<td>0.32</td>
</tr>
<tr>
<td>Stand next to in line</td>
<td>0.13</td>
<td>0.10</td>
<td>0.16</td>
<td>0.74</td>
</tr>
<tr>
<td>Sit next to in class</td>
<td>0.22</td>
<td>0.25</td>
<td>0.06</td>
<td>0.66</td>
</tr>
</tbody>
</table>

Appropriate factors and number of factors, only the total score was used in the analysis.

Labeling, Gender, and Peer Ratings

The first research question of interest was whether an ADHD diagnostic label affects peer ratings on a scale measuring behavioral intentions and commitment to
befriend a new peer. To evaluate this research question, an analysis of variance (ANOVA) was conducted. Table 2 and Figure 1 contain the average ratings from the Friendship Activity Scale by gender and label condition. The main effect for the label condition, as seen in the ANOVA results in Table 3, is significant with the labeled child receiving significantly lower ratings than the nonlabeled child (see Table 2). The mean difference effect size for the label condition is moderate (Cohen's $d = .50$).

The second research question was whether males and females differ in their ratings of peers both with and without ADHD labels. The results of the ANOVA, as shown in Table 3, indicate that there was no main effect for gender and that the interaction between gender and label was not significant, meaning that males and females did not rate peers significantly different from each other in both the labeled and nonlabeled conditions. The mean difference effect size for gender was clinically nonmeaningful (Cohen's $d = .11$). The mean difference effect sizes for gender within the

| Table 2 |

**Comparison of Friendship Activity Scale Average Ratings by Gender for Participants Who Watched the Child With the ADHD Label to Those Who Watched the Child Without the ADHD Label**

<table>
<thead>
<tr>
<th>Gender</th>
<th>No label mean ($SD$)</th>
<th>Label mean ($SD$)</th>
<th>Total mean ($SD$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>48.8 (10.5)</td>
<td>46.9 (7.1)</td>
<td>47.8 (8.8)</td>
</tr>
<tr>
<td></td>
<td>$n = 28$</td>
<td>$n = 32$</td>
<td>$n = 60$</td>
</tr>
<tr>
<td>Female</td>
<td>51.9 (9.2)</td>
<td>44.7 (8.8)</td>
<td>48.8 (9.6)</td>
</tr>
<tr>
<td></td>
<td>$n = 31$</td>
<td>$n = 24$</td>
<td>$n = 55$</td>
</tr>
<tr>
<td>Total</td>
<td>50.4 (9.9)</td>
<td>45.9 (7.9)</td>
<td>48.3 (9.2)</td>
</tr>
<tr>
<td></td>
<td>$n = 59$</td>
<td>$n = 56$</td>
<td>$n = 115$</td>
</tr>
</tbody>
</table>
Figure 1. Comparison of Friendship Activity Scale average ratings by gender for participants who watched the child with the ADHD label to those who watched the child without the ADHD label.

Table 3

Analysis of Variance

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III sum of squares</th>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Label</td>
<td>595.799</td>
<td>1</td>
<td>595.799</td>
<td>7.462</td>
<td>.007</td>
</tr>
<tr>
<td>Gender</td>
<td>5.215</td>
<td>1</td>
<td>5.215</td>
<td>.065</td>
<td>.799</td>
</tr>
<tr>
<td>Label * Gender</td>
<td>198.196</td>
<td>1</td>
<td>198.196</td>
<td>2.482</td>
<td>.118</td>
</tr>
<tr>
<td>Error</td>
<td>8862.866</td>
<td>111</td>
<td>79.846</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>277460.040</td>
<td>115</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Label and the no-label conditions are clinically meaningful but small (label condition Cohen’s $d = .28$, no-label condition Cohen’s $d = -.32$). Although no statistically significant differences were found, it is interesting that in this sample, females, when compared to males, did give on average, a lower friendship rating to the labeled peer and higher friendship rating to the nonlabeled peer. Based on these results, it appears that females were more impacted by the label than were males.
Although participants in the labeled condition rated peers lower on the Friendship Activity Scale than participants in the unlabeled condition as seen in Table 4, the average item ratings on the Friendship Activity Scale (4-point Likert scale regarding how likely the peer would be to engage in various activities with the child with 1 = “no,” 2 = “probably no,” 3 = “probably yes,” and 4 = “yes”) are close to three, regardless of label condition or gender. Thus, on average, participants indicated that they would be more likely to befriend the child in the video than they would not.

One factor that may be associated with peer ratings of a child labeled as having ADHD could be a child’s previous exposure to ADHD. In order to assess whether this exposure made any difference between rating the labeled peer versus the nonlabeled peer, the children were asked whether they had heard about ADHD, knew what ADHD was, and knew someone with ADHD. Table 5 contains a comparison of participants with respect to their previous exposure to ADHD. Although children were randomly assigned to labeled and nonlabeled groups, children in the labeled group were more likely to have heard about ADHD, $\chi^2 = 11.41$, $df = 1$, $p = .001$, know what ADHD is, $\chi^2 = 5.08$, $df = 1$, $p = .024$, or know someone with ADHD, $\chi^2 = 7.86$, $df = 1$, $p = .005$. Unfortunately, participants answered this question after viewing the video and hearing the term ADHD. Therefore, it is impossible to determine if these differences are really due to more exposure to ADHD or to hearing the term ADHD before viewing the video and answering the questionnaire. The three questions assessing exposure levels to ADHD were asked after the participants had already viewed the video so that participates were not primed on the ADHD label before viewing the video.
Table 4

Comparison of Friendship Activity Scale* Average Item Ratings by Gender for Participants Who Watched the Child With the ADHD Label to Those Who Watched the Child Without the ADHD Label

<table>
<thead>
<tr>
<th>Gender</th>
<th>No label mean (SD)</th>
<th>Label mean (SD)</th>
<th>Total mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>n = 28</td>
<td>n = 32</td>
</tr>
<tr>
<td>Male</td>
<td>2.9 (0.62)</td>
<td>2.8 (0.42)</td>
<td>2.8 (0.52)</td>
</tr>
<tr>
<td>Female</td>
<td>3.1 (0.54)</td>
<td>2.6 (0.52)</td>
<td>2.9 (0.57)</td>
</tr>
<tr>
<td>Total</td>
<td>3.0 (0.58)</td>
<td>2.7 (0.46)</td>
<td>2.8 (0.54)</td>
</tr>
<tr>
<td>n = 59</td>
<td>n = 56</td>
<td>n = 55</td>
<td></td>
</tr>
</tbody>
</table>

*aLikelihood to befriend: 1 = “no,” 2 = “probably no,” 3 = “probably yes,” 4 = “yes.”

Table 5

Comparison of Participants Who Watched the Child With the ADHD Label to Those Who Watched the Child Without the ADHD Label

<table>
<thead>
<tr>
<th></th>
<th>No label</th>
<th>Label</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n yes</td>
<td>n yes</td>
</tr>
<tr>
<td></td>
<td>(%) yes</td>
<td>(%) yes</td>
</tr>
<tr>
<td>Heard about ADHD</td>
<td>12</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>(30)</td>
<td>(70)</td>
</tr>
<tr>
<td>Know what ADHD is</td>
<td>7</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>(30)</td>
<td>(70)</td>
</tr>
<tr>
<td>Know someone with ADHD</td>
<td>5</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>(24)</td>
<td>(76)</td>
</tr>
</tbody>
</table>
Diagnostic labels are frequently used with children to help professionals communicate with one another and to provide a focus for interventions. One disorder that is commonly diagnosed in children is ADHD. It is important to understand the effect that a label such as ADHD may have on a child’s interaction with others as this may impact their social relationships. Because of a lack of empirical data in this area, there is not a consensus on whether labels have a negative affect on peer relationships. The purpose of the current study was to evaluate whether children are less likely to indicate that they would befriend a peer labeled as having ADHD as compared to a nonlabeled peer.

To assess whether school-aged children’s friendship ratings of a peer are affected by whether the peer is labeled as having ADHD, participants viewed a video displaying a typical classroom with students at a similar age level. The participants were directed to focus on one male in the video. Half of the participants were told that the male in the video had ADHD and the other half of the participants were told nothing about the male in the video. The participants then responded to a 17-item questionnaire, the Friendship Activity Scale, assessing their acceptance of the peer and the likelihood of befriending him.

Little psychometric data are available for the Friendship Activity Scale. Because of this, the internal consistency reliability and the factor structure of this measure were evaluated with the current sample. The Friendship Activity Scale was found to have high
internal consistency reliability in this sample. However, the five subscales developed by
the authors of the scale (Siperstein et al., 1988) were not supported. Instead, a four-
factor solution best fit the data. The four factors included willingness to participate in
common activities, social intimacy, social interactions, and physical proximity. It may
be that Siperstein and colleagues' five subscales were not replicated because there is no
indication that they used factor analysis to develop the subscales. Instead, the items on
the Friendship Activity Scale were developed to fit into five areas that Selman (1980)
felt were important areas of friendship. Perhaps the scale should not be considered a
multidimensional scale and is best thought of as a unidimensional scale because the
scale itself does not have many items. For this reason, only the total score was used in
this study.

In answering the research questions of this study, it was found that school-aged
children indicated that they would be less likely to befriend a peer with an ADHD
diagnostic label than a child without a label. This result was both statistically significant
and clinically meaningful. Although in this study, it was observed that females did give
on average, when compared to males, a lower friendship rating to the labeled peer and
higher friendship rating to the nonlabeled peer, there was not a significant interaction
between gender and label, nor was there a significant main effect for gender. The
nonsignificance of the gender main effect is at odds with previous findings that females
tend to be more positive in their ratings of peers (Warden et al., 2003; Whalen et al.,
1983). This may be because the present study is specific to the ADHD label. Despite
statistical nonsignificance, females were more positive in rating the nonlabeled peer than
they were the labeled peer (clinically meaningful although small). This finding may
indicate that females are less tolerant than males of the symptoms associated with an 
ADHD label, and are less likely to want to befriend an ADHD labeled peer compared to 
a nonlabeled peer.

The finding that the ADHD label negatively impacted peer ratings has important 
implications. Currently, diagnostic labels are used to help professionals communicate 
with one another, provide a focus for intervention, and increase public awareness of 
problems (Bak et al., 1987; Levin et al., 1982; Stinnett et al., 1999). Professionals, 
teachers, and parents need to be educated about how their use of labels may have a 
negative affect on peer interactions with labeled children and how labels need to be used 
with caution. The negative effects labels have may also be mediated by educating 
children about ADHD as well as other disorders. Education has been found to reduce the 
negative effects of labels (Madle et al., 1980). Also knowing that children with a label 
are treated differently than nonlabeled peers, indicate that labeled children may benefit 
from counseling about how peers may respond to their label and how they should 
interact with their peers.

Other researchers have also found that labels can have a negative impact on peer 
ratings. Thelen and colleagues (2003) found that peers rated labeled peers lower on 
scales measuring interpersonal success than nonlabeled peers. Broomfield and 
colleagues (1986) found that peers, after watching a video of a labeled and nonlabeled 
peer working on a task, reported that they felt less of a need to urge the labeled peer to 
continue working when compared to the nonlabeled peer. When examining how peers 
interacted with a child labeled as having ADHD, Harris and colleagues (1990, 1992)
found that peers were less friendly, talked less, and were less likely to report that the labeled peer was good at a task they were performing.

Although it was found in this study that labeled children received lower peer ratings than nonlabeled peers, other research (Cornett-Ruiz & Hendricks, 1993) has shown that peer ratings may not be affected by an ADHD diagnostic label. One possible explanation for no label effect could be that Cornett-Ruiz and Hendricks may have minimized the impact of the label such as emphasizing that children with ADHD are similar to other children. In contrast, the children in the present study were only told that the child in the video had ADHD. No other information about the disorder was provided as the goal of the study was to assess the influence of the diagnostic label by itself. These variances in how the diagnostic label was introduced to the participants may explain the varying results between the two studies.

Limitations of the present study should be considered when evaluating the results and planning future studies. One concern for this study is that peer ratings may not be indicative of how participants may truly treat their peers. Research has shown that individuals tend to rate their behaviors more positively than their actual behaviors (Pepler & Craig, 1998). Participants may feel they should always interact positively with others, but this may not be how they truly act. This implies that participants may be less likely to befriend peers in a natural setting than they indicated they would after viewing the video, whether this is more evident in the labeled condition compared to the nonlabeled condition cannot be addressed without further research. It could be hypothesized that this discrepancy would be most evident for the children who rated the labeled child, thus our results would still hold. However if the discrepancy between
questionnaire ratings and actual behavior is more evident in nonlabeled peer ratings compared to labeled peer ratings, the label effect could potentially be negated.

Problems could also exist in the use of a contrived setting where the participants viewed the peer via a video clip. Actual settings would vary much more and would potentially influence how a labeled peer was viewed. However, Harris and colleagues (1990, 1992) looked at how labels affect actual interactions and found results in line with the present study such that an ADHD label does influence how peers interact with labeled children. It was found that peers were less friendly towards labeled children. Although similar results were observed, we are not able to compare a "contrived" setting friendship rating with a "natural" setting friendship rating. Perhaps a natural setting would result in significantly lower friendship ratings given that participants in the contrived setting tend to give more socially desirable and positive ratings (Pepler & Craig, 1998).

An additional area of weakness that should be considered is responder bias. Children in the target age group were given permission slips to take home to their parents to sign and return. Approximately 47% of the permission slips that were sent out were returned, with some of the parents indicating that they did not want their child to participate. We must consider that there may be a difference between those who returned the form with parental consent, those who did not return the form, or those whose parents indicated that they did not want their child to participate. Differences may exist in areas such as socioeconomic status or academic performance, which would limit the generalizability of these findings. Because of these potential biases as well as other
unknown biases that are inherit in self-selected samples, our results may not be representative of the population.

Other limitations of the present study include the small and limited sample size. Replication with larger samples is needed to validate and increase the generalizability of the current findings. Another area that could be looked at is the effect that race has on ratings of labeled peers. The majority of participants in the studies in this area were Caucasian. Including a more diverse population in the participants would help us identify if any differences exist in how different races respond to an ADHD label. Another shortcoming of the study is the narrow age range (fourth and fifth graders) of the participants. Looking at a broader range of ages will help us understand differences between and within age groups.

Lastly, study results may be influenced by whether participants may have had different levels of exposure to ADHD. Previous exposure and knowledge of ADHD was assessed through three questions that each participant responded to. These questions asked if they have heard about ADHD, knew what ADHD was, or knew someone with ADHD. The children who were told that the child in the video had ADHD were significantly more likely to answer “Yes” to each of the questions. As the groups were randomly assigned we would expect the levels of exposure to be equal for each label condition. The difference seen was likely due to priming that occurred when the participants in the label condition were told that the child in the video had ADHD. Unfortunately, because these questions were asked prior to watching the video, there was no way to control for these effects in this study.
Future research is needed in order to generalize these results to other populations. One area that future research needs to look at is the influence of an ADHD label on labeled females. The current research in this area has only looked at how individuals respond to males labeled as having ADHD. Although no research has looked at how females with an ADHD label may be affected, research that has looked at the effects of labels such as behavior disorder, emotional-behavioral disorder, and serious emotional disorder have found that peers rate labeled females as more likely to develop and maintain adequate interpersonal relationships as compared to males (Stinnett et al., 1999).

Further research is also needed to see how the effects of labeling a child with ADHD may be mediated. One way that mediation may be accomplished is through education. Madle and associates (1980) found that training college students on specific disorders reduced the effect of a label on their ratings. Although there are differences between college students and elementary students, similar results may be seen and future research in this area is warranted.

Future research could also look at how diagnostic labels might affect different age groups. The majority of the research has looked at how diagnostic labels influence peer ratings in elementary school-age children. Older students in middle, junior high, and high school may respond differently to labeled peers, as they may have a different level of exposure with ADHD or social concerns regarding interactions with labeled peers. Thus, including older students in research would help us further understand what influence an ADHD label may have. Although studies have not compared high school students' friendship ratings to those of elementary school children, Thelen and
colleagues (2003) found that high school students, compared to teachers and college students, rated labeled peers, compared to nonlabeled peers, lower on scales measuring interpersonal success. Although the labels in this study did not include ADHD, this indicates there may be differences in peer ratings based on age.
REFERENCES


APPENDICES
Appendix A:

Friendship Activity Scale
Name: ____________________________

Make believe that the student you have just seen will be coming into your class. What types of activities would you like to do with them? Below is a list of activities to help you decide. If you would like to do an activity with them, circle YES. If you would probably do an activity with them, circle PROBABLY YES. If you would probably not do an activity with them, circle PROBABLY NOT. If you would not do an activity with them, circle NO.

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I would tell them a homework assignment if he is absent from class.</td>
<td>No</td>
<td>Probably No</td>
<td>Probably Yes</td>
</tr>
<tr>
<td>2. I would stand next to him while waiting in line.</td>
<td>No</td>
<td>Probably No</td>
<td>Probably Yes</td>
</tr>
<tr>
<td>3. I would play with him after school.</td>
<td>No</td>
<td>Probably No</td>
<td>Probably Yes</td>
</tr>
<tr>
<td>4. I would lend him a pencil or a pen.</td>
<td>No</td>
<td>Probably No</td>
<td>Probably Yes</td>
</tr>
<tr>
<td>5. I would help him with a math problem.</td>
<td>No</td>
<td>Probably No</td>
<td>Probably Yes</td>
</tr>
<tr>
<td>6. I would talk to him in class during free time.</td>
<td>No</td>
<td>Probably No</td>
<td>Probably Yes</td>
</tr>
<tr>
<td>7. I would invite him to my house.</td>
<td>No</td>
<td>Probably No</td>
<td>Probably Yes</td>
</tr>
<tr>
<td>8. I would sit next to him in class.</td>
<td>No</td>
<td>Probably No</td>
<td>Probably Yes</td>
</tr>
<tr>
<td>9. I would play with him during free time in school.</td>
<td>No</td>
<td>Probably No</td>
<td>Probably Yes</td>
</tr>
</tbody>
</table>
10. I would go up to him and say hello.
   No      Probably No      Probably Yes      Yes

11. I would share part of my lunch with him.
   No      Probably No      Probably Yes      Yes

12. I would sit next to him on a bus on a field trip.
   No      Probably No      Probably Yes      Yes

13. I would tell him about myself.
   No      Probably No      Probably Yes      Yes

14. I would help him with a class project.
   No      Probably No      Probably Yes      Yes

15. I would compliment him on things he does well.
   No      Probably No      Probably Yes      Yes

16. I would introduce him to my friends.
   No      Probably No      Probably Yes      Yes

17. I would choose him as a partner in a game.
   No      Probably No      Probably Yes      Yes

18. Have you heard the term ADHD?
   Yes      No

19. Do you know what ADHD is?
   Yes      No

20. Do you know someone with ADHD?
   Yes      No
Appendix B:

Demographic Form
<table>
<thead>
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<th>Age:</th>
<th>Grade:</th>
<th>Gender:</th>
<th>Ethnicity:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Male</td>
<td>White</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>African American</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>Hispanic</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td>Native American</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Other:</td>
</tr>
</tbody>
</table>

(circle one)
Appendix C:

Consent Form
Dear Parents,

Dr. Gretchen Gimpel Peacock, a faculty member in the Department of Psychology at Utah State University (USU) and Jared Toone, a student researcher from USU, are writing to request your help with a research study being done on the effects of the diagnostic labels on peer judgment. Diagnostic labels are frequently used in schools and the information gathered through this study will help us understand if they affect peer relationships. Your child’s school has approved this study and has agreed to help with this study.

Procedures
If you agree to allow your child to participate, your child will be asked to view a video of an elementary school aged child and complete a survey about whether he/she would be likely to befriend the child. The video will be presented to your child during school hours. It will take your child approximately 15 minutes to view the video and complete the survey. If you are willing to allow your child to participate in this study, please complete and return this form with your child to his/her teacher. Your child has been offered a small incentive (e.g., candy bar, pencil, eraser, stickers, etc.) if you return this form. This reward will be provided whether or not you agree to participate. If you agree to allow your child to participate, we will also ask your child to fill out a form indicating whether he/she wants to participate in the study.

Risks
There are no anticipated risks involved in participating in this study. Your child could experience positive or negative feelings when watching the video and completing the survey. If you have any questions, you may contact either Jared Toone at jtoone@cc.usu.edu or (801) 465-4638, or Dr. Gretchen Gimpel Peacock at (435) 797-0721.

Benefits
You or your child may not benefit directly from this research study. However, the information gained by this study could potentially help schools and researchers understand the effects of labeling on peer relationships. This would be beneficial in helping teachers and researchers develop treatment programs designed to help reduce any negative effects that labels may have.

Voluntary Nature of Participation and Right to Withdraw without Consequence
Participation in this research is entirely voluntary. You may refuse to allow your child to participate or withdraw your child from the study at any time without negative consequences. Your child can also refuse to participate even if you agree that your child can participate. This will not affect your child’s schooling in any way. An alternative school activity will be provided by your child’s teacher for those who do not participate.
INFORMED CONSENT
Effects of Diagnostic Labels on Peer Judgment

Confidentiality
Information about you and your child will be kept confidential and will be available only to individuals involved in the project. Your child will be assigned a code number. Only this number will be used when the data are stored in the computer. Public presentations of the results of this study will in no way identify your child. All data will be kept in a locked file cabinet, which will be accessible only by individuals directly involved in the project. This data will be kept separate from the code list, which will be destroyed and the conclusion of the study.

IRB Approval Statement: The Institutional Review Board (IRB) for the protection of human participants at Utah State University has approved this research project. If you have any concerns questions about your rights please contact the IRB at (435) 797-1821.

Copy of Consent
You have received two copies of this Informed Consent Form. Please sign both and retain one copy for your files. Please return one signed copy with your child to give to his school teacher.

Researcher Statement
I certify that the research study has been explained in writing to the individual or by my research assistant, and that the individual understands the nature and purpose as well as the possible risks and benefits associated with taking part in this research. Any questions that have been raised have been answered.

Gretchen Gimpel Peacock, Ph.D.
Principal Investigator
Dept. of Psychology
Utah State University
(435) 797-0721

Jared Toone, B.S.
Student Researcher
(801) 794-1285
INFORMED CONSENT
Effects of Diagnostic Labels on Peer Judgment

**Signature of Parent / Guardian** (please check one and sign if agreeing to have your child participate)

- Yes, I allow my child to participate in this study.
  I have read this form and I understand the purpose of this project. I also understand the potential risks and benefits involved, and what to do and who to contact if I have any concerns. If I have other questions, I understand that I may contact the researchers at the phone numbers listed below by their signatures. By signing this document, I agree to allow my child to participate in this study.

**Signature of Parent / Guardian**

Printed Name of Parent / Guardian

Printed Name of Child

- No, I do NOT want my child to participate

Printed Name of Child
Appendix D:

Assent Form
Utah State University

DEPARTMENT OF PSYCHOLOGY
2810 Old Main Hill
Logan UT 84322-2810
Telephone: (435) 797-1460
FAX: (435) 797-1448

Child Assent
Effects of Diagnostic Labels on Peer Judgment

Dr. Gretchen Gimpel Peacock, a faculty member in the Department of Psychology at Utah State University (USU) and Jared Toone, a student researcher from USU, are asking for your help with a study being done on labels (e.g., names we give to good or bad behaviors) given to children and what other children think of these labels. You are being asked to be in this study because you are in elementary school. The things we learn from this study will help us know more about children’s relationships with each other.

What will I be asked to do?
If you agree to be in this study you will be asked to view a video of a child your age. Then you will answer questions that ask you if you would like to be friends with the child in the video.

Will my answers be kept secret?
We promise to keep your answers to the questionnaire a secret. When you finish answering the questions, you will put your survey in an envelope and seal the envelope, and then turn in the envelope the person showing you the video.

When we get the surveys back, we will keep them in a locked filing cabinet. We will keep your survey while a report is written. When we write our report, we never talk about one person’s answers. We talk about answers given by groups of people, so no one (other than the researchers) will know how you answered your questions.

Am I taking risks?
There are no serious risks in being in this study. If you feel upset after filling out our questions, then you might want to tell your parents or teacher how you are feeling.

Will the research help me?
The research study may not help you personally. However, this research may help us learn more about labels and how to reduce any negative effects they may have.

Do I have to do the research study?
You do not have to do the research study. Also, if you start answering questions and then want to stop, that is perfectly fine. It is up to you to decide if you want to answer any of these questions. If you choose not to do this no one will be upset. You will not get into trouble in any way for stopping. Whether you participate in the study, or not, has nothing to do with the grades you will receive in school.

Has this research study been approved?
Utah State University has an Institutional Review Board (IRB). This group checks research studies to make sure that they are safe. The IRB at the university has approved this study.
Can I ask more questions?
You can ask any questions you have now or any time later. If you have more questions about the study at a later time, you may call Professor Peacock, or Jared Toone, and either of them will be happy to talk to you some more about the study. Their phone numbers are listed below.

Keep a copy of this form
You have been given two copies of this form. Please sign both copies. You return one signed copy in the packet with your forms and keep the other signed copy for yourself.

Student Signature
By signing below you agree that the research has been explained to you and that you understand the study, the possible risks and benefits of the study, and that taking part in the study is completely voluntary.

Do you agree to participate in the study? (Put your initials next to one): yes__ no__

__________________________________________  ____________________________
Your signature                                      Date

Researchers' Signatures

Gretchen Gimpel Peacock, Ph.D.
Principal Investigator
Dept. of Psychology
Utah State University
(435) 797-0721

Date: 1-23-06

Jared Toone, B.S.
Student Researcher
(801) 794-1285

Date: 2/3/06