

GENDER AND ETHNICITY REFERRAL BIAS FOR ADHD:  
THE SCHOOL'S VIEW

A Dissertation

by

DAHL A. ROLLINS

Submitted to the Office of Graduate Studies of  
Texas A&M University  
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

August 2005

Major Subject: School Psychology

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Approved by:

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## ABSTRACT

Gender and Ethnicity Referral Bias for ADHD: The School's View. (August 2005)

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Chair of Advisory Committee: Dr. Cynthia A. Riccio

In school, all children at some time have been disruptive; however, there are a select few who are continually disruptive and identified by school personnel as those who may have a disruptive behavior disorder such as ADHD. Many times these children are boys and of a minority group (Root & Resnick, 2003). Information collected from school teachers and parents most often provides the basis for diagnosing ADHD, whether reliable or objective. The purpose of the study was to investigate any differences in the way in which teachers respond to behavioral difficulties associated with ADHD for African American girls and boys as compared to White girls and boys, with control for SES and perceived school climate as potential confounds. These results are promising in that teachers' responses suggest similarity in perceptions of children's behavior regardless of children's socioeconomic status, gender and ethnicity. The results indicated that a significant difference exists in that teachers would talk to the counselor about the child's behavior based on the child's ethnicity, gender, and SES. When controlling for school climate, there was a significant difference in teacher responses to unusualness of inattention, which indicated that the better the school climate, the more unusual the inattention was perceived. Also, results indicated that the teacher's ethnicity and/or ethnicity and gender affected how they perceived the child's behavior.

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## CHAPTER I

### INTRODUCTION

Attention deficit hyperactivity disorder (ADHD) is one of the disruptive behavior disorders. Disruptive behavior disorders in children can lead to a lifetime of social dysfunction, antisocial behavior, and poor adjustment that have consequences affecting the children, their families, peers, and society as a whole (Kann & Hanna, 2000). In school, all children at some time have been disruptive; however, there are a select few who are continually disruptive and identified by school personnel as those who may have a disruptive behavior disorder such as ADHD. Many times these children are boys and of a minority group (Root & Resnick, 2003).

There has not been a national study of the proportion of children diagnosed with or treated for ADHD. Studies in different areas of the United States have yielded prevalence estimates ranging from 1 to 26% (LeFever & Dawson, 1999). The variability in the prevalence rates can be attributed to design of the study, sample size, and year. The higher rates come from studies that have smaller sample sizes and participants who meet the ADHD screening criteria rather than those who have been diagnosed with ADHD (LeFever & Dawson, 1999). The opinion regarded as most accurate for prevalence rates is between 3 to 5% of children in the United States (American Psychiatric Association, 2000; Barkley, 1998); fewer than 3% of school-aged children receive medication for ADHD (LeFever & Dawson, 1999). Some prevalence studies

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This dissertation follows the format for *The Journal of Special Education*.

have found that ADHD is more common among children from minority and low-income populations, but other findings challenge this assumption (LeFever & Dawson, 1999).

One factor may be the defining criteria for ADHD. “Attention-deficit Hyperactivity Disorder is a developmental disorder characterized by developmentally inappropriate degrees of inattention, over activity, and impulsivity” (Barkley, 1990, p. 87). These problems usually occur in early childhood and are relatively chronic in nature. These inappropriate behaviors cannot be better accounted for by gross neurological, sensory, language, or motor impairment, mental retardation, or severe emotional disturbance. Deficits in rule-governed behavior and maintaining a consistent pattern of work are usually associated with these difficulties (Barkley, 1998).

The definition of ADHD, however, has changed over the years. ADHD was first known in the 1960s as minimal brain damage or dysfunctions (MBD; Wolraich & Baumgaertel, 1997). Since then, the definition has changed to a more descriptive label. In 1980, the condition was described as attention deficit disorder and in 1987 as attention deficit hyperactivity disorder (APA, 2000). Further, among non-white ethnic groups, ADHD may or may not express itself differently (Samuel et al., 1997). Several risk factors have been associated with characteristics of ADHD. These risk factors include cultural differences, socioeconomic status (SES), gender, and psychosocial stressors (Greenblatt, 1994; Morgan, 1976; Reid, Casat, Norton, Anastopoulos, & Temple, 2001; Stevens, Quittner, & Abikoff, 1998; Willerman, 1973).

### *Studies of ADHD and Ethnicity*

The assessment of ADHD with children from ethnic minorities has raised serious concerns, especially with the use of behavior rating scales. Ethnic minorities with ADHD have been understudied; it is still uncertain whether differences found were due to real differences in behavior among groups, rater bias due to ethnicity or socioeconomic factors, or a combination of the two (Reid et al., 2000).

Willerman (1973) was the first to look at the difference in the frequency of hyperactivity across ethnic groups. Willerman (1973) stressed that cultural factors transmitted through child rearing practices may significantly influence the formation of symptoms such as those characteristic of what was then known as hyperkinetic syndrome. Langsdorf, Anderson, Waechter, Madrigal, and Juarez (1979) found that Blacks were perceived as more hyperactive than expected, while fewer Mexican Americans were rated as hyperactive and Whites tended to obtain ratings consistent with expectation. More recently, African American children have had the highest incidence of hyperactivity compared to Chicanos and Asians (Root & Resnick, 2003). Although African American boys had a high rate of ADHD diagnosis, their symptoms may be better accounted for by environmental factors (Root & Resnick, 2003).

The *Diagnostic and Statistical Manual of Mental Disorders (4<sup>th</sup> edition, Text Revision* DSM-IV TR: APA, 2000) has included some considerations when applying the characteristics to those of different cultures. The DSM-IV TR states that one should consider the identity of the individual, their psychosocial environment, and level of functioning. The clinician should become aware of the relationship between themselves

and the client. The clinicians should also consider the assessment process used for diagnosis because the process may be different for those of a different culture. In fact, this has led the National Association for the Advancement of Colored People (NAACP) to issue a statement of concern that minority children are being over medicated with insufficient testing for a diagnosis. The House of Representatives passed the Child Medication Safety Act; it is currently pending in the Senate and states that a school cannot bar a student from attending school if he/she is not on medication that the school believes the child should be taking (Mfume & Shelton, 2003).

There is a possibility of cross-cultural differences, but it is impossible to determine if differences are due to the use of the scale with a culturally different population or to a real difference in the base rate of ADHD-like behaviors across groups (Reid, 1995; Reid et al., 1998). Results of the study by Reid et al. (1998) suggested the possibility that factors other than behavior may affect the results of behavior rating scales for African American students. The results of the study have two significant implications for assessment. The scale used reflects the DSM-IV diagnostic criteria for ADHD, but results suggested the possibility that student ethnicity may affect the rater's perception of the presence of ADHD symptoms. Also, the results suggested that there may be negative halo effects for African American students. As such, one might expect to see a disproportionate number of African American children who would be diagnosed as ADHD combined type (Reid et al., 1998). This study cautioned against the use of behavioral rating scales only rather than consideration of behavioral observations as well (Reid et al., 1998).

### *ADHD and Socioeconomic Status*

Socioeconomic status (SES) is known to affect the cognitive and behavioral development of children (Duncan, 1994). However, the exact effects of SES on child development can be difficult to determine because of the interactions between SES and race (Kessler & Neighbors, 1986). Parents from low SES may stress to their children how to survive rather than on quiet behaviors. These teachings are opposite to those of the school system; this difference in priorities may be why children from low SES are labeled or referred first and more often (Morgan, 1976; Reid et al., 2001).

Additionally, a low socioeconomic status may be associated with other ADHD risk factors, such as poor prenatal care, severe marital discord, large family size, or foster care placement. The low status also may expose children to environmental or psychosocial stressors. Therefore, low socioeconomic status itself may be a risk factor for presentation of ADHD associated behaviors (Reid et al., 2001). It may be that low SES Black and Mexican American children are less likely to have absorbed the White middle-class values and attitudes characteristic of early childhood socialization patterns in American education (Langsdorf et al., 1979) and are thus more at risk.

### *ADHD and Gender differences*

There are considerable differences in reported male to female ADHD ratios; the ratios range from 1.6:1 to 10:1 (APA, 2000; Greenblatt, 1994) depending on the source. Clinic populations have a slightly greater proportion of males, while non-clinic samples show less disproportionately. Regardless of sample, ADHD is reported to be at least two times more prevalent among boys than among girls (LeFever & Dawson, 1999). It is

suggested that the higher rate of males in the clinic population is due to co-occurring problems of aggressive or antisocial behavior associated with ADHD in young males (Greenblatt, 1994). Also, it is suggested that girls either are not identified as having ADHD or are identified later due to differences in symptomatology (Greenblatt, 1994).

Extensive research has been conducted on boys with ADHD, but studies of girls are not as frequent (Kann & Hanna, 2000). Boys have other behavioral problems and are more likely to be aggressive (Kazdin, 1995). Previous studies on ADHD and gender have had small sample sizes, limited scope of assessment, and the absence of gender-matched comparison subjects (Berry, Shaywitz, & Shaywitz, 1985; Biederman et al., 2002). Werry and Quay (1985) found that elementary school boys were more at risk for behavioral disorders because they more often displayed symptoms of inattention, hyperactivity, and acting out behaviors than girls. Behaviors that are appropriate for one gender may not be appropriate for the other.

It is hard to tell whether gender expectations contribute to the differences in symptomatology (Webster-Stratton, 1996). In actuality, girls with ADHD show the same core symptoms and high levels of comorbid disorders as boys (Root & Resnick, 2003). It has been speculated that adults of the same sex of their children have higher tolerance of that child's behavior (Webster-Stratton, 1996). It also has been suggested that one cause for the differences in diagnosis by gender may be due to the assessment process or the scales that are used with general norms as opposed to gender-specific norms (Reid et al., 2000).

### *Other Factors and ADHD Identification*

*Rater Bias.* It is important to use rating scales to identify children with behavior problems, to predict future socioemotional and behavioral adjustment, and discriminate between different clinical types (Vaughn, Riccio, Hynd, & Hall, 1997). Another important function of behavior rating scales is to discriminate between those with clinical disorders from adjusted individuals (Vaughn et al., 1997). Rating scales are an easy method to assess children as part of a multiple method and multiple informant evaluation; however, rating scales should be age appropriate, adequately normed, and appropriate in use. Elementary school teachers have a major role in the assessment of academic and behavioral problems in children; however, teachers are not always accurate and objective raters of childhood behavior. Teachers often lack the time or ability to notice specific children's behaviors. Stevens (1980) found that ethnicity and socioeconomic status produced negative halo effects on teachers' ratings. Among the general population and those affected by ADHD, little is known about the depth and source of knowledge of teachers about ADHD (Bussing, Schoenberg, & Perwien, 1998). Further, there is little known about how teachers' knowledge of a disorder affects their ratings or their use of particular intervention strategies (Stevens et al., 1998).

Langsdorf et al. (1979) found that the prevalence of teacher-rated hyperactivity may be related to both ethnicity and social class of the child; they found that African American children were perceived as hyperactive by teachers with greater frequency than would be expected. Teacher and child ethnicity both play a factor in the assessment of problem behaviors in children. A study by Eaves (1975) found that White teachers



perceived a higher level of problematic behaviors in Black children than in White children, whereas White and Black children received equal ratings from Black teachers. The ethnicity bias may be extended to other minority groups.

In a study by Lambert, Sandoval, and Sassone (1978) teachers, identified African American students as hyperactive more often than Hispanic or White children. Another study by Stevens (1981) found that school personnel (93% of who were White) tended to attribute ADHD to African Americans more often than to White or Mexican-American students. Samuel et al. (1997) reviewed several studies and found assessors to identify ADHD in African American children more than other ethnic groups. Nearly all of the studies reported that teachers attributed ADHD at a higher rate to African American children in comparison to other ethnic groups.

*School Climate.* The quality and frequency of interactions between adults and students can be defined as school climate (Emmons, 1993). This climate encompasses the attitudes, values, and behavior of students, school personnel, parents, and community members toward each other and toward the activities and programs occurring at the school (Haynes, 1996). The interactions between children and adults at the school contribute to the overall climate of the school. The changing, complex, competitive, and technologically sophisticated society of today increases the importance of considering the school climate. A healthy school climate provides support for the social and intellectual skills children need to succeed. An unhealthy school climate can lead to conflict between children, parents, and school personnel in that it does not provide adequate support for social and intellectual development of the children (Haynes, 1996).

Social-ecological theory says that perceptions are important to understanding individuals' efforts to change their social environment (Bronfenbrenner, 1979); schools are a social environment. Attitudes toward education, sense of self, and expectations for the future influence and are influenced by the activities, roles, and interpersonal relationships that students experience in school. For example, while being in the same classroom, a disruptive student may experience the school setting differently than would a shy, quiet student. Similarly, students of a minority ethnic group may experience the social environment of school differently than a white student; boys may experience the social setting differently than girls.

Raters of school climate base their response on their own expectations and perceptions of the environment. The school climate is generally a perception of the conditions at the school. The classroom climate and school climate are different, but may overlap. Schools can have a positive climate, while individual classrooms can have poor climates and vice versa (Van der Sijde, 1988). Children's racial/ethnic background may strongly influence what they see as important to a positive school climate (Slaughter-Defoe & Carlson, 1996). In some research, African American children placed importance on the teacher-student affective bond, consistent with research on African American education (Epps, 1992; Lee & Slaughter-Defoe, 1995).

A study by Paredes (1993) found a relationship between the school climate, SES, and the dropout rate for the school; the study also found a relationship between achievement and school climate. A better school climate is related to a higher rate of learning and a lower dropout rate (Paredes, 1993); higher school performance scores can

be seen in schools with more favorable climates (Hood & LoVette, 2002). This may be due to the better utilization of the resources available at the school (Rutter, 1983).

Boys' adjustment may be facilitated by a supportive school climate; however, boys who have negative school climate perceptions may receive discipline more often than girls (Kuperminc, Leadbeater, Emmons, & Blatt, 1997). Further, African American boys and those from lower SES with positive school climate perceptions had fewer discipline referrals. Thus, positive school climate may serve as a protective factor for boys. African American girls who had negative perceptions of school climate displayed increased levels of discipline referrals and teacher-reported externalizing problems. The role of school climate is not as clear in girl's social adjustment; more variance was seen with demographic and psychosocial variables (Kuperminc et al., 1997).

Overall, studies have found that positive school climates are associated with less emotional and behavioral problems (Kuperminc et al., 1997; Roeser & Eccles, 1998). Students at greatest risk of emotional and behavioral difficulties are most affected by a positive school climate (Felner et al., 1995). Differences in school climate perceptions can be linked to factors like aggression in classroom, teacher motivation, and peer relationships (Meinrath & Kuperminc, 1997). It is possible that what constitutes a positive school climate may differ based on gender, social class, and ethnicity (Kuperminc, Leadbeater, & Blatt, 2001).

The role of school often has not been the focus of research; however, a study by Eccles, Lord, and Roeser (1996) found that what students experience in school

influences their motivation to learn and their emotional well-being. Negative experiences (i.e., differential treatment in the form of low expectations for success, and experiences of discrimination by school professionals and peers) are more common with females and African Americans; these experiences have been seen as a cause of ethnic and gender differences in academic and emotional functioning (Roeser, Wong, & Eccles, 1997; Wong & Eccles, 1996). The quality of student's academic and emotional functioning can be supported and enhanced by schools that support their needs (Roeser, Eccles, & Sameroff, 1998). At the same time, ethnic minority students and students of lower SES are more likely to attend schools with fewer resources (Alvidrez & Weinstein, 1993).

Additionally, expectations usually make people react in order to live up or down to those expectations. Most people, teachers and students react to how others see and treat them (Harris & Willower, 1998). The high expectations that usually follow improved performance can be reflected in the perceptions of school effectiveness and climate. Mott (1972) defined effective organizations as "those that produce more and higher quality outputs and adapt more effectively to environmental and internal problems than do other similar organizations" (p. 17). Perceptions of effectiveness are only one part of effectiveness; as noted by Harris and Willower (1998), good communication is important. They found that schools that were viewed as effective had teachers who were able to communicate with and understand the administration. If teachers are in a school that has optimistic administration, the teachers then perceive the school is doing a good job. It is known that the school climate is one of comparison and

competition; however, teachers do not use the judgmental information, but like to know about it (Cullingford & Swift, 2001).

### *Statement of the Problem*

Information collected from school teachers and parents most often provides the basis for diagnosing ADHD. These sources may not be the most reliable or the most objective; the scales used may not measure the same constructs across minority groups or gender ("Brown University," 1996). The school's information should play an important role in the diagnostic process because school personnel, especially teachers, are aware of and exposed to a wide range of childhood behaviors; they view students in an environment where the behaviors are most likely to present themselves (Barkley, 1998). The DSM-IV TR states that ADHD occurs in different cultures and among Western countries. Also, there are variations in the prevalence of ADHD due to different diagnostic practices rather than from differences in symptom presentation.

The necessity for a comprehensive assessment must take into account sociocultural variables that have additional importance when ethnic minority children are evaluated (Bauermeister, Berrios, Jimenez, Acevedo, & Gordon, 1990). Even more critical is the issue of the validity of the diagnostic criteria for children of a culturally different background from the one on which the diagnostic criteria were created. Unfortunately, when formulating and applying the diagnostic classification system cultural influences often are not considered (Bauermeister et al., 1990).

There is no evidence that ADHD appears more frequently in any particular ethnic, racial, or cultural group; however, because of differing cultural values,

expectations, and stereotypes associated with specific groups, the potential for over or underrepresentation of various racial/ethnic groups is considerable (Burcham & DeMers, 1995). Until recently, it was believed that expression, course, and outcome of psychological disorders such as ADHD were largely universal and independent of cultural factors (Marsella & Kameoka, 1989). There were no expected differences across ethnic groups in prevalence rates or expression of ADHD; however, growing literature suggests that cross-cultural differences may represent an important factor in assessment (Reid, 1995). Estimates are that nearly one third of public school children will be from culturally different backgrounds (Reid et al., 2001). An understanding of cultural differences has become an important issue to consider when developing school-based risk identification programs that use screening instruments with minority children.

African American boys and girls have been significantly understudied in the area of ADHD (Reid et al., 2000). Whether there are cultural or gender differences in the display of characteristics of ADHD may be hard to determine (Reid et al., 2000). Educators and all school personnel should be aware that there may be a difference in the way these disruptive behavior disorders manifest across minority boys and girls. Further, teacher perceptions of children's behavior as disruptive or atypical may vary as a function of school climate and SES.

#### *Significance of the Problem*

Children with ADHD are less likely to benefit from their education and adapt less well in various situations, a trend that continues throughout adulthood with lower income, lower socioeconomic class, and underemployment (Root & Resnick, 2003). It

is important that those students with ADHD be able to benefit and become successful in school and throughout their life. In order for this to happen, children with ADHD need to have early and accurate identification with interventions specific to their needs.

African American students have had, and continue to have, devastating experiences in school settings (Boykin, 2001; Hale, 2001). Special education has received disproportionate numbers of African American students as have remedial education classes (Gay, 2000; Harry & Anderson, 1994); on the other hand African American students have been underrepresented in advanced and/or gifted classes (Patton & Baytops, 1995). African American boys are suspended and expelled more often than any other group; African American students receive exclusionary types of discipline about two to three times as often as the general school population (Harry & Anderson, 1994). These students' ethnicity and gender, and in some cases SES, place them at a high risk of being excluded either temporarily or permanently from the school setting (Townsend, 2002). Students of different racial/ethnic backgrounds may have cultural attitudes about competition, aggression, delayed gratification, and discipline that differ from the mainstream. These differing attitudes may exacerbate a child's attentional difficulties and school problems (Bauermeister et al., 1990).

#### *Purpose of the Study*

Teachers often are the primary source for student referral regardless of ethnicity, gender, or SES. The purpose of the study was to investigate any differences in the way in which teachers respond to behavioral difficulties associated with ADHD for African

American girls and boys as compared to White girls and boys, with control for SES and perceived school climate as potential confounds.

*Hypotheses/Research Questions*

1) Is there a significant difference in teachers' perceptions of the severity of behaviors for differing ethnic groups, genders, or lower socioeconomic status? Is there an interaction effect?

2) Is there a significant difference in teachers' perceptions of the unusualness of behaviors for differing ethnic groups, genders, or lower socioeconomic status? Is there an interaction effect?

3) Is there a significant difference in teachers' perceptions of the assistance needed for behaviors for differing ethnic groups, genders, or lower socioeconomic status? Is there an interaction effect?

4) Is there a significant difference in teachers' likelihood to refer students for special education for differing ethnic groups, genders, or lower socioeconomic status? Is there an interaction effect?

5) Is there a significant difference in teachers' perceptions of the immediacy of responding for behaviors for differing ethnic groups, genders, or lower socioeconomic status? Is there an interaction effect?

6) When controlling for school climate, is there a significant difference in teachers' perceptions of children's behaviors?

7) Does ethnicity or gender of rater affect perceived severity, perceptions of unusualness, need for assistance, immediacy, or likelihood to refer?



## Definitions of Terms

Rater effects: Rater effects refer to a situation in which ratings are systematically biased due to factors internal to the rater (Barkley, 1987). Raters from different cultural groups may perceive behavior differently and, thus, differ in their ratings. More specifically, when a rater from one cultural group rates a participant from a different cultural group there may be rater effects.

ADHD: The DSM-IV states that children must have six of nine symptoms to qualify for either the inattentive or hyperactive/impulsive subtypes of ADHD, and six of nine symptoms of both subtypes to qualify for the combined type. The symptoms must have been present before the age of seven, create impairment in two or more settings (e.g., home, school, neighborhood), cause clinically significant impairment in social, academic, or occupational functioning, and not be better accounted for by any other disorder (See Appendix A).

School Climate: School climate is characterized by the interactions between the children and adults of the school. If the climate is a positive or healthy one, then the children's social and intellectual skills are supported (Haynes, 1996)

Ethnic Group: How one self identifies.

## *Implications for Practice*

Many times the school determinants for identifying children with ADHD for special education have little to do with the DSM-IV diagnostic criteria (Burcham & DeMers, 1995); children with ADHD may be served as Other Health Impaired or Emotionally Disturbed or under some other category. Prevalence rates of ADHD are

estimated to be between 3 to 7%; therefore, in a classroom of 30, there may be 2-3 students affected with ADHD. The male to female ratio ranges from 1.6:1 to 10:1 (APA, 2000; Greenblatt, 1994) while the prevalence rates by ethnic group have not been determined. The suspected overrepresentation of African Americans for ADHD as well as for qualifying or being referred for services may be attributed to racial differences in diagnosis.

A thorough assessment of suspected ADHD in children would include multiple methods of assessments with multiple informants in multiple settings (Burcham & DeMers, 1995; Kamphaus & Frick, 2001). These would include results from standardized and informal testing, interviews, observations, rating scales, and medical evaluations to establish a total picture of the child and family (Burcham & DeMers, 1995). The most effective assessment procedures would include an assessor who is knowledgeable about normal child development, as well as the characteristics of ADHD. These characteristics include comorbid problems associated with ADHD, such as conduct disorders, academic difficulties, disturbed peer relationships, and the internalizing disorders of low self-esteem, anxiety, and depression. The assessor must be knowledgeable about the strengths and weaknesses of the tests that are used as well as their administration and interpretation (Burcham & DeMers, 1995).

Teachers and school personnel are some of the first to identify those children who are referred for services in the school system. The team of assessors should remain sensitive to cultural variations in children's behavior, values, and attitudes. The team should become knowledgeable about the variations of the culturally different in the

population of students being served. The team should insist on fair assessment practices that are linked to successful interventions and not labels (Baker & Bell, 1999; Burcham & DeMers, 1995; Landau & Burcham, 1995; Reid, 1995; Reid et al., 2001; Vaughn et al., 1997). Ethical and legal requirements state that measures be “fair” (US Department of Education, 2004b). Behavioral intervention, classroom modifications, academic tasks modifications and goals are the primary parts of the treatment plan.

In a school setting, the teachers’ contribution to assessment is to identify the extent to which the symptoms associated with ADHD are interfering with the child’s ability to benefit academically, socially, or behaviorally in school so that plans can be developed to enhance the child’s school experience (Burcham & DeMers, 1995). Teachers also have the advantage of experience with multiple children for comparison. Yet, studies vary with regard to how much teachers know about ADHD (Stevens et al., 1998). Classroom modifications are required to be specific for ADHD in an Individual Educational Plan since the implementation of Public Law 101-476 (US Department of Education, 2004a). If a child with ADHD does not qualify for other special education services, some school systems may provide services under the regulations of 504, the Americans with Disability Act, and may not require an Individual Education Plan or further assessment (Wolraich & Baumgaertel, 1997).

There is good reason for early identification for behavior problems such as ADHD. Those children whose behavioral problems continue into later childhood and adolescence have adverse outcomes such as early school dropout, teenage pregnancy, delinquency, lowered occupational attainment, development of antisocial personality,

substance abuse, and criminality in adulthood (Loeber, 1990; Olweus, 1979; Root & Resnick, 2003).

The school climate as a whole may contribute to students' psychological well-being. Support for the social and intellectual skills that children need to succeed is provided by a healthy school climate; fewer emotional and behavioral problems are associated with a positive school climate (Kuperminc et al, 1997). Schools can enhance and support the quality of student's academic and emotional functioning (Roeser et al., 1998). Improving school climate should focus on teacher-student relationships, and ensuring fairness in enforcing school policies that result in improving positive behavior and reducing disruptive behavior (Felner & Adan, 1988).

Results of this study are expected to lead to additional inservice and preservice workshops in teacher training. If there is a difference in cultural, gender and/or SES in symptom presentation or perception of symptoms in children, then there is a need for specialized training in this area. One would need to know the differences and be able to discriminate what difference cultural, gender, and SES might make in perceptions and presentation of ADHD-related behaviors.

## CHAPTER II

### REVIEW OF LITERATURE

The majority of referrals to mental health clinics are for disruptive behavior disorders, including oppositional defiant disorder (ODD), ADHD, and conduct disorder (CD; Wells & Forehand, 1985). Children who display these developmentally inappropriate rates of behaviors do not spontaneously improve without intervention. In most cases, the behavior problems worsen and lead to mental health problems in adolescence and adulthood (Achenbach & Edelbrock, 1981).

This chapter will address factors related to ADHD. It will begin with a brief look at diagnosing ADHD, assessment and legal issues, and prevalence. Gender, ethnicity, socioeconomic status, and school climate will be discussed in relation to ADHD; gender, ethnicity, and SES have received little attention in the research on ADHD issues, especially the interaction of these factors. Reviews of the research find that these are relevant issues that need to be addressed. School climate is a contextual variable that also plays a role in affecting ADHD-like behaviors. If the investigation of ADHD only views the characteristics of the child, then there is a piece missing. Although, there has not been much research on ADHD and school climate, the climate does influence teachers and students by altering their perceptions. Perceptions also are altered by one's ethnic or cultural background. This chapter identifies and investigates the relation and interaction of gender, ethnicity, SES, and school climate factors on ADHD diagnosis.

Attention-deficit Hyperactivity Disorder (ADHD) is characterized by developmentally inappropriate inattention, overactivity, and impulsivity. This is a

developmental disorder that often appears in early childhood. These difficulties are “typically associated with deficits in rule-governed behavior and in maintaining a consistent pattern of work performance over time” (Barkley, 1990, p. 87). This disorder is controversial in its diagnosis and treatment (Wolraich & Baumgaertel, 1997). ADHD is seen in terms of being on a continuum; there are degrees of ADHD and how severe the disability is before receiving services (Burcham & DeMers, 1995). The DSM-IV TR (APA, 2000) describes four categories of ADHD. These are ADHD predominantly inattentive type, ADHD predominantly hyperactive-impulsive type, ADHD combined type, and ADHD not otherwise specified. The specific criteria of each type are described in the DSM-IV and the diagnosis is based on the number of symptoms (keeping in mind what is developmentally appropriate), the number of settings, and whether or not there is significant impairment in social, academic, or occupational functioning (APA, 2000).

Descriptions of ADHD in children can be traced back as early as 1848 when a German physician, Heinrich Hoffmann, described a hyperactive child, “Fidgety Phil,” and an inattentive child, “Harry Look in the Air” in a book he wrote for his children (Wolraich & Baumgaertel, 1997). In 1902, George Still lectured in England about several children who were aggressive, defiant, excessively emotional, and lacking inhibitory volition, who also were noted to have impaired attention and overactivity (Wolraich & Baumgaertel, 1997). Similar behaviors were considered to be the result of brain damage associated with encephalitis in the 1940s and 1950s. However, the current definition of the disorder was first formulated in the 1960s and was known as minimal

brain damage or dysfunction (MBD; Wolraich & Baumgaertel, 1997). Since then, the definition has changed to a more descriptive label, attention deficit disorder in 1980 and as attention deficit hyperactivity disorder in 1987. Most recently, the DSM-IV has revised the classification system as described earlier (Wolraich & Baumgaertel, 1997).

Children with ADHD are at a high risk for educational and behavioral problems (APA, 2000). In fact, almost half of the children with ADHD will be placed in special education programs for learning disabilities and behavioral disorders (Reid et al, 2001). Aggression is also a common co-occurrence with ADHD. A study by Weiss and Hechtman (1986) found that children with hyperactivity had repeated more grades, had lower self-esteem, and obtained fewer years of formal education. These children also may have lower reading and math achievement than their peers, and negative peer relations (Campbell, 1990; Schultz & Switzky, 1993). Several factors have been related to disruptive behavior disorders in children. One factor suggests that a relationship exists between SES and parenting behaviors that negatively affects the children's behavior. The other two factors include maternal stress and family constellation – both produce negative behavior in children (McNeil, Capae, & Bennett, 2002).

There are large and growing numbers of children diagnosed with ADHD. These children are of both genders and of culturally different backgrounds. Culturally different groups have a history of being misplaced in special education and over identified for behavior disorders. Despite these large and growing numbers, culturally different groups have received little attention in the area of ADHD and overrepresentation.

### *Diagnosis of ADHD*

The DSM-IV-TR (APA, 2000) has defined two dimensions of ADHD, inattention and hyperactivity/impulsivity. The behaviors for each dimension are described; to be considered as having the symptoms in each dimension, a child must display six of the nine descriptions of the dimension often. This is the first step in establishing a diagnosis – determining if the child meets the behavioral criteria. This can be gained from two primary sources such as the parents and teachers. Information gathered should also include family and home situation, birth, medical, and school history. Interviewing the child is also important, especially for those who are preteens or older. Teacher information is extremely important since many of the ADHD behaviors occur in the school setting. More than one setting is required for symptoms to be present to meet DSM-IV criteria. Physician's examination may be needed; however, observations in the clinician's office are not sufficient or representative of the child's usual behavior. Physicians can rule out contributing or causative factors, including evaluating vision and hearing (Wolraich & Baumgaertel, 1997). Other concurrent difficulties include ODD and CD with 55% of ADHD children having problems in these areas, as well (Hinshaw, 1987). Much of the overlap with ADHD is with ODD and not with CD and ADHD as previously suggested (Pelham & Evans, 1992).

Thus, to make a diagnosis, one needs to have a good history of behavioral symptoms, a physical and neurological examination that includes the evaluation of motor abilities, cognitive abilities, academic performance, and speech and language functioning. The assessment of ADHD also should take into account what is



developmentally appropriate and rule out behaviors that are not better accounted for by learning disabilities, trauma, stress, depression, anxiety, and so on. This information should be gathered from multiple sources such as the parent, child, and teacher. In addition, school and medical records should be reviewed (Root & Resnick, 2003). It is important to consider what is developmentally appropriate in intensity, frequency, and/or duration of the behavior because there are some degrees of inattention, impulsivity, restlessness, and disruptiveness in all children (Mann et al., 1992).

Conditions such as learning disabilities, anxiety disorder, or mood disorder can be the cause of the symptoms of ADHD instead of co-occurring phenomena. Other causes or issues that exacerbate ADHD are stressors in the home and school environment, both of which need to be addressed in order to make a diagnosis and plan for intervention (Wolraich & Baumgaertel, 1997). The incidence of having a learning disability and ADHD reportedly occurs in between 2% and 38% of children (Root & Resnick, 2003). In terms of mental retardation (MR), it may be a comorbid disorder but the behaviors must be compared to others with MR with regard to their ADHD symptomatology. Similarly, a central auditory processing (CAP) disorder involves some inattention and distractibility, and thus the differential diagnosis with ADHD may be confusing (Root & Resnick, 2003).

There are other issues surrounding ADHD and its causes. There may be a genetic link in that the chance of parents with a child who has ADHD having another child with ADHD is about one in three (Biederman, Faraone, & Keenan, 1992). Others have linked environmental toxins such as lead exposure to the development of ADHD.

There are also some suspected risk factors of prenatal exposure to alcohol and tobacco, as well as any significant anomaly that occurs during gestation or delivery (Biederman, Milberger, & Farone, 1995). As such, the child should have a physical exam to rule out medical problems that may cause or relate to ADHD symptomatology.

#### *Assessment and Diagnostic Issues*

School personnel may be unaware of the differences between psychiatric diagnoses and labels used by the school system (Pelham & Evans, 1992). Psychiatric diagnostic information that can be applied in the school setting is very important for school psychologists. There is less information available pertaining to a psychiatric diagnosis such as ADHD for school psychologists as compared to assessments available for educational problems such as a learning disability (Pelham & Evans, 1992). Many children may receive a diagnosis from both systems; this makes it critical that school psychologists be familiar with psychiatric disorders and what these mean in the school setting (Pelham & Evans, 1992).

Keeping in mind that a medical diagnosis of ADHD does not always lead to services in the school setting, schools also must assess the symptoms and then develop a plan of action. The DSM-IV (APA, 1994) is more important to the evaluation process and planning treatments, especially in a clinical setting. The assessment process is not only about whether the child has ADHD or not, but it should be linked to the treatment and improvement in the quality of the child's life and academic setting (Landau & Burcham, 1995). In fact, teacher consultation services in the schools can be such an intervention linked to assessment (Bergen & Kratochwill, 1990).

Assessments include interviews with parents, teachers, child, rating scales, and observations in the natural setting. One part should be a complete evaluation of the child's academic and behavioral strengths and weaknesses via standardized, as well as non traditional tests. Results of all interviews, standardized tests, nontraditional measures, rating scales, observations, and medical evaluations must be considered in total. No one assessment can be used alone to make a diagnosis (Landau & Burcham, 1995).

Those administering the assessments should be knowledgeable about normal child development, characteristics of ADHD, and other problems associated with ADHD (conduct disorders, academic difficulties, disturbed peer relationships, low self-esteem, anxiety, and depression). Administrators of assessments also must know about the strengths and weaknesses of the tests given (Landau & Burcham, 1995).

Barkley (1998) reported that the most commonly used ADHD assessment instrument is the behavior rating scale. Rating scales are important to help identify children with behavior problems, predict future socioemotional and behavioral adjustment, and discriminate among clinical types. Some of the most frequently used instruments for assessment (besides achievement and intelligence) were rating scales such as the Behavioral Assessment Scale for Children (BASC; Reynolds & Kamphaus, 1992), Achenbach Child and Teacher Checklist and report forms (Achenbach & Edelbrock, 1983), Conners Rating Scales - Revised (CRS-R; Conners, 1997), and the Revised Behavior Problem Checklist (RBPC; Quay & Petersen, 1983). In the past, the Child Behavior Checklist (CBCL) and Teacher Response Form (TRF; Achenbach, 1991)

have been used in schools but recently, the Behavior Assessment System for Children (BASC; Reynolds & Kamphaus, 1992) has been used (Vaughn et al., 1997). Measures like the Parent Rating Scale (PRS) and Teacher Rating Scale (TRS) on the BASC distinguish among anxiety, depression, hyperactivity, and attention problems (Vaughn et al., 1997).

Instruments used may have large numbers of subjects used in developing and norming them; however, large numbers do not necessarily guarantee that the norming group is representative of the population (Salvia & Ysseldyke, 1988). There is evidence that culturally different groups are not represented in the norm groups of many of the scales in use. There is also some evidence that there are cross-cultural differences across raters, and that culturally different groups may be over identified (Reid, 1995). More research is needed when using the behavioral rating scales in cross-cultural contexts, because there is little information concerning the validity of behavioral ratings with different cultural groups (Reid, 1995).

Sometimes teachers do not distinguish children with ADHD from those with similar symptoms of other disruptive behavior disorders like conduct disorder (CD) and oppositional defiant disorder (ODD). Several rating scales list similar symptoms that reflect both ADHD and ODD. It is understandable that teachers' ratings often do not differentiate between these disorders when the items on rating scales can apply to both disorders. Better or more descriptive items should be included in the rating scales for greater accuracy of teacher ratings. The rating scales that use more concrete descriptions should be less subject to negative halo effects (Mintz & Collins, 1985). In addition,

having more knowledge or experience with ADHD may not necessarily be associated with more accurate ratings of ADHD. Teachers may rate children with ODD as more like those with ADHD because that is what they know more about (Stevens et al., 1998). Generally, teachers evaluate their students in many situations, from structured academic activities to free play. The teacher's preference for structured versus unstructured classrooms may influence their ratings of children with ADHD. There should be more research to determine if improving the rating scales increases their discriminant validity.

Rating scales are easy, quick and cost-effective to use; this is why they are used most often. However, rating scales only represent the opinions of others; the rater may have distortions of memory, may misunderstand items on the scale, or just may be biased in reporting (Burcham & DeMers, 1995). Although, there are as many as 42 identified rating scales used to identify children with ADHD (Dykman, Ackerman, & Raney, 1993), the child's behavioral concerns should determine which scale is chosen, not just routine or preference.

The diagnosis and intervention should be driven by the child and his/her presenting problems rather than the measure that is chosen. A study that looked at two different rating measures found that using either instrument as part of a complete assessment would probably yield different results in terms of diagnosis and intervention planning (Vaughn et al., 1997). The results do not suggest that one measure is better than another in differentiating children with ADHD, but that both were good at correctly identifying children with ADHD (Vaughn et al., 1997). This is one more reason why a complete assessment using multiple methods and informants must be used. Age

appropriate, adequately normed, and appropriately used rating scales should be considered.

### *Legal Issues and ADHD*

Assessing students for ADHD has legal requirements that are similar to those associated with assessing any child suspected of having a disability. These legal requirements are especially important when considering who is eligible for services in the school. The team of evaluators must be multidisciplinary, include someone who is knowledgeable about the suspected disability, and the child must be assessed in each area of suspected disability (Burcham & DeMers, 1995).

Federal laws mandate that if a child's attentional difficulties interfere with learning then the child must be appropriately evaluated and accommodated (Latham & Latham, 1992). Under the reauthorization of Individuals with Disabilities Education Act of 1997 (US Department of Education, 2004b), children with ADHD and no other known disabilities may be eligible to receive services in special education under the category of "Other Health Impaired," a category that has been mostly overlooked previously (Latham & Latham, 1992). Other students with ADHD and other disabilities, such as learning disabilities or severe emotional disturbance, can seek special education services through these categories of disabilities as well. IDEA provides for a free and appropriate public education for students with ADHD. It also mandates a multidisciplinary evaluation process and the development of an individualized education plan for each student with ADHD.

Public Law 101-476 requires that classroom modifications be specified in an IEP for children with ADHD as needed. These modifications of the classroom and academic tasks are an important part of the treatment plan (Wolraich & Baumgaertel, 1997). During the reauthorization hearing for Public Law 94-142, the NAACP Legal Defense and Education Fund expressed concerns that ADHD as a category of disability would “invite abuse for black children especially black males, resulting in the disproportionate referral to special education” (Penning, 1990, p. 32). They believed this because of an increasing number of minority students, the history with assessing culturally different groups, and the possibility of disproportionate diagnosis for cultural minorities (Reid et al., 1998).

The other federal statute is the Americans with Disabilities Act (ADA; US Department of Justice, 2004) and Rehabilitation Act of 1973 (US Department of Labor, 2004), which requires that accommodations within reason be made for those who have a substantial limitation of a major life activity; learning has been identified as a major life activity since it can be impaired by those with ADHD (Root & Resnick, 2003). The 1973 Rehabilitation Act, section 504 prohibits schools from discriminating against people with handicaps. Individuals with ADHD under this statute must be provided with an equal education by schools receiving any federal fund. If services are provided under section 504, then a 504 accommodation plan must be developed. Depending on the success of the accommodations, a team may review the case again and modify the accommodations as needed or consider services under IDEA, remedial academic support services, or services in a dropout prevention program (Burcham & DeMers, 1995).

School personnel have to determine the extent to which ADHD and its symptoms are interfering with the student's ability to learn academically, socially, or behaviorally, so that appropriate interventions can be made. Then the school must determine what, if any, appropriate modifications or special services need to be provided; however, when using the IDEA category, Other Health Impaired, in Texas, a physician or medical diagnosis must be made stating the health impairment of ADHD. In some states this must be a physician, in others it can be any qualified personnel who can use the DSM-IV to make the diagnosis. The medical evaluation, if necessary, may or may not be a part of the school assessment provided to the parents for no extra cost. Therefore, it is important that schools, parents, and medical professionals work collaboratively. As with many behavioral problems, the initial referrals are made by teachers to school teams. These teams determine what the next step is in the process of helping a student with behavioral problems; that may include informal and formal assessments. The results yielded may include a new placement or being labeled with a behavior disorder. Thus, the role of the rater and the decision to refer to school teams for diagnosis has a great influence. If rater/referral bias does exist the result can be serious for the child who is referred.

### *Prevalence of ADHD*

Studies of prevalence almost always use teacher or parent ratings (Langsdorf et al., 1979). Using these measures for ADHD prevalence studies is cost efficient for the large samples needed (Langsdorf et al., 1979); however, the information collected from



teachers and parents in diagnosing ADHD may not be reliable or objective (Brown University et al., 1996).

Although there has been no national study of the proportion of children diagnosed with or treated for ADHD, according to LeFever and Dawson (1999) studies involving children and youth in the United States have yielded ADHD prevalence rates ranging from 1% to 26%. The great variation comes from the different study designs and sample size (Szatmari, Offord, & Boyle, 1989). The higher estimates are usually from studies that have involved smaller sample sizes and those who meet screening criteria instead of those diagnosed with ADHD. The expert opinion is that between 3% and 5% of children in the United States have the disorder, but fewer than 3% receive medication for ADHD (Wolraich, Hannah, Pinnock, Baumgaertel, & Brown, 1996).

A report from the Department of Health, Education, and Welfare (1971) stated that 3% of all elementary school children experience moderate to severe hyperkinetic (ADHD) disorders (Langsdorf et al., 1979). Other estimates are that between 3 and 5% of school age children may have the symptoms of ADHD (APA, 2000; Barkley, 1998). In a classroom of 30 students, there will probably be at least 2 or 3 students affected by this disorder (Moss & Dunlap, 1990). According to one study (Brown University et al., 1996), an estimated 3% to 9% of children between the ages of 5 and 14 years (i.e., about 2 million) are diagnosed every year with ADHD and approximately half of all referrals to child mental health clinics are for ADHD (Reid et al., 1998). Even though the range of the prevalence rates may lead to some limitations, one conclusion can be drawn - ADHD may be over-diagnosed and over-treated in some groups of children. Additional

prevalence studies are needed before concern about over-diagnosis and over-treatment in ADHD can be dismissed (LeFever & Dawson, 1999).

### *Gender Differences in ADHD*

According to Root and Resnick (2003), boys with ADHD outnumber girls, but estimates of the ratio of boys to girls vary significantly. These differences range from 1.6 to 10 (Greenblatt, 1994). Some of the variations may be due to clinic populations in samples. Clinic samples tend to have more referrals from boys in general most likely due to the aggressive or antisocial behavior exhibited (Barkley, 1998; Greenblatt, 1994). Researchers believe that girls are identified later or not at all for ADHD (McGee, Williams, & Silva, 1987). ADHD has been consistently reported to occur at least 2 times more often among boys than among girls (Wolraich et al., 1996). Again, because of the frequency of disruptive classroom behavior exhibited by boys, a gender-correlated behavioral pattern may be seen as resulting in more boys with ADHD (Breen & Altepeter, 1990). Boys show more external behavior problems and are therefore, referred and viewed as more hyperactive (Greenblatt, 1994). When using parent or teacher rating scales with cutoff scores, boys generally have higher scores than girls (i.e., more frequent external behavior problems) and are therefore identified more often as having ADHD (McGee et al., 1987). Among the types of ADHD, the combined type was the most prevalent for both boys and girls; however, girls were 2.2 times more likely to be diagnosed as primarily inattentive than were boys with ADHD. In addition, girls with ADHD were statistically older at diagnosis of ADHD than boys with ADHD

(Biederman et al., 2002). Notably, the DSM-IV symptomatology of ADHD was based predominately on a sample pool of males (Frick et al., 1994; Lahey et al., 1994).

One difference found between girls and boys is the prevalence of comorbid disorders. Girls are more likely to be diagnosed with anxiety, depressive disorders, somatization disorders, substance use disorders, personality disorders, and academic underachievement (McMahon & Wells, 1998). Boys are more likely to have aggressive or antisocial behaviors. Boys generally display externally directed behaviors (i.e., stealing, lying, fighting, and destructiveness), while girls generally exhibit internally directed behaviors (i.e., anxiety, shyness, withdrawal, hypersensitivity, and physical complaints; Kazdin, 1994). Girls with ADHD had fewer school problems, participated in more extracurricular activities and were at a significantly lower risk for any other behavior disorder than boys (Biederman et al., 2002). However, girls were more at risk for substance abuse problems than boys, a finding which may warrant more research. This research is limited in the fact that only White children were included.

Berry et al. (1985) reported that girls may have more cognitive impairments and suffer more peer rejection than boys. Girls with ADHD have been shown to come from families with a lower socioeconomic status than the boys. Girls with ADHD may also represent an underidentified and underserved group that is at risk for long-term academic, social, and emotional difficulties. Thus, a true prevalence rate among girls in the general population is needed (Berry et al., 1985). Family studies should examine parental psychopathology, parenting styles, language function, and the developmental course of ADHD in girls.

A study by Greenblatt (1994) that used written case studies (characteristics of ADHD with hyperactivity and without hyperactivity) for raters to examine and diagnose found that 28% of the girls were accurately assessed compared with 72% of the boys. The sample population consisted of elementary and middle school teachers at either a predominantly Hispanic school or predominantly non-Hispanic White school. This study did not find that the ethnicity of a child affected the assessment of ADHD. The children in the study were described as either Hispanic or white, boy or girl. Results indicated that girls may not be referred as often when they present behaviors associated ADHD (Greenblatt, 1994).

Some scales have provided separate norms for girls and boys, in addition to a combined norm table because boys receive higher scores on rating scales (Reid et al., 2000). However, Silverthorn, Frick, Kuper, and Ott (1996) disagree with this practice; they argued that separate gender norms are not needed because girls and boys with ADHD did not differ. Silverthorn et al. (1996) suggested that gender has a significant effect on teacher ratings of ADHD symptomatology; however, there were no significant qualitative differences in the symptoms across genders. If the ADHD symptoms were different for genders, then one should see a different pattern of item means, item variance, and effect sizes. Results also have found that there may be gender differences in the perceived severity of symptom expression as rated on teacher rating scales. The Silverthorn et al. (1996) study was limited in its sample size and may have lacked the statistical power needed to find gender differences of moderate size.

The Reid et al. (2000) results have implications for the issue of separate ADHD norms for males and females and/or different ethnic groups. They had teachers complete a rating scale on 3,322 children ages five to eighteen. There were 2,636 Whites (about half male and half female) while the remaining 686 were African American (about half male and half female). The teacher raters were mostly women (82%) and White (93.4%). The results suggested that gender has a significant effect on teacher ratings of ADHD symptomatology; results also suggested that there is not a difference in the symptomatology across genders. Finally, the results show a pattern of African American males being seen as most severe, African American females and White males were seen about the same, and the least severe were the White females. As such there should be separate standards for different groups when using behavior rating scales (Reid et al., 2000).

#### *Cultural Differences in ADHD*

In addition to the differences noted in gender prevalence and the expression of symptoms, there were several researchers who noted cultural differences. The DSM-IV is somewhat limited in its culturally sensitivity as such it does not provide separate or distinct characteristics of disorders based on ethnicity or cultural differences (Cervantes & Arroyo, 1994). It uses a medical model format to list serious and persistent mental illnesses and problems. The DSM-IV minimizes reliability issues in the diagnostic process (Kirk & Kutchens, 1992); further, it does not include disorders resulting from oppression (Akbar, 1991). Recommendations for DSM cultural sensitivity include, explicitly labeling disorders resulting from oppression in future DSM editions and an

inclusion of a cultural axis as one possible way to resolve the conflict between disease and cultural viewpoints (Fabrega, 1992). However, cultural identity information affects the test usage, modifications for tests, the way services are delivered, diagnosis of culture bound conditions, and test interpretation. “Increased awareness of cultural identity promotes recognition of cultural diversity both within and between groups” (Dana, 1998, pg. 3).

Despite legal and professional safeguards, there is a pattern of disproportionate diagnosis and placement of African American, Hispanic, and Asian children in categories of disability. This was first noticed by Dunn (1968) and Mercer (1973). Surveys in 1978, 1980, 1982, and 1984 performed by the Office of Civil Rights found that African Americans were placed in classes for mild mental retardation at approximately twice the rate that would be expected (Chinn & Hughes, 1987). Prenatal risk factors, psychosocial stressors, and economic disadvantage can affect educational and behavioral outcomes for culturally different individuals and may be factors for disproportionate representation of some groups (Reid et al., 1998). In addition, assessment instruments may be misleading or invalid when used with culturally different students. Tests have been used with students that were not presented in their native language (*Diana v. State Board of Education*, 1970), that were biased (Sattler, 1988), or considered discriminatory (*Larry P. V. Riles*, 1979).

The cultural issues in assessment, evaluation, and treatment are important because they involve such a substantial amount of the United States population. African Americans constitute 12% of the total United States population and 53% of the African

American population are women (Baker & Bell, 1999). More than 60% of the population lives in urban areas, and 25% have incomes lower than the poverty level. Any assessment measure used for diagnosis should have been evaluated and found reliable with the population it is being used for (Baker & Bell, 1999).

Some of the overrepresentation of diverse students can be linked to measurement problems (Pearson & DeMers, 1990). The established dependence upon standardized tests such as intelligence tests to identify deficits in children disproportionately stigmatizes children from culturally diverse and minority backgrounds because these groups are often inadequately represented or even absent from the test's normative sample. In fact, children being evaluated may feel less comfortable and perform less optimally if their racial or ethnic background differs from that of the examiner (Pearson & DeMers, 1990).

Cultural issues in the assessment of psychopathology have received very little attention, because it was believed that etiology, expression, course, and outcome of psychological disorders were universal and independent of cultural factors (Marsella & Kameoka, 1989). When used across cultural groups, even a laboratory measure such as the Gordon Diagnostic System (GDS; Gordon, 1982) may pose a problem. The GDS could over-identify non-American children because its norms are based on Americans. The GDS is a microprocessor-based, portable continuous performance test that administers three tasks (delay, vigilance, and distractibility). The continuous performance test has been the most frequently used measure to identify the inattention difficulties of ADHD in children (Bauermeister et al., 1990).

Bauermeister et al. (1990) believed that members of different cultures move differently and organize activities differently than White cultures. They found extremely high prevalence rates of childhood maladjustment when a measure with United States cut off points was used with children of another culture. This supports the need to develop diagnostic criteria that includes sociocultural issues and relevant assessment measures (Bauermeister et al., 1990).

According to Langsdorf and colleagues (1979) the relationship between ethnicity and hyperactivity has not been examined in prevalence research, and in most instances ethnic data are not even reported. Langsdorf and colleagues reported that African American children were perceived as hyperactive with greater frequency than would be expected, while the White students received ratings consistent with expected frequencies. Their sample population was 1719 children (half boys and half girls) with 27% White, 38% African American, and 35% Mexican-American.

To combat the measurement problems that potentially lead to misidentification, one should use assessment instruments normed on populations representative of the person being assessed, use alternative assessment techniques that emphasize attainment of educational objectives rather than comparison of individuals with a normative group, and use an assessment model that identifies strengths as well as deficits (Federal Resource Center, 1993). In addition, assessors should be sensitive to cultural variations in children's attitudes, behaviors, and values; they should become knowledgeable about cultural variations in the population of students being served and insist on fair assessment practices linked to interventions (Burcham & DeMers, 1995).



It is very difficult to determine if differences with a culturally different group are due to the scale itself or due to a real difference in the base rate of symptoms of ADHD across different groups. One study by Jarvinen and Sprague (1995) has addressed this issue and found that there was no pattern of item bias that would increase the scores of minority students. Although, the scale used in the study does not currently reflect the ADHD diagnostic criteria (APA, 2000). An important issue is for the cultural differences and influences to be taken into account when formulating and applying the diagnostic-classification system; this is just as important as an assessment that considers cultural differences (Bauermeister et al., 1990).

As of yet, according to Burcham and DeMers (1995), there is no evidence that ADHD appears more frequently in any particular ethnic, racial, or cultural group; however, because there is no lack of clear empirical determinants of ADHD, there is potential for over- or under-representation of different racial/ethnic groups. A child's attentional difficulties can be masked or exacerbated by cultural attitudes about competition, aggression, delayed gratification, and discipline.

There is an assumption that ADHD is more prevalent among children from minority and low-income populations; however, other research is challenging this assumption (Barkley, 1998; LeFever & Dawson, 1999). Although there has been substantial research on ADHD, there is less research on ADHD among culturally different students (Reid, 1995). The paucity of assessment of ADHD among culturally different students is of concern (Reid et al., 1998). In order to reduce the misdiagnosis of minority clients and to improve the quality of their treatment, cultural issues in mental

health should be studied especially the effects of race on assessment and treatment (Casimir & Morrison, 1993; Forehand & Kotchick, 1996; Worthington, 1992). Some normal culturally bound behaviors may be confused with psychopathology (Westermeyer, 1987). Misdiagnosis is common among minority and culturally different populations. Much of the research that is currently being presented on assessment and diagnosis of minority or culturally different clients is focused on adults. It should be noted that ADHD as a disorder and the measures used for assessment have not taken into consideration cultural difference (Reid et al., 1998).

For example, Reid et al. (2001) found a well-documented pattern of significantly higher ratings for African American children for ADHD as opposed to White children. They stated that twice as many African American children screened positive for ADHD. Coll, Akerman, and Cicchetti (2000) reported that there are some very real cultural differences between African American and whites; that these differences are not due to past inferiorities.

Baumgaertel, Wolraich, and Dietrich (1995) found that boys were overrepresented in all of the ADHD diagnostic subtypes. One reason for the overrepresentation has been due to the change in criteria from the DSM-III-R to DSM-IV. The most recent criteria included all those children previously identified; in addition it identified more than 60% of children meeting criteria for inattention, and 30% for hyperactivity subtype. The children in this study were German and the findings were different from those of most American studies. The authors cited socioenvironmental factors as reasons for the higher rates of ADHD. The authors described the children as

coming from crowded living conditions with little recreational and personal space in or outdoors, similar to the inner and urban cities in America. Thus, poverty and minority status has been linked to a high rate of psychopathology (Zahner et al., 1993).

Reid et al. (2001) found that an ADHD rating scale (the IOWA Conners; Pelham, Milich, Murphy, & Murphy, 1989) appeared to have construct equivalence across Whites and African American groups; however, differences existed in the mean scores across both groups leading to an increased likelihood for a positive screen for African American children. The groups differed in the perceived presence of an antisocial factor for African American boys and inattention for White girls. African American children also were rated higher on externalizing behaviors. Across genders, there were differences found, as well. African American boys were about 2.5 times more likely to screen positive, while African American girls were more than 3.5 times more likely to screen positive. This scale has been documented to give significantly higher scores for African American children. Reid et al. (2001) could not rule out the possibility that African American actually do have higher rates of inattentive, hyperactive, and/or aggressive behaviors; however, halo effects, rater effects, or socioeconomic status also may contribute and lead to a need for separate norms for African American students (Reid et al., 2001).

Again, most measures administered for diagnosing ADHD and other disruptive behavior disorders have been normed on predominantly White samples and these norms may be problematic for minority populations. African American norms might help with the problem of over-diagnosis of certain disorders because of a child's race (McNeil et

al., 2002). On the other hand, others (Patterson, Kupersmidt, & Vaden 1990) have found that income level and gender were better overall predictors of behavior problems than ethnicity or family constellation. When behaviors differ between cultures, they are usually seen as deficient when they do not match the majority or arbitrarily assigned cultural standard as set up by the dominant culture. Different cultures ascribe values differently and in the African American culture greater value is centered in the home than in the workplace (Martin & Grubb, 1990). Further, the constructs involved may differ across cultures.

Construct equivalence is a very important factor in cross-cultural assessment. For example, if a certain instrument has a different meaning when used with different groups, then the scores will not be of the same construct and are not directly comparable (Reid et al., 2001). There have been a few studies on this issue but two have investigated ADHD rating scales and equivalency across African American and White children. The first study by Reid et al. (1998) found a moderate degree of congruence across groups. The other study by Epstein, March, Conners, and Jackson (1998) found that there were similar factors across groups, but the groups differed in the presence of some factors. In fact, the raters in this study (teachers) tended to rate African American children higher on externalizing behaviors.

Patton (1998) argued that the behavior of African Americans is generally explained and interpreted by the “outsider” beliefs and assumptions about their origins and meanings of behavior as well as the values placed on them. Culturally different children should not only be viewed from the within-child deficit but the

overrepresentation problem should be examined from multiple perspectives (Artiles & Trent, 1994). Factors such as parental psychopathology (i.e. substance abuse, depression, and antisocial problems; Webster-Stratton & Hammong, 1999) and maternal adjustment problems such as high levels of anger have been associated with preschool behavior problems in low-income samples (Bassuk, Weinreb, Dawson, Perloff, & Buckner, 1997) and tend to be more of a predictor of behavior problems for youth in high-risk environments. For early onset disruptive behavior problems, child and parenting correlates were the most salient risk factors. These included parenting stress, low behavioral responsiveness, and use of harsh discipline (Gross, Sambrook, & Fogg, 1999). For example, there is a higher frequency of behaviors of inattentiveness, impulsivity, and over activity in Puerto Rican children compared to White children that may be due to the culturally determined styles of responding to a structured environment like a classroom (Bauermeister et al., 1990).

In a study by Bussing et al. (1998), African American parents received lower ADHD knowledge scores, had less current ADHD information, and professed to know less about ADHD than White parents. It is believed that a lack of information cycle may exist among African Americans in the study since most people seek medical advice from friends and family and the same information may be shared over and over again and therefore invalidating medical mainstream labels. One reason for African American parents not knowing as much about ADHD may be because the symptoms of ADHD may be perceived by them as either normal or something the child will outgrow and not necessarily in need of professional intervention. African American parents also may

believe that they and their children are targeted unfairly for discriminatory purposes (Bussing et al., 1998)

An increase in the number of culturally different children with emotional or behavioral impairment certainly dictates a need to be aware of the assessment practices for culturally different children with special needs (Reid et al., 2001). Reid (1995) reviewed studies using ADHD rating scales with culturally different groups; he concluded that there is not enough data on rating scales or psychometric properties to use across groups, there may be over-identification of some groups, norms did not adequately represent culturally different groups, and there may be a possibility of rater bias when rating different cultural groups.

There have been several main theories posited as to why or how minority students fail in school endeavors. One of these posits that minority students are inherently inferior and that education outcomes are the result of such innate deficits (Jensen, 1969). Another theory highlights the dissonance between home and school cultures as a way to explain minority children's school failure, asserting that the home culture shapes the behavior, learning, and cognitive styles of children; the school is not aware of the cultures taught at home. Thus, differences between home and school may produce problems for culturally and linguistically different children (Vogt, Jordan, & Tharp, 1987).

#### *Socioeconomic Status (SES) and ADHD*

Ethnicity alone cannot account for differences in psychological distress (Kessler & Neighbors, 1976). For ADHD, low socioeconomic status is a risk factor, in addition

to parental stress and family constellation. Parental stress or maternal stress is related to high levels of negative behavior in hyperactive children (Mash & Johnston, 1983).

Research also has shown that single-parent homes and child psychological dysfunction have a relationship (McNeil et al., 2002). Low socioeconomic status is most likely to be the better correlate associated with DSM disorders in general (Moss, Mezzich, Yao, Gavalier, & Martin 1995). In addition, parental behavior, such as depression and substance use, has been correlated with behavior disorders in children (Kann & Hanna, 2000). Similar to other developmental, learning, and mental health disorders, ADHD has been reported to be more prevalent among children from minority and low SES environments. However, ADHD medication was administered twice as often to Whites as compared to minority students. These differences may reflect parents' decisions to fill prescriptions and/or to make prescribed medication available to their children in school (LeFever & Dawson, 1999).

An individual's, family's, or groups ranking on a hierarchy according to their access to or control over some mixture of wealth, power, and social status is used to signify socioeconomic status (Mueller & Parcel, 1981). The occupation of the parent(s), income, education, prestige, power, and a certain lifestyle is included in SES (House, 1981). However, poverty is not like SES. Poverty is based on an absolute standard and is not about a relative position. The primary indicator of poverty is cash income. Cash income is only one of several factors of SES and is related but separate from occupational status, educational level, prestige, and power, that SES includes (McLoyd, 1998).

Biederman et al. (2002) found ADHD not to be associated with lower socioeconomic status and divorce or separation differentially in boys and girls; no other demographic variables were significantly different in boys and girls with ADHD. According to Sims (1986) there is a strong relationship between ethnic group and poverty that makes it difficult to determine the effects of each variable separately and its impact on mental health. Frequently, African American children also experience other factors of risk such as living in a single-parent, mother-headed home (Edelman, 1985, 1987; Glick, 1988; Laosa, 1988). African American children who have been diagnosed more frequently with behavior problems have come from low-income families. Because SES may contribute to the differences between ethnic groups, future research should control for this variable (Reid et al., 2000).

#### *Rater/Referral Bias*

Generally, educators or teachers are often asked to evaluate children with psychological problems using standardized rating scales (Sandoval, 1981). These ratings are used to make decisions concerning diagnosis, treatment, and educational placement. Teacher ratings also are used for research as criteria, as a means of monitoring treatment progress, and as indicators of long-term outcomes (Stevens et al., 1998).

It has been reported that teacher prejudices, racial bias, expectations, and differential treatment influence referral decisions of minority students (Harry, 1992). A relationship has been documented between student ethnicity, SES, teacher expectations/treatment, and pupil achievement level (Brophy & Good, 1986; Irvine,



1991). Gender, appearance, and SES can influence eligibility decisions (Ysseldyke, Algozine, Ridley, & Graden, 1982) in that certain demographic characteristics and the presence of certain childhood behaviors may be associated with negative halo effects (Stevens et al., 1998). Halo effects are evidenced when children display oppositional or aggressive behaviors and raters tend to endorse items relating to hyperactivity or inattention, even when actual behaviors are not displayed. The question of whether or not items assessed function differentially across different ethnic groups has received little attention (Reid et al., 2001). In fact, if a given ethnic group actually displayed or was perceived to have aggressive or oppositional behaviors, then there is a possibility that the result would be artificially inflated scores on unrelated areas such as hyperactivity or inattention even if these behaviors were not displayed (Reid et al., 2001).

There are very few studies that look at whether rating scales or raters perform differently with different cultural groups (Sonuga-Barke, Minocha, Taylor & Sandberg, 1993). There seems to be an association between the ethnicity of both the teacher and the child in the assessment of problem behaviors (Greenblatt, 1994). For example, White teachers perceived a higher level of problematic behaviors in African American children than in White children, whereas White and African American children received equal ratings from African American teachers (Eaves, 1975). When there are raters from countries with less similar cultural and historical backgrounds, the differences in clinician's perceptions are likely to be even greater (Mann et al., 1992). For example, Reid et al. (1998) found that when raters are from a different culture as the children

being rated, there are consistent mean differences across groups and significant differences in group variances. The differences could be from actual differences in behavior, in instrument bias, or both. The difference also could be due to halo effect, as noted in a study by Abikoff, Courtney, Pelham, and Koplewicz (1993). They reported that when teachers rate students with oppositional behaviors, halo effects or inflated ratings of ADHD-like behavior are more likely. This study showed, similar to Sonuga-Barke et al. (1993), that factors other than the behaviors of the child may affect the ratings. Although, SES could not be included in this study, the authors suggested that the norms for the White students may not be appropriate for the African American students. Additional research is needed to address whether these differences would occur with parents and across different races of teachers. The authors cautioned against the use and interpretation of rating scales with culturally different students (Reid et al., 1998).

In one study, teachers were given vignettes that described the children as either middle or low socioeconomic status. The description of the low socioeconomic status resulted in significantly higher hyperactivity ratings despite the fact that the behavior described was identical (Reid et al., 2001). In a study by Calhoun (1975) teachers rated ADHD in children by reading a vignette that differed in race, SES, and “typicalness” or the degree to which a particular behavior pattern was exhibited in a particular setting by other members of an individual’s peer group. In other words, if a child with ADHD type behavior is in a classroom with others displaying similar behavior, the child’s behavior is considered “typical” and vice versa. The study found that race and SES did not

significantly impact teacher evaluations of ADHD, but “typicalness” was found to be significant. Thus, those children who display behavior atypical of their peers are more likely to be referred for their inappropriate behavior.

Lambert et al. (1978) asked parents, teachers, and physicians to identify children who they considered to be hyperactive. Respondents identified 13% of elementary school children; teachers identified African American students as hyperactive more often than Hispanic or White children. Another study by Stevens (1980) had school personnel identify which children from videotaped vignettes exhibited hyperactive behaviors. It was found that White parents and school personnel (93% of whom were White) tended to attribute ADHD to African Americans more often than to White or Mexican-American students. Also, school faculty identified more children as having ADHD with lower social class than those with higher social class.

Samuel et al. (1997) examined six studies that assessed the prevalence and assessor bias of ADHD in school settings. In their review, the majority of the studies found assessors to identify ADHD in African American children more than other ethnic groups. Nearly all of the studies reported that teachers attributed ADHD at a higher rate to African American children in comparison to their own ethnic groups. However, what is difficult to determine is whether the differences in ADHD by ethnic groups is due to assessor bias or to a real phenotypic difference. The limited number of studies available on assessment of ADHD in African Americans have used non-traditional assessment tools such as developmental and projective assessment instruments to evaluate ADHD. Moreover, most of the assessment instruments for ADHD have not been normed on

African American children, and the patterns of comorbidity may or may not differ in African Americans (Samuel et al., 1997).

Reid et al. (2001) found that African American teachers tended to perceive less difference between White and African American students than did White teachers. It may be that African American teachers are more accurate in identifying students with ADHD-like behaviors than White teachers. It was found that African American girls were much more likely to screen positive when rated by White teachers; whereas White students of either gender were far less likely to screen positive when rated by White teachers. These effects can be seen as potential rater effects (Reid et al., 2001). The results of the study by Reid et al. (2001) suggested that there is the possibility of false positives based on the ethnicity combination of the rater and child. More studies are needed to clarify the sources and explanations of these differences before behavioral ratings used as screening instruments may be used normatively with confidence across ethnic groups in the school setting.

Separate norms are needed because of the nature of behavior rating scales themselves. Several potential sources of rater-based error have been identified by Reid and Maag (1994). Halo effects provide most of the need for the use of separate norms. Halo effects or inflated behavior rating scale scores, can occur when teachers rate children with oppositional behaviors. As mentioned before, boys are more likely to express these types of behaviors and are, therefore, more likely to be subject to halo effects and have higher ratings (Abikoff et al., 1993; Schachar, Sandberg, & Rutter, 1986). These halo effects also may differ across ethnic groups and especially for

African American children (Reid et al., 1998; Sonuga-Barke et al., 1993). Thus, more research on rater and halo effects is needed.

### *School Climate*

In addition to potential rater bias or potential measurement issues, school climate may be a contributing factor. School climate can be defined as the quality and frequency of interactions between adults and students at school (Emmons, 1993). Attitudes, values, and behaviors of students, school personnel, parents, and community member toward each other and activities occurring at school encompass school climate. School climate is a multidimensional and proximal variable (Witcher, 1993). Raters of school climate base their response on their own expectations and perceptions of the environment. The school climate is generally a perception of the conditions at the school. The child's perceived adjustment by classroom teachers is as important as the actual adjustment, especially because teachers' perceptions control instructional inputs as well as the social-emotional climate of the classroom (Kellam, Branch, Agrawal, & Ensminger, 1975).

Diversity and multicultural education are important curricular needs for teacher education and school psychology programs to address preservice student needs. There is an increasingly diverse school population with a predominantly White teaching force; this leads to a discontinuity between students and teachers (Grant & Secada, 1990). The culture that school personnel bring to the school differs from that of the students and it is essential that the personnel recognize this importance. Different cultures mean different

values, knowledge, and communication, which in turn may increase the chance for biases and their unintended consequences (Artiles, Harry, Reschly & Chinn, 2002).

A healthy school climate lends support for the social and intellectual skills that children need to succeed; an unhealthy school climate does not provide the support for social and intellectual development of the children. Bronfenbrenner's social-ecology theory (1979) posits that perceptions are important to understanding individuals' efforts to change their social environment; schools are a social environment. Minority students may experience the social environment of school differently than a student of the majority culture (White) as boys may experience the social setting differently than girls.

Overall, studies have found that positive school climates are associated with less emotional and behavioral problems (Kuperminc et al., 1997; Roeser & Eccles, 1998). Students at greatest risk of emotional and behavioral difficulties are most affected by a positive school climate (Felner et al., 1995). It is possible that what constitutes a positive school climate may differ based on gender, social class, and ethnicity (Kuperminc et al., 2001). Differences in school climate perceptions can be linked to factors like aggression in classroom, teacher motivation, and peer relationships (Meinrath & Kuperminc, 1997).

Boys' adjustment may be facilitated by a supportive school climate; however, boys who have negative school climate perceptions may receive discipline more often than girls (Kuperminc et al., 1997). Further, African American boys and those from lower SES with positive school climate perceptions had fewer discipline referrals. Thus, positive school climate may serve as a protective factor for boys. African American

girls who had negative perceptions of school climate displayed increased levels of discipline referrals and teacher-reported externalizing problems. The role of school climate is not as clear in girl's social adjustment; more variance was seen with demographic and psychosocial variables (Kuperminc et al., 1997). Children's racial/ethnic background may strongly influence what they see as important to a positive school climate (Slaughter-Defoe & Carlson, 1996). In some research, African American children placed importance on the teacher-student affective bond, consistent with research on African American education (Epps, 1992; Lee & Slaughter-Defoe, 1995).

Additionally, expectations usually make people react in order to live up or down to those expectations. Most people, teachers and students included, react to how others see and treat them (Harris & Willower, 1998). High expectations that usually follow improved performance can be reflected in the perceptions of effectiveness. Mott (1972) defined effective organizations as "those that produce more and higher quality outputs and adapt more effectively to environmental and internal problems than do other similar organizations" (p. 17). Perceptions of effectiveness are only one part of effectiveness; as noted by Harris and Willower (1998) good communication is important. They found that schools that were viewed as effective had teachers who were able to communicate with and understand the administration. If teachers are in a school that has optimistic administration, the teachers then perceive the school is doing a good job. It is known that the school climate is one of comparison and competition; however, when success or failure comparative judgments are made, teachers do not use the information but like to know about it (Cullingford & Swift, 2001). In fact, a study by Mwamwenda and

Mwamwenda (1989) posited that experienced teachers should have better teaching effectiveness than less experienced teachers.

### *Implications*

Child demographics, rater effects, and school climate have been posited as contributing factors to identifying children with disruptive behavior disorders. Many times the school determinants for identifying children with ADHD for special education have little to do with the DSM-IV diagnostic criteria (Burcham & DeMers, 1995). In a school setting, the teachers' contribution to assessment is to identify the extent to which the symptoms associated with ADHD are interfering with the child's ability to benefit academically, socially, or behaviorally in school so that plans can be developed to enhance the child's school experience (Burcham & DeMers, 1995). Teachers have the advantage of experience with multiple children for comparison and are some of the first to identify those children who are referred for services in the school system. The team of assessors should remain sensitive to cultural variations in children's behavior, values, and attitudes. The team should be knowledgeable of cultural variations and should insist on fair assessment practices that are linked to successful interventions and not labels (Baker & Bell, 1999; Burcham & DeMers, 1995). Ethical and legal requirements state that measures be "fair." The suspected overrepresentation of African American for ADHD, as well as for qualifying or being referred for services may be attributed to racial differences in diagnosis. The non-Black (African American) therapist should be somewhat aware of social-value differences when working with the African American individual (Martin & Grubb, 1990). In fact, "this view has led mental health



professionals to assign Black cultural behavioral expressions such as concentration on the present (as opposed to a future-orientation) as an inability to defer gratification, a negatively value-laden term describing basic lack of cultural development” (Martin & Grubb, 1990, p. 264).

At the same time, early identification for behavior problems, such as ADHD, is important because those children whose behavioral problems continue into later childhood and adolescence have adverse outcomes such as early school dropout, teenage pregnancy, delinquency, lowered occupational attainment, development of antisocial personality, substance abuse, and criminality in adulthood (Root & Resnick, 2003).

### *Conclusions*

It has been shown that where gender is a factor, boys generally display more externally directed behaviors (i.e., stealing, lying, fighting, and destructiveness), while girls generally exhibit internally directed behaviors (i.e., anxiety, shyness, withdrawal, hypersensitivity, and physical complaints; Kazdin, 1994). There are also differences in reported male to female ADHD ratios that range from 1.6 to 10 (Greenblatt, 1994). Girls may be identified later or not at all for ADHD (McGee et al., 1987). In fact, when using parent or teacher rating scales with cutoff scores, boys generally have higher ratings of external behavior problems than girls, and are, therefore, identified more often as having ADHD (McGee et al., 1987). According to Root and Resnick (2003), girls with ADHD have been shown to come from families with a lower socioeconomic status than the boys. Girls with ADHD also may represent an under-identified and underserved group that is at risk for long-term academic, social, and emotional

difficulties. Thus, a true prevalence rate among girls in the general population is needed (Berry et al., 1985).

What is known about ethnicity or cultural differences may not be emphasized by the DSM-IV, as it does not provide separate or distinct characteristics of disorders based on ethnicity or cultural differences (Cervantes & Arroyo, 1994). Despite legal safeguards, there is and has been a pattern of disproportionate diagnosis and placement of African American, Hispanic, and Asian children in categories of disability (Dunn, 1968; Mercer, 1973). In the past, the relationship between ethnicity and hyperactivity has not been examined in prevalence research and in most instances ethnic data are not even reported (Langsdorf et al., 1979). There continues to be less research on ADHD with culturally different students and the assessment of ADHD with culturally different students is of concern (Reid, 1995; Reid et al., 1998). Because there is a lack of clear empirical determinants of ADHD, there is potential for over- or under-representation of different racial/ethnic groups.

Ethnicity issues are important because they involve such a substantial amount of the United States population. Assessment instruments normed on a population representative of the person being assessed should be used as one way to combat the measurement problems that potentially lead to misidentification (Federal Resource Center, 1993). In addition, assessors should be knowledgeable and sensitive to cultural variations in children's attitudes, behaviors, and values and insist on fair assessment practices linked to interventions (Burcham & DeMers, 1995). Misdiagnosis is common among minority and culturally different populations; further, income level and gender

were better overall predictors of behavior problems than ethnicity or family constellation (Patterson et al., 1990).

It is known that one factor such as ethnicity alone cannot account for differences in psychological distress (Kessler & Neighbors, 1976). For ADHD, low socioeconomic status is a risk factor and is most likely to be the better correlate associated with DSM disorders in general (Moss, Mezzich, Yao, Gavalier, & Martin 1995). ADHD has been reported to be more prevalent among children from minority and low SES environments. African American children also experience other factors of risk such as living in a single-parent, mother-headed home (Edelman, 1985, 1987; Glick, 1988; Laosa, 1988). African American children who have been diagnosed more frequently with behavior problems have come from low-income families. More research should be conducted since SES may contribute to the differences between ethnic groups (Reid et al., 2000).

In the conclusion of halo effects or rater effects, there seems to be an association between the ethnicity of both the teacher and the child in the assessment of problem behaviors (Greenblatt, 1994). It is important to note that teacher prejudices, racial bias, expectations, and differential treatment influence referral decisions of minority students (since teachers are usually the first referrers or raters; Harry, 1992). A review of several studies found that the majority of assessors identified ADHD in African American children more than other ethnic groups (Samuel et al., 1997). Again, it is difficult to determine whether the differences in ADHD by ethnic groups are due to assessor bias or to a real phenotypic difference.

School climate as a whole may contribute to students' psychological well-being. Support for the social and intellectual skills that children need to succeed is provided by a healthy school climate; fewer emotional and behavioral problems are associated with a positive school climate (Kuperminc et al., 1997). Schools can enhance and support the quality of the student's academic and emotional functioning (Roeser et al., 1998).

The interactions of the factors described above are very difficult to separate and control for in research studies. Many studies have examined the relationships between different combinations of the gender, ethnicity, and SES; few have come to a conclusion. There seems to be a fairly consistent conclusion that African Americans, particularly boys are more over-identified for ADHD; however, the research on school climate is limited or non-existent when comparing or combining it with ADHD studies. It is the hope that this study can contribute to the literature on the three main factors (gender, ethnicity, SES) of ADHD in addition to the fourth and potentially important interaction factor of school climate.

### CHAPTER III

#### METHODOLOGY

Teachers often are the primary source for student referral regardless of ethnicity, gender, or SES. The purpose of the study was to investigate any differences in the way in which teachers respond to behavioral difficulties associated with ADHD for African American girls and boys as compared to White girls and boys, with control for SES and perceived school climate as potential confounds. There are several questions that are intended to be answered with this research. The questions are listed in Chapter I.

This study used an analogue approach. The advantage of using an analogue approach is that the gender, ethnicity, and SES of a fictitious child can change from case to case while all other behavioral characteristics of the child remain constant. This is not possible in a live interview or in a review of already diagnosed children. This method also allows a large number of participants in different locations to evaluate the same cases (Greenblatt, 1994; Stevens, 1980; Vaughn et al., 1997).

#### *Participants*

Participants were 160 teachers from 6 elementary schools in Central and South Central Texas. The schools ranged from 190 students to 670 students per school and grades ranged from Early Education to fifth grade. Ethnic distribution, economic disadvantaged, and program placement are among the school demographics that are presented in Table 1. One hundred twenty-seven of the teachers were White (79.4%), 13 were African American (8.1%), 17 were Hispanic (10.6%), 1 was Biracial (0.6%), 1 was Native American (0.6%), and 1 was classified as other (0.6%). Of these, 151 (94.4%)

were female and 9 (5.6%) were male. Their ages ranged from 21 to 73 with a mean age of 42, while the number of years teaching ranged from 1 to 41 with a mean of 13. The education level of the teachers included 103 (64.4%) who had completed a bachelor's degree, 35 (21.9%) who had 15-30 hours of additional coursework, and 19 (11.9%) who had completed a master's degree. Of these 160 teachers, 143 (89.4%) taught regular education, 15 (9.4%) taught special education, and 2 (1.3%) were student teachers. One hundred seventeen teachers (73.1%) were certified via the traditional route (enrolling in a bachelor's degree program for education) and 41 (25.6%) were certified through alternative methods. Teacher experience and training related to children from diverse backgrounds varied (See Table 2).

### *Instruments*

The packet included a brief personal data questionnaire (see Appendix B) and brief descriptions of two children followed by five questions at the end of each description (see Appendix C), as well as a school climate questionnaire (see Appendix D). The personal data questionnaire included basic demographic questions such as gender, ethnicity, age, level of education, and grade taught; it also included self reported level of experience and training in working with children from diverse cultures and with children with special needs.

Table 1

*School demographics by school (Frequency/Percent)*

School	A Elem.	B Elem.	C Elem.	D Elem.	E Elem.	F Elem.
Number of Students	540	649	190	554	310	670
Grades in School	EE – 4	PK – 4	PK – 4	EE – 4	EE – 5	2 – 5
Ethnic Distribution:						
African American	13	82	141	70	63	149
	2.4%	12.6%	74.2%	12.6%	20.3%	22.2%
Hispanic	117	230	21	259	6	145
	21.7%	35.4%	11.1%	46.8%	1.9%	21.6%
White	401	327	23	212	240	375
	74.3%	50.4%	12.1%	38.3%	77.4%	56.0%
Native American	6	5	0	2	0	0
	1.1%	0.8%	0.0%	0.4%	0.0%	0.0%
Asian/Pacific Islander	3	5	5	11	1	1
	0.6%	0.8%	2.6%	2.0%	0.3%	0.1%
Economically Disadvantaged	249	334	145	342	187	366
	46.1%	51.5%	76.3%	61.7%	60.3%	54.6%
Limited English Proficient (LEP)	92	154	6	180	0	73
	17.0%	23.7%	3.2%	32.5%	0.0%	10.9%
Students in Disciplinary Placements	0	2	0	0	0	0
	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%

Table 1 Continued

School	A Elem.	B Elem.	C Elem.	D Elem.	E Elem.	F Elem.
Number of	16.0	15.3	11.6	14.8	12.9	14.9
Students per	n/a	n/a	n/a	n/a	n/a	n/a
Teacher						
Student						
Enrollment by						
Program:						
Bilingual/ESL	90	148	2	180	0	70
Education	16.7%	22.8%	1.1%	32.5%	0.0%	10.4%
Gifted &	12	11	8	7	16	47
Talented	2.2%	1.7%	4.2%	1.3%	5.2%	7.0%
Education						
Special	45	64	16	45	61	100
Education	8.3%	9.9%	8.4%	8.1%	19.7%	14.9%

*Notes:* Elem. = elementary; EE = early education; PK = pre-kindergarten; ESL = English as a second language



Table 2

*Teacher demographics*

Item	Frequency	Percent
Gender		
Female	151	94.4
Male	9	5.6
Ethnicity		
White	127	79.4
African American	13	8.1
Hispanic	17	10.6
Biracial	1	0.6
Native American	1	0.6
Other	1	0.6
Education Level		
Enrolled in Bachelor's	2	1.3
Completed Bachelor's	103	64.4
Bachelor's plus 15-30 hours	35	21.9
Master's Degree	19	11.9
Employment Type		
Student Teacher	2	1.3
Regular Education Teacher	143	89.4
Special Education Teacher	15	9.4

Table 2 Continued

Item		Frequency	Percent
Certification Route	Traditional Certification	117	73.1
	Alternative Certification	41	25.6
	Did not Respond	2	1.3
Experience in working with Diversity	Minimal to None	5	3.1
	Some	52	32.5
	Much	85	53.1
	Extensive	18	11.3
Training in working with Diversity	Minimal to None	15	9.4
	Some	83	51.9
	Much	51	31.9
	Extensive	11	6.9
Experience in working with children with special needs	Minimal to None	12	7.5
	Some	64	40.0
	Much	56	35.0
	Extensive	28	17.5
Training in working with children with special needs	Minimal to None	34	21.3
	Some	74	46.3

Table 2 Continued

Item		Frequency	Percent
School involved in seeking services for ADHD	Much	35	21.9
	Extensive	17	10.6
	Yes	94	58.8
	No	57	35.6
	Did not Respond	9	5.6

*Case Study.* The two brief descriptions of children included the child's ethnicity (African American and White), gender, age, free or reduced lunch needs (lower socioeconomic status), and a description of the child's behavior in the classroom setting (see Appendix C). The cases differ with regard to gender, ethnicity, and free/reduced lunch status (lower socioeconomic status) for a total of eight different scenarios (African American, male, lower socioeconomic status; African American, male, not lower socioeconomic status; African American, female, lower socioeconomic status, African American, female, not lower socioeconomic status; White, male, lower socioeconomic status; White, male, not lower socioeconomic status; White, female, lower socioeconomic status; White, female, not lower socioeconomic status). The questionnaire/description of each child reflects behaviors consistent with the DSM-IV criteria for ADHD. It was developed by one faculty member and reviewed by another faculty member as well as two other doctoral students with revisions based on their feedback. The questions following the scenario addressed the seriousness of the child's

problem, how unusual the behavior is, how much assistance would be needed, who the participant would talk to about the behavior of the child, and how soon would the participant do something about the behavior (see Appendix C).

*School Climate.* The school climate questionnaire contained questions relating to student pride in school, respect for different cultures, and responsiveness of teachers to students problems (see Appendix D). A previously existing measure was not chosen because some questions lacked applicability. It was developed following reviews of similar measures and other studies (e.g. Haynes, 1996; Hood & LoVette, 2002; Kuperminc et. al, 1997; & Kuperminc et. al 2001; Paredes, 1993) by a doctoral student. The measure was then reviewed by two other doctoral students and two faculty members with revisions based on their feedback. Internal consistency of the measure was determined using split half reliability (equal length Spearman-Brown  $r = .77$ ). Another measure of reliability using Cronbach's alpha was conducted which yielded a good reliability ( $r = .86$ ). This instrument is considered to be adequate to the extent that the coefficients are close to +1.00. School climate was included as a consideration because the social emotional climate of the classroom may affect the teacher's perceptions and ratings, as well as a child's behavior.

#### *Procedure*

There were two small school districts with one elementary school in each district chosen as well as a larger school district with four elementary schools in the district. The schools chosen constitute a sample of convenience. The school sites were identified by the size and certain other non-identifying demographic information. The schools are

considered to be small and rural, with the number of students ranging from 190 to 670. The teachers constitute a sample of convenience with permission for participation first determined at a district level, then at individual school levels, and then at the individual teacher level. Participation was voluntary and anonymous. All persons attending the faculty meeting were given the opportunity to complete the survey and less than five refused (declined) to participate.

The demographic information sheet, scenarios, and school climate questionnaire were piloted with several graduate students and one faculty member. The pilot subjects completed forms and provided feedback; data obtained were examined to assess methods proposed. The feedback from the students resulted in the revision of the wording of some statements. Based on the pilot study, it was estimated that the completion time for the packets was approximately ten to fifteen minutes. Each participant received two scenarios; these were randomly assigned to each packet. Each scenario was assigned a number and each number was written on a slip of paper and placed in a box. For each packet two numbers were drawn out of the box to be assigned to that packet. Once the numbers were recorded they were thrown back into the box before the next set of numbers was drawn. This process was repeated in order to complete enough packets for each school.

Individual appointments were made with all three district superintendents to obtain permission. Once, district permission was obtained, the individual principals were contacted via telephone to verbally obtain permission and set a date for the researcher to visit a faculty meeting. For the study itself, once district and individual

principal permission was obtained, the packets were passed out at school faculty meetings, completed, and collected on the same day. At the faculty meeting, the principal was asked to sign a written consent for permission to speak to the faculty. The researcher briefly explained who she was, the purpose of the research, and the contents of the packet. The consent was paper clipped to the outside of a closed envelope containing the survey. The teachers were asked to read the consent before signing and completing the surveys. If consent was not given, the packet was collected. Once consent was given, the researcher collected the individual consent forms and placed them in a separate folder in order not to link them to the survey (to maintain anonymity). Once the surveys were completed the teachers placed them back inside the folders and returned them to the researcher. In order to ensure return of the packets, all were collected upon completion on site. When the faculty meeting had concluded, the researcher thanked the principals and superintendents via electronic mail or letters that included contact information for the researcher should questions or concerns arise at a later date. Results are presented in Chapter IV.

## CHAPTER IV

### RESULTS

The purpose of the study was to investigate any differences in the way in which teachers respond to behavioral difficulties associated with ADHD for African American girls and boys as compared to White girls and boys, with control for SES and perceived school climate as potential confounds. Results of the data analysis are provided in this chapter. Summary results are presented first, and then analyses by research question are presented based on the five questions following each scenario.

#### *Survey Results*

The results for those items with a Likert scale are summarized in Table 3. As can be seen from Table 3, the majority of respondents found the behaviors to be somewhat severe with a range from 2.93 to 3.05; the inattention, activity level, and impulsivity of the behavior was perceived as somewhat unusual (range from 2.68 to 2.89). Regardless of the case presented, there was general agreement that they would want assistance (range from 3.35 to 3.43), and the most common out-source for referral was a parent conference regardless of child's ethnicity, gender, and SES.

Table 3

*Results by gender, ethnicity and SES of case study by question [Mean score (SD) on Likert Scale]*

Item	Male	Female	White	African American	High SES	Low SES	Total
	(n=173)	(n=147)	(n=159)	(n=161)	(n=166)	(n=154)	(n=320)
Perceived	2.98	2.99	3.01	2.97	2.93	3.05	2.99
Seriousness <sup>1</sup>	(0.64)	(0.63)	(0.63)	(0.63)	(0.61)	(0.64)	(0.63)
Unusualness of							
Inattention <sup>2</sup>	2.86	2.82	2.89	2.80	2.83	2.86	2.85
	(0.64)	(0.63)	(0.61)	(0.65)	(0.62)	(0.65)	(0.64)
Activity	2.77	2.70	2.81	2.68	2.70	2.78	2.74
Level	(0.70)	(0.70)	(0.69)	(0.70)	(0.68)	(0.72)	(0.70)
Impulsivity <sup>1</sup>	2.87	2.89	2.89	2.87	2.88	2.88	2.88
	(0.70)	(0.65)	(0.65)	(0.70)	(0.66)	(0.69)	(0.67)
How Much							
Assistance	3.39	3.39	3.39	3.40	3.35	3.43	3.39
Needed <sup>2</sup>	(0.63)	(0.73)	(0.67)	(0.69)	(0.68)	(0.67)	(0.67)
Talk with/ Refer to:							
Parent <sup>1</sup>	3.58	3.56	3.60	3.54	3.61	3.52	3.57
	(0.68)	(0.66)	(0.66)	(0.68)	(0.59)	(0.74)	(0.67)
Admin. <sup>1</sup>	2.93	2.90	2.89	2.94	2.87	2.97	2.92
	(0.94)	(1.03)	(0.99)	(0.99)	(0.97)	(1.00)	(0.98)



Table 3 Continued

Item	Male	Female	White	African American	High SES	Low SES	Total
	(n=173)	(n=147)	(n=159)	(n=161)	(n=166)	(n=154)	(n=320)
Counselor	3.01 (0.97)	3.14 (0.93)	3.09 (0.97)	3.04 (0.94)	2.98 (0.98)	3.16 (0.92)	3.07 (0.95)
School Psych. <sup>3</sup>	2.32 (1.05)	2.35 (1.04)	2.29 (1.00)	2.36 (1.10)	2.24 (1.03)	2.43 (1.06)	2.33 (1.05)
Pre-referral Team <sup>4</sup>	2.15 (1.00)	2.08 (0.98)	2.14 (0.93)	2.09 (1.04)	2.07 (0.97)	2.16 (1.00)	2.12 (0.99)
Physician <sup>5</sup>	2.07 (0.96)	2.14 (0.98)	2.10 (0.95)	2.12 (0.98)	2.09 (1.00)	2.13 (0.93)	2.11 (0.97)
How Soon to Respond <sup>6</sup>	1.78 (0.90)	1.84 (0.97)	1.82 (0.90)	1.79 (0.97)	1.75 (0.89)	1.87 (0.98)	1.81 (0.93)

*Notes.* Likert Scale: 1 = Not at all/Very little/Not likely, 2 = Mild/A little/ Maybe, 3 = Somewhat/Some/Most likely, 4 = Serious/Unusual/A lot/ Definitely; SES = Socioeconomic Status; Admin. = Administrator; Psych. = Psychologist; <sup>1</sup>Only 319 subjects responded to this item. <sup>2</sup>Only 317 subjects responded to this item. <sup>3</sup>Only 307 subjects responded to this item. <sup>4</sup>Only 315 subjects responded to this item. <sup>5</sup>Only 301 subjects responded to this item. <sup>6</sup>Only 278 subjects responded to this item.

*Question 1.* Is there a significant difference in teachers' perceptions of the seriousness of behaviors for differing ethnic groups, genders, or lower SES? Is there an interaction effect? To test for differences across gender, ethnicity, and SES, a 2 (gender) x 2 (ethnicity) x 2 (lower socioeconomic status or not) univariate analysis of variance

(ANOVA) was performed for how serious the teacher perceived the behavior (see Tables 3 and 4).

Table 4

*Results of ANOVA on perceived seriousness for all participants*

Source	Df	F	$\eta^2$	P
Gender (G)	1	.005	.000	.946
Ethnicity (E)	1	.115	.000	.734
SES	1	2.173	.007	.141
G X E	1	2.767	.009	.097
G X SES	1	.837	.003	.361
E X SES	1	.040	.000	.842
G X E X SES	1	1.278	.004	.259
Error	311	-	-	-

*Notes.* SES = socioeconomic status

There was no significant difference in teachers' perceptions of the seriousness of behaviors by gender, ethnicity, or SES of the child in the vignette. There were no interaction effects. The response of the teachers about how serious the child's behavior is did not differ based on child gender, ethnicity or SES or any combination of these factors.

*Question 2.* Is there a significant difference in teachers' perceptions of the unusualness of behaviors for differing ethnic groups, genders, or lower SES? Is there an

interaction effect? To test for differences across gender, ethnicity, and SES, a 2 (gender) x 2 (ethnicity) x 2 (lower socioeconomic status or not) multivariate analysis of variance was performed for how unusual the teacher perceives the behavior for inattention, impulsivity, and hyperactivity (see Tables 3, 5-7).

Table 5

*ANOVA on perceived unusualness of inattention*

Source	Df	F	$\eta^2$	P
Gender (G)	1	.303	.001	.582
Ethnicity (E)	1	1.475	.005	.225
SES	1	.034	.000	.853
G X E	1	3.162	.010	.076
G X SES	1	.196	.001	.658
E X SES	1	.720	.002	.397
G X E X SES	1	3.248	.010	.073
Error	308	-	-	-

*Notes.* SES = socioeconomic status

Regardless of child gender, ethnicity, or SES, no differences were found. There was no significant difference in teacher's perceptions of the unusualness of inattention, nor were there any interaction effects.

Table 6

*ANOVA on perceived unusualness of impulsivity*

Source	Df	F	$\eta^2$	P
Gender (G)	1	.052	.000	.820
Ethnicity (E)	1	.044	.000	.833
SES	1	.022	.000	.833
G X E	1	.341	.001	.560
G X SES	1	.370	.001	.543
E X SES	1	3.009	.010	.084
G X E X SES	1	.428	.001	.513
Error	308	-	-	-

*Notes.* SES = socioeconomic status

Regardless of child gender, ethnicity, or SES, no differences were found. There was no significant difference in teacher's perceptions of the unusualness of impulsivity, nor were there any interaction effects.

Table 7

*ANOVA on perceived unusualness of activity level*

Source	Df	F	$\eta^2$	P
Gender (G)	1	.707	.002	.401
Ethnicity (E)	1	2.674	.009	.103
SES	1	.958	.003	.329
G X E	1	.619	.002	.432
G X SES	1	.228	.001	.634
E X SES	1	1.082	.004	.299
G X E X SES	1	.025	.000	.874
Error	308	-	-	-

*Notes.* SES = socioeconomic status

Regardless of child gender, ethnicity, or SES, no differences were found. There was no significant difference in teacher's perceptions of the unusualness of activity level, nor were there any interaction effects.

*Question 3.* Is there a significant difference in teachers' perceptions of the assistance needed for behaviors for differing ethnic groups, genders, or lower SES? Is there an interaction effect? To test for differences across gender, ethnicity, and SES, a 2 (gender) x 2 (ethnicity) x 2 (lower socioeconomic status or not) univariate analysis of variance was performed for how much assistance the teacher perceives would be needed regarding the behavior (see Tables 3 and 8).

Table 8

*ANOVA on perceived assistance needed*

Source	Df	F	$\eta^2$	P
Gender (G)	1	.006	.000	.938
Ethnicity (E)	1	.104	.000	.748
SES	1	.974	.003	.324
G X E	1	2.014	.006	.157
G X SES	1	.502	.002	.479
E X SES	1	.126	.000	.723
G X E X SES	1	2.992	.010	.085
Error	309	-	-	-

*Notes.* SES = socioeconomic status

There was no significant difference in teachers' perceptions of the assistance needed across gender, ethnicity, or SES. There were no interaction effects.

*Question 4.* Is there a significant difference in teachers' likelihood to seek assistance from parent, administrator, counselor, school psychologist, refer students to the pre-referral team, or suggest to parent to talk to physician for differing ethnic groups, genders, or lower SES? Is there an interaction effect? To test for differences across gender, ethnicity, and SES, a 2 (gender) x 2 (ethnicity) x 2 (lower socioeconomic status

or not) multivariate analysis of variance (MANOVA) was performed for whom the teacher would seek assistance from (see Tables 3 and 9 – 14).

Table 9

*Likelihood of teacher seeking assistance from parent*

Source	Df	F	$\eta^2$	P
Gender (G)	1	.004	.000	.951
Ethnicity (E)	1	.003	.000	.954
SES	1	3.607	.013	.059
G X E	1	1.892	.007	.170
G X SES	1	.440	.002	.507
E X SES	1	.540	.002	.463
G X E X SES	1	1.510	.005	.220
Error	276	-	-	-

*Notes.* SES = socioeconomic status

Regardless of child gender, ethnicity, or SES, no differences were found. There was no significant difference in teachers' likelihood to seek assistance from parent for differing ethnic groups, genders, or lower socioeconomic status, nor was there an interaction effect.

Table 10

*Likelihood of teacher seeking assistance from administrator*

Source	Df	F	$\eta^2$	P
Gender (G)	1	.319	.001	.573
Ethnicity (E)	1	.510	.002	.476
SES	1	.281	.001	.596
G X E	1	.001	.000	.976
G X SES	1	.155	.001	.694
E X SES	1	.107	.000	.744
G X E X SES	1	2.681	.010	.103
Error	276	-	-	-

*Notes.* SES = socioeconomic status

Regardless of child gender, ethnicity, or SES, no differences were found. There was no significant difference in teachers' likelihood to seek assistance from an administrator for differing ethnic groups, genders, or lower socioeconomic status, nor was there an interaction effect.



Table 11

*Likelihood of teacher seeking assistance from counselor*

Source	Df	F	$\eta^2$	P
Gender (G)	1	.802	.003	.371
Ethnicity (E)	1	.046	.000	.830
SES	1	1.772	.006	.184
G X E	1	2.079	.007	.150
G X SES	1	.315	.001	.575
E X SES	1	.095	.000	.758
G X E X SES	1	5.637	.020	.018*
Error	276	-	-	-

*Notes.* SES = socioeconomic status

There was a significant difference between who the teacher would talk to (counselor) and child gender x ethnicity x SES ( $p = .018$ ;  $\alpha < .05$ ). This was an interaction effect ( $partial\ eta^2 = .020$ ). Results indicated that teachers were most likely to seek assistance from a counselor for a low SES female and least likely to seek assistance from a counselor for a student from high SES.

Table 12

*Likelihood of teacher seeking assistance from school psychologist*

Source	Df	F	$\eta^2$	P
Gender (G)	1	.169	.001	.682
Ethnicity (E)	1	1.404	.005	.237
SES	1	1.387	.005	.240
G X E	1	1.801	.006	.181
G X SES	1	.517	.002	.473
E X SES	1	.658	.002	.418
G X E X SES	1	.432	.002	.512
Error	276	-	-	-

*Notes.* SES = socioeconomic status

Regardless of child gender, ethnicity, or SES, no differences were found. There was no significant difference in teachers' likelihood to seek assistance from a school psychologist for differing ethnic groups, genders, or lower socioeconomic status, nor was there an interaction effect.

Table 13

*Likelihood of teacher seeking assistance from pre-referral team*

Source	Df	F	$\eta^2$	P
Gender (G)	1	.151	.001	.697
Ethnicity (E)	1	.286	.001	.593
SES	1	.035	.000	.851
G X E	1	2.277	.008	.132
G X SES	1	.618	.002	.432
E X SES	1	1.744	.006	.188
G X E X SES	1	.582	.002	.446
Error	276	-	-	-

*Notes.* SES = socioeconomic status

Regardless of child gender, ethnicity, or SES, no differences were found. There was no significant difference in teachers' likelihood to seek assistance from a pre-referral team for differing ethnic groups, genders, or lower socioeconomic status, nor was there an interaction effect.

Table 14

*Likelihood of teacher seeking assistance by suggesting to parent to talk to physician*

Source	Df	F	$\eta^2$	P
Gender (G)	1	.482	.002	.488
Ethnicity (E)	1	.088	.000	.766
SES	1	.077	.000	.782
G X E	1	2.758	.010	.098
G X SES	1	1.970	.007	.162
E X SES	1	.341	.001	.560
G X E X SES	1	.040	.000	.842
Error	276	-	-	-

*Notes.* SES = socioeconomic status

Regardless of child gender, ethnicity, or SES, no differences were found. There was no significant difference in teachers' likelihood to seek assistance through suggesting to parents that they talk to a physician for differing ethnic groups, genders, or lower socioeconomic status, nor was there an interaction effect.

*Question 5.* Is there a significant difference in teachers' perceptions of the immediacy of response needed for behaviors for differing child ethnic groups, genders, or lower SES? Is there an interaction effect? To test for differences across gender, ethnicity, and SES, a 2 (gender) x 2 (ethnicity) x 2 lower socioeconomic status or not)

univariate analysis of variance was performed for the teacher immediacy to respond about the behavior (see Tables 3 and 15).

Table 15

*Results for immediacy of teacher responding to behaviors*

Source	Df	F	$\eta^2$	P
Gender (G)	1	.150	.001	.669
Ethnicity (E)	1	.029	.000	.864
SES	1	1.011	.004	.316
G X E	1	1.584	.006	.209
G X SES	1	2.703	.010	.101
E X SES	1	.021	.000	.209
G X E X SES	1	1.123	.004	.290
Error	270	-	-	-

*Notes.* SES = socioeconomic status

Regardless of child gender, ethnicity, or SES, no differences were found. There was no significant difference in teachers' immediacy of responding for differing ethnic groups, genders, or lower socioeconomic status, nor was there an interaction effect.

*Question 6.* When controlling for school climate, is there a significant difference in teachers' perceptions of children's behaviors for differing ethnic groups, genders, lower socioeconomic status? Is there an interaction effect? A regression analysis was

performed with school climate as the predictor, and the individual teacher perception questions as the dependent variables (see Table 16).

The school climate survey had a range of scores from 12 to 51. The minimum score should be 18; however, not all respondents completed the surveys. The highest attainable score was 72. The mean score was 31.92 and the standard deviation was 7.52. The lower the score the more positive the school climate is perceived.

Table 16

*Regression analysis for school climate as predictor of teacher responses*

Variable	B	SE B	B
Seriousness	-.001	.005	-.014
Unusualness of Inattention	-.010	.005	-.117
Unusualness of Activity Level	-.004	.005	-.047
Unusualness of Impulsivity	-.008	.005	-.094
How Much Assistance Needed	-.005	.005	-.061
Talk to a Parent	-.009	.005	-.102
Talk to Administrator	.000	.007	.002
Talk to Counselor	.003	.007	.021
Talk to School Psychologist	-.014	.008	-.099
Talk to Pre-Referral Team	.005	.007	.038

Table 16 Continued

Variable	B	SE B	B
Suggest Physician	-.007	.007	-.053
How Soon to Respond	-.006	.007	-.045

School climate was found to predict teacher responses to unusualness of inattention ( $partial\ eta^2 = .037$ ). There was an inverse relationship between the unusualness of inattention and the school climate such that as school climate improved inattention was seen as more unusual. There were no significant relationships identified between school climate and teacher responses to seriousness, unusualness of activity level, unusualness of impulsivity, how much assistance is needed, talking to a parent, talking to an administrator, talking to a counselor, talking to a school psychologist, talking to a pre-referral team, talking to a physician, or how soon to respond.

*Question 7.* Does ethnicity or gender of rater (teacher) affect perceived severity, perceptions of unusualness, need for assistance, immediacy, or likelihood to refer? Two (gender of respondent) x 2 (ethnicity of respondent) multivariate analysis of variance was used for severity, unusualness, assistance needed, likelihood to refer, and immediacy (see Tables 17 - 29). Due to a small sample size and limited generalizability, only teachers classified as White, African American, and Hispanic were included in this question that investigated the teacher's gender and ethnicity as it affects perceived severity, perceptions of unusualness, need for assistance, immediacy, or likelihood to refer.

Table 17

*Teacher responses by teacher gender and ethnicity [Mean score (SD) on Likert Scale]*

Item	Male (n=18)	Female (n=295)	White (n=253)	Af. Am. (n=26)	Hisp. (n=34)	Total (n=313) <sup>1</sup>
Perceived	2.76	2.74	2.73	2.83	2.81	2.74
Seriousness	(0.54)	(0.49)	(0.49)	(0.60)	(0.47)	(0.50)
Unusualness						
of	2.73	2.72	2.71	2.81	2.79	2.72
Inattention	(0.55)	(0.50)	(0.50)	(0.61)	(0.46)	(0.51)
Activity	2.72	2.71	2.70	2.79	2.78	2.71
Level	(0.55)	(0.51)	(0.51)	(0.63)	(0.48)	(0.51)
Impulsivity	2.72	2.71	2.70	2.75	2.77	2.71
	(0.54)	(0.53)	(0.52)	(0.66)	(0.49)	(0.53)
How Much						
Assistance	2.71	2.69	2.68	2.72	2.75	2.69
Needed	(0.54)	(0.54)	(0.54)	(0.67)	(0.50)	(0.54)
Speak with/ Refer to						
Parent	2.65	2.63	2.63	2.68	2.67	2.64
	(0.56)	(0.56)	(0.55)	(0.69)	(0.52)	(0.56)
Admin.	2.58	2.56	2.55	2.61	2.59	2.56
	(0.60)	(0.58)	(0.57)	(0.71)	(0.55)	(0.58)



Table 17 Continued

Item	Male (n=18)	Female (n=295)	White (n=253)	Af. Am. (n=26)	Hisp. (n=34)	Total (n=313) <sup>1</sup>
Counselor	2.56 (0.58)	2.52 (0.57)	2.51 (0.56)	2.57 (0.69)	2.58 (0.55)	2.53 (0.57)
School Psych.	2.51 (0.57)	2.48 (0.55)	2.47 (0.54)	2.53 (0.69)	2.54 (0.53)	2.48 (0.55)
Pre-referral Team	2.51 (0.56)	2.49 (0.53)	2.48 (0.52)	2.52 (0.67)	2.54 (0.50)	2.49 (0.53)
Physician	2.57 (0.55)	2.52 (0.52)	2.51 (0.51)	2.56 (0.65)	2.59 (0.50)	2.52 (0.52)
How Soon to Respond	2.61 (0.52)	2.55 (0.51)	2.54 (0.50)	2.60 (0.64)	2.61 (0.48)	2.55 (0.51)

*Notes:* Likert Scale: 1 = Not at all/Very little/Not likely, 2 = Mild/A little/ Maybe, 3 =

Somewhat/Some/Most likely, 4 = Serious/Unusual/A lot/ Definitely; Af. Am. = African American; Hisp. =

Hispanic; Admin. = Administrator; Psych. = Psychologist. <sup>1</sup> Due to the limited number of Biracials,

Native Americans, and Other, these respondents were not included here.

Table 18

*Results for perceived severity by respondent ethnicity and gender*

Source	Df	F	$\eta^2$	P
Teacher's	1	1.222	.004	.270
Gender (TG)				
Teacher's	2	3.344	.021	.037*
Ethnicity (TE)				
TG X TE	1	5.093	.016	.025*
Error	308	-	-	-

For seriousness of the problem, there was a statistically significant difference between ethnicity of respondent (*partial eta*<sup>2</sup> = .021) such that African American teachers found the behaviors to be more serious than Whites. There was also a statistically significant difference between the teacher's ethnicity and gender and the perceived seriousness of the problem (*partial eta*<sup>2</sup> = .016). However, due to the limited number of males in the sample, this interaction is unlikely to be generalizable to the population and will not be interpreted.

Table 19

*Results for perceived unusualness of inattention by respondent ethnicity and gender*

Source	Df	F	$\eta^2$	P
Teacher's	1	1.634	.005	.202
Gender (TG)				
Teacher's	2	3.653	.023	.027*
Ethnicity (TE)				
TG X TE	1	5.479	.017	.020*
Error	308	-	-	-

For unusualness of inattention, there was a statistically significant difference between the teacher's ethnicity and unusualness of inattention (*partial eta*<sup>2</sup> = .023) such that African American teachers found the behaviors to be more unusual than Whites. There was also a statistically significant difference between the teacher's ethnicity and gender and the unusualness of inattention (*partial eta*<sup>2</sup> = .017). However, due to the limited number of males in the sample, this interaction is unlikely to be generalizable to the population and will not be interpreted.

Table 20

*Results for perceived unusualness of activity level by respondent ethnicity and gender*

Source	Df	F	$\eta^2$	P
Teacher's	1	1.416	.005	.235
Gender (TG)				
Teacher's	2	3.095	.020	.001*
Ethnicity (TE)				
TG X TE	1	4.913	.016	.027*
Error	308	-	-	-

For unusualness of activity, there was a statistically significant difference between the teacher's ethnicity ( $partial\ eta^2 = .020$ ) such that African American teachers perceived more unusualness of the activity level. There also was a significant difference for unusualness of activity and gender and activity level ( $partial\ eta^2 = .016$ ). However, due to the limited number of males in the sample, this interaction is unlikely to be generalizable to the population and will not be interpreted.

Table 21

*Results for perceived unusualness of impulsivity by respondent ethnicity and gender*

Source	Df	F	$\eta^2$	P
Teacher's	1	1.133	.004	.288
Gender (TG)				
Teacher's	2	2.480	.016	.085
Ethnicity (TE)				
TG X TE	1	4.667	.015	.032*
Error	308	-	-	-

For unusualness of impulsivity, there was a statistically significant difference between the teacher's ethnicity and gender and impulsivity (*partial eta*<sup>2</sup> = .015).

However, due to the limited number of males in the sample, this interaction is unlikely to be generalizable to the population and will not be interpreted.

Table 22

*Results for perceived assistance needed by respondent ethnicity and gender*

Source	Df	F	$\eta^2$	P
Teacher's	1	.889	.003	.346
Gender (TG)				
Teacher's	2	2.054	.013	.130
Ethnicity (TE)				
TG X TE	1	3.999	.013	.046
Error	308	-	-	-

Regardless of teacher gender or ethnicity, no differences were found. For how much assistance is needed, there was no statistically significant difference between gender and ethnicity of respondent.

Table 23

*Results for likelihood of teacher seeking assistance from the parent by respondent ethnicity and gender*

Source	Df	F	$\eta^2$	P
Teacher's	1	.782	.003	.377
Gender (TG)				
Teacher's	2	2.006	.013	.136
Ethnicity (TE)				
TG X TE	1	4.302	.014	.039*
Error	308	-	-	-

For whom the teacher would talk to, there was a statistically significant difference in the teacher's ethnicity and gender and talking to the parent (*partial eta*<sup>2</sup>= .014). However, due to the limited number of males in the sample, this interaction is unlikely to be generalizable to the population and will not be interpreted.

Table 24

*Results for likelihood of teacher seeking assistance from the administrator by respondent ethnicity and gender*

Source	Df	F	$\eta^2$	P
Teacher's Gender (TG)	1	.707	.002	.401
Teacher's Ethnicity (TE)	2	2.260	.014	.106
TG X TE	1	5.177	.017	.024*
Error	308	-	-	-

There was a statistically significant difference between the teacher's ethnicity and gender and talking to the administrator (*partial eta*<sup>2</sup> = .017). However, due to the limited number of males in the sample, this interaction is unlikely to be generalizable to the population and will not be interpreted.



Table 25

*Results for likelihood of teacher seeking assistance from the counselor by respondent ethnicity and gender*

Source	Df	F	$\eta^2$	P
Teacher's Gender (TG)	1	.710	.002	.400
Teacher's Ethnicity (TE)	2	2.255	.014	.107
TG X TE	1	4.561	.015	.033*
Error	308	-	-	-

There was a statistically significant difference between the teacher's ethnicity and gender and talking to the counselor (*partial eta*<sup>2</sup>= .015). However, due to the limited number of males in the sample, this interaction is unlikely to be generalizable to the population and will not be interpreted.

Table 26

*Results for likelihood of teacher seeking assistance from the school psychologist by respondent ethnicity and gender*

Source	Df	F	$\eta^2$	P
Teacher's Gender (TG)	1	.795	.003	.373
Teacher's Ethnicity (TE)	2	2.403	.015	.092
TG X TE	1	4.589	.015	.033*
Error	308	-	-	-

There was a statistically significant difference between the teacher's ethnicity and gender and talking to the school psychologist (*partial eta*<sup>2</sup> = .015). However, due to the limited number of males in the sample, this interaction is unlikely to be generalizable to the population and will not be interpreted.

Table 27

*Results for likelihood of teacher seeking assistance from the pre-referral team by respondent ethnicity and gender*

Source	Df	F	$\eta^2$	P
Teacher's Gender (TG)	1	.896	.003	.345
Teacher's Ethnicity (TE)	2	2.373	.015	.095
TG X TE	1	5.416	.017	.021*
Error	308	-	-	-

There was an interaction for the teacher's ethnicity and gender and seeking assistance from the pre-referral team (*partial eta*<sup>2</sup> = .017). However, due to the limited number of males in the sample, this interaction is unlikely to be generalizable to the population and will not be interpreted.

Table 28

*Results for likelihood of teacher seeking assistance by suggesting to parent to talk to physician by respondent ethnicity and gender*

Source	Df	F	$\eta^2$	P
Teacher's Gender (TG)	1	.757	.002	.385
Teacher's Ethnicity (TE)	2	2.871	.018	.058
TG X TE	1	5.779	.018	.017*
Error	308	-	-	-

There was an interaction for teacher's ethnicity and gender and suggesting a talk with a physician (*partial eta*<sup>2</sup> = .018). However, due to the limited number of males in the sample, this interaction is unlikely to be generalizable to the population and will not be interpreted.

Table 29

*Results for how soon the teacher would do something by respondent ethnicity and gender*

Source	Df	F	$\eta^2$	P
Teacher's Gender (TG)	1	.433	.001	.511
Teacher's Ethnicity (TE)	2	2.511	.016	.083
TG X TE	1	5.307	.017	.022*
Error	308	-	-	-

There was an interaction for teacher's ethnicity and gender and for how soon the teacher would do something (*partial eta*<sup>2</sup> = .017). However, due to the limited number of males in the sample, this interaction is unlikely to be generalizable to the population and will not be interpreted.

#### *Summary of Results*

Based on the responses by the teachers in this sample, no differences were found in how teachers interpreted the seriousness of the problem, the unusualness, how much assistance would be needed, or how soon the teachers would do something based on SES, gender, or ethnicity of a child exhibiting symptoms of ADHD. However, the teachers would talk to the counselor more often if the child was a low SES White

female. School climate was not found to be predictive of teacher responses except, in relation to the teacher responses to unusualness of inattention. There was an inverse relationship which indicated that the better the school climate, the more unusual the inattention was perceived. Teacher ethnicity was not found to be a factor in unusualness of impulsivity, how much assistance is needed, seeking assistance from parent, administrator, counselor, school psychologist, or pre-referral team, or immediacy to respond. Teacher gender was not found to be a factor in any of the questions. Teacher ethnicity was found to be a factor in how they perceived the seriousness of the problem, the unusualness of inattention and the activity level such that African American teachers perceived more seriousness of the problem and more unusualness of inattention and activity level. Gender by ethnicity interactions were evident on the seriousness of the problem, their perception of the unusualness of inattention, activity level, and impulsivity, whether they would talk to a parent, administrator, counselor, school psychologist, seek assistance from a pre-referral team or suggest to the parent to talk to a physician and how soon they thought they would need to do something about the child's behavior, but the interpretation of this finding is difficult due to the small number of male teachers in the sample.

## CHAPTER V

### SUMMARY AND CONCLUSIONS

Attention deficit hyperactivity disorder (ADHD) is one of the disruptive behavior disorders, which in children can lead to a lifetime of social dysfunction, antisocial behavior, and poor adjustment (Kann & Hanna, 2000). Children with ADHD are less likely to benefit from their education and adapt less well in various situations, a trend that continues throughout adulthood with lower income, lower socioeconomic class, and underemployment (Root & Resnick, 2003). It is important that those students with ADHD are able to benefit and become successful in school and throughout their life; therefore, children with ADHD need to have early and accurate identification.

The purpose of the study was to investigate any differences in the way that teachers respond to behavioral difficulties associated with ADHD for African American girls and boys as compared to White girls and boys, with control for SES and perceived school climate as potential confounds. Approximately 160 teachers from 6 elementary schools in Central and South Central Texas were given a packet to complete that included a brief personal data questionnaire (basic demographic questions; See Appendix B), brief descriptions of two children followed by five questions at the end of each description (See Appendix C), as well as a school climate questionnaire (See Appendix D).

#### *Differences in Teacher Responses*

These results are promising in that teachers' responses suggest similarity in perceptions of children's behavior regardless of children's socioeconomic status, gender

and ethnicity. There were no differences in how teachers interpreted the seriousness of the problem, the unusualness, how much assistance would be needed, or how soon the teachers would do something based on SES, gender, or ethnicity. The results indicated that a significant difference exists in that teachers would talk to the counselor about the child's behavior based on the child's ethnicity, gender, and SES. The teachers would talk to the counselor more often if the child was a low SES White female. These results are different from previous studies, which found differences in how teachers or others responded to children based on their SES, gender, and/or ethnicity. When controlling for school climate, there was a significant difference in teacher responses to unusualness of inattention. This indicated that the better the school climate, the more unusual the inattention was perceived. Results indicated that the teacher's ethnicity affected how they perceived the seriousness of the problem, unusualness of inattention and the activity level. Teacher gender did not affect the responses. However, both the gender and ethnicity affected their perception of the seriousness of the problem, unusualness of inattention, activity level and impulsivity, whether they would talk to a parent, administrator, counselor, school psychologist, seek assistance from a pre-referral team, or suggest to the parent to talk to a physician, and how soon they thought they would need to do something. However, due to the limited number of males in the sample, these interactions can not be interpreted; results may be spurious. Results may be further limited by the low numbers of African American and Hispanic teachers.



### *School Climate*

The changing, complex, competitive, and technologically sophisticated society of today increases the importance of considering the school climate. The interactions between children and adults at the school and general perceptions of the conditions at the school contribute to the overall climate of the school. A healthy school climate provides support for the social and intellectual skills children need to succeed and fewer emotional and behavioral problems are associated with a positive school climate (Kuperminc et al, 1997). Students at greatest risk of emotional and behavioral difficulties are most affected by a positive school climate (Felner et al., 1995). It is possible that what constitutes a positive school climate may differ based on gender, social class, and ethnicity (Kuperminc et al., 2001). An unhealthy school climate can lead to conflict between children, parents, and school personnel in that it does not provide adequate support for social and intellectual development of the children (Haynes, 1996). Social-ecological theory says that perceptions are important to understanding individuals' efforts to change their social environment (Bronfenbrenner, 1979); schools are a social environment. Attitudes toward education, sense of self, and expectations for the future influence and are influenced by the activities, roles, and interpersonal relationships that students experience in school.

When studying the effects of the school climate, the teacher responses to unusualness of inattention were significant. There was an inverse relationship, which indicated that the better the school climate, the more unusual the inattention was perceived. These results may reflect the climate of the schools included and their efforts

to address over-representation. Further research will need to address the extent to which any referral bias is related to the level of over-representation in that school as well as the general school climate.

### *Teacher Ethnicity*

Perceptions vary as a function of gender or ethnicity of the teacher. Factors other than the behaviors of the child have been shown to affect the ratings, such as when raters are from a different culture (ethnicity, gender, or SES) as the children being rated, there are consistent mean differences across groups and significant differences in group variances (Abikoff et al., 1993; Eaves, 1975; Greenblatt, 1994; Reid et al., 1998; 2001; Sonuga-Barke et al., 1993; Stevens, 1981). Unlike previous studies, the teacher/respondent's ethnicity or gender did not influence their perception of how much assistance would be needed. However, all other teacher questions were affected by either the teacher's ethnicity and/or gender and ethnicity interaction. The teacher's ethnicity affected how serious they perceived the problem, unusualness of inattention and activity level. Results indicated, for example, that African American teachers perceived the problem as more serious and the inattention and activity level as more unusual. Teacher gender did not affect the responses. Both the gender and ethnicity affected their perception of the seriousness of the problem, unusualness of inattention, activity level, and impulsivity. Also, both ethnicity and gender affected whether they would talk to a parent, administrator (i.e., African American teachers were most likely to seek out an administrator or talk to a parent than any other race), counselor, school psychologist, seek assistance from a pre-referral team, or suggest to the parent to talk to

a physician, and how soon to respond (i.e., Hispanic teachers were most likely to talk to counselor, school psychologist, seek assistance from a pre-referral team, or suggest medical intervention and seek assistance sooner). Although given the sample size of male teachers in the study, the gender effects are unlikely to be generalizable. Many of these results are consistent with previous studies (e.g., Eaves, 1975; Greenblatt, 1994; Reid et al., 1998; 2001; Sonuga-Barke et al., 1993) which found differences in perceptions of children's behavior based on the respondent's gender and/or ethnicity.

#### *Summary and Conclusion*

Despite the many previous studies that have found differences in the perception of children's behavior based on their SES, gender, and/or ethnicity, the current study did not find similar results. Since the data reported here are specific to teachers, predominantly in regular education; it also would be of interest to compare results from teachers to administrators and counselors. The results of the school climate survey suggest that the current climate of the school may have influenced the perception of the teacher's responses to some specific children's behaviors; this may be a reason why this study did not find results similar to previous studies that did find differences. When investigating the respondent's gender and ethnicity and their perceptions of children's behaviors, this study did find similar results to previous studies.

The present study has focused on sociological factors that influence the rate of perceived ADHD-like behaviors. The research findings did not support the hypothesis as intended, but it provided important information even so. The study did not support the hypothesis that the ethnicity, gender, or SES of the child would affect the teacher's

perceptions. However, the teacher's ethnicity and/or gender did contribute as a factor to their perceptions of the child's behavior, which is consistent with other studies that propose that factors other than student behavior may affect behavior ratings. Although the majority of the teachers sampled were White, there was a fairly even distribution of ethnicity among the schools sampled, allowing for enough teacher familiarity with the different ethnic groups. Due to limitations in the study, the ability to generalize the results found is limited. Studies often use teacher or parent ratings because it is cost-efficient for large samples; however, teacher perceptions of ADHD behaviors should not be equated with actual incidence of the disorder. However, the results do allow for some inferences. The results suggest the possibility that factors other than behavior may affect the perceptions of the child's behaviors. Most important and promising is that the child factors have not affected the perceptions. Unfortunately, rater effects have contributed to the perceptions of the child's behaviors and thus, are factors that deserve more study.

#### *Limitations of the Study*

The participants in this study were limited to schools only in certain regions of one state; therefore, the ability to generalize may be limited to those schools whose demographics are similar to the ones studied. The gender and ethnicity of the respondents were severely limited with the majority of those surveyed being White female teachers. In fact, the only ethnic minority male teachers were Hispanic; the other ethnicity represented was White male teachers. In addition, the ethnicities represented for female teachers were very small. The small sample size of different ethnicities and genders represented may limit the ability to generalize across respondent ethnicity and

gender. Although efforts were made to contact more urban and demographically more diverse schools, those schools did not participate in the study. This limits the schools in this study to those that are more rural and smaller in population. Teachers in smaller, more rural school districts may have limited exposure to increased experiences and children with disruptive behavior disorders such as ADHD, which in turn could have influenced their ratings. The study itself involves some limitations due to the design. An analog study with a vignette was used to describe children's behaviors. The disadvantages of this would be limited background or information provided, vignettes may be leading or subjective, and no face to face interaction. Advantages of the analog study include the ability to control the environment, behavior, situation, cost, and feasibility. In addition, having this type of study eases the ability to replicate.

#### *Implications for Practice*

These findings are encouraging for the educational system in general. They suggest that if the school climate is good, the bias of teacher's perceptions of children's behaviors based on their SES, gender, and/or ethnicity may be reduced. Thus, schools may want to investigate ways to improve their school climate in efforts to reduce or eliminate bias of children's behaviors. This is also encouraging to school psychologists. Many school psychologists may want to participate in school wide interventions and improving school climate may be a good choice.

Providing didactics or training for school counselors, who seem to be the first person teachers seek or consult with regard to problem behaviors in children also would seem appropriate. These trainings may include ways for counselors to help teachers

become aware of biases in SES, gender, and ethnicity, in addition to some observable, operational defined behaviors that may be seen in children with attention deficit hyperactivity disorder. The behaviors of attention deficit hyperactivity disorder as displayed by children of different SES, genders, and ethnicities may vary. It is important to note the differences by being culturally aware and to note your own biases when observing children who display these behaviors. This is important not only to improve the over-representation of minorities being referred, but to improve the overall experience of all students in their school career.

#### *Future Research Directions*

The next step in research in this area to address questions about pre-referral bias or over representation should be a large-scale study that includes a more representative sample population of teachers in all areas of the United States. This would include a sample of teachers of every ethnicity, SES, and both genders represented in similar percentages of the population. Also, this would include the very rural to the very large and urban districts. The child demographics should be expanded as well, to include more ethnicities of children found in the schools. It would be suggested that more demographics of the school itself be included (i.e. those diagnosed with a disruptive behavior disorder). This information would help in interpreting the school climate and how or why teachers selected their answers. A measure of acculturation or racial awareness might be included to assist in interpreting teacher's responses as well. Depending on how teachers view their own cultural awareness might indicate how the child's culture influences their responses. There has been literature on ethnic identity

and its' influences in counseling, but very little, if any has been done on teachers and their referral process in the schools. This area may provide explanations related to how teachers refer students and why there is an overrepresentation of certain ethnic groups in special education.

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## APPENDIX A

*Diagnostic Criteria for Attention Deficit/Hyperactivity Disorder*

## A. Either (1) or (2):

(1) six (or more) of the following symptoms of inattention have persisted for at least 6 months to a degree that is maladaptive and inconsistent with developmental level:

## Inattention

- (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 and 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
- (i) is often forgetful in daily activities

(2) six (or more) of the following symptoms of hyperactivity-impulsivity have persisted for at least 6 months to a degree that is maladaptive and inconsistent with developmental level:

## Hyperactivity

- (a) often fidgets with hands or feet or squirms in seat
- (b) often leaves seat in classroom or in other situations in which remaining seated is expected
- (c) often runs about or climbs excessively in situations in which it is inappropriate (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

## Impulsivity

- (g) often blurts out answers before questions have been completed
- (h) often has difficulty awaiting turn
- (i) often interrupts or intrudes on others (e.g., butts into conversations or games)

- B. Some hyperactive-impulsive or inattentive symptoms that caused impairment were present before age 7 years.
- C. Some impairment from the symptoms is present in two or more settings (e.g., at school [or work] and at home).
- D. There must be clear evidence of clinically significant impairment in social, academic, or occupational functioning.
- E. The symptoms do not occur exclusively during the course of a Pervasive Developmental Disorder, Schizophrenia, or other Psychotic Disorder and are not better accounted for by another mental disorder (e.g., Mood Disorder, Anxiety Disorder, Dissociative Disorder, or a Personality Disorder).

## APPENDIX B

Teacher Perceptions of Children's Behavior  
Demographic Data

## Section I: Personal Data

1. Gender  Female  Male
2. Ethnicity  Asian or Pacific Islander  
 Black or African American  
 Hispanic/Latino/Mexican-American/Puerto Rican/Cuban  
 Native American  
 White/Caucasian/Western European Descent (Not Hispanic)  
 Biracial: \_\_\_\_\_  
 Other \_\_\_\_\_
3. What is the predominant ethnic group in your school?  
 Asian or Pacific Islander  
 Black or African American  
 Hispanic/Latino/Mexican-American/Puerto Rican/Cuban  
 Native American  
 White/Caucasian/Western European Descent (Not Hispanic)  
 Biracial: \_\_\_\_\_  
 Other \_\_\_\_\_
4. Highest Level of Education  Enrolled in Bachelor Level Program  
 Completed Bachelor Degree  
 Completed BA/BS plus 15-30 graduate credits  
 Completed Master Degree  
 Completed Doctoral Degree
5. Position  Student Teacher  
 Teacher (Regular Education)  
 Teacher (Special Education)  
 Administrator  
 Counselor  
 Other (please specify: \_\_\_\_\_)
6. If a teacher, grade level currently teaching \_\_\_\_\_
7. If a teacher, were you certified through the traditional route (Education degree)?  or through an alternative certification program?
8. Age \_\_\_\_\_ years
9. Number of years you have been teaching ? \_\_\_\_\_

10. How would you describe your level of *experience* in working with children from diverse cultures? (check one)
- I have minimal to no experience working with children from diverse cultures  
 I have some experience working with children from diverse cultures  
 I have much experience working with children from diverse cultures  
 I have extensive experience working with children from diverse cultures
11. How would you describe your level of *training* in working with children from diverse cultures? (check one)
- I have had minimal to no training to work with children from diverse cultures  
 I have had some training to work with children from diverse cultures  
 I have had much training to work with children from diverse cultures  
 I have had extensive training to work with children from diverse cultures
12. How would you describe your level of *experience* in working with children with special needs (e.g., behavioral or emotional problems, ADHD, learning problems, etc.)? (check one)
- I have minimal to no experience working with children with special needs  
 I have some experience working with children with special needs  
 I have much experience working with children with special needs  
 I have extensive experience working with children with special needs
13. How would you describe your level of *training* in working with special needs (e.g., behavioral or emotional problems, ADHD, learning problems, etc.)? (check one)
- I have had minimal to no training to work with children with special needs  
 I have some training to work with children with special needs  
 I have much training to work with children with special needs  
 I have extensive training to work with children with special needs
14. Are teachers in your school actively involved in seeking services for children with Attention Deficit Hyperactivity Disorder?
- Yes  
 No

***THANK YOU FOR YOUR ASSISTANCE!!!!***

## APPENDIX C

Name: Samuel  
 Primary Language: English

Ethnic Group: European-American (White)  
 Qualified for free/reduced lunch? No

Description: Samuel is an eight-year-old white male who recently moved into the school district; he lives with both parents; his family is from a higher socioeconomic background and he is not eligible for the free/reduced lunch program. At school his grades have been up and down, with some papers receiving 90's and some as low as 60's. Often when his work is poor, it is because he did not pay attention to the directions and he made careless errors. He often doesn't seem to be listening to direct instructions, but he will call out answers to questions that are intended for children who raise their hands. He is often "busy" walking around the room and checking on others, although most often the other children ignore him. It seems that he does not like to do independent work, and avoids this by doing other activities such as reading comic books that he sneaks in his backpack, or doodling in the margins. Many times he does not have his pencil case, his homework journal, or his books when he needs them for class. He can often be out of his seat when he becomes interested in non-learning activities such as checking on what the class gerbil is doing, or sharpening his pencil, or requesting to go to the bathroom. When he goes to lunch or recess, he frequently gets in trouble for running instead of walking, and for "butting in" to other children's conversations. Some children are beginning to avoid Samuel.

A. How serious would you consider this child's problem to be?

Not at all                      Mild                      Somewhat Serious                      Serious

B. Compared with other children the same age, how unusual is this child's inattention?

Not at all                      A little                      Somewhat Unusual                      Unusual

Compared with other children the same age, how unusual is this child's activity level?

Not at all                      A little                      Somewhat Unusual                      Unusual

Compared with other children the same age, how unusual is this child's impulsivity?

Not at all                      A little                      Somewhat Unusual                      Unusual

C. How much assistance does this child need to be successful in the classroom?

Very little                      A Little                      Some                      A Lot

D. For each of the following, please indicate how likely you would be to:

Have a parent conference?                      Not Likely                      Maybe                      Most Likely                      Definitely

Talk to Administrator?                      Not Likely                      Maybe                      Most Likely                      Definitely

Talk to School Counselor?                      Not Likely                      Maybe                      Most Likely                      Definitely

Talk to School Psychologist?                      Not Likely                      Maybe                      Most Likely                      Definitely

Refer to Special Education

Prereferral or Child Study Team?                      Not Likely                      Maybe                      Most Likely                      Definitely

Suggest to Parent They

Discuss with Physician?                      Not Likely                      Maybe                      Most Likely                      Definitely

E. Do you think this child's problems warrant an immediate response? \_\_\_\_\_ Yes \_\_\_\_\_ No

If Yes, how soon?                      Next few days                      Next few weeks                      A month                      By end of 6 Weeks



Name: Peter  
Primary Language: English

Ethnic Group: European-American (White)  
Qualified for free/reduced lunch? Yes

Description: Peter is an eight-year-old white male who has recently moved into the school district; he lives with both parents; his family is from a lower socioeconomic background and he is eligible for the free/reduced lunch program. At school, his grades are inconsistent, ranging from 60's to 90's. On some days he does great, and on others, he just doesn't seem to "get it". It does seem that he often has problems keeping his mind on his work, and frequently does not finish assignments and task, even when those around him seem to be doing fine. He has to be reminded to put his homework and classwork in the bin. Often when he loses points for assignments, it is because he made careless errors, or he because he forgot to finish it. He often wanders around the classroom, and has to be reminded to sit and finish his work. In groups, he has problems waiting his turn and talking with his "inside voice", and frequently has to be reminded to let others talk too. When he does work, he can sometimes cause problems because he hums, or talks to himself. On the playground, he plays all the active games, and often has to be called several times before he comes in with the others. Some children are beginning to avoid Peter.

A. How serious would you consider this child's problem to be?

Not at all                      Mild                      Somewhat Serious                      Serious

B. Compared with other children the same age, how unusual is this child's inattention?

Not at all                      A little                      Somewhat Unusual                      Unusual

Compared with other children the same age, how unusual is this child's activity level?

Not at all                      A little                      Somewhat Unusual                      Unusual

Compared with other children the same age, how unusual is this child's impulsivity?

Not at all                      A little                      Somewhat Unusual                      Unusual

C. How much assistance does this child need to be successful in the classroom?

Very little                      A Little                      Some                      A Lot

D. For each of the following, please indicate how likely you would be to:

Have a parent conference?                      Not Likely                      Maybe                      Most Likely                      Definitely

Talk to Administrator?                      Not Likely                      Maybe                      Most Likely                      Definitely

Talk to School Counselor?                      Not Likely                      Maybe                      Most Likely                      Definitely

Talk to School Psychologist?                      Not Likely                      Maybe                      Most Likely                      Definitely

Refer to Special Education

Prereferral or Child Study Team?                      Not Likely                      Maybe                      Most Likely                      Definitely

Suggest to Parent They

Discuss with Physician?                      Not Likely                      Maybe                      Most Likely                      Definitely

E. Do you think this child's problems warrant an immediate response?                      \_\_\_\_\_ Yes                      \_\_\_\_\_ No

If Yes, how soon?

Next few days      Next few weeks      A month      By end of 6 Weeks

Name: Paul  
Primary Language: English

Ethnic Group: African-American  
Qualified for free/reduced lunch? Yes

Description: Paul is an eight-year-old African American male who recently moved into the school district; he lives with both parents; his family is from a lower socioeconomic background and he is eligible for the free/reduced lunch program. At school his grades have been up and down, with some papers receiving 90's and some as low as 60's. Often when his work is poor, it is because he did not pay attention to the directions and he made careless errors. He often doesn't seem to be listening to direct instructions, but he will call out answers to questions that are intended for children who raise their hands. He is often "busy" walking around the room and checking on others, although most often the other children ignore him. It seems that he does not like to do independent work, and avoids this by doing other activities such as reading comic books that he sneaks in his backpack, or doodling in the margins. Many times he does not have his pencil case, his homework journal, or his books when he needs them for class. He can often be out of his seat when he becomes interested in non-learning activities such as checking on what the class gerbil is doing, or sharpening his pencil, or requesting to go to the bathroom. When he goes to lunch or recess, he frequently gets in trouble for running instead of walking, and for "butting in" to other children's conversations. Some children are beginning to avoid Paul.

A. How serious would you consider this child's problem to be?

Not at all                      Mild                      Somewhat Serious                      Serious

B. Compared with other children the same age, how unusual is this child's inattention?

Not at all                      A little                      Somewhat Unusual                      Unusual

Compared with other children the same age, how unusual is this child's activity level?

Not at all                      A little                      Somewhat Unusual                      Unusual

Compared with other children the same age, how unusual is this child's impulsivity?

Not at all                      A little                      Somewhat Unusual                      Unusual

C. How much assistance does this child need to be successful in the classroom?

Very little                      A Little                      Some                      A Lot

D. For each of the following, please indicate how likely you would be to:

Have a parent conference?                      Not Likely                      Maybe                      Most Likely                      Definitely

Talk to Administrator?                      Not Likely                      Maybe                      Most Likely                      Definitely

Talk to School Counselor?                      Not Likely                      Maybe                      Most Likely                      Definitely

Talk to School Psychologist?                      Not Likely                      Maybe                      Most Likely                      Definitely

Refer to Special Education

Prereferral or Child Study Team?                      Not Likely                      Maybe                      Most Likely                      Definitely

Suggest to Parent They  
Discuss with Physician?

Not Likely                      Maybe                      Most Likely                      Definitely

E. Do you think this child's problems warrant an immediate response?                      Yes                      No

If Yes, how soon?

Next few days      Next few weeks      A month      By end of 6 Weeks

Name: Stephan  
Primary Language: English

Ethnic Group: African-American  
Qualified for free/reduced lunch? No

Description: Stephan is an eight-year-old African American male who has recently moved into the school district; he lives with both parents; his family is from a higher socioeconomic background and he is not eligible for the free/reduced lunch program. At school, his grades are inconsistent, ranging from 60's to 90's. On some days he does great, and on others, he just doesn't seem to "get it". It does seem that he often has problems keeping his mind on his work, and frequently does not finish assignments and task, even when those around him seem to be doing fine. He has to be reminded to put his homework and classwork in the bin. Often when he loses points for assignments, it is because he made careless errors, or he because he forgot to finish it. He often wanders around the classroom, and has to be reminded to sit and finish his work. In groups, he has problems waiting his turn and talking with his "inside voice", and frequently has to be reminded to let others talk too. When he does work, he can sometimes cause problems because he hums, or talks to himself. On the playground, he plays all the active games, and often has to be called several times before he comes in with the others. Some children are beginning to avoid Stephan.

A. How serious would you consider this child's problem to be?

Not at all                      Mild                      Somewhat Serious                      Serious

B. Compared with other children the same age, how unusual is this child's inattention?

Not at all                      A little                      Somewhat Unusual                      Unusual

Compared with other children the same age, how unusual is this child's activity level?

Not at all                      A little                      Somewhat Unusual                      Unusual

Compared with other children the same age, how unusual is this child's impulsivity?

Not at all                      A little                      Somewhat Unusual                      Unusual

C. How much assistance does this child need to be successful in the classroom?

Very little                      A Little                      Some                      A Lot

D. For each of the following, please indicate how likely you would be to:

Have a parent conference?                      Not Likely                      Maybe                      Most Likely                      Definitely

Talk to Administrator?                      Not Likely                      Maybe                      Most Likely                      Definitely

Talk to School Counselor?                      Not Likely                      Maybe                      Most Likely                      Definitely

Talk to School Psychologist?                      Not Likely                      Maybe                      Most Likely                      Definitely

Refer to Special Education

Prereferral or Child Study Team?                      Not Likely                      Maybe                      Most Likely                      Definitely

Suggest to Parent They

Discuss with Physician?                      Not Likely                      Maybe                      Most Likely                      Definitely

E. Do you think this child's problems warrant an immediate response?                      \_\_\_\_\_ Yes                      \_\_\_\_\_ No

If Yes, how soon?

Next few days      Next few weeks      A month      By end of 6 Weeks

Name: Susan  
Primary Language: English

Ethnic Group: European-American (White)  
Qualified for free/reduced lunch? Yes

Description: Susan is an eight-year-old white female who has recently moved into the school district; she lives with both parents; her family is from a lower socioeconomic background and she is eligible for the free/reduced lunch program. At school, her grades are inconsistent, ranging from 60's to 90's. On some days she does great, and on others, she just doesn't seem to "get it". It does seem that she often has problems keeping her mind on her work, and frequently does not finish assignments and task, even when those around her seem to be doing fine. She has to be reminded to put his homework and classwork in the bin. Often when she loses points for assignments, it is because she made careless errors, or because she forgot to finish it. She often wanders around the classroom, and has to be reminded to sit and finish her work. In groups, she has problems waiting her urn and talking with her "inside voice", and frequently has to be reminded to let others talk too. When she does work, she can sometimes cause problems because she hums, or talks to herself. On the playground, she plays all the active games, and often has to be called several times before she comes in with the others. Some children are beginning to avoid Susan.

A. How serious would you consider this child's problem to be?

Not at all                      Mild                      Somewhat Serious                      Serious

B. Compared with other children the same age, how unusual is this child's inattention?

Not at all                      A little                      Somewhat Unusual                      Unusual

Compared with other children the same age, how unusual is this child's activity level?

Not at all                      A little                      Somewhat Unusual                      Unusual

Compared with other children the same age, how unusual is this child's impulsivity?

Not at all                      A little                      Somewhat Unusual                      Unusual

C. How much assistance does this child need to be successful in the classroom?

Very little                      A Little                      Some                      A Lot

D. For each of the following, please indicate how likely you would be to:

Have a parent conference?                      Not Likely                      Maybe                      Most Likely                      Definitely

Talk to Administrator?                      Not Likely                      Maybe                      Most Likely                      Definitely

Talk to School Counselor?                      Not Likely                      Maybe                      Most Likely                      Definitely

Talk to School Psychologist?                      Not Likely                      Maybe                      Most Likely                      Definitely

Refer to Special Education

Prereferral or Child Study Team?                      Not Likely                      Maybe                      Most Likely                      Definitely

Suggest to Parent They Discuss with Physician?                      Not Likely                      Maybe                      Most Likely                      Definitely

E. Do you think this child's problems warrant an immediate response?                      \_\_\_\_\_ Yes                      \_\_\_\_\_ No

If Yes, how soon?

Next few days      Next few weeks      A month      By end of 6 Weeks

Name: Amanda  
Primary Language: English

Ethnic Group: European-American (White)  
Qualified for free/reduced lunch? No

Description: Amanda is an eight-year-old white female who has recently moved into the school district; she lives with both parents; her family is from a higher socioeconomic background and she is not eligible for the free/reduced lunch program. At school, her grades have been up and down, with some papers receiving 90's and some as low as 60's. Often when her work is poor, it is because she did not pay attention to the directions and she made careless errors. She often doesn't seem to be listening to direct instructions, but she will call out answers to questions that are intended for children who raise their hands. She is often "busy" walking around the room and checking on others, although most often the other children ignore her. It seems that she does not like to do independent work, and avoids this by doing other activities such as reading comic books that she sneaks in her backpack, or doodling in the margins. Many times she does not have her pencil case, her homework journal, or her books when she needs them for class. She can often be out of her seat when she becomes interested in non-learning activities such as checking on what the class gerbil is doing, or sharpening her pencil, or requesting to go to the bathroom. When she goes to lunch or recess, she frequently gets in trouble for running instead of walking, and for "butting in" to other children's conversations. Some children are beginning to avoid Amanda.

A. How serious would you consider this child's problem to be?

Not at all                      Mild                      Somewhat Serious                      Serious

B. Compared with other children the same age, how unusual is this child's inattention?

Not at all                      A little                      Somewhat Unusual                      Unusual

Compared with other children the same age, how unusual is this child's activity level?

Not at all                      A little                      Somewhat Unusual                      Unusual

Compared with other children the same age, how unusual is this child's impulsivity?

Not at all                      A little                      Somewhat Unusual                      Unusual

C. How much assistance does this child need to be successful in the classroom?

Very little                      A Little                      Some                      A Lot

D. For each of the following, please indicate how likely you would be to:

Have a parent conference?                      Not Likely                      Maybe                      Most Likely                      Definitely

Talk to Administrator?                      Not Likely                      Maybe                      Most Likely                      Definitely

Talk to School Counselor?                      Not Likely                      Maybe                      Most Likely                      Definitely

Talk to School Psychologist?                      Not Likely                      Maybe                      Most Likely                      Definitely

Refer to Special Education

Prereferral or Child Study Team?                      Not Likely                      Maybe                      Most Likely                      Definitely

Suggest to Parent They Discuss with Physician?                      Not Likely                      Maybe                      Most Likely                      Definitely

E. Do you think this child's problems warrant an immediate response?                      Yes                      No

If Yes, how soon?

Next few days      Next few weeks      A month      By end of 6 Weeks

Name: Sheila  
 Primary Language: English

Ethnic Group: African-American  
 Qualified for free/reduced lunch? No

Description: Sheila is an eight-year-old African American female who has recently moved into the school district; she lives with both parents; her family is from a higher socioeconomic background and she is not eligible for the free/reduced lunch program. At school, her grades are inconsistent, ranging from 60's to 90's. On some days she does great, and on others, she just doesn't seem to "get it". It does seem that she often has problems keeping her mind on her work, and frequently does not finish assignments and task, even when those around her seem to be doing fine. She has to be reminded to put his homework and classwork in the bin. Often when she loses points for assignments, it is because she made careless errors, or because she forgot to finish it. She often wanders around the classroom, and has to be reminded to sit and finish her work. In groups, she has problems waiting her urn and talking with her "inside voice", and frequently has to be reminded to let others talk too. When she does work, she can sometimes cause problems because she hums, or talks to herself. On the playground, she plays all the active games, and often has to be called several times before she comes in with the others. Some children are beginning to avoid Sheila.

A. How serious would you consider this child's problem to be?

Not at all                      Mild                      Somewhat Serious                      Serious

B. Compared with other children the same age, how unusual is this child's inattention?

Not at all                      A little                      Somewhat Unusual                      Unusual

Compared with other children the same age, how unusual is this child's activity level?

Not at all                      A little                      Somewhat Unusual                      Unusual

Compared with other children the same age, how unusual is this child's impulsivity?

Not at all                      A little                      Somewhat Unusual                      Unusual

C. How much assistance does this child need to be successful in the classroom?

Very little                      A Little                      Some                      A Lot

D. For each of the following, please indicate how likely you would be to:

Have a parent conference?                      Not Likely                      Maybe                      Most Likely                      Definitely

Talk to Administrator?                      Not Likely                      Maybe                      Most Likely                      Definitely

Talk to School Counselor?                      Not Likely                      Maybe                      Most Likely                      Definitely

Talk to School Psychologist?                      Not Likely                      Maybe                      Most Likely                      Definitely

Refer to Special Education

Prereferral or Child Study Team?                      Not Likely                      Maybe                      Most Likely                      Definitely

Suggest to Parent They  
 Discuss with Physician?

Not Likely                      Maybe                      Most Likely                      Definitely

E. Do you think this child's problems warrant an immediate response?                      Yes                      No

If Yes, how soon?

Next few days      Next few weeks      A month      By end of 6 Weeks

Name: Keisha  
Primary Language: English

Ethnic Group: African-American  
Qualified for free/reduced lunch? Yes

Description: Keisha is an eight-year-old African American female who has recently moved into the school district; she lives with both parents; her family is from a lower socioeconomic background and she is eligible for the free/reduced lunch program. At school, her grades have been up and down, with some papers receiving 90's and some as low as 60's. Often when her work is poor, it is because she did not pay attention to the directions and she made careless errors. She often doesn't seem to be listening to direct instructions, but she will call out answers to questions that are intended for children who raise their hands. She is often "busy" walking around the room and checking on others, although most often the other children ignore her. It seems that she does not like to do independent work, and avoids this by doing other activities such as reading comic books that she sneaks in her backpack, or doodling in the margins. Many times she does not have her pencil case, her homework journal, or her books when she needs them for class. She can often be out of her seat when she becomes interested in non-learning activities such as checking on what the class gerbil is doing, or sharpening her pencil, or requesting to go to the bathroom. When she goes to lunch or recess, she frequently gets in trouble for running instead of walking, and for "butting in" to other children's conversations. Some children are beginning to avoid Keisha.

A. How serious would you consider this child's problem to be?

Not at all                      Mild                      Somewhat Serious                      Serious

B. Compared with other children the same age, how unusual is this child's inattention?

Not at all                      A little                      Somewhat Unusual                      Unusual

Compared with other children the same age, how unusual is this child's activity level?

Not at all                      A little                      Somewhat Unusual                      Unusual

Compared with other children the same age, how unusual is this child's impulsivity?

Not at all                      A little                      Somewhat Unusual                      Unusual

C. How much assistance does this child need to be successful in the classroom?

Very little                      A Little                      Some                      A Lot

D. For each of the following, please indicate how likely you would be to:

Have a parent conference?                      Not Likely                      Maybe                      Most Likely                      Definitely

Talk to Administrator?                      Not Likely                      Maybe                      Most Likely                      Definitely

Talk to School Counselor?                      Not Likely                      Maybe                      Most Likely                      Definitely

Talk to School Psychologist?                      Not Likely                      Maybe                      Most Likely                      Definitely

Refer to Special Education

Prereferral or Child Study Team?                      Not Likely                      Maybe                      Most Likely                      Definitely

Suggest to Parent They Discuss with Physician?                      Not Likely                      Maybe                      Most Likely                      Definitely

E. Do you think this child's problems warrant an immediate response? \_\_\_\_\_ Yes \_\_\_\_\_ No

If Yes, how soon?

Next few days      Next few weeks      A month      By end of 6 Weeks

## APPENDIX D

**Section IV: School Climate Survey**

This survey asks you to tell us about your school environment. For every statement below, please let us know whether you “Agree Strongly,” “Somewhat Agree,” “Somewhat Disagree,” or “Disagree Strongly.” *Circle* the response that best describes how you feel about your school using the following scale:

1 = Agree Strongly      2 = Somewhat Agree      3 = Somewhat Disagree      4 = Disagree Strongly

**1. Teachers take students concerns seriously.**

1 = Agree Strongly      2 = Somewhat Agree      3 = Somewhat Disagree      4 = Disagree Strongly

**2. Classroom rules are enforced fairly by most of the teachers.**

1 = Agree Strongly      2 = Somewhat Agree      3 = Somewhat Disagree      4 = Disagree Strongly

**3. Teacher’s decisions as a professional are supported by the campus administrator(s).**

1 = Agree Strongly      2 = Somewhat Agree      3 = Somewhat Disagree      4 = Disagree Strongly

**4. Teachers respect parents.**

1 = Agree Strongly      2 = Somewhat Agree      3 = Somewhat Disagree      4 = Disagree Strongly

**5. The morale of the staff is generally high.**

1 = Agree Strongly      2 = Somewhat Agree      3 = Somewhat Disagree      4 = Disagree Strongly

**6. Teachers do not spend too much time disciplining students.**

1 = Agree Strongly      2 = Somewhat Agree      3 = Somewhat Disagree      4 = Disagree Strongly

**7. Students are respectful of the teachers**

1 = Agree Strongly      2 = Somewhat Agree      3 = Somewhat Disagree      4 = Disagree Strongly

**8. Students cooperate with one another at school.**

1 = Agree Strongly      2 = Somewhat Agree      3 = Somewhat Disagree      4 = Disagree Strongly

**9. In this school, students feel safe in their environment.**

1 = Agree Strongly      2 = Somewhat Agree      3 = Somewhat Disagree      4 = Disagree Strongly

**10. There are not a lot of fights among students in our school.**

1 = Agree Strongly      2 = Somewhat Agree      3 = Somewhat Disagree      4 = Disagree Strongly



**11. Overall, students are well behaved in this school.**

1 = Agree Strongly      2 = Somewhat Agree      3 = Somewhat Disagree      4 = Disagree Strongly

**12. Our school staff believes that all students can attain mastery of academic skills.**

1 = Agree Strongly      2 = Somewhat Agree      3 = Somewhat Disagree      4 = Disagree Strongly

**13. Students from different backgrounds and cultures respect each other at school.**

1 = Agree Strongly      2 = Somewhat Agree      3 = Somewhat Disagree      4 = Disagree Strongly

**14. The school has or participates in different cultural activities, such as special food, music, customs, or celebrations.**

1 = Agree Strongly      2 = Somewhat Agree      3 = Somewhat Disagree      4 = Disagree Strongly

**15. Teachers reflect the diversity of students in the school.**

1 = Agree Strongly      2 = Somewhat Agree      3 = Somewhat Disagree      4 = Disagree Strongly

**16. Our school has positive relations with parents.**

1 = Agree Strongly      2 = Somewhat Agree      3 = Somewhat Disagree      4 = Disagree Strongly

**17. The community supports the school.**

1 = Agree Strongly      2 = Somewhat Agree      3 = Somewhat Disagree      4 = Disagree Strongly

**18. The general school environment is conducive to learning.**

1 = Agree Strongly      2 = Somewhat Agree      3 = Somewhat Disagree      4 = Disagree Strongly

Any additional comments you would like to share on your perceptions of the school environment:

## VITA

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- Fort Worth Independent School District, Pre-doctoral Internship, 7/2004 – 6/2005
- Hospital-Based Field Practicum, Texas Children's Hospital, 6/2003 – 12/2003
- School-Based Field Practicum, College Station ISD, 8/2002 – 5/2003
- Child/Family Therapy Practicum, Counseling and Assessment Clinic, 8/2001 – 3/2002

PUBLICATIONS

- Rollins, D. & Riccio, C.A. (2005). The Search for Self: Racial/Ethnic Identity Development. In Reynolds, C. & Frisby, C. (Eds.). *Comprehensive Handbook of Multicultural School Psychology*. NY: Wiley. (In Press)
- Castillo, L.G., Conoley, C., King, J., Rollins, D., Rivera, S. & Veve, M. (2005). Predictors of racial prejudice in White American counseling students. *Journal of Multicultural Counseling and Development*. (Accepted)
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