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School-Based Services for Children with Attention-Deficit/ Hyperactivity Disorder

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SCHOOL-BASED SERVICES FOR CHILDREN WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER

by

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ABSTRACT

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by

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This study was designed to present descriptive data from a survey of 201 school psychologists. Psychologists completed a survey addressing current practices for determining placement for students with attention-deficit/hyperactivity ddeficit, including the role of school psychologists in determining placement, how often and who monitors services, where students are served, and what services are provided in each setting. Findings indicated that psychologists were involved less frequently in placement decisions and evaluation for Section 504 than in special education. Students with Section 504 plans received less frequent follow-up than students in special education. Results indicated that schools were generally following federal guidelines and recommendations from researchers for placement decisions, at least when the school psychologist was involved. Overall, service patterns for Section 504 and special education were similar; however, all interventions were reported more frequently in special education. Data

indicated that empirically supported interventions may be underutilized in both settings for students with ADHD.

(103 pages)

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CHAPTER I

INTRODUCTION

Attention-deficit/hyperactivity disorder (ADHD) is one of the most commonly diagnosed mental health disorders in children with prevalence rates in school-aged children ranging from 3-11% (American Psychiatric Association, 2000; APA). By definition, ADHD must impact functioning across multiple settings such as school and home. Children with ADHD are at risk for adverse educational and social outcomes including school failure, dropout, low self-esteem, substance abuse, and teen pregnancy (Consensus Development Panel, 2000; Hechtman, 1999; LeFever, Villers, Morrow, & Vaughn, 2002). As a result of the prevalence of ADHD combined with the adverse impact the disorder can have on children, many advocates and researchers have pursued effective treatments and avenues to obtain increased services for students with ADHD. Encouragingly, research has demonstrated that there are psychopharmacological, behavioral, and academic interventions that help reduce the severity of ADHD symptoms and improve academic, social, and behavioral outcomes (Arnold et al., 1997; DuPaul & Eckert, 1997; DuPaul & Weyandt, 2006b). For example, medication combined with behavioral treatments that predominantly involve positive reinforcement and response cost contingencies in the classroom are effective at managing ADHD symptoms in the school setting and have received strong empirical support (DuPaul & Eckert).

Although many children with ADHD do not receive specialized services within the schools, there are two paths to such services if these are determined to be needed. Children may gain access to specialized services under Section 504 of the Vocational Rehabilitation Act of 1973 or under the Individual with Disabilities Education Act

(IDEA) of 2004 that identified ADHD as a disability that qualifies children for services under the educational classification of "Other Health Impaired" (IDEA regulations 2004). Children with ADHD may also be eligible for services under other IDEA categories (e.g., learning disability, emotional disturbance) if they have comorbid learning and/or emotional/behavioral problems that allow them to be eligible for these services. The primary difference between these two pathways is that Section 504 provides access to services via general education whereas IDEA provides services under an individualized education program (IEP) with an educational classification in special education. Students who qualify for services under Section 504 are entitled to reasonable accommodations in the school that may include classroom modifications, academic adjustments, modification of tests, auxiliary aids and devices, and behavior modification programs. Students who qualify for special education under the education classification of Other Health Impaired (or any special education classification) are entitled to all the 504 interventions in addition to more intensive academic and behavioral assistance in a small group setting. Additionally, students receiving special education services may be provided with adaptations to school work rather than only accommodations to allow them access to the regular education curriculum.

In a meta-analysis on the effects of school-based interventions for ADHD, DuPaul and Eckert (1997) noted "in general interventions were equally effective in general education and special education classroom" (p. 15). This is encouraging because it highlights the fact that children with ADHD can be effectively served in the general education setting. Although, it should be noted that there are a lack of studies directly comparing the two educational settings for students with ADHD, this meta-analysis did

not provide evidence of increased benefits of serving a child with ADHD under the more intensive and less inclusive IDEA services. However, many children with a diagnosis of ADHD who would not otherwise qualify for services (i.e., no comorbid disorders) are currently placed in special education under the classification Other Health Impaired (OHI). In a school-based survey researchers found that about 60% of students identified as ADHD were receiving special education services (Reid, Maag, Vasa, & Wright, 1994). In another study researchers found that approximately two thirds of students classified as OHI had ADHD. These results indicate that these children are receiving services solely because ADHD is impairing their education (Schnoes, Reid, Wagner, & Marder, 2006).

A major gap in the research includes a failure to address how schools determine whether to provide services to a child with ADHD under Section 504 or under IDEA. DuPaul and Eckert (1997) indicated that if a child with ADHD does not qualify for special education services under another classification the child might be considered for Section 504 or through IDEA under the educational classification OHI. Regrettably, no further guidelines were provided regarding how to determine the best service pattern. This is a significant problem because educational placement is an important factor in a child's education and in school district funding. The government mandates that children be afforded the right to a free appropriate public education (FAPE) in the least restrictive environment (LRE; IDEA regulations, 2004). This means that a child with a disability must receive a free appropriate public education and be educated with peers without disabilities to the maximum extent possible to meet the needs of the child (Yell, 1998). Thus, schools should not place a child in special education whose educational needs

could be met in regular education or until all accommodations in regular education have failed to demonstrate improvement in performance.

Some potential negative outcomes for providing an overly restrictive placement include the social stigma of special education (e.g., internal deficit approach to student problems), limited positive outcome for students, and a less rigorous academic trajectory (Rathvon, 1999). Conversely, there are many potentially helpful services children may not access if they remain in general education such as small group instruction, adaptations to the academic curriculum, and more intensive behavioral and academic interventions (Yell, 1998). Therefore, it is essential to examine the decision-making process for students identified with ADHD that have impairment in school functioning to ensure the rights of students and parents outlined in FAPE and LRE are upheld.

Based on the current literature in this area, it is clear that current practices regarding placement decisions for student with ADHD require further attention from researchers. As noted earlier the guidelines for eligibility for Section 504 are loosely defined thus creating subjectivity in the eligibility for services for children with ADHD. Research demonstrates that efficacious treatments for students with ADHD may be accessed through both Section 504 and special education with the exception of specialized instruction. Special education services are typically provided in a more restrictive setting and according to LRE and FAPE should be utilized only for children who are unable to adequately learn in the regular classroom setting. However, research also demonstrated that teachers often fail to follow through with interventions implemented in the regular education setting, suggesting students may not receive needed services in this setting (Nowacek & Mamlin, 2007). The purpose of this study was to

learn more about the current practices for determining placement for students with ADHD in the school setting (including role of school psychologist). Data were obtained on what services are provided in each setting to better understand what interventions are being provided under section 504 and IDEA. Additionally, data were obtained on follow-up for services (e.g., frequency, monitor). Specific research questions were:

1. What role do school psychologists play in evaluation and placement decisions for Section 504 services and special education (OHI classification)?

2. Who typically monitors services for Section 504 services and special education (OHI classification), and how often do schools follow-up on services in each setting?

3. What criteria do school psychologists use to determine eligibility for services and location of service delivery (504 vs. special education) for students diagnosed with ADHD, and what percentage of students identified as having ADHD received services in each placement?

4. What school-based services are typically provided to children with ADHD under Section 504 and to children with ADHD as their primary disability who are receiving special education services (OHI classification)?

CHAPTER II

REVIEW OF THE LITERATURE

Attention-Deficit/Hyperactivity Disorder Overview

Background

Historically, children with ADHD were thought to have brain damage and were labeled with "minimal brain damage," hyperkinetic reaction of childhood, and attention deficit disorder (Rapport & Kyong-Mee, 2000; Rowland, Lesene, & Abramowitz, 2002). The *Diagnostic and Statistical Manual of Mentazl Disorders* criteria for ADHD have been modified four times since 1968 and the diagnostic criteria are currently under revision for the *DSM-V* scheduled for publication in 2011 (Durand & Barlow, 2006; Schroder & Gordon, 2002). Currently, ADHD is recognized as a developmental disorder distinguished by developmentally inappropriate levels of inattention and/or hyperactivity-impulsivity (APA, 2000).

ADHD is the most common mental health disorder diagnosed in childhood. Over the past 100 years, thousands of empirical studies have been conducted to gain a better understanding of ADHD (Barkley, 2006). Current epidemiological studies highlight the difficulty in determining accurate prevalence rates due to variability of diagnosticians and diagnostic criteria. The *DSM-IV-TR* reports a 3-5% prevalence rate among school-age populations (APA, 2000). In a recent study conducted by the U.S. Centers for Disease Control, it was reported that about 7.8% of school-aged children are diagnosed with ADHD (Centers for Disease Control and Prevention, 2005). One recent study using only the *DSM-IV* criteria suggested a prevalence rate between11-16% in school

populations (Cantwell, 1996). However, a school-based prevalence study using ADHD identified though school records review found a prevalence rate of just 4.4% (Tjersland, Grabowski, Hathaway, & Holley, 2005, as cited in Barkley, 2006). Discrepancies in prevalence rates may be due to who was asked what, how the information was obtained, and different populations. Despite the variability in prevalence rates some general patterns have been identified across studies. ADHD is three to five times more common in boys than girls in clinic-based samples, and two times more common in school-based populations (APA, 2000). There is limited research on socioeconomic and racial differences in prevalence, although one study reported higher prevalence rates in urban versus rural children (Offord et al., 1987).

Etiological studies reveal biological, genetic, and environmental factors contribute to the expression of ADHD. Biological and genetic factors include abnormal right prefrontal anatomy and function (smaller prefrontal brain, possible selective deficiency in the availability of dopamine), higher rates of incidence in families and identical twins, low birth weight and differences in the neurophysiological functioning of the brain namely in executive and regulatory functioning (Barkley 1998a; Rapport & Kyong-Mee, 2000; Rowland et al., 2002; Schroder & Gordon, 2002). In general there is consensus that genetic and biological factors are the main factors contributing to ADHD; however, psychosocial and environmental factors including ineffective parenting, a chaotic home life, and poverty can exacerbate problems in children prone to ADHD (Schroder & Gordon). Many children with ADHD experience comorbid disorders, which further intensify impairment in functioning. Jensen, Martin, and Cantwell (1997) reported that between 50-80% of children diagnosed with ADHD also meet criteria for other

disorders with oppositional defiant disorder (ODD) and conduct disorder (CD) being the most common comorbid disorders occurring in approximately 40-90% of cases of ADHD.

Types and Symptoms

According to diagnostic criteria in the *DSM-IV* a child must have symptoms of inattention and/or hyperactivity-impulsivity for at least 6 months that were present before the age of 7, and impair functioning in at least two settings (APA, 2000). There are three types of ADHD: ADHD combined type, ADHD predominately inattentive type, and ADHD predominately hyperactive-impulsive type.

Children with ADHD predominately inattentive type typically have a developmentally inappropriate inability to sustain attention and concentration, poor organization, poor attention to detail, poor listening, a tendency to make careless mistakes, be easily distracted, and have difficulty following through on instructions or finishing tasks. Children with the inattentive subtype of ADHD tend to have more problems with academic success than children with the hyperactive-impulsive type of ADHD (APA, 2000; Barkley, 1998b). Barkley noted that in children with the inattentive type of ADHD, symptoms usually appear later, children are less likely to be diagnosed with comorbid disruptive disorders, cooperation with treatment is more likely, and dose of medication is typically lower.

Children with hyperactive-impulsive ADHD classically are "on the go" or act as if "driven by a motor." These children struggle with impulse control and may fidget with hands or feet, squirm in or leave their seat, talk excessively, blurt out answers before

questions have been completed, exhibit difficulty awaiting turn or interrupt others, and often have a low frustration tolerance. These children struggle to participate in activities in which they are required to sit quietly and work. Peer rejection, injury, and behavior problems are more salient in children with hyperactive-impulsive ADHD than those with inattentive ADHD (APA, 2000; Barkley, 1998b).

Children must demonstrate symptoms of both inattentive and hyperactive-impulsive ADHD to meet diagnostic criteria for ADHD, combined type. Specifically, six or more symptoms of both inattention and hyperactivity/impulsivity must be present to receive the combined type diagnosis (APA, 2000). Children with combined type display more impulsivity, overactivity, aggression, noncompliance, and peer rejection and are more likely to be diagnosed with other disruptive behavior disorder (Carlson & Mann, 2000; DuPaul & Stoner, 2003). These children are also more likely to be placed in classrooms for students with emotional disturbances, and to obtain more school suspensions (DuPaul & Stoner).

The *DSM-IV* notes that some associated features of ADHD include low frustration tolerance, temper outbursts, bossiness, stubbornness, excessive and frequent insistence that demands be met, mood liability, demoralization, dysphoria, peer rejection, and poor self-esteem. Family relations are often strained. Another area of difficulty for children with ADHD is impaired academic achievement and devalued sense of academic achievement. Children with ADHD are noted to obtain less education than their peers, have poorer vocational achievement, and IQs that are several points lower than peers (APA, 2000; Barkley, 2006; Barkley, Fischer, Edlebrock, & Smallish, 1990; DuPaul & Stoner, 2003). The next section of the literature review presents research on the

academic, behavior, and social outcomes of children with ADHD that may impair their education and functioning at school.

Impact on Education

Academic outcome. Poor school grades, grade retention, school drop out, placement in special education, and lower than expected rates of higher education are associated with ADHD (APA, 2000; Barkley, 2006; LeFever et al., 2002). Thirty percent or more of children with ADHD repeat a grade, 57% are placed in special education programs, up to 46% have been suspended from school, 10-20% have experienced expulsion, and 10-35% fail to graduate from high school (Barkley, DuPaul, & McMurray, 1990; Barkley, Fischer, Smallish, Fletcher, 2002; Reid et al., 1994). These academic outcomes present a major barrier to academic success for children with ADHD.

One of the difficulties found with children with ADHD is underperforming in school relative to their ability (Pfiffner, Barkley, & DuPaul, 2006). Underachievement is thought to stem from inattentive, impulsive, and restless behavior in the classroom (Pfiffner et al.). DuPaul and Stoner (2003) found that children with ADHD scored about one standard deviation below their peers on achievement tests. In a meta-analysis, Frazier, Youngstrom, Glutting, and Watkins (2007) also found that children with ADHD score lower than other children on standardized achievement tests in math, spelling, and reading. However, they noted that the difference did not have practical application as these students scored in the average range. It is important to note that standardized achievement tests are given one-on-one--an ideal setting for a child with ADHD--and

may not reflect the underachievement in a naturalistic setting with many distractions. Therefore, it may still be advantageous to provide supplemental instruction to these students as it appears they are underachieving although they may not qualify for specialized services.

In fact, a recent study found that motivation, study skills, and academic engagement act as mediators of the effects of ADHD and achievement (DuPaul et al., 2004). DuPaul and colleagues found that teacher perception of academic skills, academic enablers (e.g., interpersonal skills, engagement, motivation, and study skills), inattentive symptoms, and off-task behaviors predicted academic achievement. Specifically, academic skills and enablers were predictors of reading report card grades. These findings are important because they identify potential predictors of academic achievement other than ADHD symptoms indicating it is not ADHD alone that causes academic problems in school but problems associated with ADHD. Thus, it appears that if students with ADHD have teachers who perceive them to have academic skills, are engaged in the task, and have academic enablers they can improve their academic achievement. These findings underscore the importance of targeting academic skills for intervention for students with ADHD versus sole reliance on symptom reduction.

Behavioral outcome. Behavior problems associated with ADHD are often evident in the classroom such as inattention, disruptive behavior, and aggression (APA, 2000). Typical complaints from teachers include not following directions, not listening, and not completing tasks. Studies have documented problems with compliance, disruption in task completion, and poor governing of behavioral knowledge (e.g., the inability to apply rules to behavior), and difficulty transferring rules to a new task in children with ADHD

(Conte & Regehr, 1991; Danforth, Barkley, & Stokes, 1991). Additionally, researchers found that children with ADHD are more accident prone (Barkley, 2001).

Children with ADHD typically have deficits in self-regulatory behavior that may account for many of the documented behavioral and social difficulties associated with ADHD (see Barkley, 2006). Self-regulation involves a sense of time, planning for the future, and combining the two to govern behavior directed at the individual. These are the skills impaired in children with ADHD. These difficulties with self-regulation lead to a variety of behavioral difficulties. For example, Pfiffner and colleagues (2006) indicated that children with ADHD have poor emotion regulation, and, thus, greater emotional expression (e.g., anger and aggression). They also note that these children have greater problems coping with frustration, reduced empathy, and underactive arousal to tasks and stimulation. Children with ADHD may not be able to separate themselves from emotionally intense situations. Therefore, they are prone to have emotional outbursts, personalization of events, and aggressive behavior (Miranda, Jarque, & Tárraga, 2006). Barber, Milich, and Welsh (1996) found that inability to sustain effort over time may explain the difficulties with following directions, and, thus, underscores self-regulatory issues as the problem rather than difficulties with rule-governed behavior.

Social outcome. Children with ADHD often have difficulty developing and maintaining peer relationships (Barkley, 2006). In one study researchers found that children with ADHD were lower on social preference, higher on social impact, and less well-liked than other peers (Hoza et al., 2005). Children with ADHD are prone to aggression and are rated as starting more fights and arguments than are children without ADHD (Gaub & Carlson, 1997; Paternite, Loney, Salisbury, & Whaley, 1999). Research

has also demonstrated that children with ADHD have deficits in their knowledge of appropriate behavior, are not as perceptive regarding their own abilities and may overestimate their social abilities (Diener & Milich, 1997; Landau & Milich, 1988). In a review of the literature Stormont (2001) indicated that inappropriate social behavior (e.g., aggression, off-task, disruptive behavior, etc.), social knowledge deficits and biases (i.e., knowing what they should do, perspective taking, self-reflection), and negative interactions with peers and teachers may negatively influence social outcomes of children with ADHD; although it appeared that ADHD symptoms generally lead to social performance difficulties rather than social skills deficits. DuPaul (2007) noted three reasons children with ADHD may struggle with interpersonal relationships: (a) children with ADHD struggle to follow the implicit rules of reciprocal conversation (interrupting, not listening, and going off topic); (b) as a result of impulsivity these children tend to join activities abruptly and, thus, disrupt activities at inappropriate times; and (c) difficulties with negative interactions (verbal and physical aggressive behavior) are present and may intimidate peers. Poor social outcome was found to trickle into young adulthood along with higher frequencies of termination from employment among young adults with ADHD compared to those without ADHD (Barkley et al., 2002).

Given the extensive adverse impact ADHD can have on children academically, socially, and behaviorally many advocates and researchers have pursued efficacious treatments for children with ADHD. Encouragingly, there is extensive research documenting psychopharmacological, behavioral, and academic interventions that help reduce the severity of ADHD symptoms and improve academic, social, and behavioral outcomes (Arnold et al., 1997; Dupaul & Eckert, 1997; DuPaul & Weyandt, 2006b). The

following section reviews the efficacious treatments for ADHD with a focus on those that can be applied in the school setting under Section 504 and /or IDEA.

Treatment

Medical. Although school personnel will not be involved in medication decisions, it is worth noting that medication is one of the most efficacious treatments for ADHD (DuPaul & Eckert, 1997). Medication typically prescribed to reduce symptoms of ADHD includes stimulants (e.g., methylphenidate [Ritalin, Concerta, Metadate], and amphetamine [Adderall]), and nonstimulates (e.g., atomoxetine [Strattera], bupropien, and clonidine). Both stimulants and nonstimulants have received empirical support as effective treatments with about 70-80% of children responding positively to treatment (Fabianno et al., 2007; MTA Cooperative group, 1999; Pelham, 1993; Spencer, Biederman, & Wilens, 2006). Medication has been found to increase attention and impulse control; decrease disruptive behaviors including aggression; decrease activity level; and improve cooperation, compliance, and academic productivity and accuracy (Conners, 2002; Greenhill & Ford, 2002; Fabianno et al.; MTA Cooperative Group; Pelham; Spencer et al.). Although studies document improved academic productivity and classroom functioning (e.g., attention and behavior improvements) following treatment with medication, it is important to note that the literature has not demonstrated long-term changes in academic functioning (e.g., achievement or performance). Rapport, Denney, DuPaul, and Gardner (1994) noted that academic efficiency (items completed correctly) improved at a low dose of medicine, but did not improve further with higher doses although behavior gains continued. This finding indicated that poor academic

performance was not accounted for solely by attention and behavior problems. Additionally, studies report an improvement in behaviors following treatment with medication, although inattentive or hyperactive-impulsive behaviors may still be elevated and behavior improvements disappear when medication is discontinued (Pelham, Wheeler, & Chronis, 1998).

Behavioral. There are four main behavioral treatments that can be used in school settings for children with ADHD including contingency management (e.g., response cost and token reinforcement, group contingencies), self-management strategies (e.g., self-monitoring, self-monitoring plus reinforcement, self-evaluation, and self-reinforcement), peer monitoring, and instructional choice (e.g., menu of academic tasks; DuPaul & Weyandt, 2006a; Harlacher, Roberts, & Merrell 2006). Effective contingency management typically includes a combination of token reinforcement, response cost, and group contingency. An exclusive reliance on punishment-based interventions or solely on positive reinforcement is not as effective in changing classroom behavior (Dupaul & Stoner, 2003; Pfiffner & O'Leary, 1993). However, a combination of these strategies received strong empirical support (Dupaul & Weyandt, 2006b; Fabiano et al., 2007). It is important to note that in a recent study examining the intensities of behavior modification in a classroom setting in a summer treatment program that less intense programs (i.e., fixed-length sit outs, social reinforcement and social honors, and daily report cards with weekly parent-provided rewards) were equally effective in improving behavior outcomes as the high intensity interventions (i.e., point system, time-out, social reinforcement and social honors, daily report cards with daily recess rewards at school and daily parent-provided rewards, contingent classroom recess, and individualized behavioral programs;

Fabiano et al.). This finding is important considering the fact that most students with ADHD spend the majority of their time in regular education classrooms (Barkley, 2006). Additionally, it is important to consider this information when determining the service pattern and placement for a child with ADHD who exhibits educational difficulties. Given the least restrictive environment requirement it is important to note that less intense interventions that can be implemented in regular education classrooms can be equally effective at producing educational benefits as more intense interventions typically carried out in special education. More research is needed to support this finding in a typical school environment. As with medication, Barkley (2002) noted that improvements from contingency methods are situation specific and do not generalize or maintain when treatments are removed.

Self-management strategies typically include self-monitoring, self-evaluation, and self-reinforcement. Many studies have documented the efficacy of self-management strategies for increasing task-centered behavior and decreasing disruptive behavior in the general and special education classroom (Ardoin & Martens, 2004; Hoff & DuPaul, 1998; Mathes & Bender, 1997). In one study researchers documented the importance of including accuracy training in this intervention as self-evaluation decreased disruptive behavior in only one student versus self evaluation and accuracy training that decreased disruptive behavior in all four children in the general education setting (Ardoin & Martens). Self-management strategies incorporating both self-evaluation and accuracy training include the child rating his/her behavior at specified intervals with teacher-rating checks. Matched rating points are earned and can be turned in for rewards. Teacher checks and externally based rewards are eventually faded and the child maintains self-

monitoring independently. It is important to note, researchers found that students maintained behavioral improvements even after teacher feedback was discontinued and also sustained improvement in task-centered activities with self-management strategies and a pharmacological treatment plan in the special education setting several days after fading-out the procedure (Hoff & DuPaul; Mathes & Bender).

Another behavioral intervention with empirical support is peer monitoring that typically consists of training students to monitor each other and reinforce appropriate behavior (Harlacher et al., 2006). There are several potential benefits to this intervention namely that peers may be able to better monitor behavior, and children become the primary change agents (Fowler, 1986). Peer monitoring improved both the behavior of the child with ADHD as well as the child implementing intervention in a remedial summer kindergarten class (Fowler). These improvements in the child's behavior may be particularly beneficial for children with ADHD who are at a greater risk for poor peer relations. Additionally, this intervention may facilitate generalization, is more cost effective and more time efficient than other interventions that require significant teacher attention and class time (Gerber & Kauffman, 1981; Pfiffner, Barkley, & DuPaul, 2006). Davies and Witte (2000) conducted a study examining a combination of self-management and peer monitoring within a group contingency intervention for students with ADHD in the regular education classroom. This study targeted reducing talk outs. Results demonstrated that a combination of self-management and peer-monitoring within a group contingency reduced talk outs for four students with ADHD and behavior improvement maintained with removal of treatment for three of the four students.

Instructional choice intervention allows the child to choose from two or more academic activities from an academic menu. Previous research indicated that choice making improved social behavior and decreased disruptive behavior in children with developmental disorders (Dyer, Dunlap, & Winterling, 1990; Koegel, Dyer, & Bell, 1987). In a later study Dunlap and colleagues (1994) found that choice making improved task engagement and reduced disruptive behavior in three children with emotional and behavioral disorders, one of whom was identified as having ADHD. Powell and Nelson (1997) demonstrated that instructional choices decreased disruptive classroom behavior in the regular education setting for a student (case study) with ADHD such as disobedience, being out of seat, disturbing other students, and improved work completion.

ADHD is also associated with social relationship difficulties and anger issues; however, these problems are not deficits in social skills but occur as a result of performance deficits due to impulsive issues (Barkley, 1997; Stormont, 2001). Unfortunately, most social skills training programs are aimed at skill deficits and have not been effective in leading to change in situations outside of the training sessions (DuPaul & Weyandt, 2006a). The Tough Kids Social Skills program was developed to address maintenance and generalization that previous programs neglected. Researchers have noted some improvement in enhancing social skills in students with ADHD with this program (Sheridan, Dee, Morgan, McCormick, & Walker, 1996).

Academic. Academic interventions that have been used with students with ADHD include class-wide peer tutoring, instructional modifications, computer-assisted instruction, and consultation (DuPaul & Weyandt, 2006a, 2006b; Harlacher et al., 2006).

Academic interventions are an important component of treatment for ADHD as there are adverse educational outcomes for students with ADHD and medication and behavioral interventions typically focus on reducing behavior problems rather than improving academic performance. Additionally, DuPaul and Eckert (1997) noted in their meta-analysis that academic interventions also produce positive behavioral effects equal to contingency management treatment.

Peer tutoring is a proactive strategy that pairs two students together on an academic activity with one student assisting with instruction and feedback. This intervention is helpful for students with ADHD as it uses tools that have been found to enhance attention including working one-on-one, learning pace that is set by the learner, and frequent immediate feedback about performance (Pfiffner et al., 2006). The Classwide Peer Tutoring (CWPT) program created by Greenwood, Delquadri, and Carta (1997) is one of the most established peer tutoring interventions. Research has demonstrated that this program is effective at enhancing academic achievement in math, reading, and spelling for students in general (Greenwood, Maheady, & Delquadri, 2002). However, DuPaul, Ervin, Hook, and McGoey (1998) found that peer tutoring in the general education classroom also reduced disruptive off-task behavior, improved active engagement in academic tasks, and improved academic performance in math or spelling during CWPT conditions for children with ADHD. Children in this study demonstrated improved performance on posttest scores indicating improvement in attention and academic performance.

Instructional modifications include modifying assignments (e.g., shortening assignments, breaking work into smaller segments, and increasing novelty and stimuli in

work), modifying structure of independent work (e.g., providing shorter increments of time to complete work and providing many short breaks,), and modifying teaching style (e.g., vibrant and energetic teaching, direct instruction used to pinpoint academic behaviors to increase and provide students with opportunities to gain and practice skills, etc.; Barkley, 2002; DuPaul & Weyandt, 2006a, 2006b). In one study academic modifications were found to improve classroom behavior and increase academic performance for students with ADHD (DuPaul & Stoner, 2003). Specifically, direct instruction, novelty in tasks, varying the presentation, and task timing (presenting assignments one at a time and making them brief) have all received support in the literature as improving academic performance and reducing activity level for children with ADHD (Abramowitz, Reid, & O'Toole, 1994; Pfiffner et al., 2006; Trout, Lienemnn, Reid, & Epstein, 2007; Zentall, 1993).

Computer-assisted instruction (CAI) involves using computer software to supplement teacher instruction and improve academic performance (DuPaul & Weyandt, 2006a, 2006b). CAI can be used to help implement the instructional modifications noted above and may provide a good match for students with attention/distractability problems and motivational deficits. There is limited research on the use of CAI for students with ADHD; however, a few case studies provide evidence that CAI methods are helpful for children with ADHD (Clarfield & Stoner, 2005; Mautone, DuPaul, & Jitendra, 2005; Ota & DePaul, 2002). Clarfield and Stoner found that this program was effective in improved oral reading fluency and task engagement. Research also demonstrated the use of CAI improved math performance and on-task behavior (Mautone et al.; Ota & DePaul).

A recent meta-analysis study examined the effects of consultation-based academic interventions for children with ADHD. Jitendra and colleagues (2006) examined the effectiveness of intensive data-based academic intervention (problem identification, problem analysis, training, progress monitoring data collected weekly, consultant conducted integrity checks and feedback) and traditional data-based academic intervention (interview, intervention, check-up via phone or emai; no data on students collected; teacher report only) in the general education setting although the study included children receiving special education. Results of this meta-analysis indicated both of these interventions (data-based decision model vs. consultant-teacher collaboration) were effective at improving academic achievement of students with ADHD. In fact, the interventions were equally effective. These results provided further evidence that less intense interventions may be effective at improving academic outcomes for children with ADHD thus, providing supportive data that many children with ADHD could benefit from less intense interventions and only a small select group with ADHD may require intensive on-going consultation support.

Combined and multimodal programs. ADHD is a complex disorder with negative outcomes across several areas including behavior, academic, and social; therefore, interventions should address each of these areas of deficit. In fact, research shows that a multimodal approach is more effective in treating the difficulties associated with ADHD then a unimodal approach (DuPaul & Weyandt, 2006b). There is extant literature that examines the efficacy of a combination of interventions. One of the largest and most well known study compared medication, behavior interventions, and a combination of treatment with a community care control group namely, the Multimodal Study of

Children with Attention-Deficit/Hyperactivity Disorder (MTA Cooperative Group, 1999). Results of this study indicated that medication management and combined treatment including both behavior treatment and medication were similar across most outcomes (MTA Cooperative Group). It is important to note that in the combined treatment group children received a lower dose of medication than children in the medication management only group (Miranda et al., 2006). Combined treatment improved reading scores and medication and behavior treatment were more effective than community care at improving social skills (MTA Cooperative Group). Additionally, 75% of children in the behavior treatment group maintained symptom reduction (MTA Cooperative Group). Follow-up analysis revealed further significant findings regarding children diagnosed with co-morbid disorders such as OCD, ODD, and anxiety. Researchers found that the highest percentage improvement across all 19 dependent variables (i.e., comorbid conditions, gender, family history, home environment, age, nutritional/metabolic status, etc.) was obtained by children in the combined treatment group (Swanson et al., 2001). Thus for children diagnosed with co-morbid disorders including OCD, ODD, and anxiety the combined treatment may be the most efficacious intervention.

Miranda, Presentación, and Soriano (2002) conducted a study to examine the effectiveness of school-based multicomponent program for students with ADHD. The multicomponent intervention included a training session for teachers on general knowledge about ADHD, behavioral modification procedures, instructional management, cognitive behavior management to stimulate self-control, self-instruction, and reinforced self-management. The results of the study demonstrated increased academic scores,

improvement in self-regulatory behaviors (i.e., less errors on Stroop color test, better ratings on the inattention/disorganization subscale of the *DSM-IV*, and other behavior scales from patents, and hyperactive-impulsive scale [H-I] from teachers), and increased knowledge in teachers about the strategies needed to respond to educational needs of students with ADHD. It is important to note that this study demonstrated improvements at home as a result of the intervention. This finding is significant in that it is one of the few interventions for children with ADHD that has support for generalization to another setting.

In another study Fabiano and colleagues (2007) researched the effects of multiple intensities of behavior modification and methylphenidate for children with ADHD. Results indicated that low behavior management combined with a low dose of medication produced the same treatment gains as a high dose of medication or high behavior modification alone. Treatment gains for behavior modification were maximized at low doses of medication in both high- and low-intensity treatment groups. This finding provides valuable insight into school-based interventions and practical significance for children in that it underscores the idea that adding behavior modification to a medication only treatment significantly reduces the dose required to attain similar treatment gains for medication alone. Thus, behavior interventions at school can reduce symptoms and improve academic and behavioral functioning.

In a meta-analysis of single and combined school-based interventions Miranda and colleagues (2006) found that both single interventions and multiple components were effective at improving on-task behavior, academic functioning, social skills, and reducing aggression. However, in follow-up studies where treatment was discontinued treatment

gains were lost. This highlights the importance of creating long-term interventions as ADHD is a developmental long-term disorder requiring constant modification to reduce symptoms. The need for long-term interventions may provide important information when considering the service pattern for children with ADHD as there is no short-term fix to difficulties associated with ADHD.

Educational Services

Children diagnosed with ADHD are not automatically eligible for formalized special services through general education or special education. In order to qualify for specialized services the child must demonstrate a significant impairment in school performance (504 law; Pfiffner et al., 2006). If criteria are met, the student may receive services from two mechanisms. One mechanism is through Section 504 of the Rehabilitation Act of 1973, a civil rights law established to prohibit discrimination and protect the rights of individuals with disabilities. Specifically, the law ensures that children with disabilities, who do not otherwise qualify for services, receive an appropriate education with equal access to educational programs. The second pathway to services is through IDEA, a federally funded education law that provides financial aid to guarantee a free appropriate public education for students with disabilities who have an educational need and meet eligibility criteria. As noted earlier, children with ADHD may be eligible for IDEA services under the OHI classification. In addition, a child who has ADHD and co-morbid conditions such as anxiety, learning disability, OCD, and so forth, may qualify for services through IDEA under other classifications (e.g., learning disabled, emotional disturbance). Section 504 and IDEA law have many similarities as

well as some differences in procedures and services. Section 504 current case laws are often based on IDEA and the 504 services often mirror IDEA. The following section explains the purpose and goals of these laws, the process to obtaining services and the service pattern available to students through these two pathways.

Section 504

Purpose and goal. Section 504 is a civil rights law that was established to prohibit discrimination and to protect the rights of individuals with disabilities in programs and activities that receive federal financial assistance, including public schools (Copenhaver, 2003). Section 504 was established to make certain actions that "level the playing field" for individuals with disabilities. The main purpose of Section 504 in schools is to ensure an equal chance for individuals with disabilities to be successful and receive an appropriate education (Smith, 2002). Schools must provide students equal opportunities to obtain the same results, the same benefit, or to reach the same level of achievement as students who do not have disabilities, and be educated with students without disabilities to the maximum extent appropriate (Smith). Thus, accommodations and related services are generally provided in the general education setting.

Although no federal funding is provided to implement the services required under the 504 law, school districts have a number of responsibilities that they are legally mandated to perform including identification and evaluation, educational programming, placement, reevaluation, and procedural safeguards (Yell, 1998). Procedural safeguards require notice to the parent or guardian about identification, evaluation, and placement of the child in Section 504 (Yell).

Criteria for eligibility. Brady (2004) identified six steps of Section 504 eligibility that encompass the school's obligations in terms of student referral, student evaluation, student eligibility determination, student program planning, student placement, and student reevaluation. A student should be referred for Section 504 when he/she has been evaluated and does not qualify for services under IDEA, when a student is referred for IDEA but the decision is made to not evaluate or when a teacher requests consideration for Section 504 services. Additionally, services should be considered when the student is not benefiting from instruction or if he/she is exhibiting severe behavior difficulties at school (Brady; Yell, 1998). Any child who has been diagnosed or identified as a child having ADHD should be considered for services under Section 504. However, if a child experiences educational difficulties a prereferral team should meet and suggest intervention strategies to help correct difficulties. If the strategies are unsuccessful, then the team can make a referral for Section 504 or other school programs (Copenhaver).

Following a referral for 504 services, evaluations must be completed in a timely manner (although the law provides no specific timelines) and require valid assessment tools appropriate for areas of concern and administered in a manner that accurately reflects that student's abilities (Brady, 2004). The purpose of the evaluation is to determine if the student is eligible and, if so, what services are needed to provide an appropriate education. For the evaluation procedure, Section 504 has fewer requirements than IDEA. For example, 504 does not require parental consent for evaluation (consent is still considered best practice) and the evaluation needs to be conducted not by a whole multidisciplinary team but simply by "knowledgeable personnel" (Brady).

Section 504 defines disability broadly using a functional approach, therefore, eligibility determination is subjective, no operational criteria are provided, and judgment is left to the professional (Reid & Katsiyannis, 1995; Smith, 2002). However, the law provides a few general guidelines for determining eligibility. To qualify for Section 504 and be determined as an individual with a disability the student must (a) have a physical or mental impairment that "substantially limits" one or more major life activities, and (b) has a record or history of such impairment or be regarded as having such an impairment (Brady, 2004; Reid & Katsiyannis; 34 CFR 104.3 (j)(1).). No formal diagnosis of ADHD is required for a student to qualify although many school districts may establish this as their policy.

Once the team decides a disability is present they must then assess the effect of the disability on the major life activities. Major life activities include learning in terms of school functioning and academic performance as well as activities necessary to function physically (e.g., breathing, seeing, walking; Brady, 2004). Students with ADHD typically qualify for Section 504 due to limits in the "learning" domain. Smith (2002) recommends that when determining "substantial limitation" on major life activities the team should examine the nature and severity of the disability, the length of the disability, and any long term impacts of the disability. Additionally, Section 504 defines "substantially limits" as being unable to perform a major life activity that the average person can perform, and being significantly restricted as to the condition, manner, or duration compared to how the average person in the general population can perform the same activity (Smith).

Once a team determines 504 eligibility, student program planning and placement must be determined (Brady, 2004; Yell, 1998). A written Section 504 accommodation plan should be created that describes the appropriate education the student will receive noting the specific accommodations and modifications (Yell). Copenhaver (2003) suggested using the prereferral team as the Section 504 team although the law does not require that the plan be written by a team. Placement decisions are typically decided by a multidisciplinary team using evaluation data from multiple sources.

Smith and Patton (1998) indicated that the critical decision of Section 504 placement should incorporate the severity and duration of the student's impairment with an inclination to keep the student in the general education classroom whenever possible. School personnel should also consider attention to curricular needs, classroom management, and staff support (Brady, 2004). The school staff implements the necessary accommodations to meet the child's special learning requirements. School personnel should consult with parents and provide an opportunity for parent input regarding placement decision and service pattern (e.g., specific accommodations; Copenhaver).

Services provided. As previously indicated Section 504 is a specialized service pattern executed primarily in the general education setting. Therefore, the service pattern includes accommodations and modifications (but no curriculum changes) that can be implemented in regular education classrooms although accommodations may incorporate related services outside the regular education setting such as psychological services. Section 504 services must adhere to the FAPE and LRE requirements. To meet FAPE requirements according to 504 law, schools must ensure that the students are educated with their peers without disabilities, have equal access to education, and are provided

with accommodations that meet the student's needs. Additionally, students are entitled to general or special education, and related aids and services as needed. In general, accommodations for Section 504 are inexpensive, common sense modifications that provide an equal opportunity for these students to be successful.

Services include four main categories of intervention: academic adjustments, classroom modifications, modification of tests, and cognitive mediation strategies (Section 504 law). Academic adjustments include accommodations for work and instruction such as extended time, adjusting length and presentation of assignments, modifying pace of instruction, providing peer tutors, and computer-assisted instruction. Classroom modifications that may be included in the 504 plan for students with ADHD include adjusting the setup of the classroom, seating of the student, and reducing distractions. Testing modifications may include giving tests orally, allowing more time to complete tests, allowing students to dictate answers, altering the test format, or reduce reading level of test. Cognitive mediation strategies include self-instruction, self-management training, problem-solving training, relaxation and social skills training. The section 504 plan may also include auxiliary aides and devices, classroom aides and note takers, medication, and behavior modification (e.g., positive reinforcement, token reinforcement, contingency contracting, response cost, time out, etc.; Reid & Katsiyannis, 1995; Yell, 1998). It is important to note that this list includes all of the efficacious interventions for treating students with ADHD. Thus, it appears that Section 504 provides access to efficacious interventions for students with ADHD.

Although, Section 504 provides access to efficacious interventions, it is important to examine the implementation (or follow through) of services and accommodations

provided in regular education. Nowacek and Mamlin (2007), in a multiple baseline study with four elementary school general education teachers from rural or small university communities, examined teachers' understanding of ADHD and the modifications that general education teachers made for students with ADHD. Teachers completed an open-ended question where they provided their own definition of ADHD, followed by an interview with seven semistructured questions about what ADHD means, characteristics of ADHD, modifications they make in the classroom (academic and other), and how they promote acceptance. Classroom observations were conducted to triangulate the data. No information was provided regarding the presence of a 504 plan or special education placement for these students. These researchers found that although the teachers were knowledgeable about the key characteristics of ADHD, teachers made few modifications. At the elementary level teachers tended to make modifications that were oriented to the class as a whole or required little individualization. The most common individual academic modification made was shortened levels of assignments. Other modifications mentioned were modified spelling lists, used reading strategies, permitted dictation, provided copies of book pages so students with ADHD did not have to copy down problems, and permitted students to choose where they wanted to work (Nowacek & Mamlin). Behavior modifications tended to be idiosyncratic and nonsystematic. Results from this study found that although teachers reported that they made allowances for difficult behavior, and used behavior modification the modifications were implemented inconsistently during classroom observations. These findings are discouraging given that the bulk of the responsibility for intervention for students with ADHD falls on general education teachers regardless of the placement setting (Reid et al., 1994; Schnoes et al.,

2006). Additionally, the results present concerns for implementing Section 504 as the only service pattern due to the research indicating teachers inconsistently provide interventions in the regular education classroom and have difficulty individualizing modifications. Therefore, children may not receive the support they need and are legally guaranteed through specialized services and may benefit from the legal protections and accountability guaranteed through IDEA law.

Special Education IDEA 2004

Purpose and goal. The IDEA is a federal education law designed to provide states assistance in meeting the educational needs of students with disabilities via federal funding (Yell, 1998). Special education is defined as "specially designed instruction at no charge to the parents or guardians, to met the unique needs of a child with a disability" (IDEA, 20 U.S.C. § 11404(a)(16)).

According to the law the purpose of IDEA is to:

> …assure that all children with disabilities have available to them…a free appropriate public education which emphasizes special education and related services designed to meet their unique needs, to assure that the rights of children with disabilities and their parents or guardians are protected, to assist states and localities to provide for the education of all children with disabilities, and to assess and assure the effectiveness of efforts to educate children with disabilities. (IDEA, 20 U.S.C. §1400 (c))

Because this program is federally funded the government has attached substantial requirements to receive funding (Yell, 1998). Thus, students who receive special education have legal protections not offered in general education or through Section 504 that provide accountability for funding and ensure implementation of required services (e.g., IEP, 3-year reevaluation requirement, etc.; Yell).

Criteria for eligibility. IDEA disability definition and eligibility requirements are more restrictive than those required under 504 law. All children eligible for services under IDEA are also covered under Section 504 while the reverse is not true. Not all students with a disability qualify for special education; IDEA law takes a categorical approach with only 13 student disability categories (i.e., autism, deaf-blindness, mental retardation, specific learning disability, etc.). IDEA categories do not have the subjectivity found in Section 504. The 13 categories of disabilities under IDEA are operational, are tied to specific guidelines, regulations, and often norm-referenced test scores (Yell).

The identification and evaluation of students referred for special education is an important procedural requirement and includes more procedural safeguards than in the Section 504 process. Students may be referred for special education by parents, teachers, or other school personnel. Teachers must demonstrate intervention strategies prior to the multidisciplinary team conducting any evaluation. Parental permission is required to conduct any evaluation (Yell, 1998). Evaluation procedures are extensive and include timelines, appropriate tests for appropriate areas, using multiple informants, using technically sound instruments, assessing in all areas identified as concern, and tests administered by trained personnel.

To be eligible for IDEA services the student must meet qualification for one of the 13 categories and the disability must adversely impact the student's educational performance (Yell, 1998). Children with ADHD as their primary disability must meet four conditions to qualify for special education services under OHI. These four conditions include: (a) suffering from a chronic or acute health problems, (b) health

problem must cause limited alertness to the educational environment, (c) educational performance must be adversely affected, and (d) the condition must create a need for special education (Grice, 2002). To help determine if children with ADHD are eligible for special education services under the classification OHI, Zirkel (1992) suggested schools should consider if the ADHD limits the child's educational performance and if the child *needs* special education. According to research one of the best ways to evaluate the need is to examine response to regular education intervention (National Association of School Psychologists, 1998). If the child's behavior does not change as a result of regular education classroom intervention, then special education is warranted. IDEA law requires reevaluation every 3 years to maintain placement in special education.

Once states receive funding for IDEA, they assume responsibility for meeting the provisions of the law. The provisions of the law include identifying students for services and ensuring a FAPE in the LRE (Yell, 1998). FAPE requires the school to provide special education services and related services to those who meet the qualifications at no additional cost.

Related services are those developmental, corrective, or supportive services that are necessary to ensure that students are able to benefit from special education (i.e., speech therapy, psychological services, occupational therapy; Yell, 1998). FAPE also requires the school to create an IEP, which is a document containing the educational classification, present levels of performance, annual goals, testing modification, and the service pattern for the student with a disability (Yell, 1998). This is a legal document and must be renewed at least once annually. LRE is another legal requirement indicating that

schools must educate students with peers without disabilities to the maximum extent possible (Yell).

IDEA law requires that the students have a right to be educated with students without disabilities and requires that before placement can be changed a school must make efforts to maintain a student's placement in a less restrictive setting with the use of supplementary aids and services. If a student cannot receive a meaningful education in general education, another placement is appropriate with services (i.e., specially designed instruction, curriculum changes [not just accommodations as in 504], education strategies, accommodations, and related services) that meet education need and provide educational benefit or meaningful education.

Services provided. Students who qualify for special education services are entitled to all of the classroom accommodations provided via Section 504. Students in special education also qualify for "specially designed instruction," including curriculum changes, in addition to the general education accommodations and modifications. Special education may be provided in a small group specialized setting and thus can provide more intensive, individualized academic and behavior interventions.

Results of a recent national survey (Schnoes et al., 2006) indicated that 66% of students classified as OHI had a diagnosis of ADHD. In addition, 58% of students classified as emotional disturbance (ED), 20% of those classified as mental retardation (MR) and learning disabiled (LD), and 5% of those with speech/language impairments had a diagnosis of ADHD. Schnoes and colleagues indicated that students with ADHD served in special education were less likely than students without ADHD in special education to spend the majority of their instructional time in a general education

classroom. According to this study, two thirds of students with ADHD received at least one nonacademic intervention, which was comparable to students without ADHD who were also receiving special education services. However, the types of services that students with ADHD received in special education differed from students without ADHD and include behavior management programs, mental health and social work services, family counseling and behavioral interventions. Progress monitoring was the most common academic intervention for children with ADHD. Students with ADHD in special education were also more likely than students without ADHD in special education to have a classroom aide, and educational accommodations (e.g., additional time for tests and assignments, computer-assisted instruction, and shorter or different assignment). Another study surveying general and special education teachers found that students with ADHD who were receiving special education services received more frequent use of behavior modification, consultation, one-to-one, time-out, assignment, and breaks in the regular education classroom (Reid et al., 1994).

There is considerable overlap in many functions and services of Section 504 and IDEA law. In order to clarify the similarities and differences between the two services patterns for children with ADHD a table is provided. Table 1 outlines basic differences including: the type of law, purpose, eligibility, services, and so forth under Section 504 and IDEA.

Summary

Researchers have indicated that about 40% of children with ADHD do not qualify for special education (Reid et al., 1994). Recent researchers examining the prevalence of

Table 1

Comparison of IDEA and 504

Component	IDEA	Section 504
Type of Law	An Education Act	A Civil Rights Law
Purpose of law	*assist states in providing FAPE to students with disabilities *protect rights by attaching requirements to federal funding	*Protect the rights of individuals with disabilities (ensure equal access)
Eligibility	*Categorical approach -13 categories *multi disciplinary team must determine student has disability *must adversely affect educational performance	*Functional impact *Students must meet definition of a qualified person by having: - mental/physical impairment that affects MLA (record of impairment or regarded as having impairment) *no age restriction
	Both services: *Draw upon information from variety of sources *Ensure all information considered *Ensure service decision is made by people knowledgeable about student *Ensure LRE *Provide notice and evaluation before change of service	
FAPE	*Special education/related services provided: **at public expense **meet state requirements, **according to IEP **standard educational benefit	*General or special education and related aids and service *Requires written plan *standard is equivalency
LRE	*Educated with peers w/o disabilities to maximum extent possible *Removed from integrated settings only when other aids and services not successful *continuum of placement available	* ensure that the students are educated with their peers without disabilities
Procedural Safeguards	*More (comprehensive and detailed notice requirements, independent evaluations, etc)	*Less (general notice requirements, grievance procedure)
Funding	Federal funding	No federal funding
Services	All in Section 504 plus changes in curriculum, and “specialized instruction”	*Accommodations to curriculum *academic adjustments *classroom modifications *modification of tests *cognitive mediation strategies
Service Tool	IEP (may include 504 accommodations)	Accommodations and or services
Administrator	Special education director or designee	Section 504 coordinator
Enforcement	*U.S. Office of Special Education Programs *monitoring by state educational agency	*Office of Civil Rights *state Department of Education

ADHD among students in the special education categories found that 66% of students classified in the OHI category have ADHD. Additionally, almost 60% of students classified in ED category had ADHD (Schnoes et al., 2006). However, there is limited literature examining what happens to the 40% of children with ADHD who do not qualify for special education or how teams determine whether to serve children with ADHD in special education or in regular education with a Section 504 plan.

As noted earlier, all efficacious interventions for students with ADHD are available to students in regular education via Section 504 or in special education with the exception of specialized instruction, which is reserved as a service only for special education. Section 504 in the regular education classroom is an efficacious setting to serve the less severe students with ADHD who do not require intensive academic support. Unfortunately many schools do not provide adequate training and knowledge about services required through Section 504, thus this service pattern seems to be underutilized (Brady, 2004). Lack of federal funding may contribute to limited exposure to this law.

IDEA law provides federal funding in a more restrictive setting for those students with more severe needs. Students may access more intensive academic and behavior interventions in this setting. Additionally, schools are monitored to ensure proper implementation of services for IDEA. Thus, special education provides some advantages for students with ADHD beyond Section 504. However, some potential negative outcomes for providing an overly restrictive placement may include the social stigma of special education (e.g., internal deficit approach to student problems), limited positive outcome for students, and a less rigorous academic trajectory (Rathvon, 1999).

Thus we see there are benefits for providing services via Section 504 and special education. However, the criteria for determining the best placement for children with ADHD who demonstrate impairment in learning are subjective. Both IDEA and Section 504 accommodations require the child to exhibit ADHD, demonstrate impairment in learning, and failure to respond to regular education intervention. There is no research examining how school teams determine placement beyond these requirements. Therefore, further research is needed to examine current practices for determining eligibility for services to better understand where children are being served which may help inform practice guidelines to ensure children are provided with a FAPE in the LRE.

CHAPTER III

METHOD

Participants

Participants this study were 201 members of the National Association of School Psychologists (NASP) who were currently working as school psychologists in the public education system. The sample was predominately Caucasian (*n* = 187, 93.0%) and female (*n* = 165, 82.1%). The age of school psychologists in this sample ranged from 22 to 75 years (*M* = 42.79, *S*D = 11.89). The majority of school psychologists who completed this survey reported they had obtained a specialist level degree (*n* = 146, 72.6%) as their highest degree. Years of experience working as a school psychologist ranged from 1 to 38 years (*M* = 13.29, *SD* = 9.77). The sample demographics for this study were comparable to general NASP membership data in the areas of ethnicity, gender, age, education level, and years of experience (Curtis et al., 2008) indicating participants were representative of NASP members. According to 2004-05 NASP membership survey about 93% of school psychologists reported ethnicity as White/Caucasian, 77% of practitioners were female, average age of practitioners was 45.2 years, and average years of experience was 14 years. There were differences in education level reported when compared with NASP data. NASP separated those with masters degrees and specialist degrees. According to NASP data 35.7% of practitioners hold a MS and 39.9% hold a specialist degree. This sum equals 75.6%, which is similar to this study 72.3% who held a specialist degree defined as MS, EdS, and so forth. See Table 2 for the demographic details on the school psychologist sample.

Table 2

Demographics

Characteristic	Frequency	Percentage
Sex		
Male	36	17.9
Female	165	82.1
Race		
Caucasian	187	93.0
Latino/a	4	2.0
African American	5	2.5
Asian/Pacific Islander	2	1.0
Other	3	1.5
Highest degree obtained		
Specialist-level degree (e.g., MS, EdS)	146	72.6
Doctorate (e.g., PhD, EdD, Psy D)	53	26.4
Other	2	1.0

Measures

Participants completed a survey designed for this study (see Appendix A). The questionnaire was designed to assess the participants' current practice for determining eligibility for services for children with ADHD and the current service pattern for students receiving services under Section 504 and IDEA. The survey was composed of three parts. The first part contained questions about respondents' demographic characteristics. The second section of the survey included questions related to criteria for determining eligibility for services (i.e., 504 vs. special education) for students with ADHD. On the third part of the survey respondents checked the services (e.g., academic interventions, classroom modifications, testing modification, behavioral interventions) children with ADHD had received in their school within the past year with a Section 504

plan and in Special Education (OHI classification). This survey was developed after reviewing current literature on efficacious treatments for children with ADHD, service patterns in the schools for children with ADHD, and laws and regulations regarding qualification/placement for services. The survey was refined by consulting with several practicing school psychologists with expertise in ADHD. The response options for the person who typically monitors services (question 10 and 12), criteria for eligibility (question 14), and services for students with ADHD (question 15) were selected based on research, law, and current practice in the schools. Additionally, a procedural manual for Section 504 including a list of potential interventions/services used in a Utah school district and a handout on interventions for children with ADHD were utilized to compile a list of potential services available for students with ADHD. The response options were then presented to practicing school psychologists with expertise in ADHD who revised the list be deleting obsolete options and adding potential options that were not included. The options were presented two professors at Utah State University for a final revision.

After receiving Institutional Review Board (IRB) approval and prior to mailing the survey to NASP members, the survey was refined further through pilot testing. The survey was piloted with 12 practicing school psychologists. Ten of these individuals worked in school districts within Utah, including seven from the same district. The other two were from districts in New Mexico and Louisiana. School psychologists completed the survey as if they were a participant, and then provided written feedback on the ease of survey completion, their ability to accurately report on service practices, and suggestions they had for wording clarity and question additions and/or deletions. Following the pilot testing, the survey was revised to incorporate the feedback provided.

The survey was revised further after receiving feedback from the NASP research committee prior to receiving permission to conduct the study with NASP members. NASP review revisions included additional wording clarity, adding options for situations where the responding school psychologist did not participate in decisions or where services were not currently utilized at the school, deleting questions that would be difficult to answer, and deleting response options.

Procedures

Infocus, the list manager for NASP, provided a random sample of 1,000 NASP members currently employed in public schools out of a total sample size of 20,693 NASP members. The sample excluded psychologists working at a college/university, mental health agency, private practice, private school, and the "other" category. The sample also excluded retired members, student members, and trainers. The list was then reduced to 501 by selecting every other name on the list as a participant. The final sample included a random sample of 501 members of NASP currently employed in public schools. The 501 school psychologists were mailed a cover letter (see Appendix B), the survey, and a prepaid business envelope to return the survey. Surveys were coded with a unique numerical identifier matched to the NASP membership list to allow for follow up with nonresponders. One month after mailing the initial survey, a second survey was mailed to nonresponders.

In total, 152 surveys were returned from the original mailing. An additional 61 surveys were returned from the second mailing. The total response rate from both mailings was 43%. Four surveys were excluded because the respondents reported no

longer working in schools; two more were excluded because one respondent was in an administrative position, and one respondent was in an university position. Another three were excluded because the psychologists worked in private practice, private school, and an Eskimo village in Alaska. Three more surveys were excluded because the psychologists worked at the preschool level. In total, 12 surveys were excluded from the study. The final sample size included 201 surveys for a final useable return rate of 40%.

CHAPTER IV

RESULTS

The purpose of this study was to investigate current practices school psychologists use to determine the service pattern for children with ADHD and what services are typically provided via Section 504 and IDEA (OHI classification only). Therefore, descriptive statistics were the main method of analysis. Data were analyzed to present current decision-making practices for determining eligibility and classification for special education and Section 504 and percentage of students with ADHD served in each setting. Additionally, descriptive data were organized to present the person most commonly in charge of follow-up and the frequency of follow-up for Section 504 and special education, and the services most commonly provided in the special education setting versus Section 504 accommodations. A qualitative approach was taken to analyze responses to an open-ended question seeking any additional information on how decisions are made to determine placement and service pattern for children identified as having ADHD and comments on the "other" lines of the structured questionnaire. Reponses were organized and grouped together based on similar themes for the open-ended question. Responses from the "other" lines of the structured questionnaire were analyzed and grouped with another category where possible.

School Level Used for Survey Data

Respondents were asked to focus on one school, ideally an elementary school, to answer questions for this survey. The majority of respondents based their answers on a

school at the elementary level (n = 156, 77.6%), with 21 basing answers at middle school/junior high (10.4%), and 22 at the high school level (10.9%). Two participants were eliminated from the data because they checked more than one option thus, the answers could not be coded accurately.

Role of School Psychologists in Evaluation and Placement Decisions

School psychologists were asked to indicate their involvement in evaluation and placement decisions related to Section 504 and IDEA services by checking all the roles that applied from a list of roles with varying involvement for each type of service. For Section 504 placement decision and evaluation, more than half of the respondents indicated that they were a member of the team that makes placement decisions and that they conducted evaluations prior to placement decisions. Forty-five percent of participants indicated that their involvement varied based on the individual child, 10% reported no involvement, and 4% indicated that children with ADHD are not served with Section 504 in their school.

The role of school psychologists for evaluation and placement decisions for special education was predominately conducting evaluations, and serving as a member of the team that makes placement decisions. About a quarter of school psychologists indicated that their involvement varied based on the individual child. Only 1% of respondents indicated that children with ADHD are not served in special education and only one person (.5%) reported no involvement in decision making or evaluation. See

Table 3 for frequencies and percentages related to school psychologists' role in evaluation and placement decisions for 504 and IDEA.

Service Follow-up: Frequency and Monitoring

School psychologists were asked four questions regarding follow-up for children identified as having ADHD who were on Section 504 plans and for children identified as having ADHD who were receiving special education services under the educational classification OHI. Two questions addressed frequency of follow-up. Participants were asked to check the appropriate frequency ranging from once per month to never, including "NA" (no children identified as having ADHD are on 504/served under OHI), "don't know," and "other" categories. Another two questions on the survey identified who typically monitored accommodations and services for children identified as having ADHD. Participants were directed to check the person who was most often responsible for follow-up for 504 and IDEA from a list of personnel in the school setting. An "I don't know," "NA" (no children identified as having ADHD are on 504/served under OHI), and "other" response were included to gather detailed and accurate information.

Frequency

The majority of respondents indicated that there was typically follow-up to see how/if the 504 plan was being implemented at least once per year (n = 96, 47.5%). About a quarter of the respondents (n = 53, 26.4%) indicated that follow-up varied based on the individual child. About 7% of participants (6.5%, n = 13) reported that no children identified as having ADHD were on 504 plans, and 2.5% (n = 5) reported that there was

Table 3

School Psychologists' Roles in Evaluation and Placement Decision

	Section 504		IDEA (OHI classification)	
Role	Frequency	Percentage	Frequency	Percentage
Member of team that makes placement decisions	131	65.2	183	91.0
Conduct evaluations prior to placement decisions	118	58.7	188	93.5
No involvement	20	10.0	1	.5
Involvement varies based on individual child	91	45.3	48	23.9
NA–children identified as having ADHD are not served (with 504 or special education	8	4.0	2	1.0

never follow-up. Twenty-two participants checked more than one response option, therefore, we could not identify the correct response and coded the data as "missing." An additional two respondents left the question blank and were also coded as missing. Frequency of follow-up for special education was similar to Section 504 with the majority of respondents indicating follow-up at least once per year (n = 83, 41.3%). However, a larger percentage of students in special education received follow-up at least once every 3 months (n = 42, 20.9%), or once per month (n = 22, 10.9%). About one fifth of participants indicated that follow-up varied based on the individual child. Twenty-one participants checked more than one response option, therefore, we could not identify the

correct response and coded the data as "missing." An additional two respondents left the question blank and are also coded as missing. See Table 4 for detailed information.

Monitoring

The school counselor was the most commonly reported person who typically monitored 504 accommodations (n = 57, 28.4%). The principal/vice principal (n = 23, 11.4%), and "other" (n = 24, 11.9%) were also mentioned frequently. The most common answer that participants wrote in for the "other" response was the 504 coordinator (about 50% of "other" responses). The remainder either did not know, or marked the regular education or special education teacher typically monitoring services. Twenty-five participants (12.4%) checked more than one response option, therefore, we could not identify the correct response and coded the data as "missing."

The special education teacher was most commonly reported as the person who typically monitored special education services for children identified as having ADHD, who receive services under the classification OHI (n = 153, 76.1%). Interestingly, no respondents marked the regular education teacher or school counsel as typically monitoring special education services. About 4% (n = 8) marked the school psychologist and 4.5% (n = 9) indicated that the person who monitored services varied based on the individual child. Sixteen participants (8%) checked more than one response option, and therefore we could not identify the correct response and coded the data as "missing." See Table 5 for detailed information.

Table 4

Frequency of Follow-Up

	Section 504		IDEA (OHI classification)	
Follow-up	Frequency	Percentage	Frequency	Percentage
Once per month	2	1.0	22	10.9
At least once every 3 months	7	3.5	42	20.9
At least once every 6 months	5	2.5	1	.5
At least once per year	96	47.8	83	41.3
Less than once per year	7	3.5	0	0
Never	5	2.5	2	1.0
I don't know	11	5.5	2	1.0
NA–no children identified as having ADHD are on 504 plans	14	7.0	5	2.5
Varies based on individual child	29	14.4	21	10.4
Missing	25	12.4	23	11.4

Table 5

Person Who Typically Monitors Section 504 and Special Education Services

	Section 504		IDEA (OHI classification)	
Position/profession	Frequency	Percentage	Frequency	Percentage
Special education teacher	12	6.0	153	76.1
School psychologist	9	4.5	8	4.0
Principal/vice principal	23	11.4	1	.5
Regular education teacher	13	6.5	0	0
School counselor	57	28.4	0	0
I don't know	16	8.0	0	0
Other (e.g., 504 coordinator, school nurse)	24	11.9	10	5.0
NA–no children identified as having ADHD are on 504 plans	8	4.0	4	2.0
Varies based on individual child	14	7.0	9	4.5
Missing	25	12.4	16	8.0

Location of Services for Children Identified as Having ADHD

School psychologists were asked to estimate what percentage of students with ADHD received services in 504 and/or special education placements for the 2007-2008 school year. The most common placement for children identified as having ADHD was regular education (M = 37.15%, SD = 27.08). The second most common placement was special education with a classification of OHI (M = 26.31%, SD = 21.45), followed by Section 504 services only (M = 21.03%, SD = 20.32). According to estimates by school psychologists about 14% (SD = 17.78) of children identified as having ADHD received services in special education with a classification other than OHI. See Table 6 for detailed information.

Criteria for Determining Eligibility for Services

School psychologists answered a series of questions regarding how decisions are made about determining eligibility for services and location of service delivery for students identified as having ADHD who do not meet criteria for an IDEA classification other than OHI. School psychologists were asked to check all the factors that applied to decisions about placement from a list of possible factors for placement decisions based on the literature review and pilot study. Eleven surveys were eliminated, 10 because respondents marked that they did not know how decisions were made because they were not involved in the process, and one because the respondent did not answer the question.

The most common criteria used (endorsed by around 90% of respondents) were academic performance (93.2%, n = 177) and severity of impairment (89.5%, n = 170).

Table 6

Mean Percentage and Standard Deviations for Placement of Children Identified as Having ADHD (n = 152)

Placement	*M*	*SD*	Range
Regular education only (No Section 504 plan or special education services)	37.15	27.08	0 to 95
Special education placement with OHI classification	26.31	21.45	0 to 90
Section 504 only (Regular education placement with formal accommodations but no special education)	21.03	20.32	0 to 90
Special education placement with classification other than OHI (e.g., OLD, EBD, etc.)	13.98	17.78	0 to 99
Special education placement with classification other than OHI and Section 504 plan	1.01	4.83	0 to 40
Special education placement with OHI and 504	0.52	2.93	0 to 20

The third most universal factor, endorsed by about three quarters of participants was whether specialized instructions was needed (78.9%, *n* = 150). The next salient factor with 74.7% (*n* = 142) of respondents checking as an important component of decision making was the child's response to prereferral or previous interventions. About 44% (*n* = 83) marked parent input/request, and 42.1% (*n* = 80) location of services needed as the fifth and sixth most important factors. Twenty percent (*n* = 38) of school psychologists marked type of ADHD and classroom management skills of the regular education teacher as factors that played into placement decisions. Less than 5% of school psychologists marked strength or weakness of the resource team, convenience or time management, or

caseload as factors that influenced placement decisions. The criteria used for placement decisions are listed in descending order of importance in Table 7.

School-based Services Provided for Children Identified as Having ADHD

A multi-part question was used to address the fourth research question concerning the school-based services children with ADHD received in the schools under Section 504 plans and in special education under the educational classification OHI. Respondents were provided a table with a list of services available in the schools (academic interventions, classroom modifications, modification of nonstandardized tests, behavioral interventions, and "other") for a section 504 plan and/or special education. Participants were asked to place a check mark in the appropriate columns (Section 504 or special education OHI only) for services that children identified as having ADHD received in their school within the past year. There was a separate line for participants to check if there were no children with ADHD who received 504 accommodations and likewise if there were no children with ADHD that received special education services under OHI. Twenty-five participants indicated that no children identified as having ADHD received Section 504 accommodations in their school. Six participants left the question blank, thus, a total of 30 participants were excluded from the analyses for 504 services. Six respondents indicated no children identified as having ADHD received special education services, and an additional five left the question blank making a total of 11 responses excluded from analysis for special education services. Therefore, no data were included in the table below for these respondents in the corresponding categories.

Table 7

Criteria for Eligibility (N = 191)

Criteria	Percentage	*n*
Academic performance	93.2	177
Severity of impairment	89.5	170
Specialized instruction needed	78.9	150
Child's response to prereferral/previous intervention	74.7	142
Parent input/request	43.7	83
Location of services needed	42.1	80
Type of ADHD	20.0	38
Classroom management skills of regular education teacher	18.4	35
Attitude/knowledge of regular education teacher	9.5	18
Duration of impairment	8.9	17
Other	8.9	17
Parent compliance with implementation of treatment	8.4	16
Teacher compliance with treatment	6.8	13
Strength/weakness of resource team	3.2	6
Case load of special education teachers/team	2.1	4
Convenience/time management	1.6	3

In general, service patterns were similar for 504 plans and special education (OHI classification). The top five most frequently used interventions for both settings were extended time to complete assignments, adjusting physical placement of student, allowing more time to complete tests, teacher repeating and simplifying instructions, and adjusting the length of assignments and homework. Providing opportunities for movement, positive reinforcement (e.g., tokens, points, increased praise), and establishing a cue or prompt between the teacher and student were the sixth, seventh, and eighth most frequently utilized services in both setting.

All interventions listed in the table were used more frequently in special education placement. A few of them were endorsed by school psychologists as much more commonly used including teaching compensatory strategies (e.g., organization

skills, note taking, doing easy problems first), modification of tests, and several behavioral interventions. In special education (OHI) students received more modifications in all the areas of testing modifications. In fact, altering test format, receiving tests orally, and child dictating answers were reported to be used about twice as often as a special education service. School psychologists endorsed that special education students received positive reinforcement and contingency contracting (group or individual) more often than students on Section 504 plans. Additionally, school psychologists reported that in special education OHI students received response cost, social skills training, one-on-one counseling, and self-management training around double the percentage than students on Section 504 plans.

Peer monitoring and instructional choice were the two least utilized interventions in both settings, although instruction choice was used twice as much in special education setting. Peer tutoring was the third least used intervention in special education followed by response cost, peer monitoring, and self-management training. In Section 504 plans the most underutilized services after peer monitoring and instructional choice were altering the test format, response cost, and self-management training. Allowing students to dictate answers, giving test orally, time out, social skills, and one-on-one counseling were marked as services utilized less than 40% of the time. See Table 8 for details on the services received for students with ADHD.

Additional Information on How Eligibility Decisions Are Determined

The last question on the survey was an open-ended question requesting any

Table 8

Service Pattern for Section 504 and Special Education–OHI Only

Services/interventions	Section 504 (*N* = 171)		Special Education-- OHI only (*N* = 190)	
	Frequency	Percentage	Frequency	Percentage
Academic interventions:				
Extended time to complete assignments	95.9	164	96.8	184
Adjusting length of assignments and homework	81.9	140	91.1	173
Provide shorter increments of time to complete work (e.g., timer)	46.8	80	58.9	1412
Highlighting text or worksheets	44.4	76	57.9	110
Provide checklist for child/parents teacher to record assignments	63.7	109	72.6	138
Peer tutoring	45.0	77	41.1	78
Teacher repeating and simplifying instructions	84.2	144	93.7	178
Establish a cue/prompt between teacher and child	70.8	121	78.9	150
Teach compensatory strategies (e.g., organization skills, note taking, doing easy problems first)	48.5	83	81.1	154
Have child restate instructions	66.7	114	78.9	150
Instructional choice (e.g., menu of academic tasks)	18.7	32	35.3	67
Using advanced organizers	49.1	84	62.1	118
Computer assisted instruction	40.4	69	55.8	106
Classroom modification				
Adjust physical placement of student (e.g., seat student in the front of the room)	97.15	166	96.3	183
Alter physical setup of classrom to reduce distractions	4.5	93	62.1	118
Provide opportunities for movement (e.g., short breaks)	76.0	130	88.4	168

(*table continues*)

Services/interventions	Section 504 (*N* = 171)		Special Education--OHI only (*N* = 190)	
	Frequency	Percentage	Frequency	Percentage
Modification of nonstandardized tests				
Allow more time to complete tests	92.4	158	96.3	183
Alter the test format	22.8	39	60.5	115
Give test orally	36.8	63	66.3	126
Allow student to dictate answers	31.6	54	63.7	121
Behavioral interventions				
Positive reinforcement (e.g., tokens, points, increased praise)	71.9	123	88.9	169
Contingency contracting (group or individual)	43.9	75	62.1	118
Response cost	27.5	47	47.4	90
Time out	38.6	66	51.6	98
Peer monitoring	187.7	32	20.0	38
Social skills training	35.7	61	75.3	143
One-on-one counseling	36.8	63	63.2	120
Self-management training	28.1	48	53.7	102
Other	2.9	5	5.3	10

additional information regarding placement decisions and service patterns for children identified as having ADHD. Several participants (n = 35) provided responses to this question. Responses were grouped based on similar comments. Five participants indicated that they assessed functional performance (disconnect between testing and classroom performance) to determine services and placement. Five participants indicated that students with ADHD are placed on a Section 504 plan first; if additional supports are needed to produce success, special education via OHI is considered. Eight school psychologists responded that academic functioning is an important factor, and six indicated that severity of impairment is critical for placement decisions. These respondents indicated that Section 504 is reserved for mild cases of ADHD and that severe cases are best served in special education under OHI. There were three respondents who indicated that 504 plans are not used at all or not used as much as they could be. Six school psychologists stated that it is important to look at assessment results in many areas (e.g., cognitive patterns, testing, social functioning, etc.) to determine placement.

Two school psychologists did not feel teachers noticed how accommodations/ modifications helped and want students medicated. An additional two respondents felt 504 plans were useful for testing modifications (especially with pressure for passing state exams). Another two psychologists indicated if the student did not qualify special education they "may" receive 504 but usually the school meets needs in regular education (sometimes with intervention team) not 504.

CHAPTER V

DISCUSSION

ADHD is a common childhood disorder that impairs educational functioning in children. There are two pathways to services for students identified as having ADHD in the schools: Section 504 in regular education and/or special education; however, criteria for determining eligibility are loosely defined. Additionally, there is limited knowledge on what services are typically provided for students with ADHD on Section 504 and in special education with the educational classification OHI. The purpose of this study was to learn more about the current practices for school-based services for children with ADHD. This study examined the current practices school psychologists' use for determining eligibility for services for students with ADHD in the school setting. The study also examined the role of school psychologists in placement decisions, frequency of follow-up, and location of services for children identified as having ADHD. Data were obtained on what services were provided in each setting to better understand what interventions were being provided.

Role of School Psychologists in Evaluation and Placement Decisions

School psychologists have expertise in ADHD including assessment and implementing academic and behavioral interventions. Their participation as members of teams that make placement decisions for children with ADHD can be beneficial in determining the best setting and research-based services (accommodations, interventions,

etc.) to meet students' needs. No previous studies were found regarding the role of school psychologists in eligibility determination for Section 504. According to 504 law, decisions about placement and services should be made by a team of knowledgeable persons about the child that may include the school psychologist (Yell, 1998). Special education law *requires* a team of professionals, which typically includes the school psychologist, to make placement decisions for special education for children who may qualify for services due to ADHD. Previous research indicated that this process is followed in the schools as authors noted that school psychologists are almost always involved in placement decisions for special education for children with ADHD (Yell).

In this study school psychologists reported being utilized less frequently as members of teams that make placement decisions and conduct evaluations for Section 504 than for special education. Although a majority of school psychologists (65.2%) reported that they were involved on teams that make Section 504 placement decisions, far more (91.0%) were involved in special education team placement decisions. About 60% of school psychologists reported that they were involved in evaluations prior to placement decisions for Section 504 placement versus 93.5% being involved in evaluations for special education placement decisions. This suggests that school psychologists (persons with expertise in ADHD) are used less frequently for regular education intervention decisions (i.e., 504 plans) that impact the educational progress of students with ADHD. These results underscore the traditional role of school psychologists with the special education population and allude to a potential need for greater involvement at the regular education level of intervention.

Service Follow-up: Frequency and Monitoring

IDEA law provides procedural safeguards and protections for students in special education. Yell (1998) indicated that IDEA law requires yearly review of the IEP. In fact, progress reports for each IEP goal are required every time academic grades are reported. Section 504 does not include any specific guidelines for review other than "periodic" reevaluation (Yell). Results from this study indicated that Section 504 and IDEA have about the same percentage of yearly follow-up. However, in special education about 30% of school psychologist reported follow-up more than once a year (10.9% once a month, 20.9% at least once every 3 months). Follow-up for special education was lower than expected given the legal mandates to provide progress reports each times grades are reported. This number may be lower than expected because the special education teacher was typically responsible for monitoring services, thus the school psychologists might not be aware each time there is follow-up on services. Despite this, school psychologists reported more frequent follow-up in special education than in regular education with Section 504 plans. For Section 504 plans only 7% of school psychologists reported follow-up more than once a year (1% once per month, 3.5% at least once every 3 months). This lack of follow-up regarding the implementation of interventions for Section 504 plans is concerning, given that researchers have indicated inconsistent follow through on modifications for students with ADHD in general education settings (Nowacek & Mamlin, 2007). If teachers inconsistently implement interventions and no one follows up on the 504 plan to provide accountability and integrity checks, students will not receive the interventions mandated by law and

necessary for academic success in the classroom. Therefore, school faculty are not able to accurately assess the success or failure of the 504 plan in meeting the educational needs of the student, nor can educators accurately evaluate the need for further intervention (i.e., a more restrictive placement). However, administrators and teachers may wrongly interpret the lack of progress under a poorly implemented 504 plan as a need for more intensive intervention, namely special education, and may result in overrepresentation of students with ADHD in special education.

When asked who was responsible for monitoring 504 accommodations and special education services, school psychologists reported that school counselors most commonly monitored 504 services followed by the principal/vice principal and other (504 coordinator was most commonly written in the "other" line). For special education, 76% of school psychologists reported that the special education teacher was responsible for monitoring these services for children with ADHD. Most school psychologists knew who was responsible for monitoring services for both Section 504 and special education. Therefore, it seems that there is an identifiable person responsible for monitoring services.

From these results, it appears that there is less frequent follow-up for students with ADHD with Section 504, despite an identifiable person responsible for monitoring services. Federal funding may serve as a natural support for students in special education, provided that there are more legal protections requiring progress monitoring (i.e., more frequent follow-up), in addition to a permanent paid position (i.e., special education teacher) specifically hired to ensure special education services. Quite the opposite, Section 504 provides no funding, and in general the person who monitors services is

responsible for another major role in the school (e.g., school counselor, principal/vice principal) and may not have adequate resources to follow-up on interventions. It is interesting to note that fewer than 5% of school psychologists reported that they typically monitor Section 504 or special education plans. This result indicates that school psychologists, person with extensive training in interventions, treatment integrity, and consultation, are underutilized in monitoring services (e.g., treatment integrity). It may be beneficial for schools to involve psychologists in follow-up to ensure that students are receiving interventions and that the interventions are being implemented accurately.

Location of Services for Children Identified as Having ADHD

In an attempt to gather a general idea of placement for children identified as having ADHD, school psychologists were asked to report an estimate regarding placement of students with ADHD. Results from this survey were similar to previous studies with about 37% of children with ADHD placed in regular education with no Section 504 and no special education services (Reid et al., 1994). Reid and colleagues conducted a study assessing special education placement for students with ADHD. Results indicated that 40% of children with ADHD did not qualify for special education. In previous research, no data were reported about Section 504 services for children with ADHD who did not qualify for special education. In the current study, school psychologists reported that 21% of students with ADHD were placed in regular education with the support of a Section 504 plan. In total, 58% of students with ADHD were reported as not receiving special education. Underserving children with ADHD may

exacerbate negative social, behavior, and educational outcomes associated with ADHD. However, overidentifying those students who qualify for special education is a violation of FAPE under IDEA law. According to this study, it appears that more students with ADHD are remaining in regular education with the additional support provided by 504 plans that offers hope that schools are providing education in the least restricted environment available. However, there is no way to know from this study if students with ADHD are under- or overserved in special education.

Data from this study indicated that the majority of students identified as having ADHD who were receiving special education services had a classification of OHI. According to this study, 26% of students with ADHD received special education under the educational classification OHI, and about 14% received special education with a classification other than OHI. In previous research it was reported that 66% of students classified OHI had a diagnosis of ADHD, as well as 58% of students classified ED, 20% MR and LD, and 5% of those with speech/language impairments (Schnoes et al., 2006). Although direct comparisons between the current study and this previous study cannot be made as Schnoes and colleagus looked at how many students within certain special education categories had ADHD rather than what categories children with ADHD were placed in, we can acknowledge that further researcher may be warranted to examine if students with ADHD are placed in special education with a classification that accurately meets their educational needs and primary disability.

Criteria for Determining Eligibility for Services

An essential component to free and appropriate education is educating students in

the least restrictive environment (IDEA law). Therefore it is essential that placement decisions are accurate and provide services at the least intrusive level possible. Currently there are some similar criteria for determining eligibility for special education and Section 504 services for students with ADHD; although, in general, IDEA law provides objective criteria whereas eligibility for Section 504 is defined loosely (Smith, 2002). Researchers suggest that personnel should assess severity and duration of impairment, attention to curricular needs, classroom management, staff support, and consultation with parents, with a preference for keeping the student in general education whenever possible when considering eligibility for Section 504 (Copenhaver, 2003; Smith & Patton, 1998). One researcher suggested that schools should assess whether the ADHD impairs the student's educational performance and if the child needs specialized instruction (Zirkel, 1992).

Results from this survey indicated that school psychologists are generally following the recommendations of researchers and federal guidelines for determining eligibility for services. Severity of impairment and academic performance were the top two criteria school psychologists reported were used to determine where to provide services. The need for specialized instruction was the next most utilized criteria followed closely by child's response to prereferral/previous intervention. According to NASP, response to intervention (RTI) in regular education is one of the best ways to determine eligibility for special education (NASP, 1998). Although, RTI is typically more related to learning disabilities, progress monitoring may be beneficial both to rule out learning disabilities as a cause for academic difficulty for students with ADHD and as a stepping stone for progress monitoring behavior interventions. This data may be beneficial in

determining eligibility (OHI) for children with ADHD with both academic and behavior difficulties. Parent input/requests and location of services needed were ranked as the fifth and sixth most important criteria. These results are very encouraging and indicated that teams were properly assessing placement decisions, at least when the school psychologist was involved in the process.

The two criteria that were not used as frequently but are recommended as part of the decision-making process were classroom management skills of regular education teacher and duration of impairment. Duration of impairment is part of the criteria for diagnosing ADHD; therefore, long-term impairment is inherent in the diagnosis of ADHD and may be one of the reasons that duration of impairment was not considered an important factor for determining eligibility for services according to responses from this survey. Additionally, teacher compliance with treatment was one of the least utilized criteria reported in determining placement. It may be important to consider treatment integrity in prereferral interventions given the less frequent follow-up with 504 plans in school and previous research reporting that teachers inconsistently applied interventions in the classroom (Nowacek & Mamlin, 2007).

There were several criteria that psychologist reported play into decision where to serve children with ADHD that are training issues and/ or resource issues that should not be part of eligibility decisions. For example, classroom management skills of the regular education teacher were reported as a factor considered in placement decisions by about 18% of psychologists. Attitude or knowledge of the regular education teacher, parent compliance with implementation of treatment, teacher compliance with treatment, strength or weakness of resource team, case load of special education team, and

convenience or time management issues were reported as criteria considered for placement. Although each of these criteria were reported as factors that played into decision by less then 10% of psychologists, none of these factors should be considered in placement as they are training/resource issues and not related to ability of child. The school staff is responsible for training and implementing services. In fact the school psychologist has specialized training in implementing interventions, treatment integrity, and consultation. It is important for training and resource issues (e.g., teacher skills) to be evaluated and ruled out as a reason for educational problems prior to placement decisions.

Open-ended data from school psychologists indicated that functional performance was an important factor in determining eligibility for services. It was also suggested by several participants that students with ADHD are placed on Section 504 first and then if additional support is needed, they are referred for special education. This practice supports recent federal regulations and recent research regarding response to intervention being an essential component when considering specialized instruction (Cheney, Flower, Templeton, 2008; IDEA regulations, 2004). In addition, this practice supports educating the student in the least restrictive environment before a more restrictive environment (i.e., special education). Several school psychologists felt it was important to look at formal psychological assessment results across many areas (e.g., cognitive patterns, CBM, social functioning, etc.) to determine eligibility. Comprehensive psychological assessments provide data-based decisions and may be beneficial in taking out some of the subjectivity in eligibility decisions. However, it would increase the caseload and time requirements

for Section 504 without an increase in funding. Lastly, several participants felt that 504 plans were an underutilized resource in the schools.

School-based Services Provided for Children Identified as Having ADHD

Students who qualify for Section 504 have access to all of the efficacious interventions for ADHD. Special education (OHI classification) includes all of the efficacious services for ADHD available in Section 504 in addition to specialized instruction in a small group setting. One of the goals of this study was to determine what services children typically receive in each setting. The results of the survey indicated that, in general, service patterns were the same, although all of the interventions listed in the survey were used more frequently in special education. The top five most common interventions in both settings were extended time to complete assignments, adjusting physical placement of student, allowing more time to complete tests, teacher repeating and simplifying instructions, and adjusting the length of assignments and homework. It is interesting to note that the top five contain only one empirically supported intervention namely adjusting length of assignment (Barkley, 2002; DuPaul & Weyandt, 2006a). Providing opportunities for movement and providing positive reinforcement were the next two most common interventions. Although positive reinforcement (e.g., tokens, points, increased praise) has some empirical support as an intervention for ADHD, research has demonstrated that relying solely on positive reinforcement is not as effective as systems with reward and punishment (e.g., response cost) in changing classroom behavior (Dupaul & Stoner, 2003; Pfiffner & O'Leary, 1993). However, the data did not

indicate if the positive reinforcement intervention was paired with a punishment such as time out or response cost.

The interventions that were reported to be used with much greater frequency in special education included teaching compensatory strategies (e.g., organization, note taking, etc.), modification of tests (altering test format, receiving tests orally, and dictating answers), and some behavior interventions. According to the survey students in special education (OHI) receive more empirically supported research-based interventions for students with ADHD than those in regular education with 504 plans. Funding may have influenced the interventions available in Section 504 (e.g., teaching compensatory strategies). Section 504 is a regular education intervention with no federal funding. Funding issues may be responsible for fewer interventions and less intense interventions due to limited resources to implement interventions (e.g., staff, training, etc.). However, it appears that in both settings efficacious school based treatments including peer monitoring, peer tutoring, response cost, self-management training, contingency contracting, and instructional choice were among the least utilized. These interventions may be used the least because they require more teacher time, effort, and organization. Based on these findings, it seems that educators are neglecting many efficacious interventions and are frequently using interventions that lack empirical support and may require little more than arranging seats, providing extra time, and altering tests. Additionally, around seventy five percent of psychologists reported providing social skills to students with ADHD despite limited research support social skills training for children with ADHD (DuPaul & Weyandt, 2006a). One-on-one counseling was also used more frequently than research-based interventions. Implications from these findings

suggest that schools seem to use interventions that are not supported by research and are more traditional (e.g., social skills, one-on-one counseling), more frequently than meaningful, research-based interventions for children with ADHD.

Conclusion

The results from this survey indicated some important findings about current practices for determining placements for students with ADHD, services provided in Section 504 and special education (OHI), and follow-up on services. Data from the survey established that responders are following current guidelines and suggestions with what criteria they use in decisions about where to provide services. This is encouraging in light of the subjectivity in placement decisions for Section 504. Specifically, school psychologists reported that the top four criteria they consider when determining eligibility are: academic performance, severity of impairment, specialized instruction needed, and child's response to prereferral/previous intervention. However, we must keep in mind that only 65% of psychologists reported being on placement teams that made decision for Section 504 placements, so there is a need to assess how placement decisions are made when the psychologist is not a member of the team. Additionally psychologists reported using criteria that are related to training issues or resource issues that should not be considered a factor in determining placement.

Based on estimates reported by school psychologists, three fifths of children identified as having ADHD received services in regular education with or without Section 504. However, significant portions of children with ADHD are educated with services in special education. It may be important to investigate decision-making

practices more in depth to ensure that children are receiving FAPE in LRE and could not be better served in regular education with 504 accommodations. Data from this survey were close-ended and did not provide detailed information on the decision making process, but rather highlighted the criteria that were considered.

One important finding from this study concerned the role of school psychologists in placement decisions for children identified as having ADHD. As noted earlier, results indicated that school psychologists may be underutilized in 504 placement decisions and, thus, left out of critical educational decisions for students with ADHD. Additionally, fewer than 5% of psychologists reported being responsible for monitoring services, which indicates that they may be underutilized in implementing and maintaining effective interventions for students with ADHD. Despite this, school psychologists were able to identify the person responsible for monitoring Section 504 (and special education). This is encouraging and suggests that there is awareness about Section 504 and IDEA organization within schools. However, children with 504 plans received less frequent follow-up than children in special education. This may stem from the dual responsibility held by the person who was generally responsible for monitoring Section 504 (e.g., school counselor, regular education teacher, principal, vice principal) and may result in failure to implement plans correctly and, thus, interpret success/failure to respond incorrectly.

Some of the most interesting and practically relevant findings were regarding the services that are typically provided in Section 504 and IDEA (OHI). As stated previously, all efficacious interventions/treatments for ADHD are available to students via Section 504 and/or IDEA (OHI). In general, patterns for services were the same in

both settings, although interventions were used more frequently in special education. The top five most utilized interventions required minimal effort and did not include the most efficacious interventions for ADHD. Additionally, social skills training, an intervention that does not have sound empirical support, was used more frequently than well-established treatments such as behavior modification (e.g., contingency management). It is important to note that in Section 504 and IDEA (OHI) children received efficacious interventions; however, it appears that these interventions may be underutilized at the expense of ease and tradition.

ADHD is the most common childhood disorder and one of the most researched disorders. Therefore, there are sound, empirically supported treatments for ADHD. This study underscored the fact that there is currently a disconnect between current practice and research-based treatments for services for children with ADHD in the schools. It is important that schools begin to match intervention with research to provide educational programming that meets the needs of children identified with ADHD. Additionally, schools may benefit from including school psychologists in placement decisions for Section 504, as well as increasing accountability and follow-up for services provided in Section 504 by regular education teachers.

Study Limitations

There are several limitations in this study as a result of survey methodology. First, although the survey was piloted prior to execution, differing interpretation of survey items may have impacted the response to some questions. Despite a pilot test and careful review, some wording problems existed. For example, several people commented

that the question asking for estimated percentages for placement of children with ADHD was confusing. Additionally, question 15 asked about services children identified as having ADHD received rather than asking about services specifically for students with ADHD.

Another important limitation from the survey is that the data do not indicate where the special education interventions were implemented (i.e., regular education setting, special education, or both). These interventions may look different in different setting and influence a students' success differently. It would be important to make this distinction in future research.

Another potential limitation is response bias. Respondents reported using criteria for eligibility that matched federal guidelines and best practice. These responses may have been reported the way respondents thought they should be answered rather than what they actually do in practice.

Sample representativeness is another problem inherent in survey research. In this study, data were collected from a random sample of NASP members. The study sample is a fairly homogeneous group with the majority of respondents White, middle-aged, females, with an average of 13 years of experience. However, because the sample was representative of current NASP membership, the people the research is generalizing about, this does not appear to be a major problem (Curtis et al., 2008). Years of experience may have influenced how school psychologists determined eligibility and the interventions typically offered in Section 504 and IDEA (OHI). For example, school psychologists who started employment before 504 plans were available for children with ADHD, or before OHI classification was open to children with ADHD, may not be aware

of or may not feel as comfortable implementing new changes to policy and practice. Another limitation may be nonresponse bias. People who choose to respond may have differing opinions than those who choose not to respond, thus biasing the results. For example, psychologists with expertise, experience, or interest with ADHD, 504, or OHI classification may have responded more than other psychologists. Additionally, this data set does not represent the views of school psychologists who are not current members of NASP.

Future Directions

One of the main areas for future study regarding the research questions presented in this study would be to investigate decision-making practices more in depth. Data for determining eligibility form this study was gathered from close-ended questions and did not provide detailed information on the decision-making process, but rather highlighted the criteria that were considered. It may be beneficial to use interviews, record reviews, and so forth, to better assess the decision-making process. It may also be beneficial to collect data on how placement decisions are made for Section 504 when psychologists are not part of the placement team. Additionally, data collected on services typically provided, follow-up, and monitoring for students with ADHD in Section 504 and IDEA (OHI) was self-report only. More accurate data may be gathered by actual classroom observation or data collection. Additionally, school psychologists only estimated data on where students identified as having ADHD receive services. Record reviews may lend itself to more accurate data.

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APPENDICES

Appendix A:

Measure

School-Based services for children with ADHD

Please answer the following questions. If you work in multiple schools, please focus your answers on your work with **only one** of those schools (preferably choose an Elementary School at which you spend the most time working).

SECTION 1: Demographic information

1. Your Age:_____

2. Gender

_____Male _____Female

3. Ethnicity

____Caucasian ____African American
____Native American ____Asian/Pacific Islander
____Latino/a ____Other (specify)_____

4. Highest Degree earned

_____Specialist-level degree (e.g., MS, EdS)
_____Doctorate (e.g., PhD, EdD, PsyD)
_____other (specify_____)

5. How long have you been a school psychologist? _____ years

6. As you answer the rest of this survey, please focus on one of your schools – ideally an elementary school. Please indicate what level school you will use to complete this survey:

___elementary ___middle school/junior high _____high school

7. What is your role in evaluation and placement decisions for Section 504 services for children identified as having ADHD? Check all that apply.

_____ Member of team that makes placement decisions
_____ Conduct evaluation (either alone or in collaboration with others) prior to placement decisions
_____ No involvement
_____ Involvement varies based on individual child
_____ N/A – children identified as having ADHD are not served with 504 plans in my school

8. What is your role in evaluation and placement decisions for special education (IDEA) services for children identified as having ADHD? Check all that apply.

_____ Member of team that makes placement decisions
_____ Conduct evaluation (either alone or in collaboration with others) prior to placement decisions
_____ No involvement
_____ Involvement varies based on individual child
_____ N/A – children identified as having ADHD only are not served in special education programs in my school

9. For children identified as having ADHD who are on 504 plans, to the best of your knowledge how often is there typically follow-up to see how/if the 504 plan is being implemented? Check the appropriate frequency.

_____Once per month _____At least once every 3 months _____At least once every 6 months

_____At least once per year _____Less than once per year _____Never

_____I don't know _____NA (no children identified as having ADHD are on 504 plans)

____Follow-up varies based on individual child

10. Who typically monitors 504 accommodations implemented for children identified as having ADHD? Check the person who is most often responsible.

_____Special Education Teacher _____School Psychologist _____Principal

_____Regular Education Teacher _____School Counselor _____I don't know

_____Other (Please write in the title of this person)_____

_____NA (no children identified as having ADHD are on 504 plans)

____Varies based on individual child

11. For children identified as having ADHD who are receiving special education services under the educational classification Other Health Impairment (OHI), to the best of your knowledge how often is there typically follow-up to see how the IEP is being implemented? Check the appropriate frequency.

_____Once per month _____At least once every 3 months _____At least once every 6 months

_____At least once per year _____Less than once per year _____Never

_____I don't know _____NA (no children identified as having ADHD receive special education services under OHI)

_____Follow-up varies based on individual child

12. Who typically monitors Special Education services for children identified as having ADHD who are receiving special education services under the classification OHI? Check the person who is most often responsible.

_____Special Education Teacher _____School Psychologist _____Principal

_____Regular Education Teacher _____School Counselor _____I don't know

_____Other (Please write in the title of this person)_____

_____NA (no children identified as having ADHD receive special education services under OHI)

____Varies based on individual child

13. To the best of your knowledge, what percentage of children identified as having ADHD receive services in the following placement?

_____Regular Education only (no Section 504 plan or special education services)

_____Section 504 (regular education placement with formal accommodations but no special education)

_____Special Education placement with an OHI classification

_____Special Education placement with a classification other than OHI

_____Special Education placement with an OHI classification and Section 504 plan

_____Special Education placement with a classification other than OHI and Section 504 plan

SECTION 2: Criteria for eligibility

14. For children identified as having ADHD and who do **not** meet criteria for an IDEA classification other than OHI (i.e., child has no learning disability, emotional disturbance, speech delays, cognitive delays, etc.), what factors play into decisions regarding where to provide services (regular education with Section 504 versus special education placement) **Check all that apply.**

If you do not know how decisions are made because you are not involved in the process please check here _____

_____Location of services needed (e.g., regular education class, pullout class, special education class)

_____Specialized instruction needed (e.g., changes to regular education curriculum)

_____Attitude/knowledge of student's regular education classroom teacher

_____Classroom management skills of student's regular education classroom teacher

_____Child's response to pre-referral/previous interventions

_____Strength/weakness of resource team

_____Parent input/request

_____Parent compliance with implementation of treatment (e.g., signing home notes)

_____Convenience/time management

_____Severity of impairment

_____Academic performance

_____Teacher compliance with treatment

_____ Duration of impairment

_____Case load of special education teachers/ team

_____Type of ADHD (Inattentive/Hyperactive-Impulsive/Combined)

_____Other
(_____)

Please circle your top five choices from those listed above

SECTION 3: Service Pattern

15. In the table below, place a check mark in the appropriate columns to indicate what Section 504 and Special Education services children identified as having ADHD have received in your school within the past year. Please check all that apply.

If there are no children identified as having ADHD who receive Section 504 accommodations in your school, please check here and leave that column blank _____

If there are no children identified as having ADHD who receive special education services as Other Health Impaired (OHI) at your school please check here and leave that column blank _____

Services	**Section 504**	**Special Education– OHI only**
Academic Interventions:		
Extended time to complete assignments		
Adjusting length of assignments and homework		
Provide shorter increments of time to complete work (e.g., timer)		
Highlighting text or worksheets		
Provide checklist for child/parents/teacher to record assignments		
Peer tutoring		
Teacher repeating and simplifying instructions		
Establish a cue/prompt between teacher and child		
Teach compensatory strategies (e.g., organization skills, note taking, doing easy problems first)		
Have child restate instructions		
Instructional choice (e.g., menu of academic tasks)		
Using advanced organizers		
Computer assisted instruction		
Classroom Modifications:		
Adjust physical placement of student (e.g., seat student in the front of room)		
Alter physical setup of classroom to reduce distractions		

Services	Section 504	Special Education– OHI only
Provide opportunities for movement (e.g., short breaks)		
Modification of Non-standardized Tests:		
Allow more time to complete tests		
Alter the test format		
Give test orally		
Allow student to dictate answers		
Behavioral Interventions:		
Positive reinforcement (e.g., tokens, points, increased praise)		
Contingency contracting (group or individual)		
Response cost		
Time out		
Peer monitoring		
Social skills training		
One-on-one counseling		
Self management training		
OTHER		

16. Please provide any additional information on how decisions are made to determine the placement and service pattern for children identified as having ADHD. (provide information on the back side of the survey)

Appendix B:

Cover Letters

January 21, 2008

Dear School Psychologist:

We are conducting a research study to explore school-based services for children with Attention-Deficit/Hyperactivity Disorder (ADHD) and are asking for input from approximately 500 school psychologists across the country.

If you are interested in participating, please complete the enclosed questionnaire and return it in the provided postage-paid envelope. The average time to complete this survey is approximately 10-15 minutes. Completing and returning the survey indicates your consent to participate in our study.

Your participation in this study is voluntary and there is minimal risk associated with this study. Although participating in this study will not directly benefit you, you will be making a valuable contribution to our understanding of school-based services for children with ADHD. You will assist us in learning more about how decisions are made regarding where to serve students with ADHD (e.g., Section 504 versus special education) and what services are provided to children with ADHD.

The results obtained from your survey will be kept confidential. Surveys will be coded with a unique numerical identifier to allow for follow up with non-responders. One month after mailing the initial survey, a second survey will be mailed to non-responders. The coded list will be kept in a separate location from the surveys and will be destroyed following the second mailing. Only the researchers will have access to the data which will be kept in a locked file cabinet in a locked room.

The Institutional Review Board for the protection of human participants at Utah State University has reviewed and approved this research study. If you have any questions or concerns about your rights, feel free to contact the IRB at (435) 797-1821.

Thank you for considering participating in this research study. We appreciate your efforts to contribute to our understanding of school-based services for ADHD. If you have any questions or concerns about this study please contact us at the phone numbers or e-mails listed below.

Additionally, if you would like the results of this study please call or email one of the researchers and we will provide a summary of results once the research is complete. Results may also be published in a research journal.

Sincerely,

Gretchen Gimpel Peacock, Ph.D.
Associate Professor, Dept of Psychology
(435) 797-0721
gretchen.peacock@usu.edu

Tonya Tree, M.S.
Graduate Student, Dept. of Psychology
(269) 377-5201
ttree@cc.usu.edu

June 2, 2008

Dear School Psychologist:

We are conducting a research study to explore school-based services for children with Attention-Deficit/Hyperactivity Disorder (ADHD). We initially mailed you a survey approximately one month ago but have not yet received a survey back from you. We are writing in hopes that you might still consider participating in our research. Although we have received over 100 responses, additional data from practicing school psychologist will strengthen the data and may improve the potential contribution to understanding school-based services for children with ADHD. This will be our final attempt to collect data and no additional mailings will be sent.

If you are interested in participating, please complete the enclosed questionnaire and return it in the provided postage-paid envelope. The average time to complete this survey is approximately 10-15 minutes. Completing and returning the survey indicates your consent to participate in our study.

Your participation in this study is voluntary and there is minimal risk associated with this study. Although participating in this study will not directly benefit you, you will be making a valuable contribution to our understanding of school-based services for children with ADHD. You will assist us in learning more about how decisions are made regarding where to serve students with ADHD (e.g., Section 504 versus special education) and what services are provided to children with ADHD).

The results obtained from your survey will be anonymous. We initially had numerically coded surveys to enable us to know who responded and who did not but because we will not be completing another mailing, we have destroyed this coded list and your survey contains no identifying code number.

The Institutional Review Board for the protection of human participants at Utah State University has reviewed and approved this research study. If you have any questions or concerns about your rights, feel free to contact the IRB at (435) 797-1821.

Thank you for considering participating in this research study. We appreciate your efforts to contribute to our understanding of school-based services for ADHD. If you have any questions or concerns about this study please contact us at the phone numbers or e-mails listed below. Additionally, if you would like the results of this study please call or email one of the researchers and we will provide a summary of results once the research is complete. Results may also be published in a research journal.

Sincerely,

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