EXAMINATION OF CASE LAW (2007–2008) REGARDING AUTISM SPECTRUM DISORDER AND VIOLATIONS OF THE INDIVIDUALS WITH DISABILITIES EDUCATION ACT

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EXAMINATION OF CASE LAW (2007–2008) REGARDING AUTISM SPECTRUM DISORDER AND VIOLATIONS OF THE INDIVIDUALS WITH DISABILITIES EDUCATION ACT

Doris Adams Hill

A Dissertation

Submitted to

the Graduate Faculty of

Auburn University

in Partial Fulfillment of the

Requirements for the

Degree of

Doctor of Education

Auburn, Alabama
May 9, 2009

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DISSERTATION ABSTRACT

EXAMINATION OF CASE LAW (2007–2008) REGARDING AUTISM SPECTRUM DISORDER AND VIOLATIONS OF THE INDIVIDUALS WITH DISABILITIES EDUCATION ACT

Doris Adams Hill

Doctor of Philosophy, May 9, 2009
(M.S., Cameron University, 1997)
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139 Typed Pages

Directed by E. Davis Martin, Jr.

Ninety-nine court cases from the *LexisNexis* database regarding students, ages 3-21, with various forms of Autism Spectrum Disorder (ASD) were examined for the years 2007–2008. Procedural and substantive violations to the Individuals with Disabilities Education Act (IDEA) and the provision of a Free and Appropriate Public Education (FAPE) were coded and analyzed using descriptive statistics, Chi-Square analyses and logistic regression. Results were compared to earlier studies conducted from 2002–2004 which yielded relatively evenly split decisions between parents and school districts.

VITA

Doris Adams Hill, daughter of Amzie Ellsworth Adams and Dorothy Riordan Adams, was born on October 14th, 1957 in Orange, New Jersey. She graduated from Bangor Area High School, Bangor, Pennsylvania in 1975. She earned a Bachelor of Science Degree with honors in Psychology from the University of Maryland in 1984 and a Masters in Behavioral Science degree from Cameron University, Lawton, Oklahoma in 1997. She served twenty-two years in the United States Army, both enlisted and as an officer. She taught elementary school special education students with autism spectrum disorder in Celebration, Florida before pursuing a Doctor of Philosophy degree in Collaborative Special Education with a focus in autism and behavior disorders at Auburn University. She married Bruce Wayne Hill of Holly Pond, Alabama in 1979. They have three daughters (Stephanie, Casey and Brice) and a son (Riley).

ACKNOWLEDGMENTS

First and foremost, to Bruce Wayne Hill, who supported every effort of this process. Thirty years, two careers, four children, and counting…the adventure continues. To my mom, Dorothy Riordan Adams, who instilled a love of learning and fostered a desire to always imagine the possibilities. I can only hope to pass these values on to Stephanie, Casey, Brice and Riley.

Thank you to the faculty members who influenced and mentored me through this process. I would like to acknowledge the efforts of Dr. E. Davis Martin, Dr. David Shannon, Dr. Judith Lechner, Dr. Caroline Dunn, Dr. Rebecca Curtis, and Dr. Robert G. Simpson, for their guidance and support.

Thanks to Jonte C. Taylor (JT) and Cindy Nelson-Head, my comrades under siege as we moved through the graduate process together. There is a light at the end of the tunnel. Your friendship, support, unique perspectives, and pervasive abilities to see humor in the most challenging times, made this experience an even more memorable one.

To Steven P. Barnard, Auburn University Veterans Affairs, thank you for providing the best support possible to those who serve this country.

And finally, to the individuals within the autism spectrum who show me every day what it is like to perceive the world through a unique lens…I am still learning.

Style manual or journal used: Publication Manual of the American Psychological Association, 5th Edition.

Computer software used: Microsoft Word 2007

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I. INTRODUCTION

Autism is a developmental disability that affects communication, behavior, learning, socialization and cognition. The number of students diagnosed with Autism Spectrum Disorder (ASD) has risen dramatically. According to the Office of Special Education 27th Report to Congress (2005), and Fight Autism Now (2008) the number of students (ages 6-21) with autism was 22,664 in 1994, 141,022 in 2003, and 224,594 in 2006. Autism, also referred to as Autism Spectrum Disorder (ASD), is now one of the 13 categories recognized under the Individuals with Disabilities Education Act (Zirkel, 2002). Autism falls under the umbrella of Pervasive Developmental Disorders (PDD) which include Autistic Disorder, Asperger's Disorder, Rett's Disorder, Childhood Disintegrative Disorder (CDD), and Pervasive Developmental Disorder-Not Otherwise Specified (PDD-NOS) (American Psychiatric Association, 2000).

Best practices for educating students with Autism Spectrum Disorder (ASD) require early and intense, specialized instruction specifically tailored to the disorder's complex variety of manifestations. Nevertheless, most states require no special endorsement for special education teachers and autism specialists; in addition, teacher turnover is high in the special education field. This combination of factors has made it difficult for schools to meet the requirements of the Individuals with Disabilities Education Act (IDEA) and the No Child Left Behind Act (NCLB).

Under IDEA, students are guaranteed a Free and Appropriate Public Education (FAPE) in the Least Restrictive Environment (LRE). They are guaranteed protection in due process and evaluation. Under IDEA, parent participation is required in the education process, particularly in the development of their child's Individualized Education Plan (IEP). At the same time, the No Child Left Behind Act significantly impacts teachers, parents, and administrators by requiring accountability for results, scientifically based instruction, and highly qualified teachers and paraprofessionals (Yell, 2006). In October 2002, the President's Commission on Excellence in Special Education recommended reforms to bring special education into alignment with NCLB by requiring that special education be accountable for results and that special educators rely on scientifically based programming using instructional strategies and methods based on solid evidence. The commission issued three recommendations, (1) that special education must focus on results rather than process and judge success in terms of outcomes, (2) that special education must embrace a model of prevention, not failure (intervene through assessment and identification), (3) and that special education and general education must work together to provide strong teaching and effective interventions using scientifically based instruction and strategies (Yell, 2006).

The combination of factors of too few highly trained teachers, an increase in accountability requirements, and mandated parental access and participation has led to an increase in special education litigation, including litigation regarding students with autism. Because "Education, both directly of children, and of parents and teachers, is currently the primary form of treatment for children with ASD" (National Research Council, 2001, p.1), the United States Department of Education calls for instructional

programs based on scientific research and the major principles of No Child Left Behind (Yell, Drasgow, & Lowrey, 2005). When ineffective programs are used, it is at the expense of the students. Ineffective programs contribute to teacher turnover, teacher dissatisfaction, and risk of physical injury to teachers, students, and staff. In addition, and more importantly, when ineffective programs are utilized, time is lost and the window of opportunity starts to close for providing appropriate and effective instruction and behavior support to students with autism. Maintaining quality of programming, instruction, and intervention is especially crucial during early intervention when, according to the National Research Council, the ratio of adults to students should be one adult per two students (National Research Council, 2001).

Statement of the Research Problem

The incidence of Autism Spectrum Disorders increased dramatically between 1996 and 2006. The requirements of the Individuals with Disabilities Education Act (IDEA) has mandated that all students be provided a Free and Appropriate Education (FAPE) in a Least Restrictive Environment (LRE), appropriate evaluations, parent participation, and procedural safeguards for all participants. The No Child Left Behind (NCLB) Act requires increased accountability by schools; increased parental choice; site-based management; research-based teaching methods; and highly qualified teachers and paraprofessionals in order to receive federal funding. The focus of this study is to determine how the increase in students diagnosed with autism and the implementation of IDEA and NCLB have impacted the outcomes of litigation decided for the years 2007-2008.

Purpose of the Study

As the incidence of autism continues to increase, as parent become more informed, and as the No Child Left Behind requirement for the use of scientifically based methods is taught and incorporated into special education programming, it is worthwhile to determine if changes in litigation outcome have occurred since the studies published between 2002 and 2004 (Choutka, Doloughty, & Zirkel, 2004; Yell, Katsiyannis, Drasgow, & Herbst, 2003; Zirkel, 2002), which yielded overall relatively stable and even outcomes. One study examining the use of applied behavior analysis as an intervention/teaching methodology was "virtually evenly split" regarding subsamples focused on program selection and program implementation (50% parent/50% school district). Overall results showed a slight preference to parents (20 cases-parent, 18 cases-district for program selection and 13 cases-parent, 12 cases-district for program implementation) regarding prevailing parties and autism litigation (Choutka, Doloughty, & Zirkel, 2004). Zirkel (2002) reviewed 290 cases from 1978 to 2000 involving students with any Pervasive Developmental disorder. His study yielded relatively stable and neutral outcomes regarding prevailing party: almost evenly split, with a very modest advantage for school districts.

Statement of the Hypotheses

In order to answer the research questions, the following hypotheses were formulated:

HO1- There is no statistically significant difference in litigation outcome since the studies of 2002-2004 regarding autism, IDEA and NCLB, which yielded overall relatively stable and even outcomes.

HO2- There is no statistically significant difference in procedural and substantive violations of IDEA and the provision of a FAPE with regard to autism litigation decided during 2007 and 2008.

HO3- There are no statistically significant trends identified, with regard to prevailing party, in autism and IDEA related litigation for the years 2007-2008. Trends identified for examination included demographics (level of court, gender, diagnoses, or level of school), procedural violations (parent participation, evaluation, Individualized Education Plan (IEP), Least Restrictive Environment (LRE)/placement, qualification of personnel), or substantive violations (services not provided, services resulting in no progress, data not collected, lack of transition plan (elementary/secondary), Functional Behavior Assessment (FBA), and/or Behavior Intervention Plans (BIP), and Applied Behavior Analysis (ABA) or behavior issues as factors in the case).

Definition of Terms

Autism Spectrum Disorder consists of five subtypes under the umbrella category of Pervasive Development Disorders (PDD) (Autistic Disorder, Asperger's Disorder, Rett's Disorder, Childhood Disintegrative Disorder, and PDD-NOS (Not Otherwise Specified) (American Psychiatric Association, 2000).

Behavior Intervention Plan is a term that describes an individualized plan developed to address challenging behavior and is developed based on the analysis of a behavior's function. Antecedents and consequences of a behavior as well as reinforcement are considered when developing a Behavior Intervention Plan.

Developmental Disability occurs between the ages of birth and eighteen years of age. For children with ASD, development in the areas of communication, socialization and/or behavior are impacted (Heflin & Alaimo, 2007).

Due Process Hearing is a parental right under IDEA. The purpose of the hearing is to allow an impartial third party to hear and examine all sides of the dispute or complaint and to reach a settlement (Yell, 2006).

Free and Appropriate Public Education is guaranteed under IDEA. Appropriate has been defined as personalized instruction with sufficient support services, reasonably calculated to permit the child to benefit educationally from the instruction (Yell, 2006).

Functional Behavior Assessment describes a process of gathering information (data) to determine the purpose, or function, of a problem behavior. It is used to determine if an exhibited behavior is a means to avoid a person or situation, attain something or someone, or whether the behavior has internally reinforcing qualities.

Individualized Education Plan describes a plan developed by a team consisting of parents, teachers and adults involved in the education of a student. It is mandated by the IDEA and includes assessments, statements of a student's current academic performance, annual goals, how progress will be measured, least restrictive environment, and services to be provided. The IEP is the key to a FAPE under the IDEA (Russo & Osborne, 2008).

Least Restrictive Environment is a term that describes the requirement that, to the maximum extent possible, students with disabilities are required to be educated alongside students without disabilities (Yell, 2006).

Procedural Violations of the IDEA occur when procedures outlined in IDEA are not followed. These violations can be instrumental to deciding a case when procedural errors were deemed to have denied a Free Appropriate Public Education to a student with a disability (Russo & Osborne, 2008).

Substantive Violations occur when the IEP has been determined not to provide meaningful benefit. The substantive elements of the IEP include ensuring that observable, measurable and meaningful progress is made, and that the progress is not trivial, and that the IEP was designed to "confer benefit" to the individual student (Yell, 2006, p. 231).

Limitations of the Study

The study had the following limitations:

1) The acquisition of cases for examination in this study was different than prior studies. While earlier studies utilized the *Individuals with Disabilities Education Law Report* (IEDLR) and *Education for Handicapped Law Report* (EDLR), Reed Elsevier's *LexisNexis,* an online database, was used in this study. This database had all U.S. federal and state cases archived with newer cases e-filed after they were decided, improving temporal accessibility to users. While this author did not use the same data base as the previous studies, LexisNexis was determined to be comparable enough not to have significantly biased results.

2) Availability of cases was limited by posting to the *LexisNexis* search engine. There may have been cases for the year 2008 that were not yet posted at the time the research was conducted (December 2008 cases not yet posted by the end of January 2009). In addition, not all cases make it to the *LexisNexis* system and many due process cases are settled through mediation, while others are not appealed to the state review level and therefore not reported (Mandlawitz, 2002).

3) While most information coded in this study was readily available as a result of case by case examination, age and grade level were not always indicated in each case.

Delimitations of the Study

1) Court cases were selected when they addressed students, ages 3-21, parents or guardians *ad litem,* and public schools as plaintiffs or defendants, and violations to the Individuals with Disabilities Education Act.

2) Court cases selected through the *LexisNexis* data base were decided during the years 2007 and 2008. Cases selected were either finalized or in the most recent stage of review by district or circuit courts within the United States and its territories for the two years selected.

Assumptions of the Study

1) The *LexisNexis* database was accurate and comprehensive for autism and IDEA litigation for 2007 and 2008 decided at the district or circuit court level.

2) Findings from this study may reflect outcomes for all students included in the thirteen categories of IDEA, not just students with autism, since the IDEA mandate also protects students, ages 3-21, with deaf-blindness, developmental delay, emotional disturbance, hearing impairment, mental retardation, specific learning disabilities, speech or language impairment, traumatic brain injury, visual impairment, or other health impairments.

Methods and Procedures

Sources of Data

The academic search engine *LexisNexis* Legal accessed through the Auburn University Library was utilized to identify and review cases for applicability and use in the study. Students involved in these cases were between the ages of three and twenty-one and were identified as having one of the five disorders listed in the Diagnostic and Statistical Manual of Mental Disorders-Text Revision (4th ed.) under the umbrella of Pervasive Developmental Disorders. The participants were all residents of the United States under the jurisdiction of the thirteen Circuit Courts (Appendix F) designated to hear and resolve cases as outlined in the Constitution of the United States. The use of *LexisNexis* was chosen because the *Lexis* database contains nearly all published case opinions from the 1970s to the present, and all publicly available unpublished case opinions from 1980 onward. The number of cases that met the criteria for review was ninety-nine.

Data Collection Procedures

The ninety-nine cases utilized in the study were reviewed and categorized by prevailing party at the most recent step in the litigation process. Some cases were under initial review, others were under appeal, and several were finalized by the judge (circuit or district) without further recourse by the litigants. Each case was coded by the researcher using a five point scale with regard to the prevailing party. Procedural violations of IDEA (parental participation, evaluation, IEP development, placement, lack of qualified personnel, and transition), substantive violations of IDEA (failure to provide services, lack of progress, lack of data collection, lack of behavioral intervention plans, lack of extended school year services, and whether behavior, and/or teaching methodology was a factor in each case) and demographic information (level of court, gender, type of violation, and age) were coded for analysis.

Data Analysis Procedures

Case outcomes were compared by specific category utilizing nonparametric statistical procedures such as chi-square analysis. The specific comparisons included outcome by prevailing party and demographics and procedural and substantive violations to IDEA. This examination determined whether there were changes in prevailing party since the earlier studies of 2002-2004 (Choutka, Doloughty, & Zirkel, 2004; Yell, Katsiyannis, Drasgow, & Herbst, 2003; Zirkel, 2002), which determined that the split was relatively even between parents and schools as prevailing party. An analysis of variance (ANOVA) was conducted on the seventy cases where age could be accurately determined, and logistic regression determined whether factors regarding group

membership could determine odds of success (prevailing party) with regard to the litigation studied.

Significance of the Problem

The author compared the results of studies done in 2002 -2004 with the results of her analysis of cases decided during 2007 and 2008. The author suggests that, as the number of students with autism has increased, and parent participation has increased, schools are being held increasingly accountable for program implementation using sound methods and best practices. Court Cases examined from 2002–2004 indicated that the decisions were relatively evenly split between school districts and parents. The author proposed that examination of more recent court cases with regard to prevailing party (parent vs. schools) was an effective way to determine differences in outcome between these time periods and, in light of the increase in prevalence of Autism Spectrum Disorder (ASD) and number of court cases, that further examination of case outcomes was important. The author also examined the detailed factors that may have contributed to successful outcomes for the prevailing party in each case for the years 2007-2008.

The research conducted is important because when schools and parents are aware of trends in case outcomes and the circumstances surrounding the litigation involved, steps can be taken early in the process to avoid litigation and effectively meet student needs, enhancing communication, planning, training, and outcomes for students with autism. The researcher examined weaknesses, both procedural and substantive, identified in litigation regarding compliance with IDEA and NCLB for students with autism. The

research conducted will add to the body of knowledge regarding the provision of adequate programming and the use of best practices for students with autism.

II. LITERATURE REVIEW

Autism is a developmental disability that affects communication, behavior, learning, socialization and cognition. It is characterized by impaired verbal and nonverbal communication, socialization deficits, atypical responses to sensory stimulation, repetitive behavior, rigid adherence to rituals and difficulty accommodating change. Four to five times as many boys as girls are diagnosed with autism. Girls with autism, however, are more likely to present co-morbidity with more severe mental retardation. Autism, or Autism Spectrum Disorder (ASD), falls under the umbrella of Pervasive Developmental Disorder (PDD). The framework of PDD includes five spectrum disorders: Autistic Disorder, Asperger's Disorder, Rett's Disorder, Childhood Disintegrative Disorder (CDD), and Pervasive Developmental Disorder-Not Otherwise Specified (PDD-NOS). The Diagnostic and Statistical Manual of Mental Disorders (fourth edition) (American Psychiatric Association, 2000) outlines the diagnostic criteria for autism as:

A. A total of six (or more) items from (1), (2), and (3), with at least two from (1), and one each from (2) and (3):

   (1) qualitative impairment in social interaction, as manifested by at least two of the following:

(a) marked impairment in the use of multiple nonverbal behaviors such as eye-to-eye gaze, facial expression, body postures, and gestures to regulate social interaction

(b) failure to develop peer relationships appropriate to developmental level

(c) a lack of spontaneous seeking to share enjoyment, interests, or achievements with other people (e.g., by a lack of showing, bringing, or pointing out objects of interest)

(2) qualitative impairments in communication as manifested by at least one of the following:

(a) delay in, or total lack of, the development of spoken language (not accompanied by an attempt to compensate through alternative modes of communication such as gesture or mime)

(b) in individuals with adequate speech, marked impairment in the ability to initiate or sustain a conversation with others

(c) stereotyped and repetitive use of language or idiosyncratic language

(d) lack of varied, spontaneous make-believe play or social imitative play appropriate to developmental level

(3) restricted, repetitive and stereotyped patterns of behavior, interests, and activities, as manifested by at least one of the following:

(a) encompassing preoccupation with one or more stereotyped and restricted patterns of interest that is abnormal either in intensity or focus

(b) apparently inflexible adherence to specific, nonfunctional routines or rituals

(c) stereotyped and repetitive motor mannerisms (e.g., hand or finger flapping or twisting, or complex whole-body movements)

(d) persistent preoccupation with parts of objects

B. Delays or abnormal functioning in at least one of the following areas, with onset prior to age 3 years: (1) social interaction, (2) language as used in social communication, or (3) symbolic or imaginative play.

C. The disturbance is not better accounted for by Rett's Disorder or Childhood Disintegrative Disorder. (p. 75)

Individuals with autism display unusual development in the areas of communication, socialization, interests and behavior prior to three years of age. As many as 35–40% of individuals with autism do not develop spoken language (Mesibov, Adams & Klinger, 1997). Fombonne (2005) analyzed 37 surveys where data on children with autism were available. The number of subjects per study ranged from six to 5,038 (median 48; mean 209). In 21 of these studies intellectual functioning was obtained. Approximately 30% (range 0–60%) of the subjects had a measured Intelligence Quotient (IQ) in the average/above average range. These individuals are known as having "high-functioning autism" (HFA). Approximately 29% (range 6.6–100%) of individuals in each

survey had moderate intellectual impairments, and 36% (range 0–81.3%) had severe to profound intellectual disability.

Asperger's Disorder is typified by normal language development without delays or impairments. Individuals with Asperger's Disorder have a narrow range of interest, tend to remember large amounts of information on a particular topic, and can talk about that topic for extended periods of time without giving the other person a chance to talk and without appearing to listen to the communicative partner. They will consistently bring the conversation back to the topic in which they are interested, regardless of appropriateness. Individuals with Asperger's Disorder fail to pick up on social cues (such as looking at a watch, indicating disengagement) and, like individuals with autism, often have trouble with abstract, nonliteral language. Speech may appear unusual, with unusual prosody and intonation. Once rules and routines are made, an individual with Asperger's Disorder usually will follow them completely and report on others who fail to comply, leading to social difficulties that the individual often fails to understand. Even though their vocabulary is often large, people with Asperger's Disorder frequently experience difficulty with language comprehension. Excellent memory and vast knowledge of particular topics contrast with the inability to understand the social world and difficulty with independent functioning (Heflin & Alaimo, 2007).

Rett's Disorder was described first by Andreas Rett in 1966, and primarily affects females (the genetic defect is fatal to males). After normal pre- and post-natal development until 18 months, skills, words and mobility are lost. A normal head circumference is common at birth followed by head growth deceleration and hand skills deterioration. Continuous hand-wringing is a trait of Rett's Disorder. Gait and

coordination deteriorate, which might result in an inability to ambulate. Severe or profound mental retardation, as well as communication deficits, are associated with Rett's Disorder. It is categorized under PDD in the DSM-IV-TR because the behavioral component is similar to autism (American Psychiatric Association, 2000; Heflin & Alaimo, 2007).

Described by Theodor Heller in 1908, Childhood Disintegrative Disorder (CDD) is marked by a core deficit in communication (autism's core deficit is socialization). The diagnosis for CDD is marked by apparently normal development until between the ages of 2 and 10 years, and then a loss of previously acquired skills in the areas of expressive and/or receptive communication, social interaction, adaptive behavior, bowel and/or bladder control, play and/or motor skills, as well as abnormalities in at least two areas as outlined in DSM-IV-TR (social interaction, communication, and restricted repetitive, and stereotyped patterns of motor skills, mannerisms, or behavior) (American Psychiatric Association, 2000; Heflin & Alaimo, 2007).

Pervasive Developmental Disorder-Not Otherwise Specified (PDD-NOS) is used when not all criteria for the other subtypes of PDD are displayed. PDD-NOS may be diagnosed when qualitative differences exist in one of the three subtypes (socialization, communication, and behavior) and may account for increases in diagnoses in recent years (American Psychiatric Association, 2000; Fombonne, 2005; Heflin & Alaimo, 2007).

Results of a study conducted over fourteen communities in 2002 revealed that the incidence of Autism Spectrum Disorder (ASD) was approximately 6.6 and 6.7 per 1,000 eight year olds (Centers for Disease Control, 2007). This translates into approximately one in 150 in the communities studied. The number of students with ASD, ages 6–21

years increased from 22,664 in 1994 to 141,022 as of fall 2003, and 224,594 in 2006, according to the Office of Special Education's 27th Report to Congress (2005) and Fighting Autism Now (2008). This increase in individuals diagnosed with autism and the requirement to provide effective educational programming based on scientifically based methods by highly qualified teachers is a challenge that must be met in order to comply with the mandates of the No Child Left Behind Act of 2001 (Yell, 2006).

Etiology

The etiology of autism has been difficult to discern. Medical researchers have determined that autism affects a number of physical systems through changes in the brain. Specific portions of the brains of individuals with autism differ from the brains of the rest of the population (Bauman & Kemper, 2005). Neurological differences in the brainstem account for unusual reactions to physical sensations. These differences might contribute to self-stimulation behaviors ("stimming") that help the individual with autism compensate for increased vestibular input. The limbic system is associated with motivation and affect as well as putting meaning to events. Differences in the limbic system of persons with autism are tied to diminished (or lack of) response to directions, and failure to respond and orient to noise and verbalizations.

The cerebellum, which regulates many functions, is responsible for auditory processing and integration. Differences here could result in hyper- and hyposensitivity to sight, sound, smell, taste and touch as well as in overselective attention, "stimming" and behavioral excesses and avoidance. Neurological differences in the cerebellum, through which the individual modulates attention, could cause difficulty when trying to get the

attention of an individual with autism (who appears distracted), or who may take longer to shift attention. Differences in the cerebellum, which also prepares the individual for upcoming events, could result in behaviors such as rigid adherence to a set routine, strong resistance to change, perseveration and self-stimulation as a coping mechanism. These structural differences in the components of the brain combine with chemical and functional components that work together (Bauman & Kemper, 2005; Hefflin & Alaimo, 2007). Behaviorally, there are a number of instructional strategies designated to compensate for these differences. They are outlined in Appendix A.

These differences in the brains of individuals with autism were determined through postmortem studies of adults and older children. Little information exists regarding the developing brain of infants with autism. Bauman and Kemper (2005) suggested that some brain abnormalities in individuals with autism are prenatal and that there is a growing body of data that indicate that autism has an underlying neurobiological process that could be ongoing throughout postnatal development (e.g., changing brain weight in comparison with normal infants, children and adults).

Existing neural circuitry is changed through neural plasticity. When a portion of the brain is damaged or deficient, other areas of the brain develop to compensate. It is hypothesized that the neurological differences of individuals with ASD that are present at birth cause further changes to the brain because of neural plasticity. These changes may be more harmful due to disruption or diminished functioning of the brain as a result of lesions or other system failures that may also lead to seizures (Bauman & Kemper, 2005). An additional theory regarding ASD focuses on “mirror neurons,” a recently discovered class of nerve cells associated with empathy and social interaction. Studies of individuals

with autism have shown a lack of mirror neuron activity in several brain regions which, if restored, might alleviate some of autism's symptoms (Ramachandran & Oberman, 2006). Multiple conditions, such as gastrointestinal anomalies, are also often present in individuals with autism.

While the symptoms of autism appear to lie on a spectrum, there might also exist a family of disorders contributing to its development, including genetic sensitivity (pre- or post-natal) to environmental toxins and immune system infections, some of which could affect the digestive system. PPA, a fatty acid present in human diets, produced behavioral and developmental abnormalities in rodents. Investigators are examining the effects of PPA on related gut issues as well as electrical, behavioral, neurological and biochemical levels with regard to autism and permanent effects on brain and behavior (MacFabe, 2007).

A recent hypothesis was developed explaining the result of a "multiple hit," or "series of negative responses to the environment in a baby who is at risk genetically" (Jepson & Johnson, 2007, p. 45). The authors' hypothesis is that pre- and post-natal environmental toxins build in a genetically predisposed baby until a tipping point is reached, at which time tissues are damaged. Tissue damage results in inflammatory reactions, which create more damage and continue cyclically. An auto-immune reaction develops to fight off the assault until it can no longer compensate. In autism, according to this theory, the reaction correlates with neurological regression after what appears to be a time of normal development (Jepson & Johnson, 2007). Educating children with the individualized need resulting from this regression, and meeting the mandates of the No Child Left Behind Act of 2001, is one of education's most recently identified challenges.

Assessment and Intervention

Whatever its etiology, there exists no known, empirically documented cure for autism; however, management of ASD has been addressed through behavioral, educational and biological interventions. Through these interventions, increases in developmental level, IQ, and social behavior competencies, as well as decreases in symptoms of the disorder have been shown. There exists, however, a dearth of empirical data to support these treatments in an objective and controlled way (Gresham, Beebe-Frankenberger, & MacMillan, 1999). By taking the behavioral, educational, and biological difficulties into account and embracing children's interests (even though stereotypical or narrow), evaluators can get a better overall picture of the child by conducting functional behavioral assessments and can determine interventions that accommodate the strengths and interests of the child (Vacca, 2007).

"Education, both directly of children, and of parents and teachers, is currently the primary form of treatment for autism spectrum disorders" (National Research Council, 2001, p.1). The purpose of this literature review is to examine litigation regarding the appropriate education of individuals with autism. NCLB has stressed the use of scientifically proven methods, and has impacted current teacher training programs; how these changes have impacted the educational interventions used for students with autism and the outcomes of litigation with regard to prevailing party and autism is the focus of this study.

Many Applied Behavior Analysis (ABA) programs have reported impressive gains in the intellectual functioning of children with autism. In a study conducted by Harris, Handleman, Gordon, Kristoff, and Fuentes (1991) at the Douglass Developmental

Center at Rutgers University, the authors compared the results of teaching methods in three classes. One class was a “prep” class (a segregated, autism-only class based on Lovaas Discrete Trial Teaching) with in-class as well as in-home treatment. Another class focused on the skills necessary to function in an integrated classroom (student to teacher ratio of two to one). In the third classroom teachers utilized small group instruction with typical peers to resemble an integrated classroom based on the Learning Experiences…an Alternative Program (LEAP) model. Although they reported impressive gains (increases in IQ of 19 points in one year/ pretest = 67.56, post-test = 86.33), problems with the study include a lack of random assignment, no control group of children with autism not enrolled in the program, and poorly defined descriptions of the treatment program (Gresham et al., 2000).

The Learning Experiences…an Alternative Program (LEAP) for preschoolers and parents, a federally funded model demonstration program, consists of four main components:

1) Three integrated preschool classrooms each consisting of 10 typical children and 3 with autism;
2) A parent behavioral skills training program;
3) Outreach training activities involving development of IEPs, behavior management, social skills training, and transition planning;
4) Ongoing research on instructional practices.

While some components of this program have empirical support through single-case experimental design methodology, the efficacy of LEAP compared to TEACCH (Treatment and Education of Communication-handicapped Children), DTT (Discrete

Trial Teaching) and ABA (Applied Behavior Analysis), or comparison to students not receiving preschool services, has not been empirically demonstrated. Nevertheless, authors of many studies report being effective in producing large developmental gains, placements in a least restrictive environment and average IQ gains of 20 points, according to a review conducted by Gresham, Beebe-Frankenberger, and MacMillan (1999).

A study by Weiss and Delmolino (2006) was focused on the learning rates of 19 boys and one girl with ASD. The subjects were exposed to 40 hours a week of ABA intervention (shaping, Discrete Trial Instruction, naturalistic teaching, and use of reinforcement) for two years, followed by two more years of supplemental intensive home-based ABA intervention treatments. Their progress was measured against the Childhood Autism Rating Scale (CARS) and the Vineland Adaptive Behavior Scales. Results indicated that prior to intervention, all 20 children scored in the severely autistic range on the Childhood Autism Rating Scale (CARS) (M = 45.7, range 37.5 to 58, SD = 5.30). Post-intervention scores reflected improvement for all children. Nine scored in the non-autistic range (<30), nine in the mild-moderate range (30–36) and two in the severe range (37–60). The mean post-intervention CARS score was 26.6 (range from 15.5 to 43, SD = 8.60). Results document correlations between early intervention using ABA treatments and outcome regarding autism symptomatology. Results, however, were more variable with regard to adaptive behavior and, while some were fully included in educational placements at the outcome (four years later), others continued to require highly specialized instruction to learn skills. Limitations included lack of a control group (Weiss & Delmolino, 2006). While programming is often an issue within autism

litigation, it has been determined that as long as the school offers empirically based educational programming, the choice of methodology is up to the school district, provided the methodology is based on sound scientific principles (Yell, 2006).

Communication

The use of proven strategies to teach, foster and enhance the communication of students with ASD by highly qualified teachers is implied by the basic goals of No Child Left Behind. “Communication has been defined as the ability to receive, send, process, and comprehend concepts of verbal, nonverbal, and graphic symbol systems” (Heflin & Alaimo, 2007, p. 234). Early communication begins with the use of eye contact, vocalizations, and gestures. Eye gaze is used by babies from age three and a half months when their visual-motor systems are mature. Eye gaze of children with autism is often directed toward parts of objects or shapes and can resemble a fixed stare without looking in the direction of a speaker’s gaze. Babbling begins at 6 months and increases in frequency through the second year of life in typically developing infants. Awareness of language is often non-existent or takes the form of echolalia (repetition of sounds often in a nonsensical manner) in children with autism (Stone & Yoder, 2001).

“Language is a set of arbitrary symbols defined by an individual’s culture in which ideas are conveyed for the purpose of communication” (Stone & Yoder, 2001, p. 341). There are three variables that predict the development of spoken language for all children: motor imitation, joint attention, and object play. Motor imitation precipitates the ability to process, acquire and develop the language of others (Stone & Yoder, 2001). Joint attention occurs when children identify what others attend to, and is also based on

the ability to draw others into things that interest them. Joint attention signals a child's desire to interact, and helps the child elicit language from others. Children with autism often fail to make this connection with another person and/or fail to share emotional states. Children with autism might not pretend an object is something else, use imagination while playing, or use toys the way they were intended (Heflin & Alaimo, 2007). The absence of imitation, joint attention, and play impedes the development of interactional language. When a child fails to babble, coo, or use gestures by 12 months, say single words by 16 months or two-word phrases by 24 months, or loses language/social skills at any age, the child becomes at risk for a language-based developmental delay (Heflin & Alaimo, 2007). Better outcomes are indicated when early diagnosis and intervention are received (National Research Council, 2001). DTT can be used as an early intervention strategy to target language development of tacts (labels), mands (requests), gestures, and complex sentences for children who display these developmental delays. More naturalistic approaches have been demonstrated to be both empirically and conceptually effective for acquiring language and promoting generalization of language skills (Peterson, 2004).

Deficits in nonverbal social communication, preoccupation with parts of objects, and lack of interest in the human face, including lack of eye gaze, are pervasive in autism (American Psychiatric Association, 2000). The ability to judge facial expression and socially relevant information is necessary for normal social interpersonal communication. A study conducted in 2007 by Pelphrey, Sasson, Reznick, Paul, Goldman, and Piven compared eye gaze of five male adults with high-functioning autism and a normal IQ (mean age of 25.2; range 19.1 to 30.2 years) to a control group of five unaffected adult

males (mean age 28.2; range 25.2 to 32.2 years). Using an ISCAN series RK-464 remote infrared pupil-corneal reflection eye movement monitoring system to record data and identical instructions for participants, the subjects were shown pictures of faces in a darkened room for two seconds with a two-second inter-trial interval. They were also asked to identify emotions on a separate group of 24 pictures. Scan paths were compared and showed that the male adults without autism focused on the eyes, nose and mouth of individuals in the photographs. The scan paths of the men with autism were erratic and disorganized, often focusing on one or two unimportant facial features (ear, chin, or hairline).

Both groups were able to identify emotions, although the group with autism showed a deficit in the identification of fear. The results confirm the hypotheses that individuals with autism focus on individual face parts rather than overall facial configuration. Limitations to this study included an overall difference in IQ between the two groups which may have contributed to differences between them. The study also involved a small number of participants and therefore lacked significant statistical power. The use of proven strategies to teach, foster and enhance communication by highly qualified teachers is a basic goal of No Child Left Behind. Replication of effective studies that validate the use of these procedures and enhance future educational programming is a focus of this literature review.

Visual Strategies

Qualitative impairments in communication are key components of the diagnosis of autism. These impairments include a delay in (or lack of) spoken language

development, impairment in initiating or sustaining conversations with others, stereotyped, repetitive, or idiosyncratic language use, and a lack of age-appropriate make-believe play (American Psychiatric Association, 2000). For this reason, Augmentative and Alternative Communication (AAC) strategies, sign language, electronic aids and the Picture Exchange Communication System (PECS) have been used to increase communication initiation and ability to control the environment for children with autism (Cook & Hussey, 2002; Frost & Bondy, 2002). Initiated communication is a pivotal behavior for students with autism and, once learned, leads to an expanding communicative repertoire (National Research Council, 2001). The use of visual strategies is in keeping with the No Child Left Behind Act of 2001.

The primary purpose of NCLB is to ensure that public school students achieve important learning goals and are educated by well-prepared teachers. Title V of NCLB promotes the use of innovative programs, based on research-based instructional practices, for at-risk and high-need students (Yell, 2006). Many students with autism are high-need students, and empirically based visual strategies are in keeping with the tenets of No Child Left Behind.

Visual supports (written words, icons, or pictures) are designed to facilitate understanding for students who have difficulty associating meaning with verbal instructions (Tissot & Evans, 2003). Dr. Temple Grandin, who has been a successful writer, speaker, and engineer living with autism, described her life as a visual learner:

> I think in pictures. Words are like a second language to me. I translate both spoken and written words into full color movies, complete with sound, which run

> like a VCR tape in my head. When somebody speaks to me, his words are instantly translated into pictures. (Grandin, 1995, p.19)
>
> When I think, it's like surfing the Internet in my mind or looking at pictures through a viewfinder-one picture after another…I am able to explain my thought processes step-by-step, picture by picture. And, when a situation presents itself that I need to figure out, I do so from a completely logical, non-emotional standpoint. (Grandin & Barron, 2005, p. 33)

Visual schedules are pictures or symbols that outline the student's day, providing structure and predictability to the student's world (Northumberland County Council Communication Support Service, 2004). These schedules help with transitions and can be instrumental in reducing behavioral issues associated with frustration and anxiety. Visual schedules focus on the receptive language skills of individuals with autism. The same types of pictures are also used as part of the Picture Exchange Communication System (PECS) which is designed to foster expressive communication initiation for these students in a socially appropriate way (Frost & Bondy, 2002). In contrast to Augmentative or Alternative Communication (AAC), PECS is designed to be faded for some students. PECS for students who are nonverbal or minimally verbal is a flexible system, using universal language so the individual can communicate in any setting with any person. For individuals with limited or no eye contact, this skill emerges as a natural part of the exchange (Heflin & Alaimo, 2007).

In a study by Marckel, Neef, and Ferreri (2006), two boys with autism were taught improvisation with picture symbols in the students' PECS book. The subjects were taught to improvise (use shape and color descriptors instead of the actual item symbol)

and the authors were able to demonstrate, using a multiple baseline design, that creative behaviors can be taught using behavior analysis. As in the other studies noted, there were several methodological limitations. Despite these limitations, this study added to the body of empirical examples demonstrating that behavior analysis can be applied to creative behaviors. Studies that validate the effectiveness of different visual strategies used to educate students with autism are important and contribute to best practices recommended for use by highly qualified teachers. As stated earlier, use of these methods is in keeping with the goals outlined in No Child Left Behind.

Social Skills

For individuals with autism, qualitative impairments in social interaction, as manifested by marked impairment in the use of multiple nonverbal behaviors such as eye-to-eye gaze, facial expression, body postures, and gestures to regulate social interaction are common. This deficit in socialization is one of the triad of indicators used when defining autism (American Psychiatric Association, 2000). Individuals with autism also may fail to develop peer relationships appropriate to their developmental level. A lack of spontaneous seeking to share enjoyment, interests, or achievements with other people (e.g., by a lack of showing, bringing, or pointing out objects of interest) is a hallmark of Autism Spectrum Disorder (American Psychiatric Association, 2000).

Typically developing children between the ages of one and two years already possess the social skills fundamentals to interaction (e.g., attention, smiles, vocalizations, turn taking). For children with autism, early intervention in the form of DTT has been implemented to promote these skills. DTT has been successful in building a verbal

repertoire (Krantz, 2000). Through DTT, these exchanges come under stimulus control of the DTT trainers. Waiting for the verbal prompt to speak previously trained answers however, does little to promote self-initiated interactions. Incidental Teaching (IT) was designed to promote verbal initiation by placing preferred objects just out of reach, a form of antecedent manipulation. These simple environmental manipulations can evoke frequent initiation and promote acquisition of spontaneous and generalized verbal language goals (Fenske, Krantz, & McClannahan, 1999; Krantz, 2000).

Functional language develops naturally as children interact with their environment, such as during play with other children. Interventions included as part of predictable routines in pre-arranged environments to promote functional social exchanges during activities with peers is recommended (Ogletree & Oren, 1998). Peer-mediated interactions through the use of typically developing peers, "neurotypicals," as part of social skills intervention has been studied and has achieved some favorable results, with generalization being the most difficult component to achieve (Krantz, 2000).

Social Stories, originated by Carol Gray (2004), are often recommended for individuals with autism to help them adjust to changes and social challenges that are pervasive across the life span. Social Stories are written from the perspective of the individual with autism. They describe and explain the cues in specific situations, as well as appropriate responses, and are designed to decrease fear, aggression, and obsessions, and to introduce a new routine, a new behavior, and/or academic skills. Gray (2004) suggested use of a specific format (Appendices B and C). For over 10 years, researchers and practitioners have demonstrated successful use of social stories for specific incidences of behavior, including aggression, screaming, grabbing toys, transitioning,

sitting in a group, greeting others, cheating, sleeping in bed, and even wearing costumes (Kuoch & Mirenda, 2003; Scattone, Tingstrom, & Wilczynski, 2006). Social Stories have been used with other interventions as part of a treatment package or as the sole intervention. Kuoch and Mirenda (2003) noted that the participants in their social stories intervention study each had 1.5 to 3.5 years of discrete trial teaching, which may have enhanced their readiness skills with regard to the effectiveness of the stories. This is consistent with the belief that a variety of interventions may be best practice for teaching individuals with ASD. These intervention strategies should be included in the training program for highly qualified teachers as specified in the No Child Left Behind Act of 2002 (Yell, 2006). Due to the nature of the interventions, and the nature of the designs (single subject), the use of other interventions as part of the package, outside prompting, ways the stories were read, and individual changes during the intervention (i.e., concurrent chelation therapy) were internal threats to validity that were common to most of the studies. Each study, however, added to the body of literature regarding Social Stories (Scattone et al., 2006).

Behavior

Individuals with ASD are unique as a group, even when compared to individuals with other disabilities. The combinations of excesses and deficiencies in language, behavior, and social skills, wide ranges of abilities, unique isolated skills and personalities add to the puzzle that surrounds this disability. There are several interventions, as discussed throughout the paper, that attain positive results for students with ASD. When diagnosed early and exposed to structured, consistent programs based

on effective educational methods and taught by trained and positively persistent teachers and staff, students with autism can be expected to make significant progress (Simpson, 2001).

ABA methods have been successful for teaching academics, communication and social skills. The management of challenging behaviors associated with autism are often addressed with the attitude not to punish misbehavior but to take the time and opportunity to teach new behaviors to replace them (Zirpoli, 2005).

Simpson (2001) described the use of ABA in the classroom as:

> Environmental analysis and manipulation of curricula, personnel, classroom conditions, and other antecedent variables, and application of scientifically valid principles of behavior such as reinforcement, serve as the foundation for behavior change and instructional programs. Furthermore, persons who use ABA systematically and regularly measure progress on behavioral targets. Thus, practitioners of ABA, including teachers, carefully and systematically measure the effects on target responses of manipulating various antecedents and consequences, including assessing whether an intervention is responsible for change in student behavior. (p. 68)

One symptom of ASD is Self-Injurious Behavior (SIB); an aberrant stereotyped behavior that is associated with adverse environmental conditions, neurological conditions, and central nervous system damage. Students with intellectual and related developmental disabilities such as autism and PDD are at risk for their development (Symons, Sperry, Dropik, & Bodfish, 2005). Self-injurious behaviors can be indicators of frustration in communication, may be the result of internal hyposensitivity to pain, or

even function as a form of attention-seeking behavior depending on the antecedent and consequence of the SIB. When structured environments are provided, visual strategies used, and functional assessments of behavior and intervention plans are developed, incidents involving self-injurious behavior can often be reduced. When teachers are properly trained using empirically based behavioral methods to address academics and behavior, the needs of students with autism are more adequately met (National Research Council, 2001). In addition, when empirically based teaching strategies are used by highly qualified teachers, compliance with the goals of No Child Left Behind are also maintained (Yell, 2006).

Methods for managing inappropriate behaviors have been integrated into this paper under other topics (visual strategies, structure, social skills lessons, use of ABA teaching techniques such as Discrete Trials and Work Stations). The use of these strategies, based on empirically conducted research as highlighted in, but not exclusive to, this literature review, has proven to be effective in teaching students with Autism Spectrum Disorder (ASD). The use of these strategies has resulted in reduction in behavioral difficulties, enhanced academic and functional skills performance, and in compliance with the mandates outlined in the Individuals with Disabilities Education Act (IDEA) and No Child Left Behind (NCLB).

Teacher Training

Teacher training to meet the specific educational needs of children with autism has been lacking. This lack of training poses a challenge for schools attempting to meet the primary goals of the No Child Left Behind (NCLB) Act, which requires that teachers

be “highly qualified” and that instruction be based on scientific research and not “fads, fancy, or personal bias” (Yell, 2006, p. 202). The majority of teachers have not received training to work with students who are so different and whose characteristics lie across such a wide spectrum. A study conducted in the United Kingdom in 1995 found that almost 46% of teachers in schools for children with severe learning disabilities lacked the required training (Jones, 2006).

Evidence-based practices in teacher preparation were the focus of a 2004 study by Lerman, Vorndran, Addison and Kuhn, in which teachers were taught specific skills regarding reinforcer identification, direct teaching, and incidental teaching. Corresponding increases in student task responses supported the efficacy of the teacher training model used. Using the strategies described in this and other studies would help school personnel adopt and develop similar programs for continuing education for teachers and staff of students with autism. Using ABA strategies to train teachers involves a broad spectrum of instructional and educational approaches (e.g. DTT, IT, preference assessments, fluency and rate building, task interspersal). The incorporation of proven ABA principles and the design of interventions based on individual learners and goals, contributes to more comprehensive programs and beneficial outcomes.

According to Weiss (2005), teacher training and staff instruction should include Behavioral Skills Training (BST): instruction, modeling, role playing, and corrective feedback, and should include competency based skills assessments to ensure continued quality of treatment. The scientifically-based instruction mandated by NCLB must be part of teacher training programs to ensure that when teachers teach, students receive the best programming available, thereby also avoiding unnecessary litigation.

Litigation

No Child Left Behind

The No Child Left Behind Act was signed into law in 2002 as the reauthorization of the Elementary and Secondary Education Act of 1965. Originally designed to improve achievement for poor and disadvantaged youth, it represents a major shift in the federal government's role in education (Weishaar, 2007). To receive federal dollars, schools must test all students annually and meet annual yearly progress toward full proficiency for all subgroups including all racial and ethnic groups, English language learners, and students with disabilities. To receive funding, ninety-five percent of all students in all subgroups (including students with disabilities including autism) must participate in grade level testing (Hulett, 2009).

NCLB represents the most significant federal involvement in education ever. The primary goals of No Child Left Behind are:

1 – All students will achieve high academic standards by attaining proficiency or better in reading and mathematics by the 2013–2014 school year.

2 – Highly qualified teachers will teach all students by the 2005–2006 school year.

3 – All students will be educated in schools and classrooms that are safe, drug free, and conducive to learning.

4 – All limited English proficient students will become proficient in English.

5 – All students will graduate from high school. (Yell, p. 181)

Five general principles are important to No Child Left Behind. By setting state standards for reading and mathematics, the principle of *accountability* was established. The principle of *increased parental choice* allows parents to send their child to the school of their choice within their district when adequate yearly progress is not met for two consecutive years and for supplemental education services when their school does not meet annual yearly progress for three years. The third principle involves *site based management,* allowing districts to transfer funds from one grant to another without federal approval, acknowledging that local school personnel know where fiscal emphasis is needed. The fourth key principle of NCLB is *Research based teaching methods,* requiring the use of reliable and valid assessments for diagnosis and to monitor progress. The fifth principle mandates *highly qualified teachers and paraprofessionals* by the 2005–2006 school year (Weishaar, 2007). These same principles apply to teaching students with autism spectrum disorder and impact litigation surrounding educational practices.

The requirement of NCLB to use scientifically based instructional programming in all aspects of education includes the education of students with disabilities (Yell, 2006). In light of NCLB, the strategies examined in this literature review focus on interventions based on individual student needs and empirically proven methods. Results of litigation regarding the appropriate education of individuals with autism stress the scientific methods requirement of NCLB, and the use of these proven methods have impacted the outcome of court cases and, as a result, have also impacted current teacher training programs. The increases in autism diagnoses of individuals being served under IDEA and the requirement for compliance with NCLB have resulted in a steady and steep

increase in autism litigation (Yell, Katsiyannis, Drasgow, & Herbst, 2003). Special education litigation increasingly involves requests for reimbursement for ABA and other programs. It is therefore of paramount importance that special education teachers and other school personnel understand the distinction between programs, their components and efficacy when parents request them (Kates-McElrath & Axelrod, 2006).

Individuals with Disabilities Education Act

Inclusion of students with ASD in general education classes continues to be recommended and is a civil right supported by Public Law 94-142, passed in 1975. This law established the framework for the rights and responsibilities of individuals with disabilities that remains in place to this day. It was originally known as the Education of the Handicapped Act (EHA). The title was changed to the Individuals with Disabilities Education Act (IDEA) in 1990 when the act was reauthorized (Hulett, 2009). Autism was added as a separate category of disability requiring potential special education services that same year (Hall, 2009). Six pillars of the IDEA constitute the law's essential support structure. All structures are inter-related and contribute to its application. The elements are: (1) Individualized Education Program (IEP); (2) a guaranteed Free and Appropriate Public Education (FAPE); (3) education in the Least Restrictive Environment (LRE); (4) appropriate evaluation; (5) parental participation that is active in the educational process; and (6) procedural safeguards for all involved participants (Hulett, 2009).

IDEA provides the development of an IEP to ensure the delivery of a free and appropriate public education in a least restrictive environment. This document is developed by an educational team, including parents and the regular and special education teachers. IDEA requires that at the beginning of each school year, each child

with a disability will have an IEP in place (Latham, Latham, & Mandlawitz, 2008). The IEP must contain the student's present levels of educational performance; annual goals with benchmarks and short-term objectives; supplementary aids and services required; modifications and supports; extent to which student will not participate with nondisabled peers in a regular education setting; dates of services to include location; frequency and service duration; transitions services (for students over fourteen years of age); details on how student progress will be measured; and provisions for ensuring ongoing parental participation (Russo & Osborne, 2003).

> Public Law 94-142 defines a free and appropriate public education as:
>
> special education and related services that (A) have been provided at public expense, under public supervision and direction, and without charge; (B) meet the standards of the State educational agency; (C) include an appropriate preschool, elementary, or secondary school education in the State involved; and (D) are provided in conformity with the individualized education program under section 614 (d). (Hulett, p. 32)

The third pillar of the IDEA is the provision of special education in a least restrictive environment. This means, to the maximum extent possible, students with disabilities should be educated with students without disabilities. A least restrictive environment, preferably in the student's home school, can be defined through a continuum of placements, identified and outlined in the student's IEP. Placements are assessed and determined through assessment, case law and best practice (Weishaar, 2007). Examples of placements across a continuum include regular education; resource rooms; self-contained classrooms; special schools; homebound instruction; and

instruction in hospitals and institutions. Schools bear the burden of proof when they indicate that a more restrictive setting is necessary (Yell, 2006). The 2004 amendments to the Individuals with Disabilities Education Improvement Act continue to support the least restrictive environment while continuing to provide an Individualized Education Plan (IEP) for students with disabilities (Goodman & Williams, 2007; Martin, 2001).

The evaluation process is the focus of the fourth pillar of IDEA. The evaluation precedes IEP development to help define and determine needs and services. To meet the requirements of IDEA, an evaluation must include a variety of tools and strategies, without reliance on a single tool and be free of racial and cultural bias (Hulett, 2009).

Pillar five, parent participation, represents the partnership in education that exists between parents and schools to educate students with disabilities. Parents are the "vigilant guardians" of their children's education and a key contributor to the IEP process (p. 34) and have the right of consent to and participation in every aspect of IEP development. The same is true for the student, when appropriate, especially during the transition process (Hulett, 2009).

The final pillar of IDEA involves procedural safeguards, or due process or redress of grievances, to ensure that students receive a free appropriate public education in a least restrictive environment. The due process rights include the right to examine all educational records; the right to an impartial hearing with an impartial hearing officer; the right to prior notice; mediation; the accompaniment of an attorney; and appeal at the state level for local education authority hearings. Discipline of students with disabilities is also included in this portion of IDEA, with protections for all parties in order to weigh

student rights to a continuing education with the needs to maintain a safe school environment. These safeguards benefit all individuals in the IEP process (Hulett, 2009).

The due process rights of students with disabilities, in addition to the rights to be notified and be fully informed as part of the IEP process, include the right to dissent, which opens the door to conflict resolution and to an impartial hearing. In addition, when students do not have a parent to act on their behalf, a surrogate, not affiliated with the state or local educational agency, must be determined to speak for the child with regard to that student's entitlement to a free appropriate public education. In addition, parents and schools have the right to nonadversarial conflict resolution, an initial due process hearing. While IDEA does not address who must provide the burden of proof in challenges to the IEP process, case law has placed the burden of proof on the party challenging the school district or agency. IDEA regulations stipulate that hearing officers must make a decision within 45 days of filing a due process complaint. Following the full review, parents have the right to file a civil action in a state or federal district court (Hulett, 2009).

Attorney's fees were included in the 1986 amendments to IDEA and are awarded to parents when they prevail in cases. However, the court may levy an award against the parent's attorney or against the parents if the parent's complaint or subsequent course of action is deemed frivolous or was presented to harass, cause unnecessary delay, or needlessly increase the cost of litigation (Hulett, 2009).

Discipline for children with disabilities is subject to the same requirements as children without disabilities. However, expulsion or suspension of a student with a disability constitutes a change of placement which entails examination of extensive procedural requirements. The IEP is reviewed to determine if the conduct is a

manifestation of the child's disability (Latham, Latham, & Mandlawitz, 2008), and/or IEP that was not properly implemented. If the IEP team decides that misconduct either is a manifestation of a disability, or of inappropriate placement as developed through the IEP, then the student cannot be expelled (Russo & Osborne, 2008).

Free Appropriate Public Education

The IDEA and NCLB Acts were preceded by several important pieces of legislation focused on the education of children with disabilities. In *Brown v. Board of Education* (1954), it was ruled that the separate education of minorities based solely on race was unconstitutional. This ruling would be extended to include individuals with disabilities (Yell, 2006). The civil rights movement of the 1960s laid the groundwork for two important cases, *Pennsylvania Association for Retarded Citizens (PARC) v. Commonwealth of Pennsylvania* (1972) and *Mills v. Board of Education of the District of Columbia* (1972). *PARC* set the precedent that "all children have a constitutional right to public education, without regard to disability," and *Mills* "was a blueprint…for the substantive and procedural protections that were later included in Public Law 94-142," the forerunner of the Individuals with Disabilities Education Act of 1990 (Hulett, 2009, p.20-21).

Subsequent cases built on the precedents set in the *PARC* and *Mills* cases of 1972. One case, in particular, was the template for defining and determining a Free and Appropriate Public Education (FAPE); *Hendrick Hudson Central School District v. Rowley.* This was the first case resolved by the Supreme Court regarding IDEA. In this case, the courts determined that Amy Rowley's IEP was inappropriate because it did not provide her the opportunity to reach her full potential. This case was overturned in favor

of the district (by a six-to-three decision) that the lower courts made an error requiring that the student be provided opportunity for maximum potential. They ruled that districts must provide a "basic floor of opportunity" consisting of "specialized instruction and related services which are individually designed to provide educational benefit to the handicapped child…" (Hulett, 2009, p. 120) resulting in an education that is "reasonably calculated to confer educational benefit" (Yell, Katsiyannis, Drasgow, & Herbst, 2003).

The criterion for "some educational benefit" outlined in *Rowley* has been re-examined and expanded since that ruling. While the best available education is not required to meet IDEA requirements, trivial educational benefit is also not acceptable (Russo & Osborne, 2008). Many cases regarding autism and IDEA/FAPE are based on *Rowley* and interpretation of this seminal case is an integral part of current litigation.

Evaluation, parental participation, assistive technology, extended school year services and basic transportation requirements are examples of related services required by the Individuals with Disabilities Education Act. Highly qualified teachers and a focus on accountability were emphasized in the Individuals with Disabilities Education Improvement Act (IDEIA) of 2004, in order to align it more closely with No Child Left Behind. Litigation involving these areas often centers around the inability to agree on which services are to be part of the IEP (or how they are to be implemented). Other due process hearings regarding related services often center upon how those services are (or are not) provided (Hulett, 2009).

An important component of implementing the IDEA is the provision of a Free and Appropriate Public Education in the Least Restrictive Environment (LRE) with access to a public education as close as possible to and with non-disabled peers. Placements for

students with disabilities to include Autism Spectrum Disorder (ASD) include: regular classroom; special education consultation; collaborative teaching; resource room; self-contained classroom; hospital or homebound instruction; special day school; and residential placement (Hulett, 2009). Four key pieces of legislation were instrumental to setting precedent regarding LRE for students with disabilities and subsequent litigation.

In *Roncker v. Walter* (1983), the Cincinnati, Ohio public school system placed Neil, a nine year old student with moderate mental retardation, in a special school for children with disabilities, without the opportunity to interact with nondisabled peers. His parents requested due process for denial of a free appropriate public education because he was not being educated with nondisabled peers to the maximum possible extent. The parents won when the 6th circuit overturned the district courts ruling in support of the Cincinnati school district. The two-part Roncker portability test was developed from this case. This test states that if services provided in a segregated placement cannot be provided in an integrated setting then the placement is appropriate. If these services can be provided reasonably in an integrated environment, they should be provided in that integrated setting (Hulett, 2009).

The second test for a Least Restrictive Environment was *Daniel R.R. v. State Board of Education* (1989). In this case the placement of a six year old boy was changed from half day special class and half day regular class to a full day of education with a special class. The 5th Circuit court held with the school stating that "the least restrictive, most appropriate setting supersedes placement in the regular education setting…utilizing the full continuum of placements" (Hulett, 2009, p.114). A two-part test for districts to use to determine LRE was developed as a result of *Daniel*:

(1) Can the child receive a satisfactory education in the regular education class with supplemental aids and services? and

(2) Has the school attempted to integrate the child into the mainstream to the maximum extent possible? (Hulett, 2009, p. 114)

The third test of LRE is based on *Sacramento City School District v. Rachel H.* (1994). Rachel's parents requested a due process hearing when their request for a more mainstream placement for their 11 year old daughter was denied by the school district. The district and 9th Circuit courts (upon appeal by the school district) found in favor of the parents. A four-factor test was developed to determine appropriate LRE and FAPE based on *Rachel H.*: (1) the more restrictive setting must be more beneficial than the general setting with aids and services; (2) the student's benefit from interaction with typical peers must be considered; (3) the impact of the student's behavior or presence on the teacher or class must be examined; and (4) the cost of the placement in general education must be considered (Osborne & Russo, 2003).

The fourth test of LRE applied to Mark, an 11 year old student with autism in *Hartmann v. Loudoun County Board of Education* (1998). In a regular education setting, Mark's behavior continued to be aggressive and disruptive despite numerous supports. The 4th circuit overturned the district court's decision to side with the parents using the following criteria: (1) Regular education classes did not provide educational benefit; (2) the benefits of the more restrictive setting outweighed those of the regular education setting; and (3) the child's behavior compromised the welfare and education of the other classroom students. These four cases are often used to guide current court decisions (Hulett, 2009).

When behavior significantly contributed to the school district's decision for a more restrictive environment, *Honig v. Doe* (1988) was often cited as the case of precedent. In this case two students with emotional disabilities were expelled and educational services were discontinued resulting in a change of placement not authorized. This case set the standard that students with disabilities could not be expelled for more than 10 days without it constituting an unauthorized change in placement (Hulett, 2009; Yell, 2006). When districts request an injunction (often referred to as the *Honig* injunction), or Temporary Restraining Order (TRO) to remove a dangerous student from the classroom, the time is to be utilized to conduct a manifestation determination or to determine a change of placement. In IDEA 2004 an Interim Alternative Educational Setting (IAES) became the stay-put setting while manifestation was determined. This change prevented parents from litigating to keep the student in the setting where the behavior problems occurred prior to a manifestation determination hearing.

Advocacy

Advocacy groups have been instrumental in advancing the cause for equal educational rights for students with disabilities. The success and progress made in special education can be attributed to advocacy groups, from the Cuyahoga County Ohio council for the Retarded Child, the first advocacy group, which consisted of five mothers of children with mental retardation (Yell, 2006) to the Council for Exceptional Children which boasts nearly 45,000 members (Council for Exceptional Children, 2009), the National Association for Retarded Citizens (NARC) with a membership of over 140,000, as well as many other groups (Council for Exceptional Children, 2009; National Association for Retarded Citizens, 2009). They continue to strive to educate, collaborate,

and push schools, administrators, and legislators to provide adequate educational programming and to enforce the legal rights of children to a Free and Appropriate Public Education (FAPE) in accordance with the Individuals with Education Act (IDEA) and the No Child Left Behind (NCLB) Act (Yell, 2006).

Litigation and Teaching Methodologies

ABA and TEACCH, two instructional approaches for teaching children with autism, are often requested on a student's IEP. This combination of strategies has been the subject of limited research. Courts both supported/failed to support the appropriateness of these programs based on evidentiary support of the efficacy of districts' or parents' preferred programs (Choutka, Doloughty, & Zirkel, 2004).

ABA has become essential to the education process for students with autism. Behavioral procedures of functional assessment to determine behavioral interventions are now mandated as part of IDEA. Because ABA principles such as positive reinforcement, stimulus control, discrimination learning, and Discrete Trial Teaching form the basis for the science of instruction, they will continue to be used to improve instructional methodology for all students, not just for those with autism, and will continue to be dominant in the practice of education (Dunlap, Kern, & Worcester, 2001). Making decisions that are not evidence based violate the spirit of NCLB, create confusion and can lead to placement challenges and litigation that would otherwise be avoided (Jones, 2006). Programming that has been researched and recommended for students with Autism Spectrum Disorder include Discrete Trial Teaching, structured teaching and the use of work stations/systems, as well as the use of visual strategies to enhance

understanding and communication between teacher and students. Emphasis on teaching social skills has also been accepted as a proven strategy to decrease problem behavior. As long as the school offers empirically based educational programming, the choice of methodology is up to the school district. Whether ABA, TEACCH or other methods, as long as the methodology is based on sound scientific principles, litigation can be avoided (Yell, 2006). The dearth of methodological soundness with some peer-reviewed published studies, however, contributes to controversy between parents, educators and those making legal determinations (Choutka, Doloughty, & Zirkel).

Research conducted in 2004 by Choutka, Doloughty, and Zirkel analyzed case law regarding Applied Behavior Analysis (ABA) and Treatment and Education of Autistic and Related Communication Handicapped Children (TEACCH) for students with autism. The authors examined 68 hearing/review officer and court decisions regarding program implementation (such as location, frequency, duration) and program selection (the choice between competing instructional approaches). These decisions were published in the Education for Handicapped Law Report (EHLR) and Individuals with Disabilities Education Law Report (IDELR). The authors examined prevailing party (parent or district) and factors related to outcomes. The authors utilized an outcome scale of coded descriptions and determined that outcomes were split regarding both programming (ABA or TEACCH) and winning party (parent or district). They also determined that three factors predominately were associated with positive outcomes; these were testimony of witnesses, documentation of progress and Individualized Education Program (IEP) elements.

Zirkel (2002) used a similar scale in a study during which he reviewed 290 cases involving students with any Pervasive Developmental disorder. The variables examined included eligibility under IDEA, whether the district's methodology was appropriate, attorney's fees, discipline, extended school year, and related services, basing his outcomes on only the highest court decisions. His study yielded relatively stable and neutral outcomes. The scale used in his study was divided into the following categories:

1. **Complete win for the parent:** Summary judgments in parent favor and complete conclusive win after the trial.
2. **Predominant but not completely conclusive win for the parent:** Represents final conclusive decisions in parent favor for major part of disputed issues or for more than 50% of relief.
3. **Inclusive win for the parent:** Includes granting a preliminary injunction, denial of district's motion for summary judgment, or reversal of a lower court's dismissal.
4. **Evenly split decision:** Includes split inconclusive decision (e.g., denial of both parties cross motions for summary judgment) as well as split conclusive decisions (e.g., tuition reimbursement for 50% of the requested period).
5. **Inclusive win for school authorities:** Includes the denial of a parent's motion for a preliminary injunction or summary judgment, granting dismissal without prejudice or for failure to exhaust administrative remedies.

6. **Predominant but not completely conclusive win for the school authorities:** Represents final conclusive decisions in parent's favor for only minor part of disputed issues or for less than 50% of requested relief.
7. **Complete win for school authorities:** Includes granting dismissals with prejudice and districts' motions for summary judgment. (p.85)

An additional study by Yell, Katsiyannis, Drasgow, and Herbst (2003) extrapolated principles from ASD litigation in order to develop guidelines for the development of special education programs for students with autism. The authors also cited examples of common procedural and substantive violations encountered in the 254 administrative hearings and litigation in ASD published spanning the years 1990–2002. The preponderance of violations occurred in the areas of parental participation, evaluations, Individualized Education Plans (IEPs), placement decisions, lack of qualified personnel, Behavior Intervention Plans, and Extended School Year Programs (Yell, Katsiyannis, Drasgow, & Herbst, 2003). The author anticipates comparing the studies done in 2002 through 2004 (Choutka, Doloughty, & Zirkel, 2004; Yell, Katsiyannis, Drasgow, & Herbst, 2003; Zirkel, 2002) with the results of her analysis of cases decided during 2007 and 2008.

III. RESEARCH METHODS

Purpose

The purposes of this study were: (1) to determine if changes in litigation outcome have occurred since the studies of 2002 through 2004, which yielded overall relatively stable and even outcomes, (2) to examine procedural and substantive violations of IDEA and FAPE with regard to autism litigation decided during 2007 and 2008, and (3) to identify trends in outcomes of this litigation by student demographic and procedural and substantive violations of IDEA.

Participants

Individuals identified as litigants in court cases decided in 2007 and 2008 involving IDEA, FAPE and Autism Spectrum Disorder (ASD) were the participants of this study. The academic search engine *LexisNexis* Legal accessed through the Auburn University Library was utilized to identify and review cases for applicability and use in the study. Students involved in these cases were between the ages of three and twenty-one and were identified as having one of the five disorders listed in the Diagnostic and Statistical Manual of Mental Disorders-Text Revision (4^{th} ed.) under the umbrella of Pervasive Developmental Disorders. The participants were all residents of the United

States under the jurisdiction of the thirteen Circuit Courts (Appendix F) designated to hear and resolve cases as outlined in the Constitution of the United States.

The use of *LexisNexis* was chosen because the *Lexis* database contains nearly all published case opinions from the 1970s to the present, and all publicly available unpublished case opinions from 1980 onward. According to their website… "*LexisNexis* is an indispensable tool for developing comprehensive answers to critical legal and business questions through the ***Lexis***® service, which helps legal practitioners research the law more efficiently…" (*LexisNexis*, 2009). It is the author's contention that through the use of eFiling for Courts, access to cases is similar, and possibly more efficient, than the earlier court reporters such as the *Individuals with Disabilities Education Law Report* (IEDLR) and *Education for Handicapped Law Report* (EHLR) used in the earlier studies of 2002 through 2004 (Choutka, Doloughty, & Zirkel, 2004; Yell, Katsiyannis, Drasgow, & Herbst, 2003; Zirkel, 2002).

A preliminary search of *LexisNexis* Legal (Natural Language/federal and state court cases) utilizing the search terms "autism" and "2007" or "2008" yielded approximately 267 cases (state and federal combined). Each case was reviewed to determine its applicability to the study. Cases were selected if they involved students identified with ASD (or their parents/guardians *ad litem*) as defendants or plaintiffs, if the students were between the ages of three and twenty-one at the time of first litigation, and if the litigation involved defendants or plaintiffs associated with a school district. All cases identified involved violations of the Individuals with Disabilities Education Act and/or the denial of a Free Appropriate Public Education.

A preliminary review by the author regarding applicability according to the above criteria yielded approximately 141 cases. Each of these cases was separated by circuit of jurisdiction. Several cases involved the same defendants and plaintiffs at different stages of litigation. These were combined for further review. In addition, upon further review, several cases did not fit the criteria outlined above and were eliminated from the study. Examples of these included students who were not identified as having ASD, sexual assaults, injuries involving paraprofessionals or teachers in a classroom for students with autism, or cases being tried under the 14th Amendment or Section 504 of the Rehabilitation Act of 1973.

The cases utilized in the study were reviewed and categorized by prevailing party at the most recent step in the litigation process. Some cases were under initial review, others were under appeal, and several were finalized by the judge (circuit or district) without further recourse by the litigants. Each case was coded using a five point scale with regard to the prevailing party at the point of review by this researcher.

Variables

Independent Variables

After careful scrutiny of each case and the combining of related cases, the final number of cases identified for this study was ninety-nine. These cases provided the independent variable utilized in this study. Each case involved procedural violations of IDEA (parental participation, evaluation, IEP development, placement, lack of qualified personnel and transition) and substantive violations of IDEA (failure to provide services,

lack of progress, lack of data collection, lack of a BIP and/or ESY) with regard to autism litigation for the years 2007 and 2008.

Dependent Variables

The dependent variables were case outcomes, or prevailing party, identified utilizing a five point Likert scale. The dependent variables were further detailed with regard to outcome of litigation by court (district or circuit), gender, type of violation, age, and whether behavior, and/or teaching methodology was a factor in each case.

Materials

The materials involved were the court cases identified and printed utilizing the *LexisNexis* on-line database accessed through the Auburn University Library.

Data Collection

Data were collected from cases detailed in the *LexisNexis* database for the years 2007 and 2008 involving autism, students between the ages of three and twenty-one, and involving procedural and/or substantive violations of IDEA and FAPE. Ninety-nine cases were identified as meeting these criteria. Each case was reviewed and coded by circuit court where the violations occurred, type of violation involved (procedural and/or substantive), whether attorney's fees were involved, gender, age and diagnosis of plaintiff, type of school, presiding judge (name and gender), behavior as a factor in the case, and Applied Behavior Analysis (ABA) as a methodology addressed in the case. Violations identified in the case background were determined and coded. These included procedural violations (parental participation, evaluation, IEP development, placement, and qualifications of personnel) and substantive violations (failure to provide services,

lack of progress, lack of transition services, inadequate data collection, inadequate BIP, lack of ESY, inadequate ABA services, and/or whether behavior contributed to the case).

The dependent variable, prevailing party regarding IDEA and FAPE consisted of a Likert decision scale. The criteria for coding follows:

1. **Complete win for the parent:** Summary judgments in parent favor (decision without a trial) as well as other conclusive wins on all major issues of the case in favor of the parents, including summary judgments.
2. **Predominant but not completely conclusive win for the parent/inclusive win for parent:** Conclusive win in parents favor for the majority of issues or awarding of relief (e.g., compensatory education, tuition reimbursement) of more than 50% and less than 100% of what the parent originally sought. In review officer and court decisions where the published opinion does not specify the amount of relief sought by the parent, the frame of reference was the amount of relief awarded by the preceding level. Includes granting of a preliminary injunction, which means the case will return to the lower court after trial. Cases also include denial of summary judgment motion sought by school authorities.
3. **Evenly split decision:** Includes the awarding of relief (e.g., compensatory education, tuition reimbursement) of approximately 50% of that originally sought by the parent. Further, in situations where the original amount of relief sought is unknown, this category includes the awarding of relief approximating 50% of that originally awarded by a lower court to the parent. In addition, this category includes cases in which petitions by both

parties for re-hearing are denied, as well as the denial of cross motions for summary judgment (because the effect in such situations does not favor either party; also used in cases where the case is vacated and remanded for review of the entire case).

4. **Inclusive win for school authorities/predominant but not completely conclusive win for the school authorities:** Includes the denial of a preliminary injunction or summary judgment sought by the parent (in that the parent still has the opportunity for trial). Includes cases dismissed for failure to exhaust administrative remedies (i.e., cases where the parent did not resort first to a due process hearing) and cases dismissed without prejudice (because, after correcting the specified technical defects, the parents may still have their day in court). Includes the awarding of relief (e. g., compensatory education, tuition reimbursement) of clearly less than 50% of that originally sought by the parent. Further, in situations where the original relief sought is not known, this category includes the awarding of relief less than 50% of that originally awarded by a lower court to the parent.
5. **Complete win for school authorities:** Includes granting of a summary judgment in favor of school authorities (school authorities have won decisively at this preliminary step, ending the proceeding against the school district).

The decision scale was adapted from Zirkel (2002) and Choutka, Doloughty, and Zirkel (2004). The scale utilized in these studies consisted of seven points ranging from

(1) complete win for parents, (2) decision largely, but not completely, for the parent, (3) inconclusive decision favoring parent, (4) split decision, (5) inconclusive win for school authorities, (6) decision largely, but not completely for school authorities, and (7) complete win for school authorities. For the purposes of this study, the intermediate outcome codes (2-3, 5-6) were combined as dependent variables.

Observer Reliability

Inter-rater reliability was determined by selecting a second researcher to review at least twenty percent of cases and code case outcomes on a five point scale by prevailing party. After receiving training from the author, this researcher reviewed twenty-three cases (23.2%) of total cases. They obtained an agreement level of 91.3% (twenty-one of twenty-three cases). Both researchers reread and reviewed the cases where agreement was not met, and discussed the outcome, to reach 100% for the cases reviewed.

Data Analysis

The outcome of cases was compared by specific category utilizing nonparametric statistical procedures such as chi-square analysis. The specific comparisons included outcome by prevailing party and demographics (court level, gender, school, diagnosis), procedural violations (parent participation, evaluation, IEP, placement/LRE, unqualified personnel) and substantive violations (failure to provide services, services result in no progress, transition, BIP, ESY, ABA, and behavior as a factor in litigation. This examination determined whether there were changes in prevailing party since the earlier studies of 2002-2004, which determined that the split was relatively even between

parents and schools as prevailing party. The current study examined whether parents or schools prevailed in the majority of court cases examined for the years 2007 and 2008. It was also determined when in the education process (Pre-kindergarten-6th grade, 7th-12th grade) cases were more likely to occur, and the types of violations involved. An analysis of variance (ANOVA) was conducted on the seventy cases where age could be accurately determined. Primary analysis of logistic regression was used to determine whether factors regarding group membership could predict the odds of success (prevailing party) with regard to the litigation studied.

IV. RESULTS

The purposes of this study were: (1) determine if changes in litigation outcome have occurred since the studies of 2002 through 2004, which yielded outcomes largely split (50% parents/50% school district) regarding prevailing parties and autism litigation (Choutka, Doloughty, & Zirkel, 2004), (2) to examine procedural and substantive violations of IDEA and FAPE with regard to autism litigation for the years 2007 and 2008 and (3) to identify trends in outcomes of this litigation by court, gender, type of violation, age, impact of behavior and/or teaching methodology.

Overall Results

A review of district and circuit court cases between 2007 and 2008 in the United States that focused on both autism and the Individuals with Disabilities Act (IDEA) was conducted utilizing the *LexisNexis* database (legal, federal and state cases, natural language, autism, IDEA, 2007/2008) and yielded 215 cases (2007) and 290 cases (2008). These cases were reviewed for relevance to IDEA and autism. The author conducted another review, combining case duplicates and eliminating additional cases that did not fit the criteria that the cases center on autism and IDEA. The final result of this examination was the basis for this study (n = 99). The majority of cases were found in the 3rd and 9th circuits (48.5%). Table 1 shows the breakdown of cases regarding autism and

IDEA for 2007 and 2008, both federal and state, district (83.8%, n = 83) and circuit (16.1%, n = 16). The district courts are located within each circuit.

Table 1

Autism/IDEA Cases by Circuit

Circuit	States	Frequency	Percent
1	ME, MA, NH, RI, PR	5	5.1
2	NY, VT, CT	11	11.1
3	NJ, PA, DE, VI	18	18.2
4	WV, VA, MD, NC, SC	4	4
5	TX, MS, LA	3	3
6	OH, MI, KY, TN	5	5.1
7	IL, IN, WI	5	5.1
8	MN, MO, AR, IA, ND, SD, NE	7	7.1
9	NV, OR, CA, WA, AK, AZ, HI, ID, MT	30	30.3
10	WY, UT, CO, NM, OK, KS	4	4
11	AL, FL, GA	6	6.1
12	DC	1	1
	Total	99	100.0

Two types of violations regarding autism and IDEA were involved in the cases examined, procedural (97 %; n = 96) and substantive (73.7 %; n = 73). Procedural violations were divided into five categories; parental participation (29%; n = 29.3),

evaluation (27.3%; n = 27), Individualized Education Plan (IEP) (80.8%; n = 80), Least Restrictive Environment (LRE)/placement (59.6%; n = 59), and unqualified personnel (15.2%; n = 15). Frequency of involvement in the cases examined is outlined in Table 2.

Table 2

Procedural Violations by Frequency and Percentage

Violation	Frequency	Percentage
Parent Participation	29	29.3
Evaluation	27	27.3
IEP	80	80.8
LRE/Placement	59	59.6
Unqualified Personnel	15	15.2

The IEP is considered the cornerstone of IDEA (Yell, 2006) as evidenced by the number of cases involving violations to IEP procedures as the basis of litigation involved in this study. The next most common procedural violation involved placement, which is directly related to the IEP as written individually for students with autism.

Substantive violations to IDEA that were evaluated include a failure to provide services (45.5%; n = 45), services that result in no progress (14.1%; n = 14), failure to collect data (n = 0; 0%), transition (19.2%; n = 19), Functional Behavior Assessment (FBA)/Behavior Intervention Plan (BIP) (20.2%; n = 20), and Extended School Year (ESY) services (16.2%; n = 16). Of these violations, most frequently noted was failure to provide services (45.5%; n = 45) and FBA/BIP (20.2%; n = 20). Frequency of

substantive violations is detailed in Table 3. While choice of teaching methodology for students with autism cannot be litigated, the most frequently requested methodology mentioned in litigation is Applied Behavior Analysis (ABA). It remains the responsibility of professionals and parents to determine the "particular strategy or method that is deemed to be effective or scientifically based and suitable for an individual student" (Simpson, 2005, p.143). A study by Simpson (2005) evaluated thirty-three commonly used interventions for children and youth with ASD. ABA was found to be one of four interventions determined to be scientifically based. The other three were Discrete Trial Teaching (a component of ABA); pivotal response training; and Learning Experiences: an Alternative Program (LEAP). ABA (with DTT considered a component) was the only intervention of the four frequently mentioned in the cases reviewed (n = 32) and it was evaluated for a possible relationship to case outcome (prevailing party). Behavioral deficits often result in educational challenges for students with autism (National Research Council, 2001). Student behavior was involved in 41 cases and was evaluated for possible relationship to prevailing party.

Table 3

Substantive Violations by Frequency and Percentage

Violation		Frequency	Percentage
Services not Provided		45	45.5
Services result in no progress		14	14.1
Data not collected		0	0
Transition	Elementary	17	17.2
	High school	2	2
FBA/BIP		20	20.2
ESY Services		16	16.2
ABA		32	32.3
Behavior		41	41.4

A breakdown of the cases was conducted by various demographics including age (at beginning of court case), gender and diagnosis. With regard to gender, the ratio of four boys (79.8%; n = 79) to every female (17.2%; n = 17) was slightly higher in this study. Three cases did not refer to the gender of the student. Two thirds of the individuals involved in the cases outlined in this study were diagnosed with a form of autism (65.7%; n = 65) while the remaining third were identified with multiple diagnoses (34.3%; n = 34).

School was divided into two categories. Sixty-eight cases involved students from pre-kindergarten through sixth grade. The remainder, twenty-three cases, involved students in grades seven through twelve. Students in private school at public expense

were included in these groups. Grade level could not be determined for eight of one hundred cases.

Table 4

Demographics by Frequency and Percentage

Category	Frequency	Percent
Court		
District	83	83.8
Circuit	16	16.1
Gender		
Male	79	79.8
Female	17	17.2
Not Identified	3	3.0
Diagnoses		
Form of ASD	65	65.7
Multiple Diagnoses	34	34.3
School		
Pre-K-6	68	68.7
7-12	23	23.2
Not Identified	8	8.1

The dependent variable, outcomes of court cases, was divided into five subcategories. Two subcategories included parents as prevailing parties, one subcategory

was for decisions evenly split between both parties, and two subcategories included school districts as prevailing parties.

Table 5

Prevailing Party (5 Point Scale)

Prevailing Party	Frequency	Percentage
Parent all the way	10	10.1
Mostly Parent	17	17.2
Tie	19	19.2
Mostly School	14	14.1
School all the way	39	39.4

These categories were further combined, resulting in the three categories that were ultimately utilized in chi-square analysis, and ANOVA. All cases resulting in a tie were omitted from logistic regression analysis.

Table 6

Prevailing Party (3 Point Scale)

Prevailing Party	Frequency	Percent
Parent	27	27.3
Tie	19	19.2
School	53	53.5

The author was interested in determining the impact of violations and resulting prevailing party status. Violations addressed were coded as being involved or not involved in each court case. These violations were then compared to prevailing party. The results of both procedural and substantive violations by type and case outcome are depicted on the following graph, to include number of times each violation was cited and contribution of the violation to overall case outcome. Out of the ninety-nine cases reviewed regarding IDEA and autism for the years 2007 and 2008, parents prevailed in twenty seven total cases, districts prevailed in fifty-three, and neither party prevailed in nineteen.

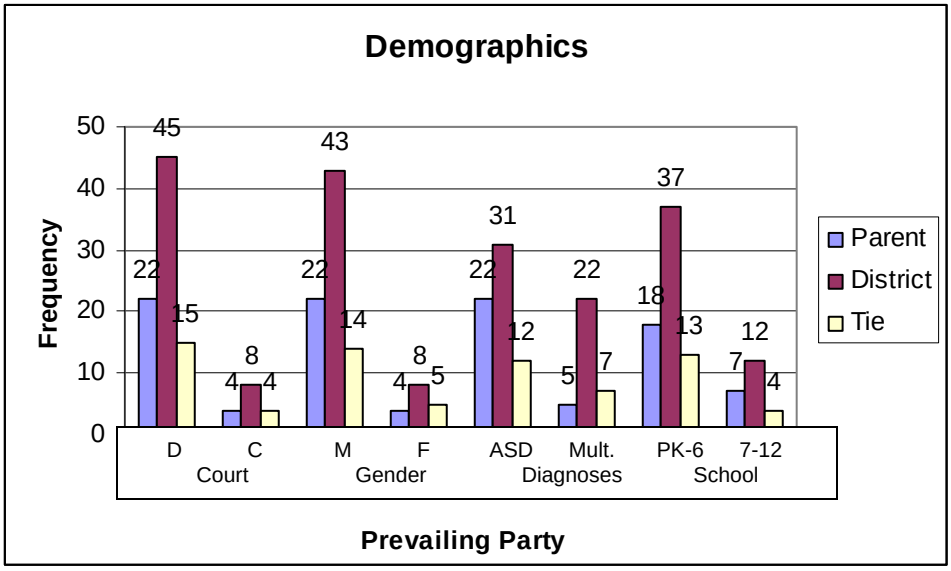

Figure 1. Demographics by Prevailing Party

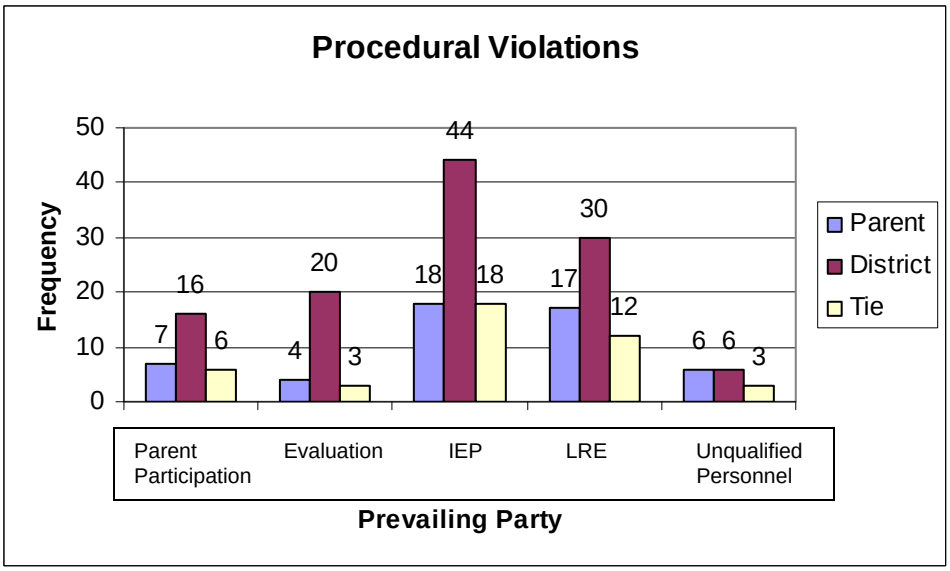

Figure 2. Procedural Violations by Prevailing Party

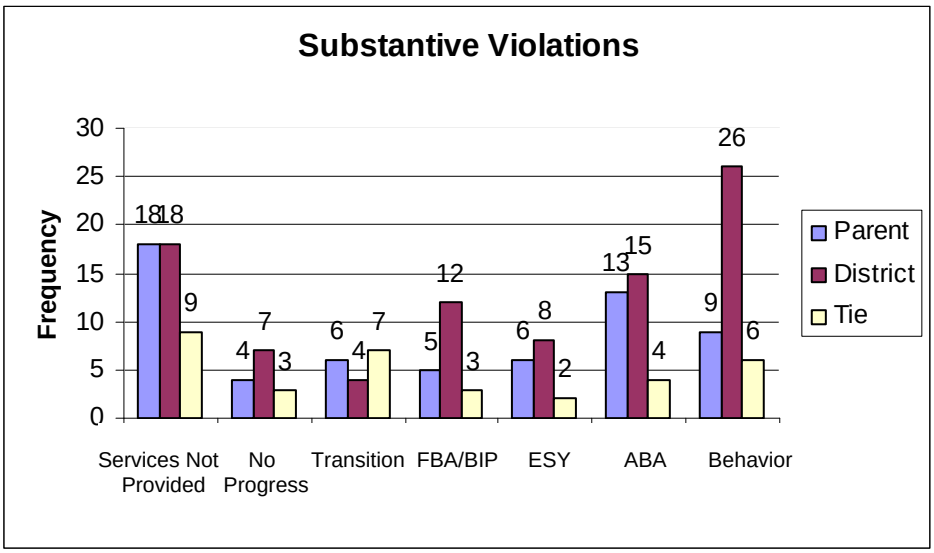

Figure 3. Substantive Violations by Prevailing Party

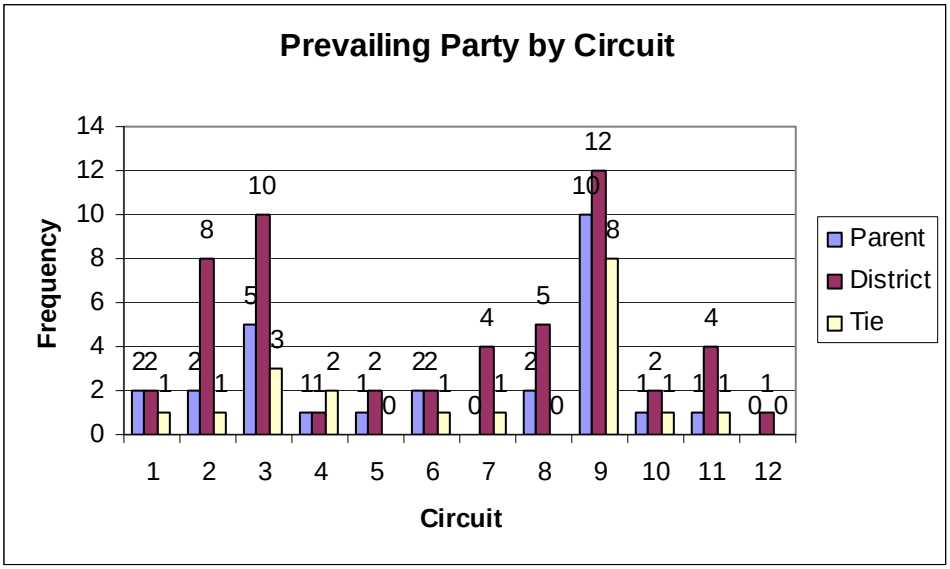

Figure 4. Prevailing Party by Circuit

Chi-Square Analysis

A chi-square analysis of violations and student demographics was conducted for all categories except age (Tables 7-9). Age was analyzed using a simple one-way analysis of variance using the continuous level of measurement that characterized this category.

Table 7

Demographics by Prevailing Party

Category	Parent Win		District Win		Tie		Chi-Square	Significance ($p < .05$)
	n	%	n	%	n	%		
District Court	22	22.2	45	45.5	15	15.2	.396	.820 (a)
Circuit Court	4	5.1	8	8.1	4	4.0		
Gender								
Male	22	22.2	43	43.4	14	14.1	1.205	.547 (a)
Female	4	4.0	8	8.1	5	5.1		
(Missing Cases)	3	3.0						
Diagnoses								
ASD	22	22.2	31	31.3	12	12.1	4.258	.119
Multiple	5	5.1	22	22.2	7	7.1		
School							.	.
K–6	18	18.2	37	37.4	13	13.1	.142	.932 (b)
7–12	7	7.1	12	12.1	4	4.0		
(Missing Cases)	8	8.1						

a. 2 cells (33.3%) have expected count < 5.

b. 1 cell (16.7%) has expected count < 5.

Demographic distribution is displayed in Table 7. Most cases examined occurred at the district court level. Sixteen cases were heard at the higher, circuit court level. With

regard to gender, the ratio of four males (79.8%; n = 79) to every female (17.2%, n = 17) is slightly higher than the 4:1 ratio indicated in the literature. Two thirds of the individuals involved in the cases outlined were diagnosed with a form of Autism Spectrum Disorder (ASD) (65.7%; n = 65) while the remaining third were identified with multiple diagnoses (34.3%; n = 34). Sixty-eight cases involved students from pre-kindergarten through sixth grade. The remainder, twenty-three cases, involved students in grades seven through twelve. Students in private school at public expense were included in these groups. Grade level could not be determined for eight cases.

Table 8

Procedural Violations by Prevailing Party

Category	Parent Win		District Win		Tie		Chi-Square	Significance (p< .05)
	n	%	n	%	n	%		
Overall								
Procedural								
Violations	26	26.3	51	51.5	19	19.2	.735	.692 (a)
N/A	1	1.0	2	2.0	0	0.0		
Parent								
Participation	7	7.1	16	16.2	6	6.1	.216	.898
N/A	20	20.2	37	37.4	13	13.1		
Evaluation	4	4.0	20	20.2	3	3.0	6.301	.043
N/A	23	23.2	33	33.3	16	16.2		
IEP	18	18.2	44	44.4	18	18.2	6.025	.049 (b)
N/A	9	9.1	9	9.1	1	1.0		
Placement/LRE	17	17.2	30	30.3	12	12.1	.424	.809
N/A	10	10.1	23	23.2	7	7.1		
Unqualified								
Personnel	6	6.1	6	6.1	3	3.0	1.661	.436 (c)
N/A	21	21.2	47	47.5	16	16.2		

a. 3 cells (50%) have expected count < 5. N/A= Not identified as part of case

b. 1 cell (16.7%) has expected count <5.

c. 2 cells (33.3%) have expected count < 5.

Table 9

Substantive Violations by Prevailing Party

Category	Parent	Win	District	Win	Tie		Chi-	Significance
	n	%	n	%	n	%	Square	(p < .05)
Overall								
Substantive								
Violations	23	23.2	35	35.4	15	15.2	3.716	.156 (a)
N/A	4	4.0	18	18.2	4	4.0		
Services not								
Provided	18	18.2	18	18.2	9	9.1	7.751	.021
N/A	9	9.1	35	35.4	10	10.1		
Services Result								
in no Progress	4	4.0	7	7.1	3	3.0	.091	.956 (b)
N/A	23	23.2	46	46.5	16	16.2		
Transition	6	6.1	7	7.1	6	6.1	3.264	.196 (b)
N/A	21		46	46.5	13	13.1		
BIP/	5	5.1	12	12.1	3	3.0	.473	.790 (a)
N/A	22	22.2	41	41.4	16	16.2		
ESY/	6	6.1	8	8.1	2	2.0	1.222	.543 (b)
N/A	21	21.2	45	45.5	17	17.2		

(table continues)

Table 9 (continued)

Category	Parent Win		District Win		Tie		Chi-	Significance
	n	%	n	%	n	%	Square	(p < .05)
ABA/	13	13.1	15	15.2	4	4.0	4.586	.101
N/A	14	14.2	38	38.4	15	15.2		
Behavior/	9	9.1	26	26.3	6	6.1	2.760	.252
N/A	18	18.2	27	27.3	13	13.2		.

a. 1 cell (16.7%) has expected count < 5. N/A= Not identified as part of case

b. 2 cells (33.3%) have expected count < 5.

Tables eight and nine show that three categories were significant ($p < .05$) for procedural and substantive violations. These categories included violations in evaluation (procedural), IEP development (procedural) and the failure to provide services (substantive) with regard to the dependent variable, prevailing party status. The school district was the prevailing party more frequently than were the parents for the two procedural categories: Evaluation (20.2% v. 4.0%) and IEP (44.4% v. 18.2%). In the substantive category both parties prevailed an equal number of times for services not provided (18.2% v. 18.2%).

Analysis of Variance

A one-way Analysis of Variance was conducted regarding age and prevailing party for the seventy cases where age could be calculated with accuracy. While 42.9% of the cases were initiated between the ages of five and eight, a one-way Analysis of Variance (ANOVA) revealed a lack of statistical significance ($F\ 2, 67 = .160$, $p = .853$)

between age and prevailing party. Exact age could not be determined for twenty-nine cases.

Logistic Regression

Multiple stepwise logistic regression analyses were conducted utilizing the two primary prevailing parties (parents, districts) as categories of the dependent variable. All cases resulting in a tie were omitted from the regression analysis. Three logistic regressions were performed to determine the extent to which three sets of predictors related to the outcomes (i.e., prevailing party) of the examined cases. Specifically, these regressions examined predictor variables as they pertained to demographics, procedural violations and substantive violations. Results are outlined in Table 10.

Table 10

Summary of Logistic Regression Models (OR, 95% CI)

Model	Null	Full		Restricted	
	% Correct	# variables	% correct	# variables	% correct
Demographics	66.2	4	66.2	1	66.2 *
Procedural Violations	66.3	5	68.6	1	66.3 *
Substantive Violations	66.3	7	73.8	2	66.3 **

*p < .05

**p < .01

Analysis of the full models (with all the IVs) did not significantly improve upon the null model. Variables not contributing to the models were dropped in order to arrive at a simpler, more parsimonious model using a backward elimination approach. For demographics, diagnosis was left in the restricted model. For procedural violations, evaluation was left and for substantive violations, failure to provide services was left in the restricted model. Finally, logistic regression analyses were conducted utilizing the single independent variables that indicated significance in earlier analyses. Wald statistics indicated that diagnoses, evaluations and failure to provide services significantly predicted prevailing party. Autism diagnoses predicted parents as prevailing party while multiple diagnoses predicted that schools would prevail, but only minimally ($p = .045$, $OR = .320$). Results of this analyses indicate that when evaluations are part of due process hearings then school districts can be predicted to prevail ($p = .041$, $OR = 3.485$). This odds ratio predicts that school districts are predicted to win 3.485 times higher than chance when evaluations are part of the variables identified in the due process hearing. This odds ratio is above what you would find normally, which is that school districts prevailed in 66.2 percent of cases for 2007 and 2008. Finally, when a failure to provide services is part of substantive violations resulting in a due process hearing, then parents were minimally predicted to prevail ($p = .007$, $OR = .257$). These outcomes correlate with Figures 2 and 3. It is worthy to note that while IEP was significant when run in a chi-square analysis it was not significant ($p < .05$) for multivariate logistic regression.

Table 11

Multivariate Logistic Regression–Single Independent Variables (OR, 95%CI)

Model	B	OR	Wald	(sig.)
Demographics				
Diagnoses	-1.139	.320	4.012	.045
Procedural Violations				
Evaluations	1.248	3.485	4.170	.041
Substantive Violation				
Fail to provide services	-1.358	.257	7.355	.007

The results of this study indicate that though the incidence of autism continues to increase gender differences continue to follow a ratio of at least four males to one female. Zirkel (2002) reviewed 290 hearing/review officer and court decisions from 1978 to August 2000 wherein children were identified as having any form of a Pervasive Development Disorder. His examination covered twenty-two years of cases involving any reference to PDD and involved an average of approximately 13 cases per year. This author researched all autism cases from 2007 and 2008 which yielded 99 cases for a period of two years (an average of 49.5 per year). Results of this examination are discussed in Chapter Five.

V. DISCUSSION

The purposes of this study were to: (1) determine if changes in litigation outcome have occurred since the studies of 2002 through 2004, which yielded outcomes relatively evenly split between parents and school districts regarding prevailing parties and autism litigation (Choutka, Doloughty, & Zirkel, 2004; Zirkel, 2002), (2) examine procedural and substantive violations of IDEA and FAPE with regard to autism litigation for 2007 and 2008, and (3) identify trends in outcomes of this litigation by student demographic and procedural and substantive violations of IDEA.

The results indicate that there has been a change in prevailing party since the 2002–2004 studies. School districts prevailed, in whole or part, in 53.5% of the cases and parents prevailed, either in whole or part, in 27.3%. Results were even in 19.2% of cases. There were no significant differences between prevailing parties as related to demographic variables. School districts prevailed approximately twice as often, similar to the overall percentages for prevailing party with regard to demographics. For diagnoses, however, school districts were four times more likely to prevail when the student was identified as having multiple diagnoses that included autism (Figure 1).

For procedural case violations, school districts prevailed in all areas (Figure 2). The majority of violations occurred in IEP development, followed by placement. Regarding substantive violations, parents tied in cases where services were found not to

have been provided and prevailed more frequently in cases regarding transition (Figure 3). Although parents did not prevail overall with regard to substantive violations, they fared better, though not to the same extent as did the school districts with regard to procedural violations. Mandlawitz (2002) noted: “Parents have uniformly prevailed in their claims when the LEA’s program was adjudged to be insufficient to meet the child’s need for intensive services. On the other hand, LEAs have prevailed on substantive questions when there were no procedural errors and a FAPE was provided” (p. 497).

Zirkel (2002) found the second circuit “district friendly” and the third circuit “parent friendly.” Results of this study supported the findings of the second circuit as “district friendly” and refuted the finding for the third. In the third district, districts prevailed twice as often (n = 10) than parents (n = 5). School districts prevailed in nine of twelve circuits. The fourth and sixth circuit tied. More cases occurred on the east and west coast (urban states) than in the central United States (Figure 4).

A chi-square analysis of the independent variables identified three areas worthy of note. Procedural violations of the Individualized Education Program (IEP) and evaluation were significant (p = .05). Evaluation and IEP development are key to IDEA compliance and vital to providing a FAPE and are highly related. The substantive violation of significance involved a failure to provide services. This is the other side of the IEP coin. The IEP team must develop observable and measure goals and determine the services needed to provide a FAPE in the LRE. Unless the goals, placements and services are implemented as outlined, then the needs of the child are less likely to be met. All IEP team members must be involved in ensuring that IEPs are not only developed but implemented in accordance with the IDEA.

A one-way analyses of variance (ANOVA) regarding age (DV) and prevailing party (IV) for the seventy cases where age could be calculated with accuracy was conducted. While 42.9% of the cases were initiated between the ages of five and eight, there was no statistical significance. The large percentage of cases initiated between five and eight years of age correspond to the time when students transition to public school from individualized pre-school programs or home-based programs where intervention is intense and the ratio of student to teacher is extremely small. It is also a time when more detailed evaluations and diagnoses are formed and detailed IEPs are developed for individual students. A diagnosis of autism may be determined, after an initial diagnosis of developmental delay, as the child enters the public school system. At this point in the child's education, parents and school district professionals may bring different expectations, philosophies and experiences to the IEP process (Tincani, 2007). For these reasons, disagreement between parents and districts over evaluations and IEP development may be more likely to surface during this time.

The transition can be disconcerting to families as children move to elementary programs, which are often less tailored to fit the child's (and parents) needs. Training of teachers and administrators may be lacking with regard to the individualized needs of students with autism. The expense of intervention strategies requiring a one-to-one ratio can be seen by administrators as a drain on limited financial resources (Tincani, 2007). These disconnects in programming at this level may also contribute to the increase in frequency of litigation for this age group (five to eight years old).

Most cases involving transition (17 of 19 cases) were involved at the elementary level. Two different conclusions can be made regarding the relatively small number of

transition cases at the 7–12th grade level. The author contends that as the higher numbers of students diagnosed with autism move into high school that due process litigation will increase. The author also realizes that as students age, parents may either become frustrated and decide that pursuing due process is not worth the effort, move to another district or placement, or they have become more realistic and pragmatic, having worked out conflicts with schools earlier in the student's school history.

According to the Centers for Disease Control, the odds of being diagnosed with autism today are 1 in 150. This incidence varies by state (Appendix F) with a high of 1 in 81 for the state of Minnesota, and a low of 1 in 432 for the state of New Mexico (Center for Disease Control, 2007). Four times as many boys as girls are diagnosed with autism (National Research Council, 2001). This study supports the statistics. Of the ninety-nine cases examined, seventy-nine (79.8%) involved males and seventeen (17.2%) involved females. Gender was not identified or involved siblings of both genders in three cases. The gender ratios of males to females in this study were slightly higher than 4:1.

Using multiple logistic regression, the author attempted to determine what demographic characteristics, or procedural and substantive violations, may have led to specific outcomes regarding prevailing party. The first model utilized the demographic variables of school (K–6/7–12), gender, diagnoses (ASD/ multiple), and level of court (district/circuit). Diagnosis was the only demographic variable showing statistical significance ($p < .05$). For students diagnosed with autism, court decisions favored parents while for those with multiple diagnoses the decisions slightly favored districts. The second model utilized procedural violations including parent participation, evaluation, IEP, LRE/Placement, and unqualified personnel. Cases involving evaluation

were statistically significant and more likely to be decided in favor of districts. The third model examined substantive violations to include a failure to provide services, services resulting in no progress, transition, Behavior Intervention Plans (BIP), Extended School Year services (ESY), Applied Behavior Analysis (ABA), and behavior as a factor in the case. Failure to provide services was statistically significant and parents were slightly more likely to prevail above the percentage determined by frequency of prevailing party.

Finally, each independent variable that may have had an impact on, or could possibly predict prevailing party, even minimally, was used in individual logistic regression analysis. These included the demographic variable of diagnoses, the procedural variable of evaluations, and the substantive variable of failure to provide services. While each of these was significant ($p < .05$), evaluations had the most significant odds ratio and were determined to be 3.485 times more likely to predict school districts as prevailing party.

There is no doubt that the number of children diagnosed with autism continues to increase and litigation regarding autism has followed suit. Data from 2007 and 2008 do not support earlier studies that found litigation largely split between prevailing parties. The results of this study raise additional questions as to why schools prevailed at a rate of 2:1 in the cases examined for 2007 and 2008.

Each case examined in this study exemplified how previous case law has contributed to present rulings. Individual cases and their rulings highlighted how different variables contributed to the judges' interpretation and overall prevailing party. The author provided the following examples to demonstrate how due process complaints of violations of IDEA and the provision of a FAPE were ruled. These cases included

frivolous charges made by parents, disagreements over evaluations, conflicts centered on substantive and procedural provisions of a FAPE, school districts that attempted to "go the extra mile" and those that attempted minimal compliance, as well as the costs of services compared to the costs (both monetary and temporal) of litigation.

J.G. & D.G. v. Paramus Board of Education (2008)

School districts prevailed when parent's charges were deemed frivolous or moot, resulting in dismissal of the case in entirety with prejudice. *J.G. & D.G. v. Paramus Board of Education* exemplifies this sort of case. The plaintiffs requested and withdrew due process IDEA petitions several times and failed to respond to defendant's discovery requests throughout the case, which revolved around reimbursement for past therapy expense and a request to increase home therapy by 25–30 weekly hours (15 hours a week was already approved for the plaintiffs' two seven-year-old children with autism). The defendants asserted that plaintiff's claims were "frivolous and unreasonable, and the repeated withdrawals, re-filings and discovery non-responses served solely to harass" the defendants and needlessly increased litigation costs (p.4). The district court judge ruled for the defendant school district.

K.R. v. School District of Philadelphia (2008)

Due process hearings centered on evaluation focused either on slow implementation or disagreement regarding diagnoses. The case of *K.R. v. School District of Philadelphia* involved the evaluation of a six-year-old girl diagnosed with learning disabilities when she entered elementary school. The parents contended that she had Asperger's Syndrome and was misdiagnosed as a result of the school district's evaluation. The school also removed 1:1 support when the child started her second year

of school and the parents alleged that she was verbally assaulted by her peers. The parents removed her from school and initiated a due process hearing seeking compensatory education and tuition reimbursement. After seven hearing sessions, it was determined that the school district had provided a proper evaluation, that she was provided supports and was not denied FAPE.

Upon appeal, parents stated the evaluation was cursory and the ensuing IEP was wrong. The district court granted the plaintiffs motion to submit additional evidence. The judge gave "due weight" and upheld the factual findings of the Hearing Officer after review, and determined with regard to the administrative record regarding the evaluation and IEP, in favor of the defendant's motion for summary judgment (p.6).

Weissburg v. Lancaster School District (2008)

Disagreement about diagnoses and evaluation were major factors in *Weissburg v. Lancaster School District.* Six-year-old Edward Weissburg was diagnosed with autism by a clinical psychologist before he started school. The school district's initial assessment diagnosed him with "severe global developmental delays" (p. 2). Parents requested an Independent Education Evaluation (IEE) but declined when their doctor was not on the list of recommended psychologists. Defendants convened several IEP meetings that did not satisfy the parents' expectations. The parents requested mediation and due process because they were dissatisfied with defendant's assessment and programming. They requested that 1) Edward's label be changed from mental retardation to autism, 2) they be granted a private assessment at school expense, 3) Edward be placed in a mainstream kindergarten with typical peers, 4) transportation be provided at school expense, 5) he be

provided a 1:1 specially trained paraprofessional, 6) he be provided with an inclusion specialist, and 7) he be assessed biannually by an educational psychologist.

Defendant reassessed Edward (with the same diagnostic outcomes) and refused to conduct an IEE at defendant's expense. Parents filed a due process complaint and defendants requested the court determine the appropriateness of the most recent assessment. The court found that while the conclusions were incorrect, the assessment was appropriate since the student had both autism and mental retardation. Plaintiff lost on all counts except one. The student was to be labeled as having autism in addition to mental retardation.

Sarah Dorros v. District of Columbia (2007)

This case involved eight year old Sarah diagnosed with high functioning autism. After the family moved to Washington D.C. the father registered her at Murch Elementary School. He failed to inform them that Sarah was accepted at Ivymount, a private special education school in Maryland. The parents unilaterally enrolled her without a complete assessment by a Murch evaluator. In August 2004, parents counsel sent a letter to the principal requesting that the evaluation process be expedited to ensure FAPE for Sarah. In September, two school psychologists, a case manager, and a speech pathologist observed Sarah and determined that Sarah met the criteria for high functioning autism and was in need of an appropriate setting to address delays and meet her needs. In October, the plaintiffs requested a due process hearing (almost a month prior to the end of the 120 day assessment statute) stating that District of Colombia Public Schools (DPCS) failed to identify Sarah's needs and neglected to provide the appropriate special education services.

The Hearing Officer found that DPCS was prepared to meet the 120 day window but plaintiff's counsel delayed that process by not providing a timely response to letters of invitation from DPCS. In December DPCS agreed to fund the Ivymount placement and funded her placement starting in December. Plaintiffs appealed the decision by the hearing officer seeking tuition reimbursement for August-December because DPCS failed to assess within the 120-day requirement of District of Colombia law. Based on court's review of the hearing officer's decision, it was determined that plaintiff's own delays slowed the evaluation process. The court affirmed the hearing officer's judgment.

B.V. v. Department of Education, State of Hawaii (2008)

In this case the mother claimed the 15 year old male student, JC, diagnosed with Asperger's Syndrome, did well in school until the 2003–2004 school year when he was placed in a self-contained classroom with a special education teacher, an Intensive Instructional Services Consultant (IISC), and a skills trainer. The teacher began to write JC's name on the board when he did something wrong, and failed to allow him to leave class 15 minutes early at the end of the day to avoid the noise and confusion, among other things, which upset his routine and resulted in "increased anxiety and aggression," according to his doctor. Plaintiff added that JC "started to have nightmares of dying and blowing up the school" and was becoming suicidal (p.7).

Plaintiff requested an emergency IEP meeting in November and requested that the Department of Education (DOE) hire a special skills trainer, of her choice, experienced with Asperger's Syndrome. JC's annual review, due in December 2003, was conducted in January 2004. After the January meeting, plaintiff informed the DOE that she was enrolling her son at Loveland Academy and was requesting reimbursement. The principal

at Kailua Intermediate School sent the plaintiff a letter stating that since Kailua was able to implement the IEP and provide FAPE, enrollment at Loveland would be at plaintiff's expense. Plaintiff subsequently sent Kailua a bill for tuition.

Plaintiff requested a due process hearing. The hearing officer concluded that although writing a student's name on the board was probably not appropriate for the student, it was not enough to show a denial of FAPE. Plaintiff appealed and argued that she was entitled to reimbursement of tuition because the school failed to respond to her requests for a skills trainer, and that the school failed to provide a FAPE. The court concluded that the DOE did not violate the student's procedural or substantive rights and that the lack of an experienced skills trainer did not deny JC a FAPE. The judge noted that the court makes decisions based on provision of a FAPE, and cannot authorize the DOE to provide the best possible educational alternative for JC or authorize reimbursement for JC's tuition.

Rose Olivas v. Cincinnati Public Schools (2007)

This case involved a young student in elementary school requiring door-to-door services due to a diagnosis of autism, Asperger's Syndrome, Attention Deficit Hyperactivity Disorder (ADHD) and other disabilities. The transportation director determined that it was unsafe to travel up the steep driveway so the mother hired a taxi to transport her son to school and filed a due process complaint citing that the stop was inadequate. The street, she maintained, was too busy, and she was too disabled herself to escort her son down the driveway.

The school board proposed that an escort would be sent to walk the student from the apartment to the bus stop and offered to pay $368 for transportation costs paid by the

mother and $1000 in attorney's fees. Olivas rejected the offer and requested a private transportation company that could navigate the steep driveway. The Hearing Officer held the district should continue to provide the escort, and upheld the reimbursement offer by the school district. Olivas then filed a supplemental complaint seeking injunctive relief, declaratory judgment, and damages. The trial court ordered the school board to pay $57,181.46 in costs and attorney's fees. On appeal, the district cited that Olivas failed to exhaust administrative requirements when she filed a supplemental complaint. The court determined that the plaintiff failed to exhaust administrative remedies and that the trial court erred when it failed to dismiss her claims for injunctive relief, declaratory judgment, and damages. The trial court's judgment was reversed, confirming the hearing officer's decision awarding attorney's fees and costs. While the district did not prevail in this case, neither did Mrs. Olivas, since the case was reversed and remanded for recalculation of attorney's fees and costs in accordance with hearing officer's decision since it demonstrated that the district attempted to meet the individualized needs of the student.

T.P. & S.P. v. Mamaroneck Union Free School District (2008)

In this case it appeared that the school district understood the requirements of legislative reforms (NCLB) and legal mandates (IDEA) and attempted to minimally comply. The Impartial Hearing Officer (IHO) ruled for the district and denied the parent's request for reimbursement for ABA services. Upon appeal, the District Judge found that the school district deprived the plaintiffs the opportunity to participate in the IEP process, "predetermined" (p. 4) the IEP by recommending placement before goals and objectives were developed, and failed to "consider a full continuum" (p. 3) of

extended day and parent training services, resulting in a document that was not reasonably calculated for the student to receive educational benefit and denied him of a FAPE. In addition, the court found that the request for ABA and speech and language services to provide transitional support from a 1:1 program to a full day school was not "grandiose or inappropriate" and that the parents should be reimbursed for them, under the provisions of the IDEA (p. 7).

S.B. v. Pomona Unified School District (2008)

Procedural due process is a right for parents when districts fail to follow IDEA with regard to IEP development. However, rulings have been interpreted differently on whether procedural violations were grave enough to deny the student of a FAPE. In *S.B. v. Pomona Unified School District*, the Central District Court judge determined that the district denied the student a FAPE by failing to include the regular education teacher in the meeting for the IEP under examination for procedural violations. The judge ordered the district to reimburse the parents for the costs of an independent evaluation and the costs of a direct private therapy program and supervision not to exceed 23 hours per month.

Board of Education of Township High School District No. 211 v. Michael & Diane Ross (2007)

The 7th Circuit Court of Appeals affirmed the judgment of the district court that a procedural IEP error did not deny the student with a FAPE in this case. The student was a 16 year old high school female with Rett's Syndrome. She was mainstreamed for her first year of high school, but after injuring staff and being consistently disruptive in class, the district sought special placement. Despite the procedural error of not including a specific

transition plan, summary judgment was granted to the school district and affirmed on appeal to the 7th Circuit Court.

Deal v. Hamilton County Department of Education (2008)

IDEA has been an underfunded mandate, but schools cannot use lack of funds as a reason to not provide a service which denies a FAPE (Hulett, 2009). In some cases districts pay thousands of dollars in costs and spend years in litigation in an attempt to avoid providing to students services that were requested by parents. In *Deal v. Hamilton County Department of Education*, after six years of litigation, the court awarded $25,204.98 to reimburse the Deals for ABA therapy. The Hamilton County Department of Education (HDCE) was directed to pay $36,528, $149,113.75, and $55, 696.10 to three separate law firms and attorneys.

Virtually every case reviewed above applied the *Rowley* standard when determining a) if the student was denied a Free and Appropriate Public Education, b) if the school districts complied with the procedural and substantive requirements of the IDEA, c) if the student was provided a "basic floor of opportunity" to "access specialized education and services" and d) if the school was able to "confer educational benefit" (Yell, 2006, p. 227). Fifty-nine cases involved the provision of a Free and Appropriate Public Education in the Least Restrictive Environment (LRE) with access to a public education with non-disabled students. *Roncker v. Walter* (1983), *Daniel R.R. v. State Board of Education* (1989), *Sacramento City School District v. Rachel H. by Holland* (1994) and *Hartmann v. Loudoun County Board of Education* (1998) were all cited as precedents, as were other, lesser known cases.

When behavior significantly contributed to the school district's decision for a more restrictive environment, *Honig v. Doe* was cited as the case of precedent. When districts request an injunction (often referred to as the *Honig* injunction), or Temporary Restraining Order (TRO) to remove a dangerous student from the classroom, the time is to be utilized to conduct a manifestation determination or to determine a change of placement (Hulett, 2009).

School districts prevailed over parents almost 2:1 in the ninety-nine cases examined in this study. Three independent variables were identified as predictors of prevailing party. While diagnoses and a failure to provide services were significant ($p < .05$), neither variable significantly increase the odds of predicting prevailing party over 2:1. Only evaluation (OR = 3.485) as a variable in the litigation examined proved both significant ($p < .05$) and increased the odds above 2:1. Evaluations were involved in twenty-seven of the cases examined. When evaluations were involved in the litigation, it increased the odds almost 3.5 times compared to the 66.3% that school districts prevailed before analysis. The finding of a single variable that increased the odds of determining prevailing party was attributed to the individualized nature of educational programming for students with autism, the differences in interpretation of IDEA by separate states and judges, and the "it depends" nature of special education law (Choutka, Doloughty, & Zirkel, 2004).

Limitations of the Study

The availability of cases was limited by posting to the *LexisNexis* search engine. The researcher acknowledged that there may have been cases for the year 2008 that were

not yet posted at the time the research was conducted. While most information coded in this study was readily available as a result of case by case examination, age and grade level were not always indicated in each case. In addition, not all cases make it to the *LexisNexis* system. Many due process cases are settled through mediation, while others are not appealed to the state review level and therefore are not reported (Mandlawitz, 2002).

The acquisition of cases for examination in this study was different from prior studies. While earlier studies utilized the *Individuals with Disabilities Education Law Report* (IEDLR) and *Education for Handicapped Law Report* (EDLR), Reed Elsevier's *LexisNexis*, an online database, was used in this study. This database had all U.S. federal and state cases archived with newer cases e-filed after they were decided, improving temporal accessibility to users. While this author did not use the same data base as the previous studies, LexisNexis was determined to be comparable enough not to have significantly biased results.

Suggestions for Future Research

Other areas noted throughout the cases examined might prove worthy of future examination. Future research might include researching the impact of parent training, the use of assistive technology, and the impact of failing to exhaust administrative remedies as part of the litigation process with regard to autism and IDEA. In addition, since the role of transition may become more prominent in such litigation as students with autism age and move through high school, this research might be worth repeating in another five

years. Finally, it might be helpful to examine the impact of expert witness testimony on case outcomes as Mandlawitz (2002) suggested.

Mandlawitz (2002) noted "It is recommended that school districts consider legal standards as programs are designed, that programs fit the unique need of the child, that programs ensure appropriate progress educationally and socially, and that communication between parents and school districts be open and honest so that the due process system is used as the last resort" (p. 495).

Summary

The examination of case law (2007-2008) regarding Autism Spectrum Disorder (ASD) and violations to the Individuals with Disabilities Education Act (IDEA) revealed that schools prevailed at a rate of 2:1 over parents. Studies by Zirkel (2002) and Choutka, Doloughty, & Zirkel (2004) yielded steady and stable outcomes overall between school district and parents. An earlier study by Yell and Drasgow (2000) examined forty-five published due process hearings and court cases between 1993 and 1998 regarding Lovaas (ABA) methodology. They found that parents prevailed in these cases 76 % of the time (34 of 45 cases). While this study focused on ABA as an educational methodology, many procedural violations described in this study (failing to evaluate all areas of need, and the conduct of evaluations by individuals with no knowledge of autism or behavioral interventions) contributed significantly to rulings in favor of parents. The move from parents prevailing in the 1990's to a climate more favorable to school districts in 2007-2008 indicates that school districts now have more evaluators knowledgeable of autism, are conducting timely evaluations, and understand the specific procedural requirements

of IDEA (Yell & Drasgow, 2000). The question is whether this knowledge will lead to better outcomes for students. If the trend found in this study continues regarding prevailing party, then schools will continue to prevail in ever higher numbers. This could be good news if it means that individualized services are being provided and procedural rules are being followed; bad news if schools merely become compliance experts.

Special education law developed through the efforts of individuals dedicated to ensuring that students with disabilities receive a Free and Appropriate Public Education (FAPE) in the Least Restrictive Environment (LRE), a right afforded to their peers without disabilities (Hulett, 2009). It will continue to be the role of individual advocates and advocacy groups such as the National Association for Retarded Citizens (NARC), the Council for Exceptional Children and various self-advocacy groups to move special education forward, especially in light of the results of this study.

The author found that schools prevail most when due process complaints center on procedural violations while parents fare better when substantive issues are involved. Logistic regression indicated that evaluation was key to predicting litigation outcome. This highlights the importance of assessment and evaluation to the development of an Individualized Educational Program. While the IEP is the key to IDEA and FAPE, proper evaluation is key to IEP development. Parents' requests for Independent Educational Evaluations (IEE) are being denied and upheld in court when school districts show that their evaluations are comprehensive, timely, individualized, and conducted by qualified professionals (*A.B. v. San Francisco,* 2008; *Blake B. v. Council Rock S.D,* 2008; *L.J. v. Broward Co.,* 2008; *M.M. v. Clarke Co. S.D.,* 2008; *M.W. v. Clarke Co.,* 2008; *Weissburg*

v. Lancaster S.D., 2008; *D.B. v. Houston I.S.D.*, 2007; *DeMerchant v. Springfield S.D.*, 2007), even when the parents are dissatisfied with school district evaluation results.

Advocates will need to find additional ways to assist and educate parents to ensure that their participation is valued in the process. Tincani (2007) promotes a contextual fit approach with regard to IEP development. Programming must be evidence based, but ultimately geared toward effectiveness in real classrooms under typical conditions. Team member's values must also be considered and if one strategy or intervention is disapproved of by a member of the team, alternatives must be explored. This study indicated that experts familiar with autism were key to school districts prevailing in the cases studied, but this expert input must not become the only voice heard when making IEP decisions, even if they lead to success for districts. The individual child's needs must be foremost when determining interventions, not just what will result in success should due process be pursued.

Realistic expectations and knowledge of conflicting demands regarding resources and implementation of interventions, and honest discussion of these by team members is also key to successful implementation and outcomes (Tincani, 2007). The author noted that parents fared better when substantive violations were part of the due process complaint. This highlights the need for schools to collect data and evaluate interventions as they are implemented to ensure they are not only complying with the IEP but are assessing and modifying interventions to promote successful outcomes.

Service providers for students with autism (such as speech, language, behavior, and occupational therapists) and other school district personnel should be mindful that even though compliance with IDEA regarding evaluations and IEPs are important to

avoid litigation, the focus should be on student outcomes and not on the documents themselves. When an IEP or evaluation does not accurately reflect the needs of the students, the IEP team should recognize these shortcomings and should work to develop goals that promote positive student outcomes that enhance academic progress, promote independence, and increase quality of life for these students. Hearing Officers and court systems must also be aware that the trend now favors schools as prevailing parties in autism and IDEA litigation. Their focus should not only be on compliance with the five pillars (IEP, FAPE, LRE, evaluation, and parent participation) of IDEA procedurally, but on the quality of the IEP and whether it supports the true intent of this mandate and the provision of a Free and Appropriate Public Education for students with autism.

Finally, autonomy and self-determination must be promoted in students as they move through the education system in the least restrictive environment possible and transition into adulthood. By promoting autonomy early and teaching self-determination and choice-making early as part of the IEP for each individual student, autonomy is more likely to be maintained and supported through high school and into adult life (Bell, Henthorne, Hill, Turnbull, & Zito, 2007). Schools will need to be reminded to keep students first, to evaluate the whole student, to promote a least restrictive environment that fosters autonomy, independence and quality of life. All stakeholders involved with students with autism, especially in light of the results of this study, must avoid the tendency to become compliance experts focused on meeting the letter of the law at the expense of meeting the real needs of individual students with autism.

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APPENDICES

APPENDIX A

BASIC STRATEGIES TO SUPPORT NEUROLOGICAL DIFFERENCES

Basic Strategies to Support Neurological Differences

Neurology	Behavior Related to Differences	Instructional Strategies
Brainstem: Reticular Activating System Regulates sensory input/output	Unusual reactions to sensations Stims to increase vestibular input	Environmental analysis Sanctioned movement
Limbic System: Motivation and affect Meaning attached to events	Unmotivated by typical incentives Unusual affect Difficulty understanding cause/effect	Use preferences to motivate Teach reading of social cues and social cues Give information visually
Cerebrum: Auditory Processing and Integration	Slow to/fails to respond to directions Fails to orient to verbalizations	Use telegraphic speech when giving directions
Cerebellum: Purkinje cells (filtering system)	Hypersensitive to sensory input: * Sight * Sound * Smell * Taste * Touch Coping mechanisms to block sensory input: * Overselective attention * Self-stimulatory behavior * Behavioral avoidance	Environmental engineering: * Reduce/eliminate stimuli * Clarify boundaries Teach compensatory strategies: * Moving to a quieter/darker area * Use low-tech devices * Polite refusals Highlight important information: * Color/size/bold/marked * Masking template/jig
Cerebellum: Modulate attention (capture, maintain, shift)	Difficult to get attention Easily distracted Shifting is jerky, often shifted to wrong place; takes longer to shift attention	Environmental engineering: * Reduce distractions * Teach clear signals Use visual cues to capture/direct attention Allow a few extra seconds for response
Cerebellum: Preparatory system	Wants a set routine Resists changes Perseverations Self-stimulatory behaviors to cope	Visual schedules/activity logs Precorrect Warn of upcoming transitions Frequent review and reassurance

(Heflin & Alaimo, 2007, p.75)

APPENDIX B

SOCIAL STORY FORMAT

Social Story Format

The Social Story format suggests using a combination of seven sentence types with an emphasis on description:

1. Descriptive sentences describe a given situation objectively by defining where the situation occurs, when it will take place, who is involved, what they are doing, and why they are doing it.

2. Perspective sentences state what another individual, usually someone other than the child with autism spectrum disorder, may think or feel.

3. Cooperative sentences can be used to remind adults how they can assist the student to learn a new skill.

4. Directive sentences are sentences that define the response the individual is expected to provide and generally begin with “I will try” or “I will work on” rather than “I will” to allow for some flexibility.

5. Affirmative sentences generally stress the directive in the Social Story.

6. Control sentences are written by the student and help him or her remember the directive.

7. Partial sentences are fill-in-the-blank sentences that require the student to provide the correct response.

Note. Adapted from Gray (2004)

APPENDIX C

SOCIAL STORY GUIDELINES

Social Story Guidelines

* Shares social information in a reassuring manner; at least 50% of the stories should praise achievement.

* Has an introduction, body, and conclusion.

* Answers “wh” questions.

* Is written from the student’s perspective (i.e., first-person or third-person format).

* States behavior positively.

* Contains descriptive sentences and some or all of the other types of sentences.

* Describes actions and events rather than directs.

* Is geared to the individual’s abilities and incorporates her or his interests.

* May use visual supports and illustrations.

* Has a title that is consistent with applicable criteria above.

Note: Adapted from Gray (2004)

APPENDIX D

COURT CASES

Court Cases

1st Circuit

Puerto Rico

Howard. v. Feliciano, No. 05-1928, LEXIS 61146, (D. P.R. Aug 8, 2008), LEXIS 72943 (D. P.R. Sep 28, 2007).

Maine

Mr. & Mrs. C. v. Maine School Administrative District No. 6, 538 F. Supp. 2d 298, LEXIS 21747, (D. Me. Mar 17, 2008), No. 06-198, LEXIS 87900, (D. Me. Nov 28, 2007).

Millay vs. Surry School Department, No. 07-178, LEXIS 89684, (D. Me. Oct 28, 2008), LEXIS 22033, (D. Me. Mar 11, 2008).

**Mr. & Mrs. I. v. Maine School Administrative District No. 55,* 480 F. 3d 1, LEXIS 5128, (C. Me. Mar 5, 2007), 416 R. Supp. 2d 170, LEXIS 3463, (D. Me., 2006).

Massachusetts

Doe v. Boston Public Schools, 550 F. Supp. 2d 170, LEXIS 35296, (Apr 1, 2008).

2nd Circuit

New York

Danielle G. v. N.Y. City Department of Education, No. 06-CV-2152, LEXIS 60192, (E.D. N.Y. Aug 7, 2008).

Tarlowe v. New York City Board of Education, No. 07-Civ. 7936, LEXIS 52704, (S.D. N.J. Jul 3, 2008).

E.H. v. Board of Education of the Shenendehowa Central School District, No. 1:05-CV-972, LEXIS 64974, (N.D. N.J. Aug 20, 2008).

Student X v. New York City Department of Education, No. 07-CV-2316, LEXIS 88163, (E.D. N.Y. Oct 30, 2008).

J.S. v. North Colonie Central School district, No. 1:07-CV-481, LEXIS 93528, (N.D. N.Y. Nov 18, 2008).

A.D. & H. D. v. New York City Department of Education, No. 06 Civ. 8306, LEXIS 91448, (S.D. N.Y. Apr 21, 2008).

M.M. & H.M. v. New York City Department of Education, No.07 Civ. 2265, LEXIS 84483, (S.D. N.Y. Oct 20, 2008).

K.Y. & T.Y. v. New York City Department of Education, No. CV 3199, LEXIS 89827, (E.D. N.Y. Jul 2, 2008).

T.P. & S.P. v. Mamaroneck Union Free School District, 06 CIV 0509, LEXIS 35288, (S.D. N.Y. May 10, 2007).

Vermont

Dana & Gary DeMerchant v. Springfield School District, No. 1:05-CV-316, LEXIS 65233 (D. Vt. Sep 4, 2007), LEXIS 9637, (D. Vt. Feb 8, 2007), LEXIS 55312, (D. Vt. Aug 7, 2006).

Connecticut

Lisa Sousa V. State of Connecticut Department of Education, CV074014002S, LEXIS 3456 (D. Conn. Dec 26, 2007).

3rd Circuit

New Jersey

D.L. & K.L. v. Springfield Department of Education, No. 05-5129, LEXIS 17727, (D. N.J. Mar 6, 2008).

J.G. & D.G. v. Paramus Board of Education, No. 06-5612, LEXIS 30030, (D. N.J. Apr 11, 2008).

**Fisher v. Stafford Township Board of Education,* No. 07-1891, LEXIS 17524, (Cir. N.J. Jul 22, 2008), LEXIS 14003, (D. N.J. Feb 27, 2007).

L.J. v. Audubon Board of Education, No. 06-5350, LEXIS 71122, (D. N.J. Sep 10, 2008), LEXIS 12337, (D. N.J. Feb 19, 2008)

R.P. v. Ramsey Board of Education, No. 06-CV-5788, LEXIS 70884, (D. N.J. Sep 17, 2008).

S.K. v. Parsippany-Troy Hills Board of Education, No. 07-4631, LEXIS 80616, (D .N.J. Oct 9, 2008).

W.C. and S.C. v. Summit Board of Education, No. 06-5222, LEXIS 95021, (D. N.J. Dec 31, 2007).

Pennsylvania

Blake B. v. Council Rock School District, No. 06-1968, LEXIS 78329, (E.D. Pa. Oct 3, 2008).

A.Y. v. Cumberland Valley School District, No. 1:07-CV-1184, LEXIS 52985, (M.D. Pa. July 7, 2008).

Heather D. v. Northampton Area School District, LEXIS 29219, (E.D. Pa. Apr 9, 2008), 511 F. Supp. 2d 549, LEXIS 44416, (E.D. Pa. June 19, 2007).

Koehler v. Juniata County School District, No. 1:07-CV-0117, LEXIS 32079, (M.D. Pa. Apr 17, 2008).

K.R. v. School District of Philadelphia, No. 06-2388, LEXIS 49064, (E.D. Pa. June 26, 2008), LEXIS 68803, (E.D. Pa. Sep 14, 2007).

Melissa G. v. School District of Philadelphia, No. 06-5527, LEXIS 2871, (E.D. Pa. Jan 14, 2008).

Travis G. v. New Hope-Solebury School District, 544 F. Supp. 2d 435, LEXIS 19646, (E.D. Pa. March 13, 2008).

J.N. v. Pittsburgh City School District, 536 F. Supp. 2d 564, LEXIS 86853, (W.D. Pa. Jul 1, 2008).

Laura P. v. Haverford School District, No. 07-5395, LEXIS 56190, (E.D. Pa. Nov 21, 2008).

N.M. v. School District of Philadelphia, No. 08-cv-1162, LEXIS 93335, (E.D. Pa. Nov 9, 2008).

William D. v. Manheim Township School District, No. 04-4535, LEXIS 72657, (E.D. Pa. Sep 27, 2007).

4th Circuit

Virginia

**A.K. v. Alexandria City Schools*, 484 F. 3d 672, LEXIS 9466, (Cir. Apr 26, 2007) 409 F. Supp. 2d 689, LEXIS 38392 (E.D. Va. 2005).

**J.P. v. County School Board of Hanover County*, 516 F. Supp. 3d 254, LEXIS 3168, (Cir. Feb 14th, 2008).

Simchick v. Fairfax County School Board, No. 1:05cv1476, LEXIS 33735, (E.D. Va. May 8, 2007), LEXIS 62786 (E.D. Va. Aug 11, 2006)**.**

West Virginia

J.D. v. Kanawha County Board of Education, No. 2:06-cv-00167, LEXIS 56947, (D. W.Va. Aug 3, 2007).

5th Circuit

Louisiana

J.M.C. & M.E.C. v. Louisiana Board of Elementary & Secondary Education, 562 F. Supp. 2d 748, LEXIS 46410, (M.D. La. June 13, 2008).

Texas

D.B. v. Houston Independent School District, No. H-06-354, LEXIS 73911, (S.D. Tex. Sep 29, 2007).

**Marc V. v. North East Independent School District*, 455 F. Supp. 2d 577, LEXIS 22278, (Cir. Tx. September 18, 2007), 455 F. Supp 2d 577, LEXIS 62752 (W.D. Tex. Aug 28, 2006).

6th Circuit

Ohio

Winkelman v. Parma City School District, 411 F. Supp. 2d 722, LEXIS 64381, (N.D. Ohio Aug 19, 2008).

Grine v. Sylvania Schools Board of Education, No. L-06-1314, LEXIS 1341 (D. Ohio Mar 31, 2008), LEXIS 1407, (D. Ohio Mar 30, 2007).

Courtland Bishop v. Oakstone Academy, 477 F. Supp. 2d 876, LEXIS 15181, (S.D. Ohio Mar 5, 2007), No. 06-CV-404, LEXIS 13418, (S.D. Ohio Feb 27, 2007).

Rose Olivas v. Cincinnati Public Schools, No. C-060417, LEXIS 1682, (D. Ohio Apr 20, 2007).

Tennessee

**Deal v. Hamilton County Department of Education*, No. 06-6123, LEXIS 514 (Cir. Tenn. Jan 7, 2008), LEXIS 76324, (E.D. Tenn. Aug 1, 2006), LEXIS 27570 (E.D. Tenn. Apr 3, 2006).

7th Circuit

Indiana

B.B. v. Perry Township School District, No. 1:07-cv-0323, LEXIS 53246, (S.D. Ind. Jul 11, 2008).

Wisconsin

A.S. v. Madison Metropolitan School District, 477 F. Supp. 2d 969, LEXIS 18869, (W.D. Wis. Mar 13, 2007).

**Hjortness v. Neenah Joint School District*, 507 F.3d 1060, LEXIS 30546, (Cir. Wis. Aug 18, 2007), 498 F. 3d 655, LEXIS 19744, (Cir. Wis. 2007), LEXIS 43642 (E.D. Wis. 2007).

Illinois

Brett K. v. Momence Community Unit School District No. 1, No. C 3353, LEXIS 23880, (N.D. Ill. Mar 30, 2007).

** Board of Education of Township High School District No. 211 v. Michael & Diane Ross*, 486 F. 3d 267, LEXIS 11097, (Cir. Ill. May 11, 2007), LEXIS 17450 (N.D. Ill. Aug 15, 2005)

8th Circuit

Arkansas

V.M. v. Brookland School District, No. 3:05CV00232, LEXIS 37340, (E.D. Ark. May 6, 2008).

J.S. & A.S. v. East End School District, No. 4:05-CV-01599, LEXIS 24996, (E.D. Ark. Apr 3, 2007).

Minnesota

C.N. v. Willmar Public Schools ISD No. 347, No. 07-4774, LEXIS 63673, (D. Minn. Aug 19, 2008).

A.C. v. Independent School District, No. 06-3099, LEXIS 37681, (D. Minn. May 22, 2007), LEXIS 81580, (D. Minn. Nov 7, 2006).

Missouri

Astourian v. Blue Springs R-IV School District, No. 07-0179, LEXIS 62631, (W.D. Aug 13, 2008).

K.F. v. Francis Howell R-III School District, No. 4:07CV01691, LEXIS 20700, (E.D. Mar 17, 2008).

O'Dell v. Special School District of St. Louis County, 503 F. Supp. 2d 1206, LEXIS 23416, (E.D. Mar 30, 2007).

9th Circuit

Arizona

Wiatt v. Prescott Unified School district, No. 3:07-cv-8082, LEXIS 37302, (D. Az. May 6, 2008).

Parenteau v. Prescott Unified School District, No. CV 07-8072, LEXIS 104465, (D. Az. Dec 11, 2008).

California

A.M. v. Westside Union School District, No. CV 08-893, LEXIS 72633, (C.D. Ca. Jul 25, 2008).

Joshua A. s. Rocklin Unified School District, No. 07-01057, LEXIS 20115, (E.D. Ca. Mar 14, 2008), LEXIS 63978, (E.D. Ca. August 17, 2007).

J.R. v. Sylvan Union School District, No. CIV S-06-2136, LEXIS 44800 (E.D. Ca. Jun 4, 2008), 18168, (Mar 10, 2008), LEXIS 89821, (E.D. Ca. Nov 27, 2006).

K.S. v. Fremont Unified School District, 545 F. Supp. 2d 995, LEXIS 13397, (N.D. Ca. Feb 22, 2008), LEXIS 67494, (N.D. Ca. Sep 4, 2007).

**L.M. vs. Capistrano Unified School District,* 538 F. 3d 1261, LEXIS 17634, (9th Cir. Cal. Aug 19, 2008), LEXIS 97057, (C.D. Ca. Mar 13, 2007).

S.B. v. Pomona Unified School District, No. CV 06-4874, LEXIS 31458, (C.D. Ca. Apr 15, 2008).

Weissburg v. Lancaster School District, No. CV-1921, LEXIS 27196, (C.d. Ca. Mar 28, 2008).

Brenneise v. San Diego Unified School District, No. 08cv28, LEXIS 90724, (S.D. Ca. Nov 7, 2008).

A.B. v. San Francisco Unified School District, No. C 07-4738, LEXIS 91298, (N.D. Ca. Oct 30, 2008).

G.J. McElroy v. Tracy Unified School District, No. 2:07-CV-00086, LEXIS 89866, (E.D. Ca. Oct 28, 2008), LEXIS 44065, (E.D. Ca. Jun 8, 2007).

**JG, NG, RG, & SG v. Douglas County School District,* No. 06-17380, LEXIS 26389, (Cir. Ca. Sep 12, 2008).

J.C. v. Vacaville Unified School District, No. CIV.S-05-0092, LEXIS 2475, (E.D. Ca. Jan 10, 2007).

N.R. v. San Ramon Valley Unified School District, No. C 06-1987, LEXIS 9135, (N.D. Ca. Jan 25, 2007).

Linda Pedraza v. Alameda Unified School District, No. C 05-04977, LEXIS 26541, (N.D. Ca. Mar 27, 2007).

M.J. v. Clovis Unified School District, No. 1:05-CV-00927, LEXIS 28761, (E.D. Ca. Mar 27, 2007), LEXIS 66346, (E.D. Cal. Sep 15, 2006).

E.P. v. San Ramon Valley Unified School District, No. C05-01390, LEXIS 47553, (N.D. Ca. Jun 21, 2007).

** H.B. v. Virgenes Unified School District,* 239 Fed. Appx. 342, LEXIS 16160, (Cir. Ca. Jun 14, 2007).

Wooley v. Valley Center-Pauma Unified School District, No. 07cv0675, LEXIS 50461, (S.D. Ca. Jul 11, 2007).

R.K. v. Hayward Unified School District, No. C 06-07836, LEXIS 72950, (N.D Ca. Sep 21, 2007).

Hawaii

B.V. v. Department of Education, State of Hawaii, 514 F. 3D 1384, LEXIS 3001, (D. Haw. Feb 12, 2008), 451 F. Supp. 2d 1113, LEXIS 39585, (D. Haw. Dec 19, 2005).

B.T. v. Department of Education, State of Hawaii, No. 08-00356, LEXIS 64446, (D. Haw. Aug 21, 2008).

**Mark H. v. Lemahieu,* 513 F. 3d 922, LEXIS 987, (Cir. Haw. Jan 17, 2008), 372 F. Supp. 2d 591, LEXIS 20212, (D. Haw. 2005).

Paul K. & Stephanie K. v. Hawaii, 567 F. Supp. 2d 1231, LEXIS 50382, (D. Haw. 1 Jul 2008).

Makiko & Jeffrey D. v. State of Hawaii, No. 06-00189, LEXIS 28501, (D. Haw. Apr 17, 2007).

Alan & Cheryl H. v. State of Hawaii, No. 06-00212, LEXIS 71145, (D. Haw. Sep 24, 2007).

Montana

**N.B. & C.B. v. Hellgate Elementary School District,* No. 07-35018, LEXIS 18865, (Cir. Sep 4, 2008).

Nevada

Yates v. Washoe County School District, No. 03:07-CV-00200, LEXIS 68937, (D. Nev. Aug 27, 2008), LEXIS 83878, (D. Nev. Oct 30, 2007).

Oregon

**Van Duyn v. Baker School District,* 481 F. 3d 770, LEXIS 7606, (Cir. Or. Apr 3, 2007), No. CV-02-01060, LEXIS 44883, (D. Or. Jan 11, 2005).

10th Circuit

Colorado

**Systema v. Academy School District No. 20,* 538 F. 3d 1306, LEXIS 18221, (Cir. Co. Aug 26, 2008).

**Thompson R2-J School District v. Luke P.,* 540 F. 3d 1143, LEXIS 18612, (Cir. Co. Aug 29, 2008), LEXIS 47043, (D. Co. Jun 27, 2007).

**McQueen v. Colorado Springs School District No. 11,* 488 F. 3d 868, LEXIS 12223, (Cir. Co. May 25, 2007), 419 F. supp. 2d 1303, LEXIS 13312, (D. Co. 2006).

New Mexico

Chavez v. Tularosa Municipal Schools, No. CIV 05-05-380, LEXIS 93203, (D. N.M. Nov 17, 2008), LEXIS 97751, (D. N.M. Sep 10, 2007).

11th Circuit

Georgia

B.F. v. Fulton County. School District, No. 1:04-CV-3379, LEXIS 76714, (N.D. Ga. Sep 9, 2008), LEXIS 82975 (N.D. Ga. Nov 7, 2007).

M.W. v. Clarke County School District, No. 3:06-CV-49, LEXIS 90389, (M.G. Ga. Nov 6, 2008), LEXIS 75278, (M.D. Ga. Sep 29, 2008).

Florida

L.J. v. Broward County School Board, No. 06-61282, LEXIS 16972, (S.D. Fl. Mar 5, 2008), LEXIS 97252, (S.D. Fl. Nov 20, 2007).

L.M.P. v. School Board of Broward County, No. 06-61897, LEXIS 5212, (S.D. Fl. Jan 24, 2008), LEXIS 71845, (S.D. Fl. Sep 26, 2007).

School Bd. of Lee County v. E.S, 561 F. Supp. 2d 1282, LEXIS 18098, (M.D. Fl. Mar 10, 2008), LEXIS 96642 (M.D. Fl. Aug 27, 2007).

Hughes v. District School Board of Collier County, No. 2:06-cv-629, LEXIS 89359, (M.D. Fla. Sep 22, 2008), LEXIS 68828 (M.D. Fl. Sep 18, 2007).

D.C. Circuit

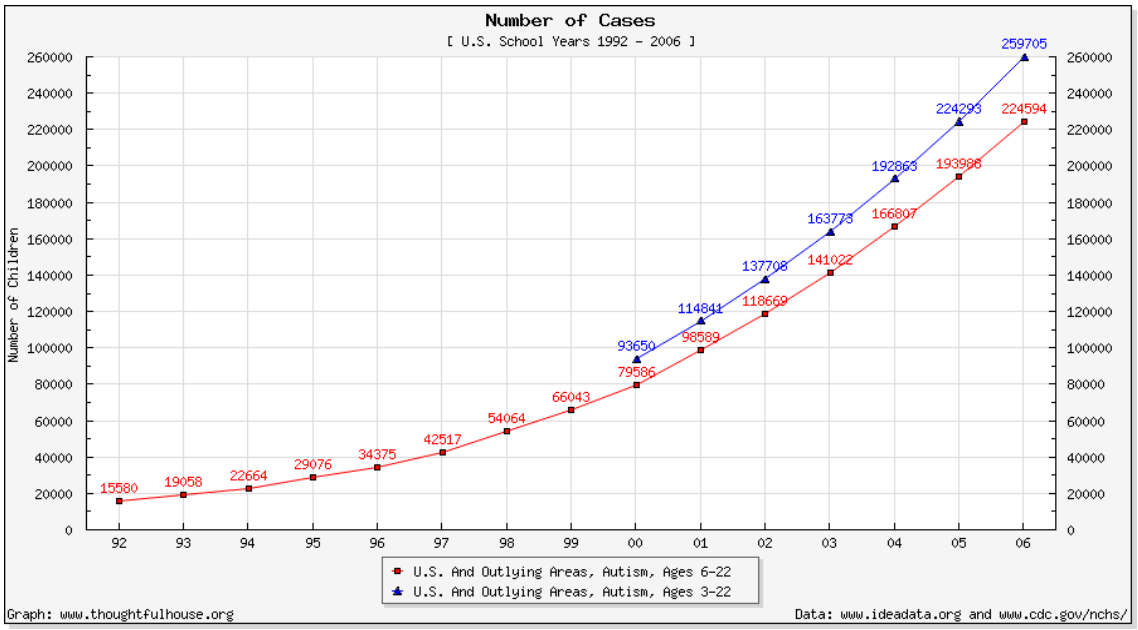
Washington D.C.

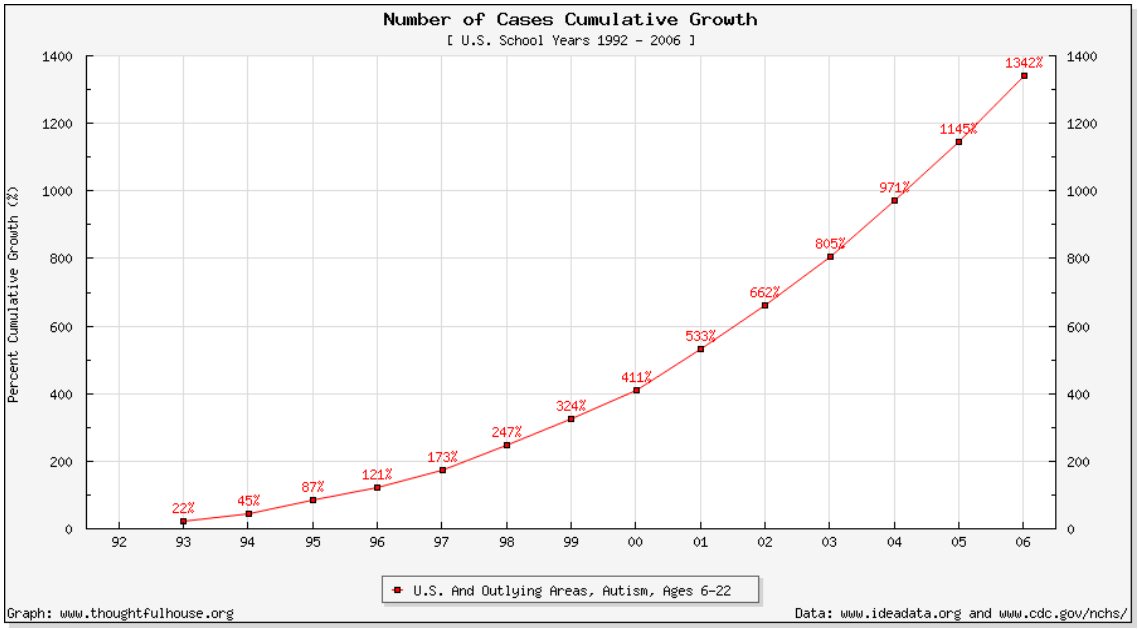
Sarah Dorros v. District of Columbia, 510 F. Supp. 2d 97, LEXIS 70076, (D. D.C. Sep 21, 2007).

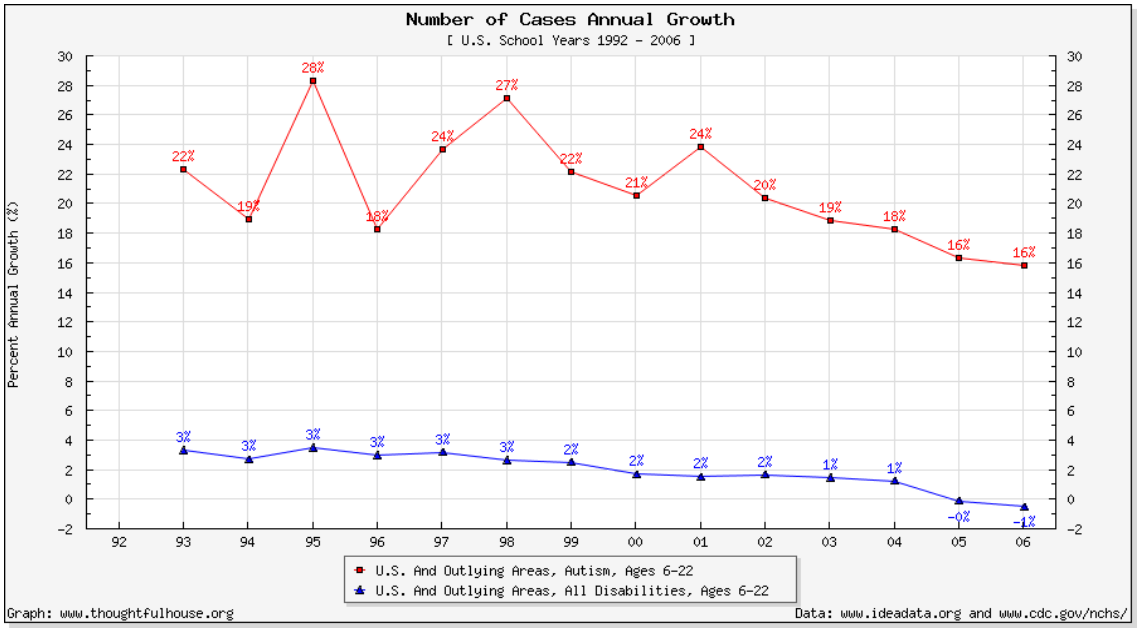
* Circuit Court Cases

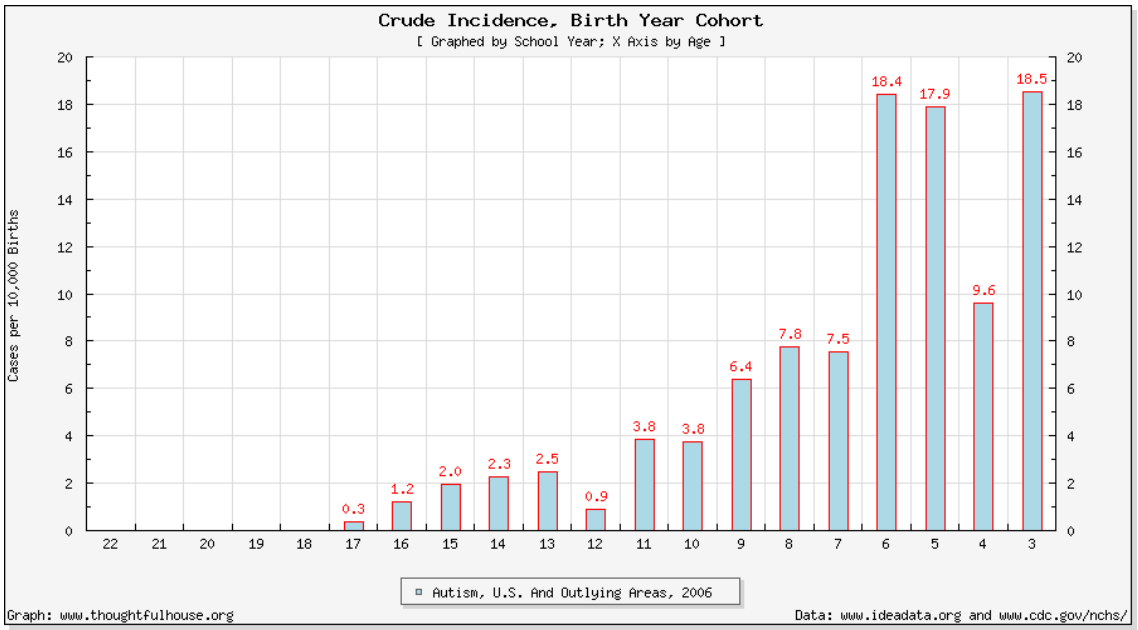
APPENDIX E

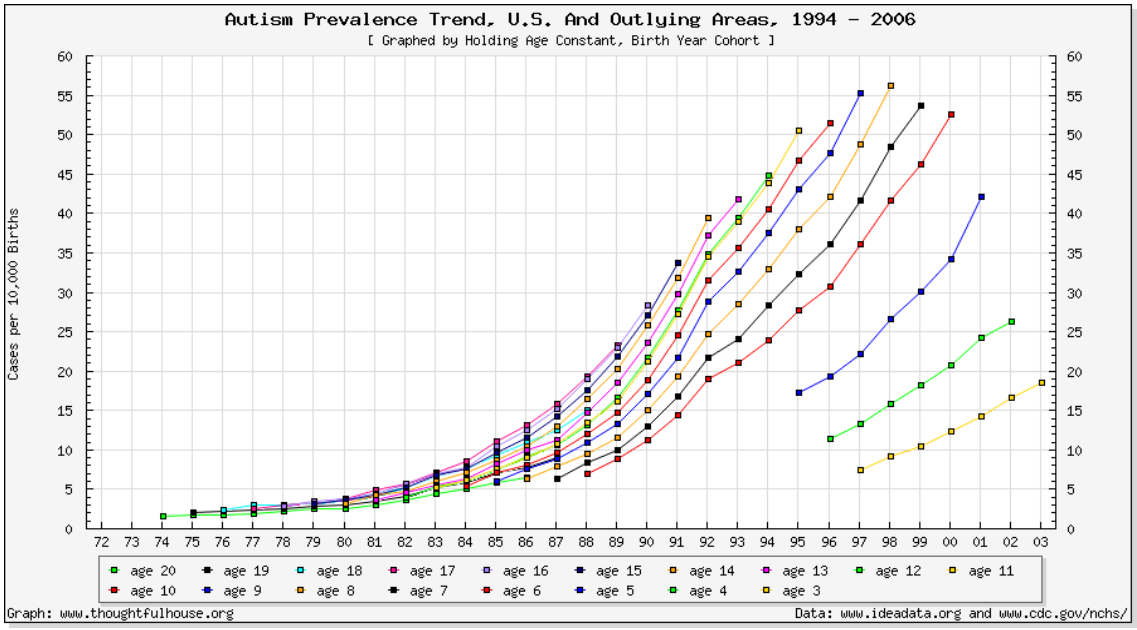
CENTERS FOR DISEASE CONTROL AUTISM STATISTICS/INCIDENCE


Number of Cases
[U.S. School Years 1992 - 2006]
Number of Children
15580
19058
22664
29076
34375
42517
54064
66043
79586
98589
118669
141022
166807
193988
224594
93650
114841
137708
163773
192863
224293
259705
U.S. And Outlying Areas, Autism, Ages 6-22
U.S. And Outlying Areas, Autism, Ages 3-22
Graph: www.thoughtfulhouse.org
Data: www.ideadata.org and www.cdc.gov/nchs/


Number of Cases Cumulative Growth
[U.S. School Years 1992 - 2006]
Percent Cumulative Growth (%)
22%
45%
87%
121%
173%
247%
324%
411%
533%
662%
805%
971%
1145%
1342%
U.S. And Outlying Areas, Autism, Ages 6-22
Graph: www.thoughtfulhouse.org
Data: www.ideadata.org and www.cdc.gov/nchs/

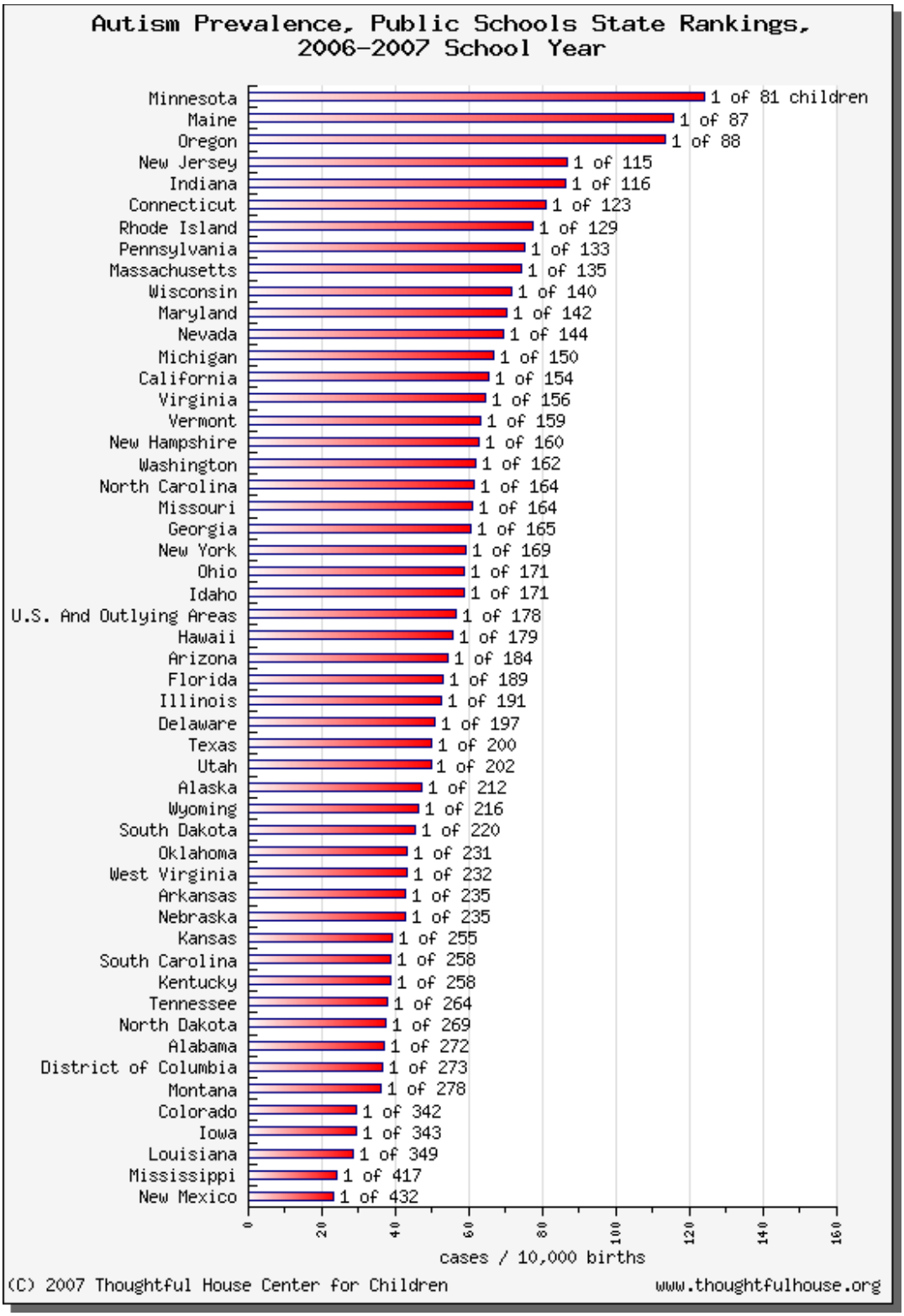

Number of Cases Annual Growth
[U.S. School Years 1992 - 2006]
Percent Annual Growth (%)
22% 19% 28% 18% 24% 27% 22% 21% 24% 20% 19% 18% 16% 16%
3% 3% 3% 3% 3% 3% 2% 2% 2% 2% 1% 1% -0% -1%
92 93 94 95 96 97 98 99 00 01 02 03 04 05 06
U.S. And Outlying Areas, Autism, Ages 6-22
U.S. And Outlying Areas, All Disabilities, Ages 6-22
Graph: www.thoughtfulhouse.org
Data: www.ideadata.org and www.cdc.gov/nchs/


Crude Incidence, Birth Year Cohort
[Graphed by School Year; X Axis by Age]
Cases per 10,000 Births
0.3 1.2 2.0 2.3 2.5 0.9 3.8 3.8 6.4 7.8 7.5 18.4 17.9 9.6 18.5
22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3
Autism, U.S. And Outlying Areas, 2006
Graph: www.thoughtfulhouse.org
Data: www.ideadata.org and www.cdc.gov/nchs/


Autism Prevalence Trend, U.S. And Outlying Areas, 1994 – 2006
[Graphed by Holding Age Constant, Birth Year Cohort]
Cases per 10,000 Births
0 5 10 15 20 25 30 35 40 45 50 55 60
72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01 02 03
age 20 age 19 age 18 age 17 age 16 age 15 age 14 age 13 age 12 age 11
age 10 age 9 age 8 age 7 age 6 age 5 age 4 age 3
Graph: www.thoughtfulhouse.org
Data: www.ideadata.org and www.cdc.gov/nchs/

APPENDIX F

CENTERS FOR DISEASE CONTROL AUTISM PREVALENCE, STATE RANKINGS


Autism Prevalence, Public Schools State Rankings,
2006-2007 School Year
Minnesota 1 of 81 children
Maine 1 of 87
Oregon 1 of 88
New Jersey 1 of 115
Indiana 1 of 116
Connecticut 1 of 123
Rhode Island 1 of 129
Pennsylvania 1 of 133
Massachusetts 1 of 135
Wisconsin 1 of 140
Maryland 1 of 142
Nevada 1 of 144
Michigan 1 of 150
California 1 of 154
Virginia 1 of 156
Vermont 1 of 159
New Hampshire 1 of 160
Washington 1 of 162
North Carolina 1 of 164
Missouri 1 of 164
Georgia 1 of 165
New York 1 of 169
Ohio 1 of 171
Idaho 1 of 171
U.S. And Outlying Areas 1 of 178
Hawaii 1 of 179
Arizona 1 of 184
Florida 1 of 189
Illinois 1 of 191
Delaware 1 of 197
Texas 1 of 200
Utah 1 of 202
Alaska 1 of 212
Wyoming 1 of 216
South Dakota 1 of 220
Oklahoma 1 of 231
West Virginia 1 of 232
Arkansas 1 of 235
Nebraska 1 of 235
Kansas 1 of 255
South Carolina 1 of 258
Kentucky 1 of 258
Tennessee 1 of 264
North Dakota 1 of 269
Alabama 1 of 272
District of Columbia 1 of 273
Montana 1 of 278
Colorado 1 of 342
Iowa 1 of 343
Louisiana 1 of 349
Mississippi 1 of 417
New Mexico 1 of 432
0
20
40
60
80
100
120
140
160
cases / 10,000 births
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APPENDIX G

MAP OF UNITED STATES DISTRICT COURTS

Circuit Court Cases

(Zirkel, 2002)