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Section 504 and Public Schools: A National Survey Concerning “Section 504-Only” Students

Rachel A. Holler and Perry A. Zirkel

The primary purpose of this study is to determine a preliminary national percentage of students who are “504-only.” The survey data reveal that 504-only students represent 1.2% of the public school population. There is a significant difference in the 504-only percentage with regard to school level, with middle and high schools having a greater percentage of these students. The results of this study suggest that the prevailing practices for determining Section 504 eligibility do not square with recent judicial findings.

Keywords: *Section 504; legal issues; eligibility determination; disability; principal*

Scholars, researchers, and educators have focused their attention on the Individuals with Disabilities Education Act (IDEA) for many years. Conversely, Section 504 and its sister statute, the Americans with Disabilities Act (ADA), have only recently come under scrutiny. In combination, these three pieces of legislation have influenced the landscape of public education. Principals face increased pressure to meet the adequate yearly progress requirements of the No Child Left Behind Act (NCLB). Section 504 plans may help curb the overidentification of students with individualized education plans (IEPs), one of the many subgroups scrutinized with standardized testing. Furthermore, parents are looking for ways to get testing accommodations for their students without the perceived stigma associated with special education. Principals must be knowledgeable about the legislation and regulations surrounding these three laws or risk costly consequences. Legally accurate eligibility determinations under Section 504 are part of the implementation responsibility of regular educators and, ultimately, the principal.

The first of the three statutes, Section 504, is civil rights legislation that is part of the Rehabilitation Act of 1973. Section 504 directly affects public schools, prohibiting discrimination against persons with disabilities by all organizations receiving

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federal financial assistance. More specifically, Section 504 mandates that students with disabilities have an equal opportunity to participate in all programs receiving federal funds.

Congress passed the IDEA just 2 years after Section 504. The IDEA provides federal funding to states so that they may in turn provide special education services to eligible students younger than age 21. More specifically, the IDEA entitles students with disabilities to a free appropriate public education as formulated in an IEP. The regulations for the IDEA preceded and were far more detailed than the Section 504 regulations. Thus, school districts focused on the implementation of IDEA rather than Section 504.

The ADA, enacted in 1990, is the most recent of the three laws. Although it does not contain provisions specific to students, the ADA reinforces Section 504 and expands coverage beyond organizations receiving federal funds. For public schools, the ADA is redundant with regard to students because it mirrors and reinforces Section 504. As a result, the term *Section 504/ADA* covers both statutes in reference to public school students.

One of the major differences between Section 504 and the IDEA is their respective definitions of *disability*. Students must qualify in 1 of the 13 disability classifications and need special education to be eligible under the IDEA (“Individuals with Disabilities Education Act Regulations,” 2006), representing what is generally understood to be a two-part definition. In contrast, Section 504 has a three-part definition that is broader than that of the IDEA. More specifically, eligibility for Section 504 services, including accommodations, are for a student who has (a) a physical or mental impairment that (b) substantially limits (c) one or more major life activities (Section 504 of the Rehabilitation Act, 2005). The definitional alternatives for a person with a record of such impairment or who is regarded as having such impairment apply to protect the student from exclusion, not to entitle the student to services (Office for Civil Rights [OCR], 1992).

Although the disability definitions for Section 504 and the IDEA are different, a student who is eligible under the IDEA is also covered by Section 504. Conversely, some students who are not covered by the IDEA are eligible under Section 504. For the purposes of this article, students who are eligible under Section 504 but not under the IDEA are referred to as “504-only” students.

The courts have recently refined the boundaries for 504-only students. More specifically, under the recent “demanding” standards of Section 504/ADA (*Toyota Motor Mfg. v. Williams*, 2002, p. 197), for a student not eligible under the IDEA to qualify under Section 504 for the major life activity of learning would be the exception rather than the rule. For example, a student with attention-deficit/hyperactivity disorder (ADHD) who does not qualify under one of the IDEA classifications, principally other health impairment (OHI), would, under current legal standards, typically not have a substantial limitation to the major life activity of learning. These relatively

recent judicially established standards consist of a global interpretation of “major life activity” and, more significantly, two demanding interpretations for “substantial limitation:” (a) This element of the eligibility definition is with, not without, mitigating measures, such as medication and (b) the frame of reference is the average person in the general population, not the potential of the particular individual (Zirkel, 2003b). If the impairment of ADHD globally limited learning in comparison to the average student, the student would, in all likelihood, need special education services. Yet unlike under the IDEA, the eligibility for 504-only students may be based on major life activities other than learning, such as breathing or eating.

The second major difference between Section 504 and the IDEA relates to funding. Inasmuch as Section 504 is civil rights legislation, it is an unfunded mandate. All public schools must comply with Section 504, but they do not receive any additional monies for this compliance. In contrast, the IDEA is funding legislation, currently providing 15% to 20% of the excess costs of special education (Zirkel, 2003a).

The third relevant difference between Section 504 and the IDEA is the availability of data on those students meeting the respective disability definitions. The Office of Special Education Programs is the part of the U.S. Department of Education (USDE) that is responsible for administering the IDEA. In its most recent annual report to Congress, this agency reported that special education students represented 12.1% of the public school enrollment (USDE, 2003). Conversely, the OCR, the part of the USDE responsible for administering Section 504 for public school students, collects and reports only trend data on selected civil rights issues such as ethnicity and representation in special programs. Neither OCR nor any other source has published data on the number of students covered under Section 504.

Several researchers have identified the need for specific data on 504-only students. For example, Russo and Morse’s (1999) explanation of Section 504 for school business leaders emphasized the need for collecting data on the number of 504-only students. Similarly, in their survey to assess state policies and guidelines related to Section 504, Katsiyannis and Conderman (1994) found minimal data concerning 504-only students, and they called for comprehensive data collection to resolve this problem.

In the absence of such data, some sources have speculated that school districts in certain areas may be engaged in overidentification of 504-only students. For example, Zirkel (2000a) suggested that districts may be overidentifying students under Section 504 from families at either extreme of socioeconomic status (SES). At about the same time, the *Los Angeles Times* reported abuses to the College Board’s Scholastic Aptitude Test (SAT) by “upper-income game players” (Weiss, 2000, p. A1), who, based on Section 504, received extra time to boost their scores. More specifically, Weiss (2000) claimed that these abuses were more prevalent in specific areas, including “well-to-do pockets along the Boston-New York-Washington corridor” and in “the Los Angeles area as well as in the San Francisco Bay Area, Santa Barbara and San Diego” (p. A1).

However, neither Zirkel nor Weiss provided specific data on the percentage of 504-only students or the relationship of this percentage to SES.

The primary purpose of this study is to determine the national percentage of students who are 504-only, that is, those students who are eligible under Section 504 but not under the IDEA. The secondary purposes are (a) to determine whether there are significant differences in the percentages of 504-only students based on the school's level, setting, and wealth and (b) to identify prevailing school interpretations of Section 504's three-part eligibility definition.

Related Literature

The empirical research on Section 504 in relation to public school students is limited and lacks systematically collected data regarding the number of students served under Section 504. Overall, the nonempirical literature and limited empirical research consist of two main categories: (a) the differences in the implementation of Section 504 in various types and levels of public schools and (b) the application of the three-part eligibility definition for Section 504 and the uses or abuses of this definition.

Section 504 Implementation in Public Schools

Even though Section 504 became law in 1973, the IDEA received more attention from the public school community through the early 1990s. Its regulations were much more detailed, its litigation was far more frequent, and the reauthorization and monitoring of funding reinforced institutional attention and compliance. Gradually, more parents turned to Section 504/ADA to combat discrimination against, and secure accommodations for, their children, largely relying on OCR's complaint resolution process. School districts initially lagged in response to these complaints. A study by Zirkel (1997b) revealed that the frequency of Section 504 OCR student cases increased to a high point in 1990, when the tide turned in the direction of districts in terms of not only frequency but also outcomes; the majority was in favor of parents until 1990 and in favor of districts since then.

Several critical hypotheses emerge in the implementation of Section 504/ADA in relation to K-12 students. The first is that the increase in Section 504 plans appears to be particular to the high school level. This increase is associated with the emphasis on high-stakes tests, such as the SAT. According to news accounts, educational psychologists have seen an increase in "parents and college-bound teenagers who want only one thing: a diagnosis that will entitle the youngster to additional time" (Gross, 2002, p. A1) to take the SAT. For these parents, as the *Los Angeles Times* also reported, "Section 504 of the Rehabilitation Act has emerged as the legal vehicle of choice" (Weiss, 2000, p. A20). Fueling this trend, in 2003, on being sued under Section 504 and the ADA, the College Board decided to stop "flagging" the SAT scores of students with disabilities who took the test with extended time (Lewin, 2003). More directly strengthening the hypothesis, one qualitative study explored a

single suburban high school's experience with implementing and interpreting Section 504/ADA (Hurley, 2001). Specifically, during the 2-year period of the study, students in need of 504 accommodations increased significantly (Hurley, 2001). Yet both the empirical literature and nonempirical literature lack any corresponding attention to Section 504/ADA at the elementary and middle school levels, reinforcing the need for systematic comparison.

Second, according to these same limited sources, the school setting and location also appear to be possibly significant factors in relation to the frequency of Section 504 plans in public schools. Not only does the SAT prompt high school students to search for disability diagnoses, but these extra time accommodations "are disproportionately clustered in well-to-do pockets along the Boston-New York-Washington corridor . . . [and] the practice has spread west to similar wealthy, highly competitive communities in the Los Angeles area" (Weiss, 2000, p. A1). Conversely, urban high schools lack the time, resources, and parental pressure to evaluate, diagnose, and serve students who need Section 504/ADA supports (Gross, 2002). For example, not one student in the 10 Los Angeles urban high schools reportedly received extra time or accommodations on the SAT (Weiss, 2000). Conversely, Hurley's (2001) case study was in a suburban high school in the New York metropolitan area, where the percentage of accommodations increased to 10% of the student body in 2 short years. Inviting systematic quantitative analysis, Hurley similarly suggested that such suburban schools have the bulk of Section 504 plans in comparison to urban, inner-city, or rural schools.

The final factor, which overlaps with the second, is the seeming direct and significant association between Section 504 plans and the affluence of the families who secure them. According to news accounts, purchasing a disability diagnosis is limited to "upper-income game players" (Weiss, 2000, p. A1), who have the resources to buy advantages for their students. For example, private school students were reportedly the recipients of one in every four accommodations on the SAT (Gross, 2002). This issue is not unique to Section 504, as it also applies to the IDEA. For example, an Ohio study found that suburban, high-SES school districts had an unusually large percentage of students with IEPs (Legislative Office of Education Oversight, 2002).

Section 504 Eligibility Definition

The key to student eligibility for accommodations or services under Section 504 is the act's three-part definition of disability: (a) physical or mental impairment that limits (b) a major life activity (c) substantially (Section 504 of the Rehabilitation Act, 2005). In recent years, the courts have established relatively restrictive standards for interpreting this definition, particularly its third essential element.

The first part of the definition is open ended when compared to the 13 categories of the IDEA. It includes a growing list of recognized physical or mental impairments, such as allergies, asthma, ADHD, diabetes, and dyslexia. A medical diagnosis is not essential for the recognition of an impairment (Zirkel, 2003b). However, having a

recognized impairment is necessary but not sufficient for Section 504 eligibility. For example, Reid and Katsiyannis (1995) cautioned, “Students with [ADHD] are not automatically entitled to educational services under Section 504” (p. 45). Each student must also qualify for the other two parts of the definition to be eligible for a Section 504 plan.

Starting with but extending beyond the major life activity of “working” in the employment context, the courts have taken a global view of the second part of the definition. Thus, Zirkel (2000b) warned that the use of small subsets of the major life activity of learning, such as “written expression, self-esteem, and organizational skills [is] . . . questionable” (p. 411) for Section 504, as contrasted to IDEA, eligibility. At the same time, schools should guard against conceiving of learning as the only major life activity that would qualify a student for a Section 504 plan. Section 504 regulations also include other examples, such as breathing, speaking, hearing, walking, and seeing (Section 504 of the Rehabilitation Act Regulations, 2005). Nevertheless, the Supreme Court has established a “demanding standard” (*Toyota Motor Mfg. v. Williams*, 2002, p. 197) for this part of the definition; the activity must be of critical importance to one’s daily life.

The courts have been even more stringent in interpreting the third part, substantial limitation. The first aspect concerns the effects of mitigating measures, such as medication. Specifically, the Supreme Court has held that the determination of substantial limitation is with, not without, the effect of mitigating measures (*Sutton v. United Air Lines, Inc.*, 1999). Second, various lower courts (e.g., *Costello v. Mitchell Pub. Sch. Dist.*, 2001; *D.P. v. Sch. Dist. of Poynette*, 2004) have consistently applied the eligibility element of substantial limitation in reference to the student’s average peer in the general population. Zirkel (2005) observed that the general population is “at least at the state level, and, preferably, where data are available, at the national level” (p. 12).

During the development of these demanding judicial standards, Zirkel (2000a) conjectured that Section 504 should account for no more than 1% to 2% of a district’s population. In contrast, governmental reports establish that 12% of public school students receive services under the IDEA (USDE, 2003). Neither the government nor other published sources have provided systematic data concerning the eligibility practices and results for Section 504. For example, Katsiyannis and Conderman’s (1994) survey revealed that only 14 states had developed policies for Section 504 and that no state collected Section 504 student data. A pair of dissertations examined the practices in single states. Smith’s (1996) survey of Arizona school districts revealed that ADHD was the most common basis for a Section 504 plan and that over 25% of the 504-only students who received a plan were not eligible under the IDEA. More recent, Seese (2003) surveyed Connecticut school districts, noting differences in Section 504 practices with respect to district wealth. In lower SES districts, the principal was responsible for Section 504, whereas wealthier districts used a central office staff member. In addition, higher SES districts had more OCR complaints than did lower SES districts. Thus, there is a lack of and need

for specific data on 504-only students at the national level, including their number and the standards that districts and schools use to determine their eligibility.

Method

Sample

The population for the study consisted of the 89,301 public schools in the United States in Market Data Retrieval Company's database, excluding private and Catholic schools. Market Data Retrieval Company provided a random sample of 1,250 public school principals' names and school addresses, which would yield a sufficient size if 383 usable surveys (30.6%) were returned (Krejcie & Morgan, 1970). Of the 1,250 addresses in the original sample, 36 were undeliverable, resulting in a decreased sample size of 1,214. The return, after three mailings, was 567, of which 549 were usable for data analysis purposes, representing a response rate of 45.2%. The distribution of the sample based on the three independent variables of school level, school setting, and free or reduced lunch percentages appears in Appendix A.

Instrument

The customized two-part questionnaire consisted of 11 items (see Appendix B). The first part of the instrument collected the following demographic information about the building: school level (i.e., elementary, middle, or high school), school setting (i.e., urban, suburban, or rural), school wealth designated by the percentage of students receiving free or reduced lunches, and current student enrollment. These school demographics constituted the independent variables for the study. The second part of the questionnaire requested the specific number of special education and 504-only students attending the school. In addition, the second part explored the school interpretations of 504-only students' impairments, major life activities, and substantial limitation. The data from the second part of the questionnaire represented the dependent variables in the study.

School principals and special education directors responsible for Section 504 in Northampton, Lehigh, and Montgomery Counties in Pennsylvania received an initial draft of the questionnaire during the summer of 2003. They provided feedback regarding the length of the questionnaire and the typical building principal's access to Section 504 data.

For the next phase, three experts—a university faculty member, a school district attorney, and a consultant and former administrator who each had nationally recognized specialization in Section 504—completed a critique of each survey item by rating its accuracy and clarity on a scale of 1 to 5. The experts provided suggested revisions for any items rated 3 or below. Based on these critiques, the questionnaire underwent several revisions until its final, accepted form.

Data Collection

Principals at each of the schools in the sample received a mailing containing a letter explaining the purpose of the study, the questionnaire, and a stamped return envelope. The letter asked the principal to complete the questionnaire or to designate another individual in the building to complete it. After 3 weeks, 309 (25.5%) usable questionnaires were returned. Nonrespondents received a second mailing containing an additional follow-up letter, the questionnaire, and a stamped return envelope. The second mailing generated 143 (11.8%) usable questionnaires. The third and final mailing of the questionnaire yielded 97 (8.0%) more usable questionnaires.

Data Analysis

To determine the national percentage of students who were 504-only, we aggregated the school populations rather than averaging each school's percentage. Specifically, we tallied all 504-only students from Item 6 and divided by the sum of all school populations from Item 4 to determine the percentage of 504-only students.

A one-way analysis of variance (ANOVA) revealed whether there were significant differences at the .05 level in the percentages of 504-only students based on the school's level, setting, and wealth. If the ANOVA yielded significance, Scheffé's post hoc identified any pairwise significance within the independent variables.

Finally, to analyze the respondents' interpretations of the three-part eligibility definition, first we calculated the frequency distributions for the response options of Items 7, 8a, and 8b, including a tally of additional impairments or major life activities provided in the "other" blanks of the questionnaire. Next, we divided the responses first for Items 9a and 9b into two categories based on whether they were legally correct or incorrect, reporting the frequencies of each category.

Limitations

One limitation became obvious for the sample—the result of the natural disasters of Hurricanes Katrina and Rita. Many schools in the affected areas were not operating at the time of the mailings. In addition, many schools in Texas and other states enrolled students from the affected areas without having student records. Thus, these hurricanes could have influenced not only the response rate but also the accuracy of results.

Other limitations are specific to the survey instrument. The first is the use of free or reduced lunch percentages to determine school wealth. A Department of Agriculture study revealed that as many as 25% of the 28 million children who receive free or reduced lunches might be ineligible for this program (Associated Press, 2003). Furthermore, schools near military bases may have higher percentages of students on free or reduced lunches because all children of military personnel qualify regardless of need. Yet given concerns with student confidentiality and response rate, we did not find a feasible alternative measure of school SES.

A second limitation of the survey instrument is the possible lack of clarity for the school setting question. Many principals may not know the differences in the official census classification of urban, suburban, and rural settings, therefore inconsistently indicating the setting of the school. To enhance the ease of questionnaire completion, we did not provide definitions for these classifications.

A final limitation of the survey instrument is that some building principals may not have access to the specific information about 504-only students for Part II of the questionnaire. Some schools or districts may not account for these students because, unlike the monitoring of special education students, neither the federal nor the state government has general reporting requirements for 504-only student data.

Results

Based on the aforementioned aggregate analysis, the 504-only students represented 1.2% of the sample's total students.

Table 1 summarizes the results of the ANOVAs for school level, school setting, and free or reduced lunch percentages. School level was the only demographic variable with a significant *F* value. Scheffé's post hoc analysis revealed significance at the .01 level for both high and middle schools in comparison to elementary schools; the average mean percentage of 504-only students was significantly higher at these levels when compared to the elementary level. In addition, Table 1 reveals that the standard deviations of the independent variables are larger than the means and that all of the between-group effect sizes are small (Cohen, 1988).

For the first, impairment part of the Section 504 eligibility definition, which is the focus of Item 7 of the questionnaire, 122 respondents (22.2%) had no 504-only students in their buildings. The results for the remaining 427 respondents appear in Table 2. The most common impairment was ADHD (80.0%); thus, at least one plan in 80% of the responding schools with 504-only students was for a student with ADHD. Diabetes was the next most frequent response (24.1%). As Table 2 also reveals, 45.7% of respondents selected the "other" category, specifying additional impairments for the 504-only students in their building. Because the 195 respondents who selected "other" could list multiple impairments, 338 responses were generated. Of the 338 "other" responses, 86 (25.4%) were impairments included in IDEA disability categories. In addition, at least 35 (10.4%) responses were not recognized impairments.

For the second part of the Section 504 eligibility definition—major life activity—Table 3 summarizes the results of Item 8a. For the 427 respondents who had Section 504-only students in their building, the two polar response options for this item received the majority of responses (i.e., 45.6% + 36.9% = 82.5%). More specifically, almost half (45.6%) of the schools with 504-only students reported that the major life activity of learning accounted for 0% to 25% of their 504-only students.

Table 1. Results of ANOVA Among Each of the Demographic Variables and the Percentage of 504-Only Students

Variables	504-Only <i>M</i>	504-Only <i>SD</i>	<i>F</i> Value	Effect Size
School level			11.371**	.041
Elementary	0.0091	0.01628		
Middle	0.0172	0.02313		
High	0.0163	0.01796		
School setting			2.285 ^a	.008
Rural	0.0129	0.01647		
Suburban	0.0136	0.02096		
Urban	0.0091	0.01920		
Free or reduced lunch category			0.601 ^a	.005
Under 10% (very low)	0.0139	0.01364		
10% to 20% (low)	0.0119	0.01449		
21% to 30% (moderate)	0.0092	0.01076		
31% to 50% (high)	0.0125	0.01488		
51% and above (very high)	0.0119	0.02046		

Note: The 504-only *M*, 504-only *SD*, and effect size are converted decimals, not percentages.

a. *ns*.

***p* < .01.

Table 2. Frequency of Section 504-Only Students' Impairments

Impairment	<i>n</i>	%
ADHD	333	80.0
"Other"	195	45.7
Diabetes	103	24.1
Asthma	81	19.0
Dyslexia	81	19.0

Note: The percentages do not add up to 100% because respondents could select multiple impairments.

Conversely, the major life activity of learning represented 76% to 100% of the 504-only students in most of the remaining schools (36.9%).

In addition, corresponding to Item 8b, Table 4 summarizes the major life activities other than learning of the 504-only students. According to a substantial minority of respondents (44.5%), none of the 504-only students in their buildings qualified

Table 3. Percentage of 504-Only Students With the Major Life Activity of Learning

Major Life Activity Category	<i>n</i>	Relative %	Adjusted %
0% to 25%	190	44.5	45.6
26% to 50%	42	9.8	10.1
51% to 75%	31	7.3	7.4
76% to 100%	154	36.1	36.9
Missing	10	2.3	—
Total	427	100.0	100.0

Table 4. Frequency of Section 504-Only Students' Major Life Activities

Major Life Activity	Frequency	%
None remaining	190	44.5
Breathing	67	15.7
Hearing	61	14.3
"Other"	60	14.1
Seeing	57	13.3
Walking	44	10.3

Note: The percentages do not add up to 100% because respondents could select multiple major life activities.

based on a major life activity other than learning. Of the remainder of respondents with 504-only students, four other major life activities—breathing, hearing, seeing, and walking—each accounted for approximately 10% to 15% of the major life activities. A catchall category of “other” accounted for the final 14.1% of 504 plans that were not for learning. Similar to the impairment question, respondents could generate multiple responses. Of the 64 “other” responses, the majority (78.1%) were impairments rather than major life activities.

For the final essential element, substantial limitation of the student’s major life activity, Table 5 shows the frequency of responses for Item 9a of the questionnaire, examining school practices regarding mitigating measures. Almost 11% of respondents left the item blank, likely indicating that they did not know the answer. If their answers are considered incorrect, slightly more than half (54.3%) of respondents selected the correct answer, which is that the determination of substantial limitation is with the use of mitigating measures. This percentage correct would have been lower if we had applied a guessing penalty to the tabulation.

Similarly, Table 6 summarizes the results to Item 9b, which asked respondents to interpret the frame of reference used to determine the substantial limitation of a

Table 5. Answers of Respondents to Mitigating Measures Question

Answer	Frequency	%	Adjusted %
Without mitigating measures	191	34.8	39.1
With mitigating measures	298	54.3	60.9
Missing	60	10.9	—
Total	549	100.0	100.0

Note: The answer, "with mitigating measures," is the legally correct answer.

Table 6. Answers of Respondents to Frame of Reference Question

Frame of Reference	Frequency	%	Adjusted %
Child's potential	303	55.2	59.8
Child in class	25	4.6	4.9
Child in building	50	9.1	9.9
Child in district	16	2.9	3.2
Child in state	15	2.7	3.0
Child in nation	22	4.0	4.3
Other or multiple responses	86	13.8	17.0
Missing	42	7.7	—
Total	549	100.0	100.0

Note: The answer, "child in state" and "child in nation," answer, is the correct answer.

major life activity. The majority (55.2%) of the respondents selected the individual child's potential, whereas only 6.7% of respondents selected the correct answer—the average child in the state or nation—as the applicable frame of reference.

Finally, if Items 9a and 9b, which respectively concerned mitigating measures and frame of reference, are considered together, only 18 (3.3%) of the respondents reported legally correct practices for determining the critical, substantial limitation element for eligibility.

Discussion

National Percentage of 504-Only Students

In relation to the study's first question, the national percentage of 504-only students in the sample is approximately 1.2%. There are no government reports or research studies about the number or percentage of 504-only students, but a low proportion of

504-only students is unsurprising for several reasons. First, IDEA compliance has been the primary focus of public schools, resulting in extensive identification of students with special needs. For example, according to USDE reports to Congress, the special education population of students ages 6 to 17 moved from 4,675,826 in 1994-1995 to 5,583,963 in 2001-2002, representing a 19.4% increase (USDE, 1996, 2003), whereas public school enrollment increased only 8.2% during this period (Hoffman, 1996, 2003). Second, as evidenced by the lack of literature and research, many school administrators are relatively unaware about Section 504's role in the public schools and thus are less likely to recommend or initiate Section 504 for students. Although some schools may have abused the identification of 504-only students, offering a 504 plan as "a consolation prize" (Zirkel, 2000a, p. 1) for students who do not qualify for IDEA services, these plans remain relatively infrequent in comparison to IEPs.

Nevertheless, in light of the relatively recent judicial interpretations of Section 504 eligibility, the 1.2% figure may, on balance, be inflated. Although the courts have left the impairment part of the definition relatively open ended, they have notably narrowed the other two essential elements of the definition in recent years. More specifically, for the major life activity part of the definition, the Supreme Court has used a "demanding standard" (*Toyota Motor Mfg. v. Williams*, 2002, p. 197), as the activity must be of critical importance to an individual's daily life. In a recent federal district court case, the court cited *Toyota Motors* (2002) to reject a student's claim that her spinal condition affected a major life activity (*Soirez v. Vermilion Parish Sch. Bd.*, 2005). Similarly, the Supreme Court decided that the determination of substantial limitation must include the use of mitigating measures, such as medication (*Sutton v. United Air Lines, Inc.*, 1999). For example, an inhaler is a mitigating measure for a student with asthma, as a more recent court case explained on determining that the particular asthmatic student was not eligible for Section 504 (*Block v. Rockford Pub. Sch. Dist.*, 2002). Finally, lower courts have made clear that the frame of reference for substantial limitation also compares the student to an average peer in the general population. For example, using this standard, a federal district court ruled that a student had "moderate" (*Marshall v. Sisters of Holy Family of Nazareth*, 2005, p. 1019) behavior problems and thus was not eligible for Section 504 services.

The responses to the items for the basis of the 504 plans in terms of major life activity and substantial limitation further contribute to the conclusion that 1.2% is an overestimate of the national percentage of 504-only students. For example, the vast majority of the 64 "other" responses for major life activity did not qualify under the current judicial interpretations of major life activities. Indeed, 50 of the 64 respondents erroneously listed an impairment as a major life activity. The effect of these particular responses was in the direction of false positive eligibility determinations, inflating the overall 504-only percentage.

Similarly, for substantial limitation, as Table 5 shows, at least 34.8% of respondents applied the eligibility definition without mitigating measures. Even without a

guessing penalty and without the presumption that the 10.9% of blank responses were incorrect, the 34.8% is also in the direction of an inflated misapplication of the eligibility definition.

Conversely, however, there is a possibility that the 1.2% figure is an underestimate of the 504-only population. First, respondents' low level of knowledge of Section 504's three-part eligibility definition could, in some schools, result in a lack of identification of students who may be in need of Section 504 services. Second, 122 respondents (22.2%) reported not having any 504-only students. Even with the restrictive prevailing judicial interpretations, it is not likely that more than one fifth of the schools would have no students eligible for 504 plans. Next, as seen in Table 1, the 504-only standard deviations for the independent variables were larger than the means. In addition, there was a small effect size for all of the independent variables (Cohen, 1988). These two findings suggest heterogeneity within the sample. The wide variance of percentages of 504-only students within the schools could be a result of some schools accommodating too many students and other schools failing to recognize eligible students. Thus, the 1.2% figure could represent an overestimate for some schools and an underestimate for others, raising the question of demographic factors.

Demographic Factors and 504-Only Students

School level. School level was a statistically significant factor for 504-only students. More specifically, both the high school and middle school levels had significantly higher percentages of 504-only students than did the elementary level. The finding for the high school level is consistent with news accounts reporting the use of 504 plans to gain accommodations on the SAT (Gross, 2002; Weiss, 2000). It also fits with the limited finding of a dramatic increase in 504 plans in Hurley's (2001) high school case study. The finding for the middle school level lacks any pertinent literature for comparison purposes. However, the lack of a significant difference between the high school and middle school levels for 504-only percentages squares with the commonalities between these two levels. More specifically, in contrast to elementary schools, the subject matter specialization and greater emphasis on report cards and achievement testing may increase the pressure for Section 504 plans to support struggling students. Elementary schools may accommodate students in a more nurturing environment, thereby mitigating the need for such formal and legalized measures.

School setting. In contrast to the results for school level, the percentage of 504-only students did not significantly differ among rural, suburban, and urban settings. This lack of significance is contrary to expectations to the limited extent that news accounts and one qualitative study point to suburban schools as having a disproportionately higher number of 504-only students than urban and rural schools (Hurley, 2001; Weiss, 2000).

Nevertheless, the finding with regard to school setting warrants further research for several reasons. First, a possible shortcoming of the questionnaire is the lack of precise definitions regarding rural, suburban, and urban classifications. Thus, the respondents may have over- or underestimated their school's true classification, thereby confounding data analysis for this independent variable.

Second, it may be that setting contributes to significance not alone but in combination with other factors such as location and litigiousness. A closer reading of the news accounts suggests that it is not suburban settings per se that have higher percentages of 504-only students but certain suburban settings in locations characterized by high wealth and a propensity for litigation. Select schools in high-litigation zones of the country may be abusing the use of Section 504 (Weiss, 2000). Conversely, schools in other parts of the country, where litigation is the exception rather than the rule, may make accommodations without resorting to a formal Section 504 plan. If the suburban areas of one region underidentify Section 504 while those in another region within the same setting category overidentify this eligibility status, the results will average themselves to mask any significance.

Third, we noted a differential response rate that further masked the possible role of this setting-related factor. More specifically, although not subjected to statistical tabulation, the response rate was lower in schools located in suburban litigation zones. For example, more litigious areas of the country, such as the "Boston-New York-Washington corridor" and "wealthy, highly competitive communities in the Los Angeles area" (Weiss, 2000, p. A1) had a much lower response than the overall 45.2% rate would indicate, whereas Midwestern states with less litigious tendencies responded at a greater rate. Thus, the sample may be skewed, with possible differences in school setting hidden by the response rates of different areas of the country.

School wealth. There was no significant difference in the percentage of 504-only students with respect to school wealth. The lack of significance for school wealth is surprising, as the poorest categories of free or reduced lunch data were expected to have low percentages of 504-only students (Weiss, 2000; Zirkel, 1997a). There may be several reasons for the lack of significance, but the sample was representative of the population with respect to school wealth.

First, free or reduced lunch percentages have various limitations and may not be the best measure of school wealth (Associated Press, 2003). One limitation is that the free or reduced lunch percentage indicates the extent of poverty for a segment of the schools, but it does not measure the extent of wealth among the remaining population. For example, a low free or reduced lunch proportion of 10% may represent a homogeneous community with middle-class families and few wealthy families, whereas the same percentage may represent a heterogeneous community with extremely wealthy areas. More specifically, the free or reduced lunch percentage

fails to reveal the range of wealth. Another limitation of the free or reduced lunch percentage is that, like any other measure of school wealth, it does not indicate the wealth of the particular student. A family with the advantage of high-SES may well be within a school that, on average, is not marked by wealth.

A second reason for a lack of significance may be that, as previously discussed with regard to the results for school setting, wealth—whether individual or institutional—may be a significant factor not in isolation but instead in combination with litigious zones of the country. Because location was not one of the independent variables in the study, it was not possible to analyze this connection.

School Interpretations of the Section 504 Eligibility Definition

The majority of survey respondents were school principals (70.6%), and their roles for Section 504 were largely divided between building coordinator (41.1%) and team member (41.3%). Moreover, the directions allowed the principal to refer the questionnaire to a designee, presumably the Section 504 coordinator when the principal did not have that role, for the responses. In any event, the 504 eligibility teams' reported practices did not conform to recent judicial interpretations of the Section 504 eligibility definition. On balance, their incorrect interpretations were in the direction of overidentification of 504-only students.

Impairment. Respondents selected the impairments of their 504-only students from a list of four common impairments. For the 427 respondents who had 504-only students out of the 549 total respondents, the most frequent impairment—representing 333, or 80%, of the respondents with 504-only students—was ADHD. This prevalence of ADHD is not surprising in light of previous, more limited research. For example, Smith's (1996) Arizona study found that ADHD was the most common impairment for 504-only students in that state. Similarly, a Maryland study noted that a "sizeable number" (Safer & Malever, 2000, p. 537) of students who received medication for ADHD were on Section 504 plans. As referenced below in the Major Life Activity and Substantial Limitation sections, the predominance of ADHD suggests an overidentification of 504-only students in light of recent case law.

The second most frequent response was the catchall "other" impairment category, representing 195 respondents who accounted for 338 responses. A substantial segment of the "other" responses further suggested the questionable legal interpretations of Section 504 identification criteria. For example, 86 of the 338 responses identified impairments included in specific IDEA disability categories, such as vision, hearing, and OHI. In most of these cases, students who had substantial limitations of learning would meet the additional IDEA criterion of the need for special education, for which an IEP in compliance with IDEA standards would be the defensible approach ("Response to McKethan," 1996). The remaining students with IDEA-recognized impairments who do not need special education would clearly be

questionable in terms of current legal standards for substantial limitation. In addition, although less frequent, 35 respondents provided imprecise entries, such as medical or anxiety, that do not suffice as a recognized impairment, thus further evidencing the loose use of 504 plans.

Major life activity. The two major life activity questions also pointed to the overuse of 504 plans. The first major life activity question—Item 8a—focused on learning. The majority of respondents reported that more than one fourth of their 504-only plans were based on the major life activity of learning. Their responses did not square with Item 8b, on which almost half (44.5%) of respondents selected “none remaining,” thus attributing all of their 504 plans to learning. Aside from the lack of internal consistency between these two items, the “other” major life activities provided by respondents for Item 8b suggest a misinterpretation of major life activities. For the catchall “other” category of this nonlearning item, 50 of the 64 responses were impairments, not major life activities, thus suggesting lack of attention to a second and differentiable essential element of the definition.

The responses to these two items show internal inconsistencies that not only further call into question the respondents’ understanding of current legal criteria but also may be attributable to respondents’ lack of attention to the questionnaire or their inability to perform basic mathematical procedures. First, there was a lack of congruence between the responses to Items 7 and 8a with respect to students with ADHD. Although 80% of the responses for impairments were for ADHD, the corresponding proportion of responses for the major life activity of learning was much lower. The major life activity category of 76% to 100% was expected to represent a majority of respondents because of the high proportion of ADHD impairments, yet only 36.9% of respondents selected this category.

The internal inconsistency for Items 7 and 8a merits further examination for the specific ADHD impairment. For students with ADHD whose major life activity is learning, modern courts require a global interpretation, including a wide variety of centrally significant tasks. If the student has ADHD and meets the “demanding standard” (*Toyota Motor Mfg. v. Williams*, 2002, p. 197) for the major life activity of learning, the student in most cases would qualify for an IEP under the IDEA’s two-pronged definition of disability, with OHI being the classification and the need for special education obvious in the pervasive adverse effect on educational performance. Conversely, if the student with ADHD does not meet the judicially refined two-pronged definition for IDEA eligibility, it is very unlikely that the student would meet the three-pronged definition for Section 504 eligibility.

Substantial limitation. Although respondents misinterpreted impairments and major life activities to some extent, their overall lack of legally informed practice in terms of Section 504 eligibility was most pronounced in the two questionnaire items that concerned substantial limitation. As Table 5 reveals, almost half (45.7%) of the respondents

were wrong with regard to the applicable legal standard, and on balance this inaccuracy was in the direction of overidentification. Similarly, as shown in Table 6, most (85.6%) of the respondents used an incorrect frame of reference, whereas another 7.7% did not complete the item. The net effect of misapplying both parts of the substantial limitation definition results in overidentifying 504-only students.

The percentage correct for each of these two items warrants discussion with regard to respondents' knowledge of substantial limitation. Only 3.3% of respondents had accurate knowledge of both aspects of substantial limitation. The overwhelming proportion of respondents lacked accurate knowledge of the critical applicable case law precedents. Furthermore, the higher level of inaccuracy as to the frame of reference, when compared to mitigating measures, may be attributable to the judicial levels of the precedents. More specifically, the mitigating measure issue has reached the Supreme Court level, whereas only the lower courts have addressed the frame of reference issue thus far.

The judicial level of these frame of reference rulings may account for the high percentage of incorrect answers in more than one way. First, the time lag between judicial pronouncements and general knowledge depends on public media or school law publications, which are both much more pronounced for Supreme Court than for lower court decisions. Second, the jurisdiction for lower courts is much more limited, accounting for a binding effect only in certain parts of the country.

The context of the case law, for both the trilogy of Supreme Court decisions on mitigating measures and the various lower court decisions on the average person frame of reference, may also contribute to the incorrect interpretations concerning both of these standards. More specifically, the nonschool and employment context of the initial decisions led to belated recognition by lower courts, by OCR, and—most notably—by school 504 teams of the applicability to student eligibility under Section 504.

Aside from the judicial level of the rulings and the context of the case law, another reason for incorrect answers may be the respondents' professional orientations. For example, looking at a child's potential and analyzing the child's functioning without mitigating measures would seem to be the "right" educational frame of reference, especially with respect to the IDEA model of special education. Instead, the "wrong" answers for educators who do not have access to the relevant legal information are the legally defensible decisions when determining substantial limitation.

Yet at the same time, the pressure for erring on the side of eligibility rather than on the opposite outcome is undeniable in a society that is increasingly competitive and litigious and—whether in terms of the new legal high stakes for schools or more metaphorically—in which no child is left behind. A false positive in terms of 504 eligibility may help the principal make adequate yearly progress under NCLB, assuaging parents who seek extra testing time or other accommodations for their children

or adding leverage to get teachers to differentiate instruction and otherwise provide individually responsive adjustments to students. Indeed, encouraging parents and students to have Section 504 plans instead of IEPs may eliminate possible disaggregated groups of special education students and ultimately the risk of failing to make adequate yearly progress under NCLB. Conversely, a determination that the student is not eligible in the wake of a parent or teacher referral, even when it is not a false negative, can lead to an OCR complaint or a court suit.

Recommendations for Further Study

Further research is warranted to test and extend the results of this study. In terms of sampling, future studies should focus on location—both the wealth and litigiousness of the location in combination with setting. One method would be to compare the inner-city core, wealthy suburbs, and remote rural areas in the “Boston-New York-Washington corridor” and the “highly competitive communities in the Los Angeles area” (Weiss, 2000, p. A1). Another strategy would be to disproportionately stratify the national sample with respect to the wealthy suburban areas that are prone to more litigation.

With regard to the survey instrument, the customized questionnaire developed for this study should be expanded to include a case analysis component. By requesting specific information on one randomly chosen individual 504-only student, researchers may gain more specific information and insights concerning school-specific interpretations regarding the eligibility definition. In addition, the questionnaire should be adapted to account for the “other” responses from Items 7 and 8b, to provide for additional choices for impairments and major life activities, including subsets of learning, and to add further items, such as a question concerning the specific legal information sources available to and used by respondents.

In terms of method, one alternative would be to audit Section 504 plans in selected schools. This type of study would allow the researcher to corroborate whether the questionnaire responses square with the actual documents. Similarly, a case study approach of carefully selected schools would allow for more direct and in-depth information, whether for purposes of corroboration or for comparisons as to location, wealth, and litigiousness.

Recommendations for Principals

Principals should consider taking several steps to update compliance with student eligibility under Section 504. These steps vary depending on school level, size, setting, and community. For example, a principal in a large, inner-city high school may need to work with central office administrators to identify the reasons behind the underidentification of 504-only students. In contrast, a principal in a midsized,

wealthy, suburban town might have direct access to a school board attorney to address a problem of overidentifying 504-only students.

After identifying the particular school factors, the principal should meet with the school board attorney, central office administrators, or other appropriate district personnel regarding the recent and relevant Section 504 case law decisions. A careful review of these court decisions will contribute to consistent implementation of Section 504 plans from building to building. As students transition from different school levels or to different buildings within the district, this consistency is important to meet the needs of all 504-only students. Other steps, such as effective training and monitoring and regular articulation meetings, will help further the overall goal of consistent identification of 504-only students.

Next, principals within larger districts should verify that the building has a Section 504 team, whereas smaller districts may opt for a centralized team. Within a building-level Section 504 team, the principal should designate a coordinator. The coordinator could be the building principal, a counselor, or another staff member. However, the coordinator should not have the dual role of special education coordinator. To enhance consistency from one school level to the next, middle school eligibility teams should consider including high school representatives.

Once a Section 504 team is established, the team's responsibilities should include considering students for Section 504 eligibility, writing Section 504 plans, and enhancing smooth transitions for students both within and outside of the district. The district or building should provide ongoing professional development for all team members, checking the legal accuracy of the materials against such references as *Section 504, the ADA, and the Schools* (Zirkel, 2004). One suggested initial professional development activity would be to use the Section 504 Building Questionnaire (Appendix B) to identify current building practices regarding the law. Use of this questionnaire may help uncover specific problem areas and possible tendencies to over- or underidentify 504-only students. The questionnaire and its results may also provide a framework for subsequent professional development sessions.

Moreover, the principal or designated 504 building-level coordinator should review all current Section 504 plans in the building. Each plan should identify a disability that substantially limits a major life activity. In addition, current plans should be accurately implemented. If the principal uncovers a problem with a Section 504 plan, a follow-up meeting with the school board attorney or central office administrators may be appropriate, depending on the district demographics and accepted practices. Other options to address issues with particular plans include working with the existing Section 504 team to brainstorm solutions or meeting with the parents of identified students to revise the plan.

Finally, if a general building practice of over- or underidentification is uncovered during the review of Section 504 plans, the principal may need to remedy the situation systematically. Overidentification issues could be addressed during the annual review of the Section 504 plan, notifying parents in advance that the meeting will address the threshold question of whether the student continues to be eligible “according to current legal standards.” Revisions to 504 plans may be necessary in some cases. Other alternatives include some sort of grandfathering system, such as applying the new legal standards during a particular school year or when the student reaches a transitional grade, such as the sixth or ninth grades. Conversely, for underidentification issues, the Section 504 team may need to implement a systematic child-finding effort. This approach would focus not on accommodations but rather on making parents aware of the elements of eligibility, the resulting entitlement to accommodations and related services, and notice of the applicable procedural safeguards.

Appendix A
Distribution of Respondents by Demographic Variables

Variable	n	Relative %	Adjusted %
School level	549	100.0	100.0
Elementary	327	59.6	59.6
Middle	103	18.8	18.8
High	106	19.3	19.3
Other	13	2.4	2.4
School setting	549	100.0	100.0
Rural	242	44.1	44.5
Suburban	183	33.3	33.6
Urban	119	21.7	21.9
Missing	5	0.9	—
Free or reduced lunch category	549	100.0	100.0
Less than 10% (very low)	56	10.2	10.7
10% to 20% (low)	64	11.7	12.2
21% to 30% (moderate)	59	10.7	11.3
31% to 50% (high)	119	21.7	22.7
51% and above (very high)	226	41.2	43.1
Missing	25	4.6	—

Appendix B

Section 504 Building Questionnaire

Part I: General School Information

Directions: Please take a few minutes to provide demographic data about your building (i.e., school). For questions 1 and 2, use a check (✓) to indicate one response for each item. Please provide a specific number for your responses to numbers 3 and 4.

1. What **level** or **levels** of instruction are provided in your building?

elementary middle school/junior high high school

Other [please specify] _____

2. How would you best characterize the **setting** of the school building?

urban suburban rural

3. What **percentage** of the students in your building receive **free/reduced lunches**? ____

4. **How many students** are currently enrolled in your building? _____

Part II: IDEA and 504 Information

Directions: Please take a few minutes to provide information about the programs and services provided to your students with disabilities. Please fill in specific numbers for questions 5 and 6. Consultation with a district or building Section 504 coordinator may provide more timely answers for the questions.

5. **IEP Students:** How many of the students in your building are identified under the Individuals with Disabilities Education Act for special education services (i.e., students who have an IEP)? _____

6. **504-Only Students:** How many of the students in your building are identified as Section 504-Only (i.e., students who have a Section 504 plan **but not an IEP**)? _____

7. **Impairment:** Which impairments are the basis of the eligibility of the *504-Only students* in your building? [Check all that apply.]

ADHD Dyslexia Diabetes Asthma

Other [please specify] _____; _____; _____

8a. **Major Life Activity:** What percentage of the *504-Only students* in your building have a major life activity that is learning or part of learning (e.g., organizational skills or behavior) rather than another major life activity as the basis of eligibility? [Check one category.]

0-25% 26-50% 51-75% 76-100%

8b. **Major Life Activity:** For the remaining 504-Only students in your building, if any, which major life activities other than learning are the basis of eligibility? [Check all that apply.]

- None Remaining
- Walking
- Breathing
- Seeing
- Hearing
- Other [please specify] _____; _____; _____

For questions 9a and 9b, use a check (✓) to indicate one response for each item. Please select the item that best describes what your current building practice is.

9a. **Substantial limitation:** When determining Section 504 eligibility, does your building’s eligibility team make its determination of whether the student’s identified impairment is “substantial” with or without mitigating measures, such as medication? For example, if the student has asthma and uses an inhaler, does your team determine whether the limitation on breathing is substantial with or without the inhaler? [Check one.]

- with mitigating measures
- without mitigating measures

9b. **Substantial limitation:** When determining Section 504 eligibility, which frame of reference does your building’s eligibility team use in determining whether the impairment substantially limits the student’s major life activity? [Check one.]

The individual child’s performance in relation to . . .

- his/her own potential
- the performance of other children in the same class
- the performance of other children (in the same grade) in the building
- the performance of other children (in the same grade) in the district
- the performance of other children (in the same grade) in the state
- the performance of other children (in the same grade) in the nation
- Other [please specify] _____

For questions 10 and 11, provide information about yourself and your role within the school. There is no need to include your name on the survey.

10. Position/Title of school building representative filling out form (e.g., principal, counselor) _____

11. What is your official Section 504 role, if any?

- 504 Building Coordinator
- 504 District Coordinator
- 504 Team Member
- Other [please specify] _____

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