ED 477 664	EC 309 637

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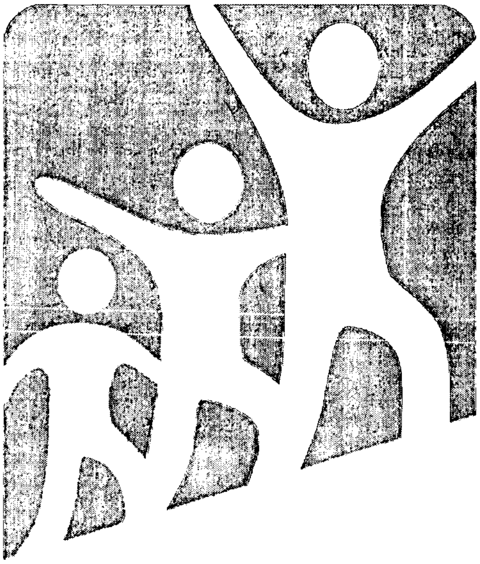
TITLE	Disability Profiles of Elementary and Middle School Students with Disabilities. SEELS (Special Education Elementary Longitudinal Study).
INSTITUTION	SRI International, Menlo Park, CA.
SPONS AGENCY	Special Education Programs (ED/OSERS), Washington, DC.
PUB DATE	2002-10-00
NOTE	28p.
CONTRACT	ED-00-CO-0017
AVAILABLE FROM	For full text: http://www.seels.net/designdocs/ SEELS_disability_profile.pdf.
EDRS PRICE	EDRS Price MF01/PC02 Plus Postage.
DESCRIPTORS	Age Differences; Attitudes toward Disabilities; *Classification; Cultural Differences; *Disabilities; *Disability Identification; *Early Intervention; Elementary Secondary Education; Health Conditions; Middle Schools; Parent Attitudes; Parent Child Relationship; Predictor Variables; *Socioeconomic Influences; *Student Characteristics

ABSTRACT

Using data from the Special Education Elementary Longitudinal Study that included more than 11,000 students (ages 6-12), this study explored the primary disability classification assigned to students by their schools, the variety of disabilities that parents reported, functional limitations associated with students' disabilities, disability identification, and early intervention services. Findings indicate: (1) almost three-fourths of students with disabilities were classified as having a learning disability or a speech impairment; (2) parents reported an average of 1.5 disability categories, ranging from 1.4 for students in the speech/language impairment category to 3.0 for students classified with deaf-blindness; (3) speech was cited as the most frequently limited function, with 43% not able to speak as clearly as other children; (4) 5% of parents of white students and 6% of African American students asserted their children had no disability, whereas parents of 10% of Hispanic students did so; (5) 24% of the students were first recognized as having a disability when they were infants or toddlers, and 22% were identified in their preschool years; and (6) students from wealthier households were more likely to be identified as infants or toddlers and receive earlier services. (Contains 15 exhibits and 6 references.) (CR)

October
2002



SEELS

DISABILITY PROFILES OF ELEMENTARY AND MIDDLE SCHOOL STUDENTS WITH DISABILITIES

Prepared for:
Office of Special Education Programs
U.S. Department of Education

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SRI Project P10656

SEELS has been funded with Federal funds from the U.S. Department of Education, Office of Special Education Programs, under contract number ED-00-CO-0017. The content of this publication does not necessarily reflect the views or policies of the U.S. Department of Education nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. government.

DISABILITY PROFILES OF ELEMENTARY AND MIDDLE SCHOOL STUDENTS RECEIVING SPECIAL EDUCATION

The nature and severity of the disabilities of students who receive special education can be powerful influences on their experiences. Disabilities can shape how families function in relation to children with disabilities, how those children interact with peers and adults, how schools and other organizations respond to students' needs, and what students are able to achieve as they progress through school and into adulthood.

For purposes of special education eligibility, the nature of a student's disability generally is codified in a primary disability classification. The classifications result from the process of identification and eligibility determination that students go through when their Individualized Education Plans (IEPs) for special education services are developed or revised. That classification is an important factor in understanding variations in student experiences, but it indicates only one aspect of students' disabilities.

In this report, we go beyond students' primary disability category labels in an important step toward understanding their disabilities. We address the following aspects of the disabilities of elementary and middle school students who were receiving special education:

- The primary disability classification assigned them by their schools.
- The variety of disabilities that parents reported.
- Students' health and some of the functional limitations associated with their disabilities.
- The length of time children and families had been dealing with disability issues—i.e., the ages at which children first were identified as having a disability, delay, or learning problem; when they first began receiving special services from a professional for those problems; and the age of students' first participation in special education at school.
- Experiences with early intervention for infants and toddlers with disabilities and/or preschool special education.

These issues are addressed using information from the Special Education Elementary Longitudinal Study (SEELS),[1] sponsored by the Office of Special Education Programs of the U. S. Department of Education. SEELS includes a sample of more than 11,000 students who were ages 6 through 12 in 1999 and receiving special education services in first grade or higher. Findings represent students with disabilities in this age range as a whole and students in each of the 12 federal special education disability categories used nationally.

The information reported here was provided by parents or guardians[2] of SEELS students in telephone interviews and a mail survey conducted in the summer and fall of 2000. Findings are presented for elementary and middle school students with disabilities as a whole and for those

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[1] Additional information on the design of SEELS can be found at www.seels.net. Details of the demographic characteristics of elementary and middle school students with disabilities and their households are reported in Wagner, Marder, & Blackorby (2002). The functional abilities of students with disabilities are reported in more detail in Blackorby et al., (2002).

[2] For simplicity, parents and guardians are referred to as parents.

who differed in primary disability classification, age, gender, household income, and race/ethnicity.[3]

Students' Disabilities

Primary Disability Classification

The primary disability classification assigned to students receiving special education is a shorthand summary of the results of a diagnostic process that is intended to reveal to school staff, parents, and students the one or more learning challenges for which they receive special education services. It indicates what the school believes is a student's dominant disability, from an educational perspective, and is one important component of a student's functional profile.

Almost three-fourths of students with disabilities in the SEELS age group were classified as having a learning disability (43%) or a speech impairment (30%, Exhibit 1). Those with mental retardation, emotional disturbances, or other health impairments were 9%, 6%, and 4% of students, respectively. The seven remaining disability categories each were fewer than 2% of students; together they comprised about 6% of students receiving special education. Thus, when findings are presented for students with disabilities as a whole, they represent largely the experiences of students with learning disabilities and speech/language impairments.

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[3] Differences between subgroups of students discussed in this report are at the $p<.05$ level of significance or lower.

Exhibit 1
DISABILITY CATEGORIES OF STUDENTS RECEIVING SPECIAL EDUCATION, AGES 6 TO 13

Primary Disability Classification	Federal Child Count[4]		SEELS Weighted
	Number	Percentage	Percentage
Specific learning disability	1,428,939	43.2	41.5
Speech/language impairment	1,002,090	30.3	32.7
Mental retardation	292,833	8.8	8.8
Emotional disturbance	204,725	6.2	5.9
Hearing impairment	39,922	1.2	1.2
Visual impairment	14,658	.4	.4
Orthopedic impairment	42,406	1.3	1.3
Other health impairment	149,037	4.5	4.5
Autism	47,064	1.4	1.5
Traumatic brain injury	6,379	.2	.2
Multiple disabilities	59,685	1.8	1.8
Deaf-blindness	1,025	<.1	<.1
Developmental delay[5]	19,304	.6	--
TOTAL	3,307,067	100.0	100.0

It is important to note that, although we often refer to students receiving special education as "students with disabilities," the population of those with disabilities is larger than those receiving special education. For example, 5% of the general population of parents of children ages 6 through 12 reported that their children had a speech or language impairment, and almost 3% reported that their children had an emotional disturbance.[6] However, children of that age group who were receiving special education primarily for speech/language impairments and emotional disturbances constituted only 2.3% and .9% of students, respectively. This difference points up the fact that many children experience some degree of disability that is not a sufficient challenge to their ability to learn in traditional school settings to qualify them for special education.

Exhibit 1 demonstrates that the weighted distribution of SEELS students very closely approximates that of students in the nation. Thus, weighted findings from SEELS provide an accurate picture of the characteristics, experiences, and achievements of children receiving special education for the range of disabilities highlighted in Exhibit 1.

Parents' Reports of Students Disabilities

Although primary disability classification is an important indicator of disability, it comes well short of describing the full range of learning challenges and disabilities many students face. To obtain a broader view of students' disabilities than their primary disability classification assigned by schools, parents were asked to report the "physical, sensory, learning, or other disabilities or problems" with which their children had been diagnosed.[7] They also were asked

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[4] Child count data are for children ages 6 to 13 who were receiving services under IDEA, Part B, in the 1999-2000 school year in the 50 states and Puerto Rico (OSEP, 2001).

[5] Students ages 8 and under who were classified by school districts as having a developmental delay were reassigned to other categories for purposes of weighting the SEELS sample, using information from parent interviews. Schools also will reassign them when they reach age 9 if they continue to receive special education.

[6] Calculated using data from the National Household Education Survey, 1999 for children ages 6 to 13.

[7] The question wording is as follows: "{CHILD} is included in this study because (his/her) school or school district indicated at the beginning of the 1999-2000 school year that (he/she) may have received special education services and had an IEP (Individualized Education Plan). With what physical, sensory, learning, or other disabilities or

to report on students' health and functioning in the physical, sensory, and communication domains. It is important to underscore that, although parents' reports of disabilities and functional limitations may be informed by the results of professional diagnostic processes, they also are likely to reflect parents' own judgment and their experiences with and perceptions of their children's functioning.

All students who were selected for the SEELS sample were receiving special education services in the 1999-2000 school year. However, by the 2000-2001 school year, parents of 6% of students reported that they had no disabilities and were not receiving services for a disability. It is not clear whether these students had been declassified from special education[8] because their disability had been ameliorated (e.g., a speech articulation difficulty that had been overcome through therapy) or whether the parents who provided information about SEELS students were unaware of the special education services they received in school. It also is possible that some parents simply did not perceive as a disability the condition for which their children received special education.

The percentages of students reported by their parents as not having a disability or not receiving special education services was almost 7% for students classified (by schools) with learning disabilities, 6% for students with speech/language impairments, 5% for students with mental retardation, and 1% for students classified with sensory or orthopedic impairments or autism. These students are not included in the following discussion of the types of disabilities reported by parents.

Exhibit 2 depicts the percentage of parents who reported that their children had each of the main categories of disability. It also includes reports of students having attention deficit/ hyperactivity disorder (AD/HD), a disability that is subsumed under the other health impairment category but is of educational and policy interest in its own right.

Parents' reports reveal much about the diversity of students within disability categories. First, it is apparent that the percentages in each column add to more than 100%, indicating that parents reported more than one category of disability for many students. In fact, parents' reports averaged 1.5 disability categories, ranging from 1.4 for students in the speech/language impairment category to 3.0 for students classified with deaf-blindness.

In addition, parents' reports of disabilities are helpful in understanding students in "umbrella" categories that encompass a broad range of disabilities, particularly the other health impairment and multiple disabilities categories. Within the school-identified category of other health impairments, parents identified their children as having a range of disabilities including AD/HD (70%), learning disabilities (24%) as well as "other" disabilities (32%). "Other" disabilities included such things as genetic disorders that could manifest themselves in numerous ways and, therefore, were not readily classified as one of the primary disabilities. The most commonly reported disability within the multiple disabilities category was other health impairment (39%) and the AD/HD generally subsumed within it (32%). Parents also reported a variety of "other" disabilities (35%) for their children who were classified with multiple

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problems has {CHILD} been diagnosed? [PROBE: Any other disabilities or learning problems?]" Parents also were asked explicitly whether their child had attention deficit or hyperactivity disorder if those conditions had not been mentioned in response to the initial question.

[8] The rate at which students were declassified from special education and the characteristics of those students will be the subject of future SEELS analyses.

disabilities. From 23% to 30% of students classified with multiple disabilities were reported to have speech impairments or learning or orthopedic disabilities.

Two additional points emerge from the figures in Exhibit 2. First, within every primary disability category to which students were assigned by schools, parents reported some students to have had disabilities across the 11 additional disability categories (i.e., other than the school-assigned category). For example, 65% of students whose primary disability identified by their schools was learning disability were reported by parents as having a learning disability. However, between 4% and 45% of students in other primary disability categories also were reported by parents as having a learning disability, including parents of one-fourth of students whose primary disability category was emotional disturbance or other health impairments, 30% of those with multiple disabilities, and 45% of those with mental retardation. Speech impairments also were reported for students in every primary disability category. They included 77% of students classified by schools as having a speech impairment, but also 7% of students with a primary disability classification of emotional disturbances, for example. AD/HD also was common, being reported for 27% of students overall and 70% of those classified as having other health impairments, but also for from 9% to 65% of students in other disability categories. Even low-incidence conditions, such as hearing and vision impairments and autism, were reported for students in every primary disability category. This prevalence of additional disabilities clearly reveals a complexity in the concept of disability that the primary disability category label cannot help but mask.

Further, parents' views of the disabilities of their children in many cases did not mesh well with the primary disability classification that schools assigned to students. For example, among students whose school-assigned primary disability classification was learning disability, only 65% were reported by parents as having learning disabilities; 35% of parents of students with that classification did not mention learning disabilities at all as among their children's physical, sensory, or learning problems.

Exhibit 2
PARENTS' REPORTS OF STUDENTS' DISABILITIES, BY DISABILITY CATEGORY

	All Disabilities	Learning Disability	Speech/ Language Impair-ment	Mental Retarda-tion	Emotional Disturb-ance	Hearing Impair-ment	Visual Impair-ment	Orthopedic Impair-ment	Other Health Impair-ment	Autism	Traumatic Brain Injury	Multiple Disabilities	Deaf-Blindness
Percentage reporting:													
Learning disability	40.3	**65.4**	17.1	45.2	24.9	12.2	10.2	17.2	23.7	4.4	39.9	29.5	9.6
	(1.2)	(2.0)	(1.8)	(2.3)	(2.0)	(1.8)	(1.8)	(2.0)	(2.1)	(1.1)	(4.8)	(2.4)	(10.1)
Speech/Language impairment	34.9	13.1	**77.3**	21.4	7.1	24.9	11.5	11.4	13.0	16.5	15.1	24.6	28.0
	(1.1)	(1.4)	(2.0)	(1.9)	(1.2)	(2.4)	(1.9)	(1.7)	(1.7)	(2.0)	(3.5)	(2.3)	(15.5)
Mental retardation	3.9	.9	.5	**30.0**	1.3	2.5	8.3	3.3	3.0	5.8	3.4	18.1	44.8
	(.5)	(.4)	(.3)	(2.2)	(.5)	(.8)	(1.7)	(.9)	(.9)	(1.2)	(1.8)	(2.1)	(17.1)
Emotional disturbance	5.7	4.3	1.2	4.3	**45.0**	2.4	1.1	2.2	5.3	1.7	4.8	5.1	5.0
	(.6)	(.9)	(.5)	(1.0)	(2.3)	(.8)	(.6)	(.8)	(1.1)	(.7)	(2.1)	(1.2)	(7.5)
Hearing impairment	4.0	2.2	3.9	3.1	1.0	**92.3**	1.9	1.8	3.1	1.3	1.9	5.6	39.5
	(.5)	(.6)	(.9)	(.8)	(.4)	(1.4)	(.8)	(.7)	(.9)	(.6)	(1.3)	(1.2)	(16.8)
Visual impairment	3.0	3.0	1.1	3.4	3.2	1.8	**95.1**	4.5	3.6	.6	6.1	8.9	70.6
	(.4)	(.7)	(.5)	(.8)	(.8)	(.7)	(1.3)	(1.1)	(.9)	(.4)	(2.3)	(1.5)	(15.7)
Orthopedic impairment	3.2	.9	1.4	6.8	.7	3.4	13.2	**61.5**	8.6	2.6	12.5	23.2	17.7
	(.4)	(.4)	(.6)	(1.2)	(.4)	(1.0)	(2.1)	(2.6)	(1.4)	(.8)	(3.2)	(2.3)	(13.2)
Other health impairment	32.2	34.9	14.6	39.0	66.0	24.1	14.2	35.0	**79.1**	27.7	39.0	38.9	8.8
	(1.1)	(2.0)	(1.6)	(2.3)	(2.2)	(2.3)	(2.1)	(2.5)	(2.0)	(2.4)	(4.7)	(2.6)	(9.8)
AD/HD	27.4	27.7	12.8	34.0	64.9	19.5	10.7	27.0	70.2*	26.3	34.3	32.1	8.8
	(1.0)	(1.9)	(1.6)	(2.2)	(2.2)	(2.2)	(1.9)	(2.3)	(2.3)	(2.3)	(4.6)	(2.5)	(9.8)
Autism	3.9	.6	5.7	2.6	1.2	1.3	2.4	.8	1.3	**84.1**	.2	6.3	5.6
	(.5)	(.3)	(1.1)	(.7)	(.5)	(.6)	(.9)	(.5)	(.6)	(1.9)	(.5)	(1.3)	(7.9)
Traumatic brain injury	.4	.1	.2	.5	.2	.3	2.3	1.6	.8	.1	**59.3**	1.4	7.8
	(.2)	(.1)	(.2)	(.3)	(.2)	(.3)	(.9)	(.7)	(.4)	(.2)	(4.8)	(.6)	(9.1)
Deaf-blindness	.2	.2	.1	.0	.0	2.4	2.7	.1	.0	.2	.0	.1	**24.9**
	(.1)	(.2)	(.1)	(.0)	(.0)	(.8)	(1.0)	(.2)	(.0)	(.2)	(.0)	(.2)	(14.9)
Developmental delay	5.2	5.1	2.7	13.3	3.2	3.7	7.6	9.7	5.6	5.8	8.5	12.4	10.5
	(.5)	(.9)	(.8)	(1.6)	(.8)	(1.0)	(1.6)	(1.6)	(1.2)	(1.2)	(2.7)	(1.8)	(10.6)
Other	16.3	16.3	11.6	17.0	19.8	12.5	15.9	26.8	31.7	24.1	20.9	35.0	23.2
	(.9)	(1.6)	(1.5)	(1.8)	(1.8)	(1.8)	(2.2)	(2.3)	(2.3)	(2.3)	(4.0)	(2.6)	(14.5)
Sample size	9,686	1,033	831	853	868	1,031	813	988	922	1,100	356	843	48

Numbers in bold indicate congruence between parents' reports and school disability classifications. Standard errors are in parentheses.

* The 70.2 percent figure for ADHD is included in the 79.1 percent figure for OHI.

This mismatch was apparent to lesser or greater degrees for students with every primary disability classification. The greatest congruence occurred for children with hearing and visual impairments; 92% and 95% of parents of those students acknowledged that their children had such disabilities. However, only 30% of parents of students classified with mental retardation as their primary disability reported that the children had mental retardation at all; they were more likely to report that their children had learning disabilities (45%).

Several factors could be involved in this mismatch in descriptions of students' disabilities. It is possible that some disabilities were perceived as more acceptable than others and thus were reported more often (e.g., learning disability may have been chosen as a descriptor more readily than mental retardation). Some parents also may not have been familiar with the precise meaning of the disability labels and may have incorrectly described the disabilities of their children. Schools also may have misdiagnosed students' problems and categorized students' disabilities incorrectly. Some research has shown, for example, that schools identify boys as having dyslexia (a learning disability that affects students' reading ability) twice as often as girls, when tests of their actual reading ability show that dyslexia occurs equally in boys and girls (Shaywitz & Shaywitz, 2001). It also is possible, though probably not common, that some students' disability profiles changed over time so that the classification reported by schools when students were chosen for SEELS no longer accurately described the disabilities parents reported several months later. Finally, parents' perspectives of disability and their children's functioning at home simply may have differed from those of the schools. For example, a learning disability that was a significant enough challenge at school to qualify a student for special education may not have been nearly so apparent in the less structured environment of the home, where learning educational content was not the primary expectation for children.

Parents' Reports of Students' Functioning

The diversity and multiplicity of disabilities reported above can reveal themselves in a variety of functional limitations that can affect students' abilities to participate successfully at school and in the community. To understand those functional limitations, parents of SEELS students were asked a variety of questions about their children's health and functioning in the physical, sensory, and communication domains (Exhibit 3).

Almost one in ten students were reported by parents to be in only fair or poor health. Ten percent were reported to have a hearing loss, and 13% did not see normally (either with or without glasses or contact lenses). One in five students had some limitation in the use of their arms, hands, legs, or feet. Speech was the most frequently limited function; 43% were reported by parents not to speak as clearly as other children of the same age.

Exhibit 3

PARENTS' REPORTS OF STUDENTS' FUNCTIONING

	Percentage	Standard Error
Percentage whose parents reported that students:		
Were in fair or poor health	8.8	.8
Had a hearing loss	10.5	.8
Did not see normally with or without corrective lenses	12.7	.9
Had trouble using arms, hands, legs, or feet	20.4	1.0
Did not speak as well as other children student's age	43.1	1.3
Sample size	8,331	

These functional limitations affected the disability categories differentially, of course (Exhibit 4). As expected, students in the orthopedic impairment category were the most likely to be reported by parents as having physical functioning limitations (80%), those in the visual impairment or deaf-blindness categories were the most likely to have uncorrected vision problems (2% and 83%), and those in the hearing impairment or deaf-blindness categories all were reported to have a hearing loss. Although a sizable percentage of students in the speech/language impairment category were reported by parents not to speak as clearly as other children (58%), they were not the category of students most likely to be described as having a speech problem. Sixty-five percent or more of students classified (by their schools) with hearing impairments, autism, multiple disabilities, or deaf-blindness were reported by their parents to have speech limitations.

Sometimes large proportions of students in categories not directly associated with these kinds of limitations also experienced them. For example, mental retardation is considered to be a predominantly cognitive disability, yet 43% of students with that primary disability were reported by parents as having physical limitations in the use of their arms, hands, legs, or feet as well as than mental retardation. They also were among the most likely to be reported to have only fair or poor health (18%), less than normal vision (22%), or a hearing loss (14%). Students with learning disabilities were among the least likely to be reported as having each of the other kinds of functional limitations. Yet, even among students in this category, about one in seven had limitations in the use of their limbs or less than normal vision, and 8% were in fair or poor health or had a hearing loss. These findings reinforce the notion of the complex set of abilities and disabilities that students who receive special education services bring to their educational experiences.

Demographic Differences in Parents' Reports of Students' Disabilities

The pattern of some kinds of disabilities and functional limitations reported by parents differed for students in different age groups and for boys and girls. Differences in reported disabilities also were noted for students in different income categories and racial/ethnic groups.

Exhibit 4
PARENTS' REPORTS OF STUDENTS' FUNCTIONING, BY DISABILITY CATEGORY

	Learning Disability	Speech/ Language Impair- ment	Mental Retarda- tion	Emotional Disturb- ance	Hearing Impair- ment	Visual Impair- ment	Orthopedic Impair- ment	Other Health Impair- ment	Autism	Traumatic Brain Injury	Multiple Disabilities	Deaf- Blindness
Percentage whose parents reported that students:												
Were in fair or poor health	7.7 (1.2)	6.2 (1.2)	18.3 (2.0)	8.0 (1.4)	10.2 (1.8)	10.6 (2.0)	15.6 (2.1)	12.2 (1.6)	6.2 (1.3)	16.6 (3.9)	20.1 (2.2)	34.3 (18.3)
Had trouble using arms, hands, legs, or feet	14.8 (1.6)	12.5 (1.7)	43.2 (2.5)	18.1 (1.9)	18.7 (2.4)	34.4 (3.2)	79.6 (2.3)	33.1 (2.4)	54.6 (2.7)	45.9 (4.2)	56.9 (2.7)	65.6 (18.3)
Did not see normally with or without corrective lenses	13.7 (1.6)	7.0 (1.3)	21.5 (2.1)	12.2 (1.7)	10.7 (1.9)	92.4 (1.8)	18.9 (2.3)	14.7 (1.8)	7.5 (1.4)	23.9 (4.5)	26.8 (2.4)	83.3 (14.7)
Had a hearing loss	8.3 (1.3)	9.3 (1.5)	14.1 (1.8)	5.8 (1.2)	100.0 (.0)	9.2 (1.9)	6.9 (1.5)	10.9 (1.6)	6.5 (1.3)	11.6 (3.4)	13.8 (1.9)	100.0 (.0)
Did not speak as well as other children student's age	27.6 (2.1)	58.2 (2.5)	58.5 (2.5)	27.0 (2.3)	64.6 (3.1)	25.1 (2.9)	41.0 (2.8)	35.6 (2.4)	65.7 (2.3)	48.6 (5.3)	69.5 (2.6)	75.4 (20.4)
Sample size	866	720	724	729	869	684	841	907	1,072	305	804	38

Standard errors are in parentheses.

Age. There were no differences between age groups of students in the proportion who were reported by parents as having limitations in hearing or physical functioning (Exhibit 5). Despite there being no difference in the rate at which parents reported a visual impairment, older students were more likely than younger students to be reported as having less than normal vision (15% vs. 10%).

There was a higher incidence of reported learning disabilities and other health impairments among older children, the latter difference resulting largely from higher rates of reported AD/HD. No marked difference in students' general health was associated with the different rates of other health impairments. Speech impairments were lower for older than younger students, consistent with national child count figures (OSEP, 2001). Consistent with this, younger students also were more likely to be reported as not speaking as clearly as other children of the same age.

Exhibit 5

PARENTS' REPORTS OF DISABILITIES AND FUNCTIONAL LIMITATIONS, BY STUDENTS' AGE OR GENDER

	Age			Gender	
	6 to 9	10 to 12	13 or older	Boys	Girls
Percentage reporting:					
Learning disability	30.3 (1.6)	50.2 (1.7)	48.6 (7.2)	39.3 (1.4)	41.6 (2.1)
Speech impairment	50.0 (1.7)	20.8 (1.4)	10.8 (4.5)	35.1 (1.4)	35.0 (2.0)
Mental retardation	3.6 (.6)	4.2 (.7)	5.1 (3.2)	3.2 (.5)	5.3 (.9)
Emotional disturbance	5.0 (.7)	6.2 (.8)	10.0 (4.4)	5.8 (.7)	4.9 (.9)
Autism	5.6 (.8)	2.2 (.5)	3.5 (2.6)	4.4 (.6)	3.1 (.7)
Other health impairment	26.3 (1.5)	38.1 (1.7)	35.9 (7.0)	36.3 (1.4)	24.6 (1.8)
AD/HD	23.2 (1.4)	31.8 (1.6)	33.0 (6.8)	31.8 (1.4)	19.9 (1.7)
Percentage reporting students:					
Were in fair or poor health	8.2 (1.0)	9.4 (1.1)	10.6 (4.5)	8.5 (.9)	9.4 (1.3)
Had a hearing loss	10.7 (1.1)	10.1 (1.1)	11.6 (4.8)	9.9 (.9)	11.3 (1.4)
Did not see normally with or without corrective lenses	10.3 (1.1)	15.0 (1.3)	15.0 (5.5)	10.9 (1.3)	16.3 (1.7)
Had trouble using arms, hands, legs, or feet	21.7 (1.5)	19.1 (1.4)	19.8 (6.1)	20.6 (1.3)	20.0 (1.8)
Did not speak as well as other children student's age	51.8 (1.8)	45.1 (1.8)	26.9 (6.7)	44.1 (1.6)	41.2 (2.2)
Sample size	4,449	3,951	254	5,747	2,907

Standard errors are in parentheses.

Gender. Gender differences in parent-reported disabilities were few. Other health impairment was the only disability identified by parents more often for boys than girls, largely because of differences in rates of reported AD/HD (32% vs. 20%). Less-than-normal vision was more commonly reported for girls than boys, even though their rate of diagnosed visual impairment was the same, suggesting the possibility of a higher rate of undiagnosed or uncorrected vision problems among girls.

Household income. There were no income-related differences in parents' identification of physical impairments, physical functioning, or hearing or visual impairments, yet there were marked differences in the extent to which parents reported functional limitations in hearing and

Exhibit 6
PARENT-REPORTED DISABILITIES THAT DIFFERED BY INCOME OR RACE/ETHNICITY

	Income			Race/Ethnicity				
	$25,000 or Less	$25,001 to $50,000	More than $50,000	White	African American	Hispanic	Asian/ Pacific Islander	American Indian/ Alaska Native
Percentage reporting:								
Learning disability	45.1	39.9	31.0	39.1	46.3	41.7	22.0	41.2
	(2.0)	(2.3)	(2.1)	(1.4)	(2.8)	(3.6)	(8.9)	(14.8)
Speech impairment	30.0	35.6	40.0	36.6	27.4	36.1	41.8	13.7
	(1.9)	(2.2)	(2.2)	(1.4)	(2.5)	(3.5)	(10.6)	(10.3)
Mental retardation	5.3	3.2	2.8	3.5	4.4	5.5	2.2	3.0
	(.9)	(.8)	(.7)	(.5)	(1.1)	(1.7)	(3.2)	(5.1)
Emotional disturbance	7.9	4.7	2.9	5.1	8.4	5.2	1.4	2.2
	(1.1)	(1.0)	(.8)	(.6)	(1.5)	(1.6)	(2.5)	(4.4)
Other health impairment	36.4	31.6	29.1	32.9	35.1	27.9	21.8	38.0
	(1.9)	(2.1)	(2.0)	(1.4)	(2.6)	(3.3)	(8.9)	(14.6)
AD/HD	30.2	27.6	25.8	29.0	29.8	20.4	17.2	36.4
	(1.9)	(2.1)	(2.0)	(1.3)	(2.5)	(2.9)	(8.2)	(14.4)
Percentage reporting students:								
Were in fair or poor health	15.8	5.7	3.7	5.4	15.6	13.6	10.9	11.5
	(1.6)	(1.1)	(.9)	(.7)	(2.1)	(2.6)	(7.6)	(11.6)
Had a hearing loss	14.9	9.1	6.6	9.2	14.0	11.4	11.4	16.3
	(1.6)	(1.3)	(1.2)	(.9)	(2.0)	(2.4)	(7.6)	(13.6)
Did not see normally with or without corrective lenses	17.7	11.6	8.6	10.9	18.8	14.7	6.0	3.2
	(1.7)	(1.5)	(1.3)	(1.0)	(2.3)	(2.7)	(5.8)	(6.5)
Had trouble using arms, hands, legs, or feet	23.4	17.9	20.6	20.8	21.1	14.6	6.0	3.2
	(1.8)	(1.8)	(1.9)	(1.2)	(3.0)	(2.7)	(5.8)	(6.5)
Did not speak as well as other children student's age	53.3	60.3	57.3	57.4	55.3	58.1	39.6	76.0
	(2.2)	(2.3)	(2.3)	(1.5)	(3.0)	(3.8)	(12.4)	(15.6)
Sample size	2,949	2,446	2,748	5,457	1,818	1,064	180	44

Standard errors are in parentheses.

vision (Exhibit 6). Lower-income students were more likely to be reported as having a hearing loss (15% vs. 7%) or less-than-normal vision (18% vs. 9%), suggesting possibly higher rates of uncorrected or undiagnosed impairments for poorer children.

Parents of poorer children reported higher incidences of learning disabilities, mental retardation, and emotional disturbances than parents from higher-income households. In contrast, poorer children were less likely to be reported as having speech impairments than children from higher-income households or to have trouble speaking as clearly as other children (between the lowest and middle income groups). Fair or poor health was more likely to be reported for poorer children.

Race/ethnicity. There were notable differences between racial/ethnic groups in the extent to which parents denied that students had a disability or were receiving special education services. Whereas parents of 5% of white students and 6% of African American students asserted their children had no disability, parents of 10% of Hispanic students did so.

Parents' reports of sensory and physical impairments were unrelated to racial/ethnic background. However, both learning disabilities and emotional disturbances were reported more frequently for African American students than for students in other racial/ethnic groups. While not statistically significant, parents of Asian/Pacific Islander children were somewhat less likely to report learning disabilities than other students. In contrast, a lower rate of speech/language impairment was reported for African American students relative to white and Hispanic students (27% vs. 37% and 36%). African American and Hispanic students were not markedly different from white students in the rate of reported health impairments, yet they were more likely to be reported to be in only fair or poor health.

Some of these differences in the reported rate of disabilities between racial/ethnic groups may relate to the income differences noted above. African American students with disabilities were more likely to come from low-income households than other students (Wagner, Marder, and Cardoso, 2002). Thus, it is not surprising that learning disabilities, which were reported more often for students in low-income households, also were reported more often for African American students. Similarly, speech impairments were reported less often for both low-income and for African American students. These relationships suggest the complex intertwining of disability, poverty, and race/ethnicity.

Age at Identification and First Service

The age at which children first are recognized as having a disability or developmental delay is an important component of a student's disability profile; it can indicate much about the nature of children's disabilities and the experiences that children and families have with them. Some disabilities, such as genetic disorders, and some conditions that result from premature birth, affect children throughout their lifetimes; they and their families never experienced a time when disability was not an aspect of their relationship. Other disabilities emerge when children reach the ages of typical developmental milestones and exhibit delays in acquiring skills, such as delays in walking or talking. Still others become apparent when children take on more sophisticated cognitive tasks, such as reading or mathematics, and demonstrate difficulty in learning. Others can result from accidents that occur at any age.

Regardless of the age at which disabilities emerge, promptness in treating disabilities can be extremely important in ameliorating their effects on children's development and functioning.

IDEA '97 legislates programs for children with disabilities that begin at birth and have outreach components to families of young children.

Here, we present parents' reports of the ages at which their children first were recognized as having a disability or developmental delay. The ages at which children first received professional services for a disability or delay and first received special education also are presented.

Exhibit 7
AGE OF FIRST IDENTIFICATION OF AND SERVICE FOR DISABILITIES

	Percentage	Standard Error
Disability first identified at age:		
Birth through 2 years	24.1	1.1
3 or 4 years	22.3	1.1
5 years	19.0	1.0
6 or 7 years	23.1	1.1
8 years or older	11.5	.8
First professional services at age:		
Birth through 2 years	9.3	.8
3 or 4 years	16.5	1.0
5 years	13.4	.9
6 or 7 years	34.3	1.2
8 years or older	26.5	1.1
First received special education in elementary school at age:		
5 years	55.7	2.2
6 or 7 years	29.9	2.0
8 years or older	14.4	1.6
Sample size: All students	8,483	
First services at school age	3,256	

Almost one in four elementary- and middle-school-age students (24%) had disabilities that first were recognized when they were infants or toddlers (Exhibit 7).[9] Another 22% had disabilities or delays first identified in their preschool years. Thus, more than half (54%) of children had their disabilities first identified when they were school age.[10]

Even larger proportions of children did not begin receiving professional services for their disabilities until they entered school. Whereas 9% of children first received services in infancy or their toddler years and 16% first were served at ages 3 or 4, most children (74%) first received services when they reached school age. More than one-third of children (34%) first were served at age 6 or 7 and more than one-fourth (26%) at age 8 or older. For children who first began receiving professional services from or through their schools, the majority (56%) began receiving special education at age 5.

Disability Differences in Age at Identification and First Service

There were dramatic differences in age at first identification and service for disabilities among children who differed in their primary disability classification (Exhibit 8). The vast majority (87%) of children with visual impairments or deaf-blindness were identified as having a disability before age 3. Almost all children with deaf-blindness (80%) also received their first professional services as infants or toddlers; fewer children with visual impairments (57%) did.

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[9] The age at identification and service is constrained by the age of the children in the sample. The percentage of children who were identified as having a disability or who first received services after age 5 is necessarily smaller than at younger ages because some sample members were only 6 years old at the time of the parent interview and thus could not have been identified or served at older ages.

[10] School age is considered age 5 or older, although some children with disabilities entered school at age 6.

Almost three-fourths (74%) of children with orthopedic impairments and 71% of children with autism first were recognized as having a disability before age 3. More than half (57%) of children with orthopedic impairments, but fewer than a third (31%) of children with autism, first were served at that early age. Hearing impairments were identified before age 3 for 61% of children with that disability classification, but only one-third of those then identified received services at that age.

In contrast, only 12% of children who were classified in school as having learning disabilities were identified as having a disability or delay before age 3; more than three-fourths did not have a disability identified until school age, and 87% were not served until age 6 or older. School age was the time when 44% to 54% of children classified with speech/language or other health impairments, emotional disturbances, and traumatic brain injuries were first identified as having a disability or delay. From 65% to 82% of students in those categories (42% to 62%) did not receive professional services for their disabilities until school age.

Demographic Differences in Age at Identification and Service Initiation

Age. Each successive age cohort of students receiving special education can include students who first were identified as having a disability and/or first received services for a disability at that age. Hence, each successive cohort included a larger proportion of students identified at older ages, as shown in Exhibit 9. Differences in age at identification were intertwined with differences in the distribution of disabilities for children in various age cohorts. For example, children in the younger age cohorts were more likely than older children to have their disability or learning problem identified in their infant or toddler years. This pattern is consistent with the higher prevalence of speech/language delays in the younger cohorts and the fact that speech delays are by far the most common reported delay or disability among young children receiving early intervention services (Hebbeler et al., 2001). Conversely, students who were 10 years old or older included larger proportions of children with learning disabilities and emotional disturbances, disabilities that often emerge later in life.

Gender. There were no differences between boys and girls in age at first identification or first service. For both groups, 24% first were identified as having a disability before age 3, and 9% of boys and 10% of girls first were served at those ages. More than half (52%) of boys and 56% of girls first were identified with a disability at school age (age 5 or older), and three-fourths of these, respectively, first were served at those ages.

Exhibit 8

PARENTS' REPORTS OF AGE AT DISABILITY IDENTIFICATION AND SERVICE INITIATION, BY DISABILITY CATEGORY

Percentage Reporting Age	Learning Disability	Speech/ Language Impairment	Mental Retarda- tion	Emotional Disturb- ance	Hearing Impair- ment	Visual Impair- ment	Orthopedic Impairment	Other Health Impairment	Autism	Traumatic Brain Injury	Multiple Disabilities	Deaf- Blindness
Disability first identified at age:												
Birth through 2 years	11.7	23.4	42.8	21.0	61.3	87.0	74.1	34.1	71.2	32.2	67.9	87.0
	(1.5)	(2.1)	(2.6)	(2.1)	(3.0)	(2.3)	(2.6)	(2.4)	(2.4)	(5.0)	(2.6)	(13.0)
3 or 4 years	15.5	32.4	18.5	25.1	16.3	6.1	10.1	21.1	24.9	17.5	15.2	7.3
	(1.7)	(2.4)	(2.0)	(2.2)	(2.3)	(1.6)	(1.8)	(2.1)	(2.3)	(4.1)	(2.0)	(10.1)
5 years	22.8	17.5	16.1	20.2	12.0	3.9	9.0	18.5	1.9	20.3	8.4	1.6
	(2.0)	(1.9)	(1.9)	(2.1)	(2.0)	(1.3)	(1.7)	(2.0)	(.7)	(4.3)	(1.5)	(4.9)
6 or 7 years	33.2	18.2	14.7	20.7	7.3	2.3	4.8	19.4	1.7	15.6	6.0	4.0
	(2.2)	(2.0)	(1.8)	(2.1)	(1.6)	(1.0)	(1.2)	(2.0)	(.7)	(3.9)	(1.3)	(7.6)
8 years or older	16.7	8.4	7.9	13.0	3.1	.8	2.0	7.0	.3	14.3	2.6	.0
	(1.7)	(1.4)	(1.4)	(1.7)	(1.1)	(.6)	(.8)	(1.3)	(.3)	(3.7)	(.9)	(.0)
First professional services at age:												
Birth through 2 years	3.7	4.4	23.1	5.3	33.2	57.4	56.7	18.3	31.0	18.1	47.9	80.2
	(.9)	(1.0)	(2.2)	(1.2)	(2.9)	(3.3)	(2.9)	(2.0)	(2.5)	(4.1)	(2.7)	(15.4)
3 or 4 years	9.3	21.3	20.9	17.0	30.5	19.6	17.9	16.9	47.2	16.7	24.2	8.4
	(1.4)	(2.1)	(2.1)	(1.9)	(2.8)	(2.7)	(2.2)	(1.9)	(2.7)	(4.0)	(2.3)	(10.7)
5 years	7.5	20.4	14.1	16.2	12.4	11.2	7.0	13.4	12.2	10.8	10.5	2.2
	(1.2)	(2.0)	(1.8)	(1.9)	(2.0)	(2.1)	(1.5)	(1.7)	(1.8)	(3.3)	(1.7)	(5.6)
6 or 7 years	41.5	34.4	24.7	33.4	16.4	8.4	11.5	27.6	6.9	30.0	10.3	.5
	(2.3)	(2.4)	(2.2)	(2.4)	(2.2)	(1.9)	(1.9)	(2.3)	(1.4)	(4.9)	(1.7)	(2.8)
8 years or older	38.0	19.6	17.2	28.1	7.5	3.4	7.1	23.8	2.6	24.4	7.0	8.7
	(2.3)	(2.0)	(1.9)	(2.3)	(1.6)	(1.2)	(1.5)	(2.2)	(.9)	(4.6)	(1.4)	(10.9)
First received special education in school at age:												
5 years	35.7	72.6	62.9	33.3	60.1	61.7	62.9	43.8	76.1	58.3	72.8	--
	(4.7)	(3.9)	(4.1)	(3.8)	(5.1)	(4.8)	(4.1)	(3.8)	(3.8)	(8.6)	(3.7)	
6 or 7 years	37.2	23.1	28.2	40.6	30.9	29.8	28.6	35.0	19.1	30.1	21.2	--
	(4.8)	(3.6)	(3.8)	(3.9)	(4.8)	(4.5)	(3.8)	(3.6)	(3.4)	(8.0)	(3.4)	
8 or 9 years	27.0	4.3	8.9	26.1	9.1	8.4	8.6	21.2	4.9	11.7	6.0	--
	(4.4)	(1.8)	(2.4)	(3.5)	(3.0)	(2.7)	(2.4)	(3.1)	(1.9)	(5.6)	(2.0)	
Sample size: All students	841	709	701	698	861	698	835	902	1,079	305	813	41
First services at school age	186	242	257	289	323	323	364	391	406	111	353	11

– Too few cases to report separately. Standard errors are in parentheses.

Exhibit 9

PARENTS' REPORTS OF AGE AT DISABILITY IDENTIFICATION AND SERVICE INITIATION, BY AGE

	Age at Interview							
Percentage Reporting Age	6	7	8	9	10	11	12	13
Disability first identified at age:								
Birth through 2 years	29.7	33.8	28.5	25.5	18.8	20.2	18.9	18.0
	(4.8)	(3.2)	(3.0)	(2.8)	(2.4)	(2.5)	(2.8)	(6.0)
3 or 4 years	40.3	37.5	21.8	22.0	20.5	15.0	15.5	6.6
	(5.2)	(3.5)	(2.8)	(2.6)	(2.5)	(2.3)	(2.6)	(3.9)
5 years	22.8	18.5	22.5	18.6	17.9	17.2	18.1	18.7
	(4.5)	(2.8)	(2.8)	(2.4)	(2.3)	(2.4)	(2.8)	(6.1)
6 years	6.3	8.4	16.6	13.6	15.4	15.3	14.3	16.5
	(2.6)	(2.0)	(2.5)	(2.2)	(2.2)	(2.3)	(2.5)	(5.8)
7 years		1.8	7.7	11.1	9.6	14.5	13.5	11.8
		(1.0)	(1.8)	(2.0)	(1.8)	(2.2)	(2.5)	(5.1)
8 years or older			2.9	9.1	17.9	17.8	19.6	27.4
			(1.1)	(1.8)	(2.3)	(2.4)	(2.9)	(7.2)
First professional services at age:								
Birth through 2 years	9.7	11.6	11.3	10.3	8.5	7.2	7.2	6.4
	(2.8)	(2.3)	(2.2)	(1.9)	(1.7)	(1.8)	(1.9)	(3.9)
3 or 4 years	29.6	27.2	17.4	16.1	13.5	12.0	11.3	8.1
	(4.8)	(3.2)	(2.6)	(2.3)	(2.1)	(2.1)	(2.3)	(4.3)
5 years	34.1	22.1	16.0	8.8	9.9	10.1	8.4	5.3
	(5.0)	(3.0)	(2.5)	(1.8)	(1.8)	(1.9)	(2.0)	(3.5)
6 years	23.2	25.1	22.8	20.9	18.6	15.3	16.1	20.0
	(4.5)	(3.1)	(2.9)	(2.5)	(2.4)	(2.3)	(2.6)	(6.3)
7 years		12.4	19.2	14.9	15.1	13.1	17.2	11.5
		(2.4)	(2.7)	(2.2)	(2.2)	(2.2)	(2.7)	(5.0)
8 years			12.3	18.2	17.4	17.5	14.9	11.8
			(2.2)	(2.4)	(2.3)	(2.4)	(2.6)	(5.1)
9 years or older				10.8	16.9	24.7	24.8	37.0
				(1.9)	(2.3)	(2.7)	(3.1)	(7.6)
Sample size: All students	494	1,143	1,309	1,437	1,449	1,342	1,065	244

Standard errors are in parentheses.

Household income. Differences were noted in age at identification and first service for students who differed in the incomes of the households in which they lived (Exhibit 10). Those in wealthier households (more than $50,000 per year) were more likely to be identified as having a disability as infants or toddlers (29%) than were students in the lower income categories (22% and 20%). Conversely, they were less likely to be identified as having a disability when they were older (e.g., 8% of higher-income children identified at age 8 or older, compared with 14% of children of this age group in the lowest income category). However, these differences were moderated when we examine age at first service provided by a professional. In contrast, differences in age at first receipt of special education were more pronounced, again favoring earlier service for children from wealthier families. For example,

Exhibit 10

PARENTS' REPORTS OF AGE AT DISABILITY IDENTIFICATION AND SERVICE INITIATION, BY INCOME AND RACE/ETHNICITY

	Income			Race/Ethnicity				
Percentage Reporting Age	$25,000 or Less	$25,001 to $50,000	More than $50,000	White	African American	Hispanic	Asian/ Pacific Islander	American Indian/ Alaska Native
Disability first identified at age:								
Birth through 2 years	21.8	22.5	29.2	25.6	22.7	18.3	31.5	29.3
	(1.8)	(2.0)	(2.2)	(1.4)	(2.5)	(3.0)	(11.7)	(16.6)
3 or 4 years	22.1	23.2	22.8	23.7	19.0	20.3	10.5	12.4
	(1.8)	(2.0)	(2.0)	(1.3)	(2.4)	(3.2)	(7.7)	(12.0)
5 years	18.0	20.2	18.3	19.8	19.2	16.1	21.3	27.8
	(1.7)	(1.9)	(1.8)	(1.2)	(2.4)	(2.9)	(10.3)	(16.3)
6 or 7 years	23.7	23.5	21.3	22.1	23.4	28.6	26.4	29.4
	(1.9)	(2.0)	(2.0)	(1.3)	(2.5)	(3.5)	(11.1)	(16.6)
8 years or older	14.4	10.7	8.4	8.9	15.8	16.7	10.4	1.1
	(1.6)	(1.4)	(1.3)	(.9)	(2.2)	(2.9)	(7.7)	(3.7)
First professional services at age:								
Birth through 2 years	8.8	8.7	10.8	9.6	8.7	8.2	9.0	6.0
	(1.2)	(1.3)	(1.5)	(.9)	(1.7)	(2.2)	(7.1)	(8.7)
3 or 4 years	15.4	17.6	16.8	18.1	13.5	13.3	13.8	13.5
	(1.6)	(1.8)	(1.8)	(1.2)	(2.0)	(2.7)	(8.5)	(12.5)
5 years	14.7	12.2	13.2	13.3	15.6	10.9	13.8	11.1
	(1.6)	(1.5)	(1.6)	(1.1)	(2.2)	(2.4)	(8.5)	(11.5)
6 or 7 years	32.2	37.4	34.8	35.6	31.2	31.4	43.7	26.3
	(2.1)	(2.2)	(2.3)	(1.5)	(2.8)	(3.6)	(12.3)	(16.1)
8 years or older	28.9	24.2	24.4	23.4	31.0	36.4	19.7	43.2
	(2.0)	(2.0)	(2.0)	(1.3)	(2.8)	(3.8)	(9.8)	(18.2)
First received special education in school at age:								
5 years	51.0	52.9	63.4	57.3	51.3	58.7	39.1	68.9
	(3.8)	(3.9)	(3.8)	(2.6)	(5.0)	(7.5)	(22.1)	(27.5)
6 or 7 years	30.7	35.0	23.5	29.6	32.9	23.5	58.5	24.0
8 or 9 years	18.3	12.0	13.3	13.2	15.9	18.0	2.5	7.1
Sample size: All students	2,882	2,410	2,715	5,385	1,757	1,034	176	43
First received services at school-age	1,100	919	1,054	2,082	700	357	62	22

Standard errors are in parentheses.

among children who first received professional services at school age, 63% of children in households with incomes of more than $50,000 per year received special education at age 5, compared with 51% of children from households with incomes of $25,000 or less.

Race/ethnicity. Differences also were noted for students of different racial/ethnic backgrounds, consistent in direction with those found for household income. White students, who tended to be from higher-income families, were more likely to be identified as having a disability at younger ages than Hispanic children (26% vs. 18% for those under age 3) and less likely to be identified in the older age range (8 or older, 9%) than African American (16%) or Hispanic children (16%). Again, the differences regarding age at first receipt of professional services were moderated. The pattern of ages of identification and first service for Asian/Pacific Islander children was similar to that of white children.

Program Participation in Children's Early Years

Programs to serve infants, toddlers, and preschool-age children with disabilities are an important component of IDEA. In Part C of IDEA, early intervention services are mandated for children who have been identified with a disability or developmental delay before age 3; in some states, children at risk of delay also are eligible for early intervention services. The number of infants and toddlers served under Part C has been increasing; 203,488 were served in 1999 OSEP, 2001). Special education and related services in the preschool years, called for in Part B of IDEA, served 587,438 children who were ages 3 through 5 in 1999 (OSEP, 2001).

Exhibit 11
EARLY INTERVENTION RECEIPT AMONG CHILDREN WITH DISABILITIES IDENTIFIED BEFORE AGE 3

	Percentage	Standard Error
Received early intervention services	29.8	1.8
Early intervention recipients who began services at age:		
Birth to 1 year	57.0	3.0
1 to 2 years	30.8	2.8
2 to 3 years	12.2	2.0
Sample size: Students identified before age 3	5,174	
Early intervention recipients	2,574	

As described previously, 24% of elementary- and middle-school-age children who were receiving special education were reported to have disabilities or delays that were identified before age 3. However, fewer than one-third of these children (30%) had participated in early intervention services for infants and toddlers with disabilities (Exhibit 11). Among those who did, more than half (57%) began early intervention before they were a year old.

Among the 65% of children who were younger than age 6 at the time that disability or significant delay was identified, 45% had received special education services in their preschool years (Exhibit 12). The vast majority of children (94%) who had received early intervention services went on to preschool special education. However, they constituted fewer than half of those

Exhibit 12
PRESCHOOL SPECIAL EDUCATION ENROLLMENT AMONG CHILDREN WITH DISABILITIES IDENTIFIED BEFORE AGE 6

	Percentage	Standard Error
Received preschool special education services	44.7	1.7
Preschool special education students who began services at age:		
Birth to 1 year	31.7	2.2
1 or 2 years	28.0	2.1
3 or 4 years	37.2	2.2
5 to 6 years	3.2	.8
Preschool special education students who had received early intervention services	48.7	2.4
Sample size: Students with disabilities identified before age 6	6,346	
Preschool special education students	4,090	

receiving special education in preschool; 51% of preschool students with disabilities had not received early intervention services previously. Four in 10 students who had received preschool special education did not begin professional services for a disability until their preschool years.

Beyond these programs that are directed specifically to young children with disabilities, preschool or nursery school is a common experience for young children, with and without disabilities. Such early education experiences offer opportunities to learn social skills and prepare for school entry. A large majority of children with disabilities (70%) attended preschool or nursery school (Exhibit 13), including 87% of those who had received early intervention and 88% of those who had received special education services in their preschool years. More than one-fourth of children (28%) attended a Head Start center for preschool; these children were 40% of those who attended any kind of preschool or nursery school.

Preschool was an opportunity for more than three-fourths of children who attended them to interact with children who had no identified disabilities. More than one-third of preschool students with disabilities attended preschools where they were the only child with a disability, and 41% attended preschools where their schoolmates included both children with and without disabilities. Head Start centers and other preschools were equally likely to offer an inclusive program to students. However, Head Start centers were more likely to have a mix of other children with disabilities and children without disabilities, whereas children who attended other preschools were more likely to be the only child with a disability enrolled in the school.

Exhibit 13

PRESCHOOL OR NURSERY SCHOOL ATTENDANCE BY CHILDREN WITH DISABILITIES

	Percentage	Standard Error
Attended preschool or nursery school	69.8	1.2
Attended a Head Start center	27.5	1.2
Attended preschool where:		
All other students had disabilities	22.7	1.5
Some other students had disabilities	41.4	1.7
No other students had disabilities	35.9	1.7
Attended non-Head Start preschool where:		
All other students had disabilities	23.3	1.9
Some other students had disabilities	35.0	2.1
No other students had disabilities	41.6	2.2
Attended a Head Start center where:		
All other students had disabilities	19.3	2.3
Some other students had disabilities	52.4	2.9
No other students had disabilities	28.2	2.6
Sample size: all students	8,470	
Preschool students	5,535	
Non-Head Start preschool students	3,439	
Head Start center enrollees	1,842	

Disability Differences in Early Program Participation

Children with different primary disability classifications had markedly different experiences with programs to serve young children with disabilities (Exhibit 14). Children whose disabilities had been identified before they were 3 years old and who had deaf-blindness, orthopedic impairments, or multiple disabilities were most likely to have received early intervention services (84%, 69%, and 68%, respectively). Among children whose disabilities had been identified before they were 3 years old, those classified with deaf-blindness, orthopedic impairments, or multiple disabilities were most likely to have participated in preschool special education (78% to 91%).

More than half of children with identified disabilities before age 3 who had hearing (55%) or visual impairments (53%) or mental retardation (52%) received early intervention services, and almost two-thirds of students in those categories with identified disabilities before age 6 participated in preschool special education (62% to 69%). In contrast, only about one in five children with learning disabilities whose disabilities were identified when they were infants or toddlers received early intervention services, as did only 14% of those with speech impairments. These categories of children, and those with emotional disturbances, also were the least likely to have received preschool special education services (31% to 40%).

The range in rates of participation in preschool or nursery school across the disability categories was not as wide as the range of participation in programs specifically for young children with disabilities. From 65% to 86% of children went to preschool or nursery school, including more than 80% of those with visual, orthopedic, or other health impairments or autism, multiple disabilities, or deaf-blindness. Only about two-thirds of children with learning disabilities, mental retardation, or traumatic brain injuries attended preschool or nursery school.

Exhibit 14

EARLY PROGRAM PARTICIPATION, BY DISABILITY CATEGORY

	Learning Disability	Speech/ Language Impairment	Mental Retarda-tion	Emotional Disturb-ance	Hearing Impair-ment	Visual Impair-ment	Orthopedic Impairment	Other Health Impairment	Autism	Traumatic Brain Injury	Multiple Disabilities	Deaf-Blindness
Percentage who had participated in:												
Early intervention services[a]	21.7	14.3	52.5	24.3	54.8	53.0	69.2	42.4	42.9	39.3	68.2	84.0
	(4.4)	(2.7)	(3.6)	(4.0)	(3.3)	(3.6)	(3.0)	(3.8)	(2.9)	(8.3)	(2.8)	(14.9)
Preschool special education[b]	31.3	40.3	61.6	35.7	68.9	65.4	78.3	47.1	79.0	51.2	80.2	90.9
	(3.6)	(3.1)	(3.0)	(3.3)	(3.0)	(3.3)	(2.5)	(3.2)	(2.2)	(6.7)	(2.3)	(11.6)
Preschool/nursery school[c]	65.1	70.9	67.5	75.6	78.7	82.1	83.9	80.2	86.3	64.4	81.8	82.6
	(2.2)	(2.3)	(2.4)	(2.2)	(2.5)	(2.6)	(2.1)	(2.0)	(1.9)	(5.1)	(2.1)	(14.6)
Head Start center[c]	26.9	24.2	35.9	37.4	25.3	28.2	25.8	29.9	19.1	30.4	33.2	16.2
	(2.1)	(2.2)	(2.5)	(2.5)	(2.7)	(3.1)	(2.6)	(2.4)	(2.2)	(4.9)	(2.7)	(14.6)
Preschool with nondisabled children[d]	84.6	85.2	53.7	78.7	53.8	57.4	56.6	76.0	41.2	79.9	36.5	62.5
	(2.5)	(2.5)	(3.5)	(2.9)	(3.5)	(4.0)	(3.5)	(2.8)	(3.0)	(5.9)	(3.0)	(21.7)
Sample size: [a] Students identified before age 3	156	303	373	217	677	618	649	392	966	115	670	38
[b] Students identified before age 6	296	454	492	399	768	640	730	573	1,040	185	730	39
[c] All students	847	713	698	692	866	693	835	898	1,078	304	805	41
[d] All preschool students	394	374	390	372	635	510	619	543	873	177	616	32

Standard errors are in parentheses.

As pointed out previously, attending a Head Start center was tied closely to household income. Therefore, it is not surprising that children with emotional disturbances, mental retardation, or multiple disabilities were among the most likely to be Head Start center attendees (33% to 36%); they also were the categories with the largest proportion of children from very-low-income households. Fewer than one in five children with autism (19%) attended a Head Start center; attendance rates ranged from 24% to 30% for most other categories.

Children with learning disabilities were among the least likely to have attended preschool, but, when they did, they were the most likely to have their preschool program include nondisabled children (85% of preschool attenders). High rates of participation in inclusive programs also were noted for preschool students with speech impairments (85%), emotional disturbances (79%), or traumatic brain injuries (80%). Children in preschool who had autism or multiple disabilities were less likely to be in programs that included nondisabled children (42% and 36%, respectively).

Demographic Differences in Early Program Participation

Age and gender. There were no differences between boys and girls or children of different ages in the rates at which they participated in early intervention, preschool special education, preschool/nursery school, or Head Start centers, or in the extent to which they participated in inclusive programs in preschool.

Household income. There were no differences in receipt of early intervention or preschool education between income groups (Exhibit 15); families' resource limits apparently did not pose a barrier to accessing these services. However, preschool attendance differed between poorer and wealthier children. Those from higher-income households were more likely to have attended preschool or nursery school (78% of those with incomes greater than $50,000) than were children from households with lower incomes (66% and 68%). Predictably, fewer children from wealthier households attended Head Start centers (11%), compared with those in the lowest (42%) and middle income groups (27%). There were no differences between groups in the likelihood that those attending preschool were in programs that included children without identified disabilities; children were equally likely to be in inclusive preschool programs, regardless of income.

Race/ethnicity. Similar to differences between children related to household income, those who differed in their racial/ethnic backgrounds did not have different rates of receiving early intervention services or preschool special education. However, they differed in their rates of attending preschool and Head Start centers. White and African American children were equally likely to have attended preschool (72%) and were more likely than Hispanic children to have done so (58%). Although their rates of going to preschool were the same, white and African American children differed in attendance at Head Start centers. White and Asian/Pacific Islander children had the lowest rates of Head Start center attendance (20% and 10%, respectively), which were lower than the rates for African American children (48%) and for Hispanic children (32%). There were no differences in the likelihood that their preschool programs were inclusive between children of different racial/ethnic backgrounds who attended preschool.

Exhibit 15
EARLY PROGRAM PARTICIPATION, BY INCOME AND RACE/ETHNICITY

	Income			Race/Ethnicity				
	$25,000 or Less	$25,001 to $50,000	More than $50,000	White	African American	Hispanic	Asian/ Pacific Islander	American Indian/ Alaska Native
Percentage who had participated in:								
Early intervention services(a)	30.9	28.0	28.5	30.0	340.6	31.1	31.2	16.5
	(3.2)	(3.2)	(3.1)	(2.2)	(4.3)	(6.2)	(15.6)	(22.1)
Preschool special education(b)	42.3	47.7	43.7	46.2	40.7	40.2	45.8	46.8
	(2.8)	(3.0)	(2.9)	(2.0)	(3.7)	(5.2)	(14.9)	(27.4)
Preschool/nursery school(c)	65.6	68.1	77.8	72.3	72.2	58.1	54.0	60.2
	(2.1)	(2.2)	(2.0)	(1.4)	(2.7)	(3.8)	(12.3)	(17.9)
Head Start center(c)	42.5	26.7	11.2	20.4	48.3	32.5	10.1	22.0
	(2.2)	(2.1)	(1.5)	(1.3)	(3.0)	(3.7)	(7.6)	(15.6)
Preschool with nondisabled children(d)	77.1	75.9	78.4	76.0	78.3	82.0	68.7	94.7
	(2.6)	(2.7)	(2.5)	(1.8)	(3.4)	(4.3)	(15.0)	(11.4)
Sample size: (a) Students identified before age 3	1,649	1,426	1,819	2,229	987	645	126	23
(b) Students identified before age 6	2,091	1,774	2,140	4,051	1,265	786	149	30
(c) All students	2,881	2,406	2,705	5,375	1,751	1,036	174	43
(d) All preschool students	1,741	1,563	1,954	3,624	1,088	628	119	28

Standard errors are in parentheses.

Summary

Information provided by parents does much to expand our understanding of the multidimensional nature of children's disabilities. According to parents, within each primary disability classification, there were students who also had one or more of virtually every other kind of disability. On average, parents reported 1.5 disabilities for students. Parents' reports underscore the complexity of disability, which goes well beyond the category labels used by schools.

Parents' views also highlight the differences in perspectives on disability that can occur between parents and schools. Although all students were receiving special education services in the year in which parents were interviewed, 6% of them asserted that their children had no disabilities for which they received services. Further, in many cases, parents' reports of students' disabilities did not include the primary disability classification identified by schools. This discrepancy between parents' reports of students' disabilities and schools' classifications of students' primary disabilities was rare for students with sensory impairments, but common for the majority of students in the categories of mental retardation or emotional disturbance.

These disjunctures between parents' and schools' views of primary disability may result from the different contexts (home and school) in which they view children's disabilities in operation, and the different functional implications of disability that dominate at home and at school; what may be the primary challenge to successful functioning in the learning environment of the school may not be the primary challenge to successful functioning in the context of the home. These differences in perspectives undoubtedly come into play when parents and school staff interact in planning children's educational programs; recognizing them could facilitate those interactions.

Parents' views also may provide important insight regarding the prevalence of some kinds of disabilities. Most notably, parents of more than one-fourth of students identified their children as having attention deficit or attention deficit/hyperactivity disorders (AD/HD). This disability was mentioned by parents of 70% of students in the other health impairment category. Although there is much debate on the true prevalence and appropriate diagnosis of these conditions, the rate at which parents perceived them as part of their children's disability profiles is telling. and may be unaccounted for in the way school staff interact with students with disabilities.

Students' disabilities resulted in a variety of limitations in student functioning. Parents reported that significant minorities of students were not in good health, had a hearing loss, did not see normally even after visual correction, and had some restriction in the use of their arms, hands, legs or feet. More than 40% were reported not to speak as clearly as other students the same age. Functional limitations of some kinds were apparent for students in disability categories that were not directly related to those limitations. For example, 43% of students with mental retardation were reported to have limitations in the use of one or more limbs.

Information on the ages at which children first were identified as having a disability or delay and first received services for them may point up opportunities for earlier efforts to ameliorate the effects of some kinds of disabilities. Parents of almost half of children reported that their disabilities had been diagnosed before age 5, but only half of those children received services before age 5. The majority of children with disabilities first were served when they reached school, even when their parents reported that their disabilities had been evident much earlier. This gap between identification and services was apparent even for such disabilities as autism and hearing impairments whose manifestations typically impact child functioning well before formal schooling begins.

Thirty percent of children who had disabilities diagnosed before age 3 had received early intervention services for them; 45% of those whose disabilities had been identified before age 6 participated in preschool special education. However, services did appear to be ongoing for those children who received them; virtually all of those who had received early intervention also received special education services in their preschool years.

Disability profiles differed for students of different ages, particularly in the prevalence of speech/language impairments. Students with that primary disability classification were smaller percentages of each older age cohort, whereas students with learning disabilities and other health impairments, particularly AD/HD, were progressively larger proportions students in older cohorts. These differences in the distribution of disabilities in different age cohorts were reflected in such factors as the age at identification of disability. For example, younger students, who were more likely than older students to have speech/language impairments, also were more likely to report that their disability had been identified before school age.

Gender differences were few. Parents of boys were more likely to report that students had AD/HD and, therefore, a health impairment, than parents of girls. In contrast, parents of girls were more likely to report students had less-than-normal vision than parents of boys, even though they were not more likely to report that their daughters had a diagnosed visual impairment. This suggests that girls may have had uncorrected vision problems with greater frequency than boys.

Lower-income and wealthier students also differed in their disability profiles in important ways. Lower-income students were more likely to be identified as having learning disabilities, mental retardation, and emotional disturbances than wealthier students, and were more likely to have reported hearing and vision limitations. They also were less likely to have their disabilities identified before school age (in part because of the disabilities that were more prevalent among lower-income students) and to have them treated at young ages when they were identified. However, it is encouraging to note that income limitations did not appear to pose barriers to accessing early intervention or preschool special education services; there were no differences between income groups, or between racial/ethnic groups, in the rate at which children received those services. But, the potential benefits of preschool attendance were not equally available to all students. Those from lower-income households were less likely than wealthier students to have attended preschool to help prepare them for school entry.

Regarding racial/ethnic differences, students of color experienced disability in different ways than white students, according to parents. For example, learning disabilities and emotional disturbances were reported more frequently for African American students than white or Asian/Pacific Islander students. They also were more likely to have had their disabilities first identified and treated when they were older. African American students also were more likely to be reported as in only fair or poor health and to have both hearing and visual problems than white students, even though they were no more likely to be reported as having a diagnosed hearing or visual impairment, suggesting the possibility of undiagnosed or uncorrected sensory impairments among African American students. Parents of Hispanic students were less likely than white students to acknowledge their children had AD/HD or any disability at all, and to report that their children were in good health. Racial/ethnic differences in program participation mirrored those observed for different income groups; there were no differences between groups in participation in early intervention or preschool special education for students whose disabilities had been identified at ages appropriate for those services. However, Hispanic students were less likely than others to have attended preschool or nursery school.

These findings have helped to illustrate the complexity of the concept of a student's disability by illuminating its multiplicity and functional implications and the variation in how early it began to influence the life of a student and his or her family. Future analyses from SEELS will explore in detail the ways the variations in students' disability profiles relate to their experiences in school and in their communities and their achievements as they transition from elementary to middle and middle to high school.

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