

PEELS PROGRESS Notes

AUGUST 2006

Preschoolers with Disabilities: A Look at School Readiness Skills

FINDINGS...

In general, preschoolers with disabilities scored within one standard deviation of the population mean on standardized assessments of school readiness.

Children identified as having mental retardation scored lowest on several verbal readiness measures.

Children identified as having autism scored within one standard deviation of the mean on emerging literacy skills, but had social skills and behavior problems outside that range.

The Pre-Elementary Education Longitudinal Study (PEELS) is examining the preschool and early elementary school experiences of three-, four-, and five-year-old children with disabilities and the early academic and social-behavioral skills they exhibit. The study will follow a nationally representative sample of more than 3,000 children through 2009. This *PEELS Progress Notes* presents a profile of standardized assessment scores for preschoolers with disabilities nationwide in the areas of emerging literacy, pre-math, and social-behavior skills. The findings in this document are highlights from *Preschoolers with Disabilities, Characteristics, Services, and Outcomes*, available at www.peels.org.

Assessments

Preschoolers with disabilities participated in a series of assessments to determine school readiness¹. The majority of these children (84 percent) completed the following assessments:

- **Literacy: Letter and Word Identification**—These skills were assessed using the Woodcock-Johnson III, Letter-Word Identification subtest (Woodcock, McGrew, and Mather 2001).
- **Literacy: Vocabulary**—Receptive vocabulary was assessed using an adapted version of the Peabody Picture Vocabulary test (PPVT) (Dunn and Dunn 1997).
- **Math: Applied Problems**—The ability to analyze and solve practical math problems was assessed using the Applied Problems subtest (Woodcock, McGrew, and Mather 2001).

Seventy-five percent of children received teacher rating scores on the following:

- **Social Skills and Problem Behaviors**—Social skills and problematic behaviors were assessed using the Preschool and Kindergarten Behavior Scales (Merrell 2002).

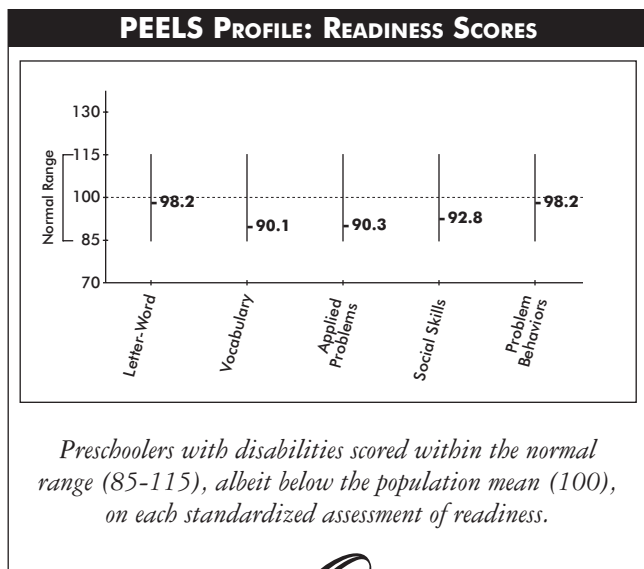
For each of the assessments, scores were totaled and converted to a norm-referenced scale with a mean of 100 and a standard deviation of 15. In a general population, 68 percent of children would be expected to have scores within one standard deviation of the mean.

Findings

As a group, preschoolers with disabilities had standard scores averaging 2 to 10 points below those of their non-disabled peers, except on problems behaviors, where their scores were better than those of children in the general population. [See the exhibit, *PEELS Profile: Readiness Scores*.] Group differences were tested for statistical significance using analysis of variance at the .05 level, showing that some groups performed better than others.

DISABILITY PROFILE OF CHILDREN AGES 3-5

Disability	%
Speech or Language Impairment	49.2
Developmental Delay	26.8
Autism	7.0
Low Incidence	5.7
Mental Retardation	3.7
Learning Disability	2.4
Other Health Impairment	2.4
Orthopedic Impairment	1.8
Emotional Disturbance	1.0
Total	100.0



EMERGING LITERACY

On letter and word identification skills, the overall performance of preschoolers with disabilities averaged 98.2, with a median of 98.0 and standard errors of 0.8 and 0.7, respectively. The 95 percent confidence interval was 96.7 to 99.7 for the mean and 96.5 to 99.3 for the median. This is very close to the population mean. However, the following differences were observed:

- Children identified as having autism (M = 108.8, S.E. = 6.4), speech or language impairments (M = 100.1, S.E. = 0.8), or other health impairments (M = 98.2, S.E. = 4.6) had scores near or above the population mean. Children identified as having mental retardation (M = 85.5, S.E. = 5.1) had scores one standard deviation below the population mean.
- Children identified as having autism (M = 108.8, S.E. = 6.4) scored significantly higher than children identified as having developmental delays (M = 93.0, S.E. = 1.3), learning disabilities (M = 93.2, S.E. = 3.1), mental retardation (M = 85.5, S.E. = 5.1), or other health impairments (M = 98.2, S.E. = 4.6).

On vocabulary, the overall performance of preschoolers with disabilities averaged 90.1, with a slightly higher median of 91.4 and standard errors of 0.6 and 0.9, respectively. Preschoolers in all of the disability categories except mental retardation performed within one standard deviation of the population mean. The mean vocabulary performance for children

with mental retardation was 69.9 (S.E. = 4.1), more than two standard deviations below the population mean.

EARLY MATH PROFICIENCY

Overall performance of preschoolers with disabilities averaged 90.3, with a slightly higher median of 93.2. Performance varied across disability categories as follows:

- Children identified as having developmental delays (M = 82.7, S.E. = 1.4), other health impairments (M = 84.2, S.E. = 5.7), or autism (M = 80.7, S.E. = 6.9) performed more than one standard deviation below the mean for the norm population.
- Children identified as having mental retardation (M = 60.6, S.E. = 4.0) performed more than two standard deviations below the population on early math skills.

SOCIAL SKILLS AND PROBLEM BEHAVIORS

Overall teacher ratings suggest that the social skills of preschoolers with disabilities fall well within one standard deviation of the population mean. In general, the five-year-olds (M = 96.2, S.E. = 1.4) did better than the three-year-olds (M = 85.2, S.E. = 1.2). Children in three disability groups, low incidence (M = 84.3, S.E. = 3.9), autism (M = 73.2, S.E. = 3.4), and mental retardation (M = 73.2, S.E. = 3.4) received social skills ratings more than one standard deviation below the mean for the norm population.

On teacher ratings of problem behavior, overall, preschoolers with disabilities perform within one standard deviation of the population mean. However, ratings vary across disability groups, with six categories—children identified as having autism (M = 109.5, S.E. = 1.5), developmental delay (M = 102.9, S.E. = 1.0), emotional disturbance (M = 111.3, S.E. = 4.3), learning disability (M = 102.6, S.E. = 2.4), mental retardation (M = 105.0, S.E. = 2.2), and other health impairment (M = 101.7, S.E. = 5.1), showing average ratings above the population mean of 100. [Note: A higher rating on this measure indicates a higher level of problem behavior.] Children identified as having an orthopedic impairment (M = 93.7, S.E. = 3.0), speech or language impairment (M = 93.1, S.E. = 0.7), or low incidence disability (M = 95.9, S.E. = 2.6) had fewer problems than the general population.

REFERENCES

Dunn, L.M., and Dunn, L.M. (1997). *Peabody Picture Vocabulary Test-Third Edition*. Circle Pines, MN: American Guidance Services.

Merrell, K.W. (2002). *Preschool and Kindergarten Behavior Scales, Second Edition*. Austin, TX: PRO-ED.

Woodcock, R.W., McGrew, K.S., and Mather, N. (2001). *Woodcock-Johnson III Tests of Achievement*. Itasca, IL: Riverside Publishing.

¹ Scores for children with disabilities were included in these analyses, regardless of whether test accommodations were used. In all, 359 children used accommodations. For more information, see *Preschoolers with Disabilities, Characteristics, Services, and Results*, available at www.peels.org.

