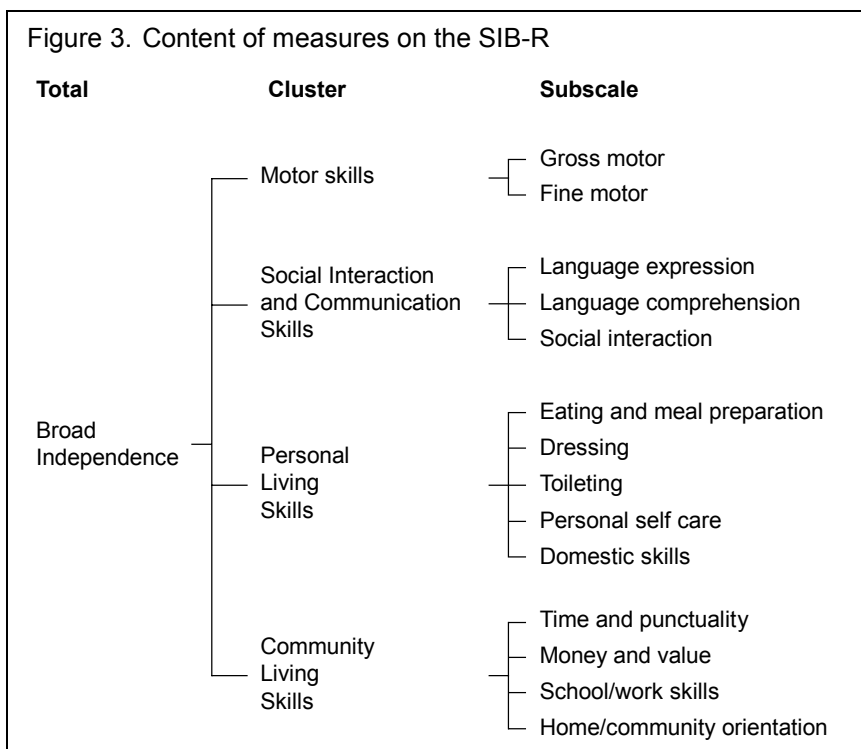


5. The Abilities of Youth Reported on the Functional Rating

This chapter presents findings from the NLTS2 functional rating, the *Scales of Independent Behavior-Revised* (SIB-R) (Bruininks et al. 1996), completed for 16- to 18-year-old youth with disabilities. The SIB-R is designed to assess skills needed to function independently in home, social, school, work, and community settings. The rating scale was completed by a youth's teacher or school staff member most knowledgeable about his or her functional abilities, or by parents, primarily when youth were no longer in school.¹ The SIB-R checklist addresses both academic and functional areas and mirrors the more functional nature of curriculum and instruction for youth with more severe disabilities who were identified by school staff or parents during screening to be appropriate for a functional rating.

As noted in chapter 1, the SIB-R covers a broad range of behaviors that are measured on the 14 subscales identified in figure 3. The subscales are organized into four clusters and an overall



rating, broad independence. Each cluster is made up of two to five subscales, with each subscale having up to 20 items;² a total of 229 items are included in the overall broad independence rating. The analyses reported in this chapter are at the cluster level. Performance is reported as the percentage of youth whose ratings fall within a standard score range, which allows comparison with the norm sample of same-age youth in the general population. Focusing on findings at the cluster level minimizes the danger of

¹ As reported in chapter 2, approximately 22 percent of youth with a functional rating are estimated to have had it completed by a parent. Only one statistically significant difference between those with ratings that were parent-completed and those with ratings completed by teachers was noted on the variety of demographic and disability-related factors and assessment scores examined. The group with ratings completed by parents had a significantly larger proportion of African American youth than the group with teacher-completed ratings (43 percent vs. 14 percent, $p < .05$).

² Each item is scored on a 4-point scale. On each item, the respondent rated the youth's ability to complete the task without help or supervision. A youth received a rating of 0 if he or she never or rarely performed the task, even if asked; 1 if he or she did the task completely, but not well; 2 if all parts of the task were done fairly well; and 3 if the task was almost always done very well and without prompting. The sum of the item scores is the raw score for each subscale.

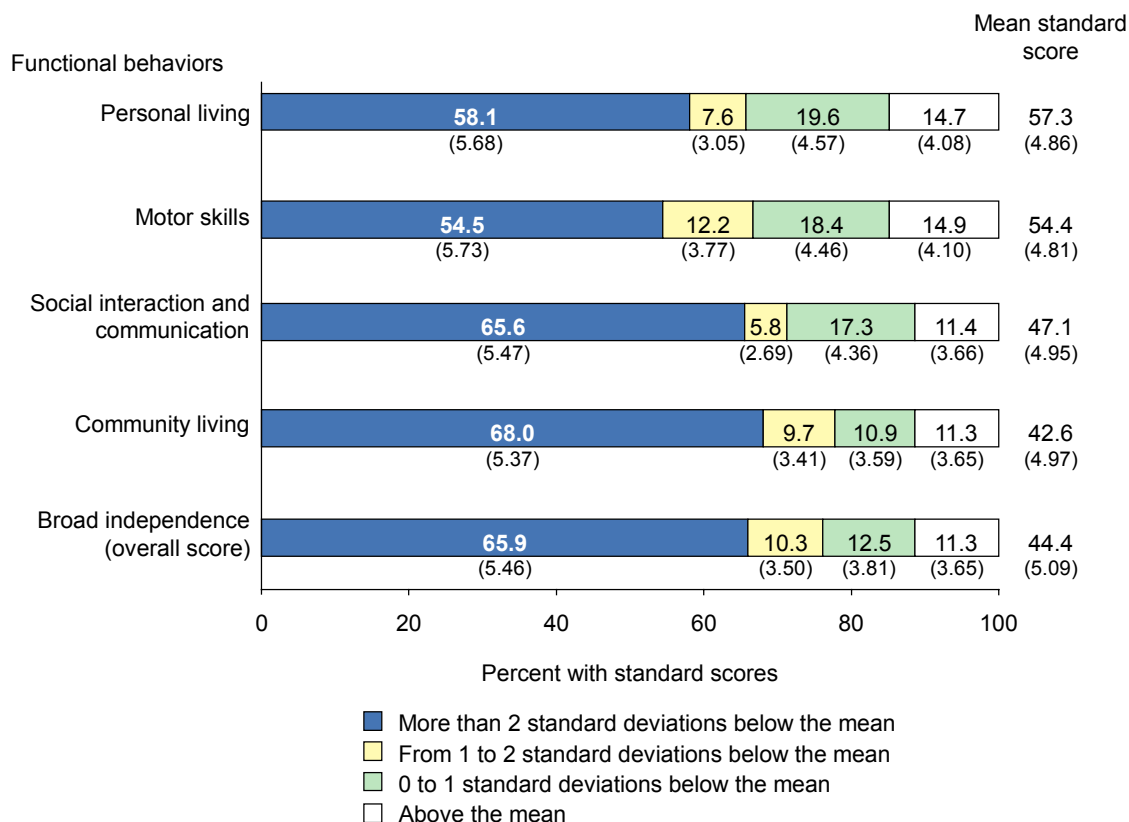
generalizing from the score for a single, narrow behavior (such as time and punctuality) to a broad, multifaceted ability (community living skills).

Functional Skills

Findings regarding functional skills are reported as standard scores, which have a mean of 100 and a standard deviation of 15. In the general population, the distribution of test scores on each cluster is equally divided above and below the mean, and more than 80 percent have skills that are within one standard deviation below the mean or higher. Individuals scoring 100 or above are considered to have “average” to “high-average” and above functional skills for youth their age in the general population (Bruininks et al. 1996). Youth scoring up to one standard deviation below the mean have “average” to “low-average” functional skills, and those scoring from one to two standard deviations below the mean have “low” functional skills. Youth who are rated more than two standard deviations below the mean (about 2 percent of the general population) have “very low” functional skills. Youth with standard scores six or more standard deviations below the mean likely find most age-appropriate functional skills extremely difficult or impossible to perform.

Figure 4 shows the performance of youth with disabilities for whom a functional rating was completed. As described in appendix B, many youth for whom functional ratings were completed have limitations in sensory, physical, and/or communication domains and in their

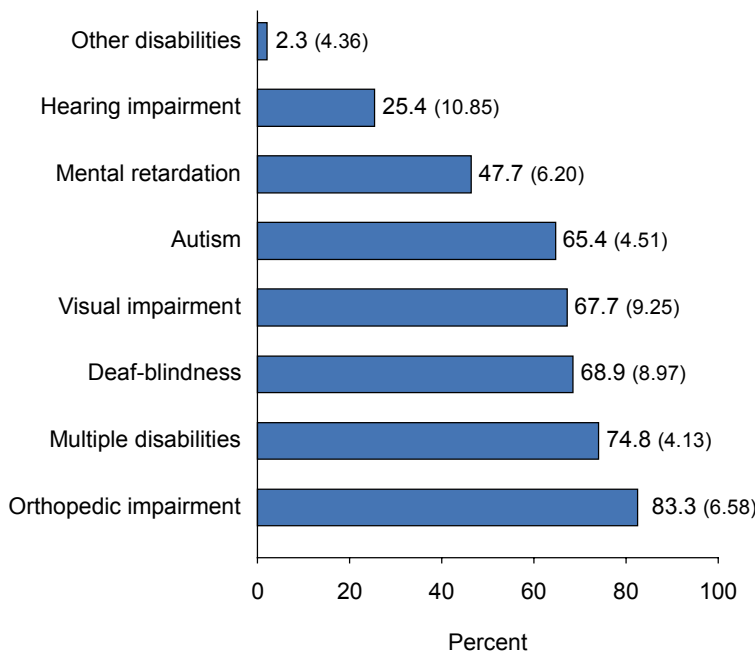
Figure 4. Performance of youth with disabilities on functional rating measures



NOTE: Standard errors are in parentheses.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Special Education Research, National Longitudinal Transition Study-2 (NLTS2), functional ratings, 2002 and 2004.

Figure 5. Percentage of youth with disabilities performing more than six standard deviations below the mean¹ on functional rating measures



¹ Mean of 100 with standard deviations of .15.

NOTE: Standard errors are in parentheses.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Special Education Research, National Longitudinal Transition Study-2 (NLTS2), functional ratings, 2002 and 2004.

functional cognitive skills. These limitations would be expected to manifest themselves in low scores relative to the general population. Although some of the youth for whom functional ratings were completed perform across the score range, the majority of youth have very low scores. Mean scores range from 43 for community living skills to 57 for personal living skills; across the subtests, only these two means scores differ significantly from each other ($p < .05$). From 22 percent to 38 percent scores more than six standard deviations below the mean (figure 5), with the percentage of youth with these very low scores being significantly larger for the community living skills and broad independence measures than for personal living skills (22 percent vs. 38 percent and 37 percent, $p = .06$). In contrast, from 11 percent to 15 percent score above the mean.

Personal living skills. Five subscales are included in this behavior cluster: eating and meal preparation, dressing, toileting, personal self-care, and domestic skills. The cluster assesses an individual's ability to take care of his or her personal needs primarily within the home. Eating and meal preparation tasks range from simple eating and drinking to meal preparation. Dressing skills range from being able to remove clothing to appropriately selecting and maintaining clothes. Toileting tasks range from using the toilet regularly to selecting and using appropriate toilet facilities outside the home. Personal self-care tasks evaluate performance in basic grooming and health maintenance, with tasks ranging from using a toothbrush to seeking medical care for illness. Domestic skills range from placing dishes in or near the sink to home maintenance tasks. Youth for whom functional ratings were completed have an average standard score on this subscale of 57. More than half (58 percent) are rated more than two standard deviations below the mean, and 22 percent are rated more than six standard deviations below the mean. About one-third of youth with disabilities for whom functional ratings were completed are rated as having personal living skills within one standard deviation below the mean or higher.

Motor skills. The gross and fine motor skills subscales in this cluster assess a range of motor proficiency tasks involving mobility, balance, endurance, and coordination of arms, legs, and the entire body, as well as precise movements ranging from picking up small objects to assembling objects consisting of small parts. The mean standard score on this cluster for youth

who have a functional rating is 54. Fifty-five percent of youth score more than two standard deviations below the mean, with 28 percent scoring more than six standard deviations below the mean. About one-third of youth for whom functional ratings were completed are rated as having low-average to above-average age-appropriate gross and fine motor skills and can perform most motor skill tasks adequately.

Social interaction and communication skills. This skill cluster consists of three subscales: social interaction, language comprehension, and language expression. It measures an individual's interaction with others in various social settings and his or her understanding and communication of information through signs, oral expression, or written symbols. Social interaction skills range from basic interactions, such as handing an object to another person, to more complex interactions involving making plans to attend social activities outside the home. Language comprehension tasks range from recognizing one's name to more complex behaviors, such as securing information through reading or listening. Language expression items evaluate the ability to communicate by talking as well as other forms of expression, including sign and language boards. Tasks range in difficulty from indicating yes or no and repeating common words to preparing and presenting formal reports.

The average standard score for youth with disabilities who have a functional rating is 47. About two-thirds of these youth are rated more than two standard deviations below the mean, with almost one-third scoring more than six standard deviations below the mean. About 28 percent of youth for whom functional ratings were completed are rated as having low-average to above average social and communication skills.

Community living skills. Subscales in this cluster measure the skills needed to use community resources and perform in work and social settings. Tasks involving time and punctuality range from understanding the basic concept of the time of day to the ability to keep appointments. Tasks involving money and value range from selecting particular coins to complex consumer decisions involving investments and credit. Skills required in the workplace or at school range from indicating when a task is finished to vocational skills, such as completing job applications. Orientation skills required in the home and community range from getting around the home and neighborhood to traveling in the community.

The community living skills mean standard score is 43. More than two-thirds are rated more than two standard deviations below the mean, with 38 percent more than six standard deviations below the mean. About 20 percent of youth for whom functional ratings were completed are rated as low-average to above-average on functional skills, being able to perform age-appropriate community living skills at least adequately.

Broad independence. On this overall measure of functional independence, the mean standard score is 44. Fully two-thirds of youth for whom a functional rating was completed have functional independence skills more than two standard deviations below the mean compared with about 2 percent of youth in the population as a whole. Thirty-seven percent of youth for whom functional ratings were completed are rated more than six standard deviations below the mean and experience great difficulty in performing age-appropriate functional skills. About one-fourth of youth for whom functional ratings were completed are rated higher than one standard deviation below the mean and are likely to perform most age appropriate functional living skills at least adequately; this compares with more than 80 percent of youth in the general population who have functional skills in this range.

Disability Differences in Functional Performance

Table 3 shows the range in standard scores on the measure of broad independence for youth across disability categories for whom functional ratings were completed. Few youth in the categories of learning disability, speech/language impairment, emotional disturbance, other health impairment, and traumatic brain injury were assessed using the functional rating, so the scores for youth in those categories cannot be reported separately. However, their combined scores are reported to allow comparison with youth in each of the other disability categories. Among youth with “other disabilities,” 21 percent are rated more than two standard deviations below the mean, and about 60 percent are rated in the low-average to above-average range; their mean standard score on broad independence is 90. This score is significantly higher than the mean standard scores for youth in all of the other disability categories; these range from 10 for youth with orthopedic impairments or multiple disabilities to 53 for youth with hearing impairments ($p < .01$ compared with youth with hearing impairments and $p < .001$ for all other comparisons).

Table 3. Standard scores on the broad independence measure, by disability category

Standard scores	Other disabilities ¹	Mental retardation	Hearing impairment	Visual impairment	Orthopedic impairment	Autism	Multiple disabilities	Deaf-blindness
Percentage with standard scores:	Percent / standard error							
More than two standard deviations below the mean	20.6 (11.70)	89.3 (3.84)	68.3 (11.59)	80.5 (7.84)	92.4 (4.68)	96.2 (1.81)	95.8 (1.91)	94.9 (4.26)
From 1 to two standard deviations below the mean	18.7 (11.28)	7.3 (3.23)	7.4 (6.52)	8.9 (5.64)	3.2 (3.11)	2.0 (1.33)	2.0 (1.33)	2.3 (2.91)
0 to 1 standard deviations below the mean	31.2 (13.41)	2.1 (1.78)	10.6 (7.67)	10.6 (6.09)	4.3 (3.58)	†	1.4 (1.12)	2.8 (3.20)
Above the mean	29.6 (13.22)	1.3 (1.41)	13.8 (8.59)	0 †	0 †	1.9 (1.29)	0.8 (0.85)	0 †
Mean standard score	90.1 (8.82)	22.7 (3.41)	52.7 (10.31)	21.4 (6.86)	9.5 (4.34)	14.2 (2.29)	10.2 (2.10)	13.3 (4.55)

† Not applicable.

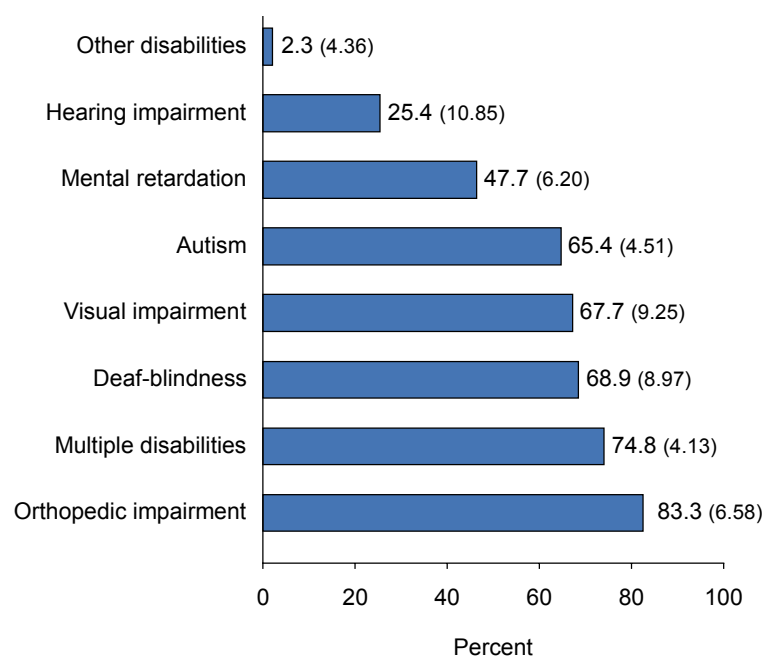
¹ “Other disabilities” includes the categories of learning disability, speech/language impairment, emotional disturbance, other health impairment, and traumatic brain injury.

NOTE: Standard errors are in parentheses.

SOURCE: U.S. Department of Education, National Center for Special Education Research, National Longitudinal Transition Study-2 (NLTS2), student assessments, 2002 and 2004.

As with the distribution of scores for youth with a functional rating as a whole, and with the exception of youth in the “other disabilities” category, the majority of youth in each disability category are rated more than two standard deviations below the mean. In fact, the majority of youth with autism, visual or orthopedic impairments, deaf-blindness, or multiple disabilities are rated more than six standard deviations below the mean (figure 6). Among youth with hearing

Figure 6. Percentage of youth with disabilities performing more than six standard deviations below the mean on the measure of broad independence



NOTE: Standard errors are in parentheses.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Special Education Research, National Longitudinal Transition Study-2 (NLTS2), functional ratings, 2002 and 2004.

impairments, about one-fourth are rated in the low-average to above-average range, whereas fewer than 10 percent of youth with visual impairment and 5 percent of youth with mental retardation, orthopedic impairment, autism, multiple disabilities, or deaf-blindness are rated in this range. With the exception of youth with “other disabilities,” those with hearing impairments have a significantly higher mean standard score on the broad independence measure than youth in all other categories ($p < .05$ compared with youth with visual impairments, $p < .01$ for youth with mental retardation, and $p < .001$ for youth with orthopedic

impairments, autism, multiple disabilities, and deaf-blindness. Youth with mental retardation also are rated higher than their peers in some disability categories, including youth with orthopedic impairments, autism, and multiple disabilities ($p < .05$ compared with youth with orthopedic impairments and autism and $p < .01$ compared with youth with multiple disabilities).

Comparing the percentages of youth for whom a functional rating was completed who are rated more than six standard deviations below the mean shows that 83 percent of youth with orthopedic impairments are rated in this range, a significantly higher rate than for youth with hearing impairments (25 percent, $p < .001$), mental retardation (48 percent, $p < .001$), or autism (65 percent, $p < .05$), whereas youth with hearing impairments are less likely to score in this range (25 percent do so) than youth with autism (65 percent, $p < .001$) or multiple disabilities (75 percent, $p < .01$).

Demographic Differences in Functional Performance

There are few statistically significant differences in performance for youth with a functional rating who differ in gender, age, and racial/ethnic background. Exceptions are presented below.

Gender. Boys with disabilities are less likely than girls to be rated more than two standard deviations below the mean on motor skills (47 percent vs. 71 percent, $p < .05$), personal living skills (51 percent vs. 75 percent, $p < .05$), and community living skills (61 percent vs. 84 percent,

$p < .05$). Instead, boys are more likely than girls to have scores that are one to two standard deviations below the mean on community living skills (13 percent vs. 2 percent, $p < .05$) and are more likely than girls to be rated in the first standard deviation below the mean on motor skills (23 percent vs. 7 percent, $p < .05$), personal living skills (26 percent vs. 4 percent, $p < .01$), and the overall broad independence (17 percent vs. 3 percent, $p < .05$). Only for motor skills are the mean standard scores significantly different between genders, with scores for boys being significantly higher than those for girls (60 vs. 42, $p < .05$).

Age. Greater percentages of 17- and 18-year-olds than 16-year-olds are rated in the low-average to average range, the first standard deviation below the mean (24 percent and 23 percent vs. 5 percent, respectively, $p < .05$). Seventeen-year-olds are more likely than 18-year-olds to be rated in this range on community living skills (18 percent vs. 1 percent, $p < .05$) and are more likely than 16-year-olds to be rated in this range on the measure of broad independence (16 percent vs. 1 percent, $p < .05$).

Race/ethnicity. A greater percentage of White than African American youth are rated above the mean on community living skills (15 percent vs. 2 percent, $p < .05$), and a greater percentage of African American than White or Hispanic youth are rated in the first standard deviation below the mean on broad independence (27 percent vs. 11 percent and <1 percent, $p < .05$ and $p < .01$, respectively).

Summary

This chapter has described the performance of youth with disabilities on four functional dimensions and on an overall measure of broad independence, derived from the SIB-R. Across the measures, the large majority of youth with disabilities for whom the functional rating was completed are rated at the lowest performing level relative to youth in the general population. However, across measures, some youth with disabilities for whom a functional rating was completed were rated as having skills within average performance levels relative to youth in the general population.