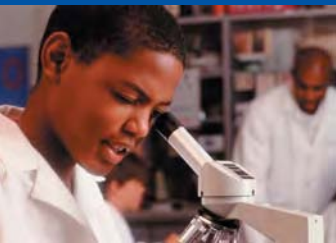


An Overview of Findings From Wave 2 of the National Longitudinal Transition Study-2 (NLTS2)



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August 2006

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An Overview of Findings From Wave 2 of the National Longitudinal Transition Study-2 (NLTS2)

Introduction

In 2001, the U.S. Department of Education funded the National Longitudinal Transition Study-2 (NLTS2) to provide a national picture of the characteristics, experiences, and outcomes of secondary school students with disabilities as they transition to young adulthood. NLTS2 includes a sample of more than 11,000 youth who were ages 13 through 16 and receiving special education services in seventh grade or above in the 2000-2001 school year. The sample is nationally representative of youth with disabilities as a group and youth in each of the 12 federal special education disability categories in use for students in the NLTS2 age range.¹ Data are being collected in five waves over a 9-year period and include information from parents, youth, school staff, and school records. NLTS2 is the only source of information on such key aspects of youths' experiences as their academic achievement, school completion, and postsecondary education and employment.

Data from Wave 1 of NLTS2 were collected in 2001 and 2002, when youth were ages 13 through 18 and virtually all still were in secondary school. The Wave 1 overview report documented youths' disabilities and functioning; their individual and household demographics; the characteristics of their schools, school programs, and classroom experiences; the experiences of youth in their nonschool hours; and how youth with disabilities fare in the domains of school engagement, academic performance, social adjustment, and independence.

This Wave 2 overview summarizes findings from two NLTS2 reports. One report (Wagner et al. 2006) presents data from direct assessments of youth's reading and mathematics abilities and content knowledge in science and social studies and from teacher- or parent-completed functional ratings for youth for whom a direct assessment was reported to be inappropriate. Youth were 16 through 18 years of age when data were collected. A second report (Wagner et al. 2005) presents findings from data collected in 2003 (Wave 2), when youth were ages 15 through 19 and 28 percent no longer were in secondary school. In that report, the experiences of youth who were out of school at Wave 2 are compared to their experiences at Wave 1, when they were still in high school, to illuminate the changes that accompany school-leaving. When data are available, comparisons also are made with the experiences of same-age youth in the general population, using data from the 2000 National Longitudinal Survey of Youth (U.S. Department of Labor n.d.).

This Wave 2 overview addresses two sets of research questions. One set is addressed with data from the direct assessments and functional ratings and includes:

- How well do youth with disabilities achieve in the areas of language arts, mathematics, science, and social studies?
- How does their academic achievement compare with the general population of same-age youth?

¹ For additional information on the design of NLTS2 and for downloadable products, go to www.nlts2.org

- What factors pertaining to youths' disability and functioning, individual and household demographics, family support for their education, and previous school experiences are associated with stronger academic achievement?
- What are the functional abilities of youth who did not participate in the direct assessment?

A second set of research questions reflects the fact that Wave 2 included the first sizable group of youth with disabilities who had left secondary school. Research questions pertinent to these youth include:

- To what extent do youth with disabilities complete high school?
- What are the experiences of youth with disabilities in the postsecondary education, employment, independence, and social domains up to 2 years after high school?
- What individual and household characteristics and youth experiences are associated with variations in the school completion of youth with disabilities and with their achievements in their early years after high school?

These sets of questions are addressed by using data from the following sources:

- **Youth assessments.** Academic achievement and functional performance were measured using one of two forms of assessment. An assessment was attempted for each NLTS2 sample member for whom a telephone interview or mail questionnaire had been completed by a parent and parental consent for the assessment had been provided. Youth were eligible for their single assessment during the data collection wave in which they were 16 through 18 years old.² This age range was selected to limit the variability in performance that could be attributed to differences in the ages of the youth participating and to mesh with the every-2-year NLTS2 data collection cycle. The oldest two single-year age cohorts of youth (i.e., those ages 15 or 16 when sampled) reached the eligible age range in Wave 1 (2002), and the younger two cohorts (those ages 13 or 14 when sampled) reached the eligible age range when Wave 2 school data were collected (2004). Assessment data are combined across the two waves. A total of 5,222 youth participated in the NLTS2 direct assessment, and a functional rating was completed for 1,051 youth.
 - **Direct assessments.** The NLTS2 direct assessment includes research editions of subtests of the Woodcock-Johnson III (Woodcock, McGrew, and Mather 2001) that assess language arts skills, mathematics abilities, and content knowledge in science and social studies. The research editions are shorter versions of the standard WJ III assessment battery and were developed for use in NLTS2 by the original WJ III developers.³ The WJ III subtests are particularly advantageous for

² Wave 1 assessments also included 10 youth whose assessments were not completed until shortly after their 19th birthdays.

³ The research and standard versions of the WJ III share items and administration procedures and have comparable psychometric properties. The difference between them lies in the larger number of items used in the standard version; the time (and, therefore, expense) of the standard version precluded its use for the large number of youth included in the study. The larger number of items in the standard version results in smaller standard errors. This greater precision in estimates for the standard version is necessary when the results are to be used for programmatic decision making about individuals (e.g., eligibility for special education services). The smaller

NLTS2 because they permit comparisons with a general population norm group assessed in 2000. To be eligible for the direct assessment, a youth needed to be able to understand directions given in spoken English, large print, Braille, or sign language; have a consistent response mode (i.e., the assessor could reliably understand a youth's responses); and have the ability to work with an assessor or with someone who was familiar to the student who could and would conduct the assessment in the presence of the assessor. To determine if a youth could participate in the direct assessment, assessors, who typically were school psychologists or teachers, interviewed the school staff person who was most familiar with a youth and his or her school program, usually a special educator. Information was sought from parents if youth were no longer in school. Information provided by school staff or parents also was used to identify any accommodations that a youth required to participate in the assessment; 39 percent of youth who participated in the direct assessment received an accommodation (please refer to chapter 2 of Wagner et al. 2006 for details on direct assessment procedures).

- **Functional ratings.** If a youth did not meet the requirements for the direct assessment, even with accommodations, he or she was deemed eligible for the adult-completed functional rating—the Scales of Independent Behavior-Revised (SIB-R; Bruininks et al. 1996). Its fourteen 18- to 20-item subtests form four clusters (motor, social interaction and communication, personal living, and community living skills) as well as an overall measure of independence, thereby providing a comprehensive measure of adaptive functioning in school, home, employment, and community settings. A functional rating was completed by a youth's teacher if the youth was in school or by a parent if he or she was no longer in school.
- **Parents or guardians.** NLTS2 study members' parents or guardians were a key source of information in Wave 2 on some aspects of the early postschool outcomes of their adolescent children with disabilities and on factors included in multivariate analyses to explain variations in both academic performance and postschool outcomes. Wave 2 telephone interviews were conducted with parents in spring through fall 2003.
- **Youth.** Wave 2 included the first telephone and mail survey information collected from youth with disabilities themselves. Telephone interviews were conducted with youth who were reported by parents to be able to respond to questions about their experiences that were asked over the phone. Those reported to be able to respond to questions but not by phone were mailed written questionnaires; these include a large proportion of youth with hearing impairments. These data sources provided information for out-of-school youth on their experiences since leaving high school. As with parent interviews, Wave 2 youth telephone and mail surveys were conducted in spring through fall 2003.
- **School surveys.** Some school-related data included in multivariate analyses of academic achievement come from the NLTS2 *Student's School Program Survey*. This

number of items in the research versions results in larger standard errors, but are adequate for use in calculating the group-level statistical estimates used in NLTS2. The norms for the general population are the same for both versions of the instrument.

mail survey was administered to school staff who were most knowledgeable about the overall school programs of NLTS2 sample members who attended their school. Respondents to the *General Education Teacher Survey* were teachers of general education academic classes attended by NLTS2 sample members, if students took such a class. The surveys collected information about aspects of the classroom experiences of students with disabilities in general education academic classes and in vocational education and special education settings. Both surveys were administered in Waves 1 and 2 for youth still in secondary school at those times. If a youth's direct assessment was conducted in Wave 1, independent variables used school survey data from that wave; similarly, Wave 2 school survey data were used in analyses of youth whose assessment was conducted in that wave.

Analyses of Wave 2 data largely were descriptive (e.g., means and percentages for key variables reported for youth in each disability category); two-tailed F tests were used to identify significant differences between groups. Multivariate analyses (i.e., logistic or ordinary least squares regression) also were conducted to address some research questions.

Highlights of the information NLTS2 obtained from these sources are described below as they relate to the research questions addressed in Wave 2.

The Academic Achievement and Functional Performance of Youth With Disabilities

Academic Achievement

A considerable gap in achievement in language arts, mathematics, science, and social studies exists between youth with disabilities and their peers in the general population.

- Direct assessment results are reported as standard scores, which, for the general population of youth, have a mean of 100 and a standard deviation of 15. In the general population, 50 percent of youth score at the mean of 100 or above and 50 percent score below. In contrast to this distribution for the general population, from 77 percent to 86 percent of youth with disabilities have standard scores below the mean across subtests.
- In the general population, about 2 percent of youth have standard scores that are more than two standard deviations below the mean (i.e., below 70). Among youth with disabilities represented by those who participated in the direct assessment, from 14 percent to 27 percent score more than two standard deviations below the mean across subtests.
- Youth with disabilities have the greatest difficulty with understanding what they read; the mean passage comprehension standard score of 79 is significantly lower than any of the other scores.
- Vocabulary, as measured by the use of synonyms and antonyms, appears to pose the fewest challenges, with a mean standard score of 87, significantly higher than all other scores.

- Despite the low scores overall, on each measure, some youth with disabilities have scores above the mean; across the measures, from 12 percent to 23 percent score above the mean of 100.

Factors Related to Academic Achievement

NLTS2 findings reinforce the fact that the academic achievement of youth with disabilities in reading, mathematics, science, and social studies is related to a complex array of factors that characterize youth, their households, and their school experiences. Multivariate analyses demonstrate that several individual factors differentiate youth on the basis of their academic achievement.

- The achievement of youth in several disability categories varies across the academic domains assessed. For example, youth with visual impairments outscore those with learning disabilities (the largest disability category, whose scores dominate the score for youth with disabilities as a whole) on three measures, but are similar on the other three, independent of other differences between them. Youth with hearing impairments score significantly higher than those with learning disabilities on mathematics calculation but significantly lower on science and social studies content knowledge.
- Youth in the categories of mental retardation and multiple disabilities consistently record significantly lower performance scores than youth with learning disabilities across the achievement measures.
- Independent of the nature of their disabilities, having higher functional cognitive skills relates consistently to higher academic achievement. Higher scores on the majority of subtests also are recorded for youth whose disabilities were not manifested until they were older and are reported to affect fewer functional domains.

Some demographic and household characteristics also are significantly related to academic achievement, independent of disability-related factors.

- Boys with disabilities score higher than girls with disabilities on mathematics calculation and problem solving subtests as well as on science and social studies content knowledge subtests, with differences of 3 or 4 standard score points.
- White youth with disabilities score from 7 to 13 standard score points higher on all academic achievement measures than African American or Hispanic youth with disabilities or those with other racial/ethnic backgrounds.
- Youth with disabilities from low-income households (i.e., \$25,000 in annual income or less) have lower average standard scores in all domains relative to youth from moderate income households, independent of racial/ethnic and other differences between them. Differences range from 3 to 5 standard score points.
- Given similar disability, functional, and demographic characteristics, youth with disabilities score from 4 to 6 standard score points higher with each successively higher level of parental expectations regarding their future enrollment in postsecondary school.

Few school experiences of youth with disabilities show statistically significant relationships with youth's academic achievement; students' grades and school mobility and having ever been

retained at grade level are not significantly related to academic achievement, independent of other factors considered in the analyses. Two exceptions are:

- Higher absenteeism is associated with lower scores on both mathematics subtests.
- Having had disciplinary problems at school is associated with lower mathematics calculation scores.

In addition, using some kinds of accommodations during the assessment relates to some measures of academic performance, but not in a consistent direction.

- Controlling for other factors, using a calculator provides a 3- or 4-point advantage on the mathematics subtests.
- Using American Sign Language or a sign language interpreter and taking breaks during a session or needing multiple sessions to complete the assessment are associated with lower scores on some subtests.

Abilities of Youth Reported on the Functional Rating

Youth for whom a functional rating was completed were assessed on four clusters of functional skills (motor skills, social interaction and communication, personal living skills, and community living skills) and on an overall measure of independence.

- Average standard scores for youth with disabilities across the measures range from 43 to 57, compared with a mean of 100 for the general population.
- From 22 percent to 38 percent of youth with disabilities across subtests have scores that are more than six standard deviations below the mean.
- Across measures, from 11 percent to 15 percent of youth represented by those with a functional rating have scores above the mean for the general population.
- Youth are significantly less likely to score more than six standard deviations below the mean on personal living skills (22 percent) than on community living skills (38 percent) or the measure of broad independence (37 percent).
- The few youth with learning disabilities, speech or other health impairments, emotional disturbances, or traumatic brain injuries who have a functional rating together scored higher on the overall measure of broad independence than youth in other disability categories, with a mean of 90.
- The next highest-ranking mean score on the broad independence measure (53) was for youth with hearing impairments; it significantly surpassed the mean scores of all other categories, which ranged from 10 to 23.
- About two-thirds or more of youth with autism, multiple disabilities, visual or orthopedic impairments, or deaf-blindness score more than six standard deviations below the mean on the measure of broad independence.
- Only one statistically significant difference across functional performance measures is apparent in the mean standard scores of youth with disabilities who differ in gender, age, household income, or racial/ethnic background, favoring boys over girls on the motor skills measure (60 vs. 42). Although there were some differences in the

percentage of youth in particular standard deviation categories, no consistent patterns were apparent.

Early Postschool Experiences of Youth With Disabilities

Data collected from youth and/or their parents are the source of information about the experiences of youth with disabilities in the first few years after leaving high school. Interview data are available for approximately 1,200 youth.

High School Leaving Status

By the time of the Wave 2 parent/youth interviews in 2003, 28 percent of youth with disabilities who had been in secondary school in the 2000–01 school year were no longer in high school. Although some youth had been out of high school as much as 2 years, the majority had been out of school from a few weeks to a little more than a year. Seventy-two percent of these 15- through 19-year-old school leavers had completed high school by graduating or receiving some kind of certificate of completion; 28 percent of school leavers had not finished high school. The most common reasons reported for dropping out of school are dislike of school (36 percent) and poor relationships with teachers and students (17 percent).

- The vast majority of youth with visual or hearing impairments (95 percent and 90 percent) completed high school, as did more than 85 percent of out-of-school youth with autism or orthopedic impairments.
- The majority of school leavers with disabilities—those in the categories of learning disability, mental retardation, speech or other health impairment, or traumatic brain injury—have school completion rates of 72 percent to 79 percent.
- The school completion rate for youth with emotional disturbances (56 percent) is lower than the rate for all other categories, with the exception of youth with multiple disabilities or mental retardation.
- Youth with disabilities from households with annual incomes of more than \$50,000 are significantly more likely to complete high school than those from households with incomes of \$25,000 or less (82 percent vs. 64 percent). There are no significant differences in school completion rates between youth who differ in gender or race/ethnicity.

Engagement in School, Work, or Preparation for Work

Up to 2 years after leaving high school, almost 8 in 10 out-of-school youth with disabilities have been engaged in postsecondary education, paid employment, or training to prepare them for employment. Employment is the sole mode of engagement in the community for about half of out-of-school youth with disabilities, 4 percent have attended postsecondary school without working or participating in job training, and about one-fifth have both gone to school and worked since leaving high school.

Postsecondary Education Participation

- About 3 in 10 out-of-school youth with disabilities have been enrolled in some kind of postsecondary school since leaving high school, with one in five attending a postsecondary school at the time of the Wave 2 interview. This rate of current enrollment is about half that of their peers in the general population (41 percent).⁴
- One-fifth of youth with disabilities have enrolled in 2-year or community colleges since high school, and 10 percent were attending such schools at the time of the interview, a participation rate similar to that of youth in the general population (12 percent).
- Since leaving high school, 9 percent of youth with disabilities have attended a 4-year college, with 6 percent doing so when interviewed. Youth in the general population are about four and one-half times as likely as youth with disabilities to be currently taking courses in 4-year colleges (28 percent).
- About 5 percent of youth with disabilities attend postsecondary vocational, business, or technical schools within 2 years of leaving high school.

Multivariate analyses indicate that several youth and household characteristics and experiences are associated with a higher probability of having enrolled in 2- or 4-year colleges, including having a visual impairment or higher functional cognitive skills, being female, having a better educated head of household, progressing to the next grade level each year in school, and graduating from high school. Only having attention deficit disorder or attention-deficit/hyperactivity disorder (ADD/ADHD) is associated with the likelihood of enrolling in a postsecondary vocational, business, or technical school.

The experiences of postsecondary students with disabilities include the following:

- Almost three-fourths of postsecondary students with disabilities go to school full-time, and about 8 in 10 are enrolled steadily, rather than attending school intermittently.
- About half of postsecondary students with disabilities report that they do not consider themselves to have a disability, and another 7 percent acknowledge a disability but have not informed their schools of it. Forty percent of postsecondary students with disabilities have informed their schools of their disabilities, and 35 percent receive accommodations, the large majority (88 percent) of those whose schools are aware of their disabilities.

Employment After High School

- About 7 in 10 out-of-school youth with disabilities have worked for pay at some time since leaving high school, and more than 4 in 10 were employed at the time of the Wave 2 interview. This rate is substantially below the 63 percent employment rate among same-age out-of-school youth in the general population.
- Since the Wave 1 interview, when youth were still in high school, out-of-school youth with disabilities have experienced an overall increase in the average number of hours

⁴ Unless otherwise noted, all data for the general population related to postschool experiences were calculated by the authors from the 2000 National Longitudinal Survey of Youth for out-of-school 15- through 19-year-olds (U.S. Department of Labor n.d.).

they work per week, reaching 29 hours in Wave 2, and a nearly 20-percentage-point increase (to 40 percent) in those working full-time.

- Wages earned by out-of-school youth with disabilities increased an average of \$1.30 since they were in high school 2 years previously, to \$7.30 per hour. This results in a significant drop in the percentage of youth with disabilities working for less than minimum wage and a 25-percentage-point increase (to 41 percent) in the proportion of youth earning more than \$7.00 per hour. However, receiving benefits as part of a total compensation package is not common; about one-third of out-of-school youth with disabilities receive any benefits (i.e., paid vacation or sick leave, health insurance, or retirement benefits).
- Reliance on typically low-paying personal-care jobs (e.g., child care), has decreased markedly among girls with disabilities; 6 percent of girls work in such jobs in Wave 2. At the same time, there has been an increase in jobs in the trades (e.g., carpentry, plumbing) among boys; 28 percent of boys hold these kinds of jobs up to 2 years after leaving high school.
- Eighty-four percent of working out-of-school youth report having employers who are unaware of their disabilities. Among those who report their employers are aware of their disabilities, 25 percent are receiving workplace accommodations for them; they constitute 4 percent of working youth with disabilities.
- Most working youth with disabilities have positive feelings about their employment experiences. Four in 10 say they like their current job or liked their most recent job “very much,” three-fourths believe their current or most recent job has put their education to good use and that they are well paid, and two-thirds believe they have opportunities for advancement. Among youth employed more than 6 months, about 60 percent report being promoted, taking on more responsibility, or receiving a pay increase.

Emerging Independence

- Up to 2 years after high school, about three-quarters of youth with disabilities still are living with their parents, a significant decline from 2 years earlier and a similar rate to that of the general population of youth (75 percent, Arnett 2000).
- There has been a significant increase in the proportion of age-eligible youth who have driving privileges; two-thirds can drive, whereas fewer than half could do so 2 years earlier.
- About 12 percent of out-of-school youth are living with a spouse or roommate outside of their parents’ home in Wave 2; two-thirds of youth in this living arrangement are reported to have annual incomes of \$5,000 or less.
- About 1 in 10 out-of-school youth with disabilities participated in government benefit programs during high school, and participation has changed little during the first 2 postschool years.

- Personal financial management tools are being used by more youth with disabilities; about one-third have personal checking accounts, and almost one in five have a credit card or charge account in their own name, significantly more youth than 2 years earlier.
- Eight percent of out-of-school youth with disabilities are reported to have had or fathered a child by Wave 2, a rate of parenting similar to that for the general population (11 percent).

Leisure Activities, Social Involvement, and Citizenship

- Passive uses of leisure time, such as watching television or videos and listening to music, have declined in the 2 years since youth with disabilities left high school, as has communicating by computer. Whereas in Wave 1, 46 percent and 36 percent, respectively, reported these as their most common leisure activities, rates are 16 percent and 15 percent in Wave 2.
- Participation in organized community groups and in volunteer or community service activities also has declined. In Wave 2, 28 percent of out-of-school youth with disabilities belong to organized community groups, and a similar share take part in volunteer activities, down from about 46 percent pursuing each activity in Wave 1.
- In contrast, out-of-school youth with disabilities are seeing friends more often than they were 2 years earlier. Just over half of youth with disabilities report seeing friends at least weekly outside of organized groups and any school they may attend, an increase from about one-third of youth 2 years earlier.
- Almost two-thirds of youth with disabilities who are 18 or older are registered to vote, a rate similar to that for the general population of youth (approximately 60 percent, Lopez and Kirby 2003).
- When they have been out of secondary school up to 2 years, about half of youth with disabilities have been stopped by police for other than a traffic violation, and 16 percent have spent a night in jail, both significant increases in a 2-year period. Almost 3 in 10 have been arrested at least once, and 1 in 5 are on probation or parole. These rates of arrest and being on probation or parole have not increased significantly since leaving high school, and the arrest rate is not significantly different from that of peers in the general population (23 percent).

Results Associated With Dropping Out of School

Whether youth with disabilities complete high school is associated with a variety of differences in experiences in their early postschool years.

- Dropouts are significantly less likely to be engaged in school, work, or preparation for work shortly after high school than are school completers; 69 percent vs. of dropouts have been engaged in these activities, compared with 86 percent of school completers.
- The form of postschool engagement undertaken by dropouts is unlikely to include postsecondary education. Controlling for other differences between dropouts and completers, including their functional cognitive abilities and previous academic achievement, dropouts with disabilities are 18 percentage points less likely to have

enrolled in a 2- or 4-year college shortly after high school than are school completers. Eight percent of dropouts have attended vocational, business, or technical schools, and 1 percent have attended a 2-year college at some time since leaving high school, compared with 5 percent and 27 percent, respectively, among high school completers with disabilities.

- The rate of holding a paid job since high school among both dropouts and school completers is about 85 percent. However, dropouts with disabilities tend to work more hours per week (an average of 34 vs. 27 for school completers).
- Dropouts are more likely to support independent households and children than are school completers. More than one-fourth of dropouts with disabilities (27 percent) are living independently with a spouse or partner, compared with 7 percent of school completers; 19 percent are parenting, rates of independent living and parenting that are more than four times those of youth with disabilities who completed high school (3 percent).
- Dropouts are less likely than school completers to have a driver's license (51 percent vs. 73 percent) or a checking account (16 percent vs. 39 percent) and to be registered to vote (48 percent vs. 69 percent).
- More than one-third of dropouts with disabilities have spent a night in jail, three times the rate of youth with disabilities who finished high school. Controlling for other differences between them, dropouts are 10 percentage points more likely to have been arrested than youth with disabilities who finished high school.

Disability Differences Across Outcome Domains

Youth who differ in their disability category demonstrate different patterns of early postschool experiences, as noted below.

Youth With Learning Disabilities or Other Health Impairments

- About three-fourths of out-of-school youth with learning disabilities or other health impairments have completed high school, almost all of those with a regular diploma.
- Among out-of-school youth with learning disabilities or other health impairments, 87 percent and 78 percent, respectively, have been engaged in school, work, or preparation for work since leaving high school, and about 45 percent were currently employed at the time of the Wave 2 interview.
- Among youth with learning disabilities or other health impairments, 27 percent and 33 percent, respectively, were expected by their parents “definitely” to go on to postsecondary education after high school, and 33 percent and 37 percent of the two groups have done so within 2 years of leaving high school. Enrollment in 2-year colleges is most common (22 percent and 31 percent).
- Youth with learning disabilities or other health impairments have experienced among the broadest changes in their leisure-time and friendship pursuits, with significant reductions in passive leisure activities. For example, 45 percent and 47 percent of the two groups, respectively, indicated watching television was a primary leisure activity in

Wave 1, rates that dropped by 33 and 31 percentage points in Wave 2. They also experienced increases in seeing friends at least weekly; approximately one-third of the two groups reported this frequency of seeing friends in Wave 1, whereas 56 percent of youth with learning disabilities and 47 percent of youth with other health impairments do so in Wave 2.

- Although these two groups of youth are among the most likely to be registered to vote (about 70 percent are), they also have experienced 20- and 28-percentage-point declines, respectively, in participation in organized groups, from Wave 1 rates of 48 percent and 54 percent. Volunteer activities also are less common; there have been 20- and 25-percentage-point decreases from Wave 1 rates of 47 percent and 56 percent.
- Youth in these categories are second only to youth with emotional disturbances in the likelihood of being involved with the criminal justice system (e.g., 50 percent and 52 percent, respectively, have been arrested), and those with other health impairments show the only significant increase in arrest rates in the 2 years between Waves 1 and 2 (19 percentage points), reaching a rate of 35 percent.

Youth With Emotional Disturbances

- Youth with emotional disturbances are the most likely youth with disabilities to be out of secondary school at Wave 2 (36 percent), with 44 percent of those leaving school without finishing, the highest dropout rate of any disability category. School completers with emotional disturbances also are among the least likely to be reported by parents to have graduated with a regular diploma (86 percent).
- Thirty-five percent of youth with emotional disturbances no longer live with parents, the largest of any category of youth with disabilities, and they are the only group to show a significant increase in the likelihood of living in “other” arrangements (from less than 1 percent to 6 percent), including in criminal justice or mental health facilities, under legal guardianship, in foster care, or homeless.
- Youth in this category have experienced the largest increase in their rate of parenting; 11 percent of youth with emotional disturbances report having had or fathered a child, a 10-percentage-point increase from Wave 1.
- One-third of these youth have not found a way to become engaged in their community since leaving high school; for those who have, employment is the usual mode of engagement. Although more than 6 in 10 youth with emotional disturbances have been employed at some time since leaving high school, only about half as many were working at the time of the Wave 2 interview.
- About one in five youth with emotional disturbances have been enrolled in any kind of postsecondary education since leaving high school.
- Youth with emotional disturbances are among the most likely to see friends often (52 percent report doing so at least weekly), yet they are among the least likely to take part in organized community groups (22 percent) or volunteer activities (20 percent) or to be registered to vote (52 percent).

- More than three-fourths have been stopped by police other than for a traffic violation, 58 percent have been arrested at least once, and 43 percent have been on probation or parole. These rates have not changed significantly since Wave 1.

Youth With Mental Retardation or Multiple Disabilities

- Relatively few 15- through 19-year-olds in these categories are out of school (19 percent and 14 percent, respectively), consistent with their tendency to remain in high school until they reach age 21 (U.S. Department of Education 2003). Youth in these categories who have left high school are among the least likely to have completed high school (72 percent and 65 percent), and within the group of completers, they are among the least likely to be reported by parents to have graduated with a regular diploma (84 percent and 91 percent).
- Their rates of engagement in school, work, or preparation for work shortly after high school (52 percent and 54 percent) are at the low end of the disability category distribution, yet youth with mental retardation are as likely as any other category of youth to be living on their own (16 percent) and to be parenting (12 percent). Relatively few have driving privileges (21 percent and 45 percent) or checking accounts (10 percent and 28 percent).
- Multivariate analysis indicates that, independent of other differences between them, youth with multiple disabilities are 17 percentage points less likely to see friends often than youth with learning disabilities.
- Youth with mental retardation and those with multiple disabilities also are among the least likely to take part in organized community groups (24 percent and 23 percent) or volunteer activities (23 percent and 29 percent) up to 2 years after leaving high school.

Youth With Hearing or Visual Impairments

- Ninety percent or more of youth with hearing or visual impairments finish high school, virtually all reportedly with a regular diploma.
- Youth with hearing or visual impairments are more than twice as likely as youth with disabilities as a whole to have enrolled in a postsecondary school; about two-thirds have done so up to 2 years after high school. Further, they are the most likely to attend a 4-year college or university; about 4 in 10 have enrolled in such schools, a rate four times that of youth with disabilities as a whole.
- Unlike youth with disabilities as a whole, youth with these sensory impairments show no significant decline over time in their participation in organized community groups or volunteer activities; almost twice as many of them volunteer (47 percent of each group), compared with youth with disabilities as a whole. They are as likely to be registered to vote (64 percent and 62 percent) as any other category of youth with disabilities.
- Within 2 years of leaving high school, the rates of criminal justice system involvement are low for these groups of youth (e.g., 12 percent and 6 percent, respectively, have been arrested), as are their parenting rates (3 percent and 2 percent).

Despite these experiences being similar for youth with hearing and visual impairments, their experiences with friends and jobs differ.

- Youth with hearing impairments are significantly less likely than youth with disabilities as a whole to get together with friends frequently (32 percent vs. 52 percent), a difference not observed for youth with visual impairments.
- In contrast, multivariate analyses show that, irrespective of other differences in disability, functioning, and demographics, youth with visual impairments are 21 percentage points less likely to be employed currently than youth with learning disabilities; there is no difference in the probability of employment between youth with learning disabilities and those with hearing impairments.
- More than 80 percent of youth with hearing impairments who are age-eligible have driving privileges, compared with fewer than 20 percent of youth with visual impairments.

Demographic Differences Across Outcome Domains

Youth with disabilities differ in many respects other than the nature of their disability, including such characteristics as age, gender, household income, and race/ethnicity. However, these differences are not associated with strong or consistent differences across outcome domains, although there are some exceptions, as noted below.

Age

Age does not have an independent relationship with the likelihood that youth with disabilities see friends often or enroll in a vocational, business, or technical school, nor are there age differences in the likelihood that youth participate in volunteer or organized community group activities. Similarly, age is not associated with the likelihood of parenting or of being involved with the criminal justice system. However, some differences are evident.

- Age is significantly associated with a 23-percentage-point higher likelihood of employment and with a 12-percentage-point higher likelihood of 2- or 4-year college enrollment, independent of the influences of disability, functioning, and other demographic differences between youth.
- Nineteen-year-olds have experienced the largest drop over time in the proportion living with parents (from 94 percent to 67 percent) and the largest increase in having a checking account (from 8 percent to 43 percent) or personal credit card (from 8 percent to 24 percent).
- The only significant increases in earning a driver's license or learner's permit have occurred among 18- and 19-year-olds, who are more likely than younger peers to have earned those privileges (64 percent and 78 percent, respectively vs. 38 percent among 15- through 17-year-olds).

Gender

The experiences of boys and girls with disabilities up to 2 years after high school are similar in many, although not all respects. Similarities across genders include their school-leaving status;

the likelihood of being engaged in school, work, or preparation for work since leaving high school; current employment rates; and most aspects of independence, including residential arrangements, having driving privileges, using personal financial management tools, and having had or fathered a child. Significant differences are apparent regarding other experiences, however. NLTS2 has found that:

- Girls with disabilities are 6 percentage points more likely to have been enrolled in a 2- or 4-year college since high school than are boys, controlling for other differences between them.
- An increase over time in seeing friends frequently has occurred only among girls with disabilities (from 24 percent to 54 percent). This differential change has eliminated the difference between genders that existed in Wave 1, when boys were found to engage more frequently than girls in this behavior (38 percent vs. 24 percent).
- The significant increases in the likelihood of being stopped and questioned by police other than for a traffic violation and of spending a night in jail that is evident among youth with disabilities as a whole occurs solely among boys. A 16-percentage-point increase brings to 55 percent the rate of being stopped by police among boys, and the 21 percent of boys who had spent a night in jail is a 12-percentage-point increase over the rate in 2001. The increases result in boys being significantly more likely than girls ever to have stayed overnight in jail up to 2 years after high school (21 percent vs. 8 percent).
- Girls with disabilities are significantly less likely than boys to be single; about one-fourth are engaged, married, or in a marriage-like relationship. Girls who are living independently are significantly more likely than boys to be supporting themselves on less than \$5,000 per year (82 percent vs. 59 percent).

Household Income

Youth with disabilities who come from households with different income levels have some similar early postschool experiences. Their leisure-time use and social lives have not changed differentially, nor have many aspects of their independence, including their residential arrangements or parenting status. Income level also is unrelated to the likelihood of currently being employed or ever having been arrested, irrespective of other differences between youth. Also, having a better-educated head of household outweighs income in helping explain the variation in the likelihood that youth with disabilities will enroll in 2- or 4-year colleges up to 2 years after leaving high school.

However, youth with disabilities from wealthier households are more likely to be engaged in school, work, or preparation for work; whereas 93 percent of youth with disabilities from families with incomes of more than \$50,000 a year are engaged in such activities after high school, 70 percent of youth from families with household incomes of \$25,000 or less a year are thus engaged. Similarly, youth with disabilities from wealthier households are more likely than peers from low-income households to have earned driving privileges (79 percent vs. 52 percent) and to have a personal checking account (45 percent vs. 16 percent) or a credit card (26 percent vs. 11 percent).

Race/Ethnicity

There are no differences across racial/ethnic groups in the likelihood of being engaged in school, work, or preparation for work shortly after high school; enrolling in college or a vocational, business, or technical school; living independently; having active friendships; having had or fathered a child; or ever having been arrested. However, independent of other differences between them, African American youth with disabilities have a 16-percentage-point lower likelihood of current employment than White youth. Also, White youth with disabilities are more likely than African American youth to have driving privileges (78 percent vs. 40 percent) and a personal checking account (40 percent vs. 22 percent).

Looking Ahead

NLTS2 will continue to describe the experiences of youth with disabilities as they age and to investigate the programs and experiences during secondary school and the early transition years that are associated with positive results in young adulthood. The link between academic performance and both school completion and early postschool outcomes will be a focus of upcoming NLTS2 analyses. Those analyses will illuminate the relationships between successful learning in school and youth's later ability to pursue their educations, find employment, and become independent and productive members of their communities, the ultimate goals of secondary education.

References

- Arnett, J.J. (2000). Emerging Adulthood; A Theory of Development From the Late Teens Through the Twenties. *American Psychologist*, 55: 469-480.
- Bruininks, R.H., Woodcock, R.W., Weatherman, R.F., and Hill, B.K. (1996). *Scales of Independent Behavior-Revised (SIB-R)*. Chicago: Riverside Publishing.
- Lopez, M.H., and Kirby, E. (2003). *Voter Turnout Among Young Women and Men*. College Park, MD: The Center for Information and Research on Civil Learning and Engagement.
- U.S. Department of Education. (2003). *To Assure the Free Appropriate Public Education of All Children With Disabilities. The Twenty-fifth Annual Report to Congress on the Implementation of the Individuals With Disabilities Education Act*. Washington, DC: U.S. Government Printing Office.
- U.S. Department of Labor. (n.d.). *National Longitudinal Surveys*. Available from <http://www.bls.gov/nls/>
- Wagner, M., Newman, L., Cameto, R., Garza, N., and Levine, P. (2005). *After High School: A First Look at the Postschool Experiences of Youth With Disabilities: A Report From the National Longitudinal Transition Study-2 (NLTS2)*. Menlo Park, CA: SRI International.
- Wagner, M., Newman, L., Cameto, R., and Levine, P. (2006). *The Academic Achievement and Functional Performance of Youth With Disabilities: A Report From the National Longitudinal Transition Study-2 (NLTS2)*. (NCSE 2006-3000). Menlo Park, CA: SRI International.
- Woodcock, R.W., McGrew, K.S., and Mather, N. (2001). *Woodcock-Johnson III Tests of Academic Achievement-Research Edition*. Itasca, IL: Riverside Publishing.