1. Introduction

Traditional social indicators of adolescents emerging into adulthood include living independently, earning a postsecondary degree, obtaining full-time employment, getting married, or becoming a parent (Haber et al. 2008; Keller, Cusick, and Courtney 2007; Oesterle et al. 2010; Settersten and Ray 2010). Although there has been a shift in the timing and sequence of adult transitions these core indicators have remained the same (Furstenberg 2010). As youth with disabilities leave high school and transition to adulthood, they are increasingly exposed to opportunities for postsecondary education, employment, and independent living (Newman et al. 2010). Current national policy mandates are holding schools and states more accountable for the postschool outcomes of youth with disabilities. The 2004 reauthorization of the Individuals With Disabilities Education Act (IDEA) highlighted the importance of improving the postschool outcomes of youth with disabilities by requiring schools to develop "measurable postschool goals in the areas of employment, education/training, and, if appropriate, independent living" and states to "report student postschool outcome performance" (Morningstar et al. 2010).

The National Longitudinal Transition Study-2 (NLTS2) provides a unique source of information to help in developing an understanding of the experiences of secondary school students with disabilities nationally as they go through their early adult years. NLTS2 addresses questions about youth with disabilities in transition by providing information over a 10-year period about a nationally representative sample of secondary school students with disabilities who were receiving special education services under the Individuals With Disabilities Education Act (IDEA) in the 2000–01 school year.

The NLTS2 Wave 4 overview report describes key postsecondary outcomes for the subset of young adults with disabilities who were out of secondary school up to 6 years and 19 to 23 years old[1] when telephone interviews were conducted in 2007. This report, as all NLTS2 reports are guided by the NLTS2 framework. Specifically, this report addresses questions that reflect critical domains of young adulthood, which are central to the purpose of IDEA as expressed in 20 U.S.C. 1400(d)(1)(A) to "prepare them [children with disabilities] for future education, employment, and independent living." This report focuses on the following research questions:

- What are the postsecondary education, employment, independence, and social outcomes of young adults with disabilities in their first 6 years out of high school?
- How do these outcomes differ for young adults in different disability categories, for those with different school-exit characteristics (high school completion status and length of time out of high school), and demographic characteristics (young adults' gender, young adults' race/ethnicity, and parents' household income)?[2]

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[1] The age of young adults with disabilities in 2007 was based on birthdates provided by parents during interviews and the date of the Wave 4 interview.

[2] Findings are reported for White, African American, and Hispanic youth; other racial/ethnic categories are too small (less than 3 percent of the population of youth with disabilities) to report findings separately. Parent's household income is reported using the three income categories included in the data collection instrument (i.e., $25,000 or less, $25,001 to $50,000, and more than $50,000. NLTS2 household income item categories were based on a review of general population statistics to ensure that the household income response categories fairly

- How do the post-high school outcomes of young adults with disabilities compare with those of similar-age peers in the general population?

As indicated by these research questions, this NLTS2 Wave 4 report focuses on post-high school outcomes, such as postsecondary enrollment rates and employment rates; it does not describe post high-school experiences, such as receipt of accommodations in postsecondary school or job search activities. The NLTS2 Wave 3 and Wave 5 overview reports include full descriptions of both post-high-school outcomes and experiences (Newman et al. 2009; Newman et al. in review).

Study Overview

NLTS2 is a 10-year-long study of the characteristics, experiences, and outcomes of a nationally representative sample of youth with disabilities who were 13 to 16 years old and receiving special education services in grade 7 or above on December 1, 2000. NLTS2 findings generalize to youth with disabilities nationally and to youth in each of the 12 federal special education disability categories in use for students in the NLTS2 age range.[3] (Details of the NLTS2 design, sample, and analysis procedures are presented in appendix A.)[4] The study was designed to collect data on sample members from multiple sources in five waves, beginning in 2001 and ending in 2009. Wave 1 included parent interviews (2001), surveys of school staff (2002), and assessments of the academic abilities of students who were 16 to 18 years old in 2002. Wave 2 involved interviews with both parents and youth (2003), a mail survey of youth whose parents reported they were able to respond to questions but not by phone (2003), school staff surveys for youth still in high school (2004), and assessments of the academic abilities of youth who were 16 to 18 years old in 2004. Wave 3 (2005) repeated the parent telephone interviews as well as the youth interviews and mail surveys. Wave 4 (2007) and Wave 5 (2009) included telephone interviews and mail surveys both of parents and of youth. High school transcripts were collected annually for youth leaving high school each year.

The NLTS2 sample was constructed in two stages, beginning in 2000. The NLTS2 district sample was stratified to increase the precision of estimates, to ensure that low-frequency types of districts (e.g., large urban districts) were adequately represented in the sample, to improve comparisons with the findings of other research, and to make NLTS2 responsive to concerns voiced in policy debate (e.g., differential effects of federal policies in particular regions, districts of different sizes). Three stratifying variables were used: region, size (student enrollment), and community wealth. A stratified random sample of school districts was selected from the universe of approximately 12,000 that served students receiving special education in at least one grade from the 7th through 12th grades. In order to be nationally representative of youth with disabilities who attended the most common types of publicly-supported schools, all known state-supported “special schools”—i.e., those that served primarily students with hearing and visual

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evenly divided the population. In NLTS2 Wave 1, the income breakdown was 35 percent for the category of $25,000 or less, 31 percent for $25,001 to $50,000, and 34 percent for more than $50,000.

For consistency across the report, all comparisons are presented for all variables unless otherwise noted in a section (i.e., by length of time out of high school, high school completion status, disability category, age, gender, household income, and race/ethnicity.)

[3] The definitions of the 12 primary disability categories used in this report are specified by law and presented in table A-4, appendix A.

[4] Additional information about NLTS2 is available at www.nlts2.org.

impairments and multiple disabilities (77 in NLTS2)—also were invited to participate in the studies. These districts and 77 state-supported special schools that served primarily students with hearing and vision impairments and multiple disabilities were invited to participate in the study, with the intention of recruiting approximately 500 districts and as many special schools as possible from which to select a target sample of about 12,000 students. Recruitment efforts resulted in 501 school districts and 38 special schools agreeing to participate and providing rosters of students receiving special education services in the designated age range, from which the student sample was selected.

The roster of all students in the NLTS2 age range who were receiving special education services from each district and special school was stratified by primary disability category, as reported by the districts. Students then were selected randomly from each disability category. Sampling fractions were calculated that would produce enough students in each category so that, in the final study year, findings would generalize to most categories individually with an acceptable level of precision, accounting for attrition and for response rates to the parent/young adult interview. A total of 11,276 students were selected and eligible to participate in NLTS2.

Data Sources for Young Adults With Disabilities

This section presents the multiple data sources used in this report to describe the post-high school experiences of young adults with disabilities at the time of the Wave 4 interview, who were known to be out of secondary school at the time of the Wave 4 data collection. Appendix A includes a description of the overall response rates for each wave of data collection.

Primary sources used in this report were the Wave 4 youth telephone interview and mail survey or the Wave 4 parent telephone interview, conducted in 2007.[5] In addition, those variables that describe young adults' experiences since leaving high school were constructed on the basis of data from the Waves 2 and 3 (conducted in 2003 and 2005, respectively) youth telephone interviews and mail surveys or from the Waves 2 and Wave 3 parent telephone interviews for young adults who were out of high school at those times. School district rosters, high school transcripts, and the Wave 1 parent interview or mail survey also provided a small amount of the data used in this report. Each data source for young adults with disabilities is described briefly below and discussed in greater detail in appendix A.

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[5] NLTS2 instruments are available at www.nlts2.org.

Table 1. NLTS2 data sources for post-high school experiences of young adults with disabilities included in this report

Source	Approximate number	Percent of young adults included in this report
Total number of sample members with responses to Wave 4 survey known to be out of secondary school at the time of the Wave 4 data collection	4,650	100.0
Youth telephone interview	2,300	49.3
Youth mail questionnaire	360	7.8
Parent telephone interview	1,990	42.9
Number in Wave 4 report and out of school in Wave 3, with Wave 3 survey data coming from	2,160	46.5
Youth telephone interview	1,360	29.3
Youth mail questionnaire	160	3.4
Parent telephone interview	640	13.8
Number in Wave 4 report and out of school in Wave 2, with Wave 2 survey data coming from	890	19.0
Youth telephone interview	570	12.2
Youth mail questionnaire	50	<1.0
Parent telephone interview	270	5.8
Number in Wave 4 report with Wave 1 survey data		
Parent interview	4,480	96.0
High school transcript	3,570	77.0
School and school district student rosters	4,650	100.0

The data for young adults with disabilities, the focus of this report, were obtained for approximately 4,650 sample members[6] with responses to the Wave 4 survey who were known to be out of high school at the time of the Wave 4 data collection (table 1).

Parent/Young Adult Data

Wave 4 Data

Information on the outcomes of young adults with disabilities came from young adults themselves in the majority of cases (see table 1), usually from the youth telephone interview. These respondents were young adults with disabilities who were reported by parents to be able to answer questions for themselves by telephone. Young adults who were reported to be able to answer questions for themselves, but not by telephone (e.g., young adults with hearing impairments), were sent a mail questionnaire. For young adults who were reported by parents not to be able to answer questions for themselves (e.g., young adults with significant cognitive impairments), interviews were attempted with parents. Thus, there are three sources of data for Wave 4 of NLTS2. Data from these three sources were combined for the analyses reported here and subsetted to include only data for young adults with disabilities, aged 19 and older.

Youth telephone interview. NLTS2 sample members who were eligible for a Wave 4 youth telephone interview were those (1) for whom working telephone numbers or addresses for the youth or their parents were available so that they could be reached by phone (a total of approximately 8,130 young adults) and (2) whose parents or guardians (referred to here as parents) had reported in the Wave 2 parent telephone interview (if interviewed at that time) or the Wave 3 parent interview (if interviewed in Wave 3 for the first time) that the youth could answer questions about his or her experience by phone (a total of approximately 8,130 youth).[7]

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[6] All unweighted sample sizes included in the text, figures, and tables of this report are rounded to the nearest 10, per IES Disclosure Review Board requirements.

[7] See appendix A for more information on sample eligibility.

Wave 4 interview attempts were made directly with youth who were reported in Waves 2 or 3 to be able to participate in a telephone interview, without attempts being made to contact parents in advance. For youth whose parents were not interviewed in Waves 2 or 3 and, therefore, whose ability to participate in a telephone interview or mail survey was unknown, parent interviews were attempted first. At those times, after making the initial telephone contact with the parents of sample members and completing items intended only for parent respondents, parents were asked whether their child was able to respond to questions about their experiences by telephone for themselves. Parents who responded affirmatively and whose sample children were younger than age 18 then were asked to grant permission for their children to be interviewed and told the kinds of questions that would be asked.[8] Parents of young adults 18 or older were informed of the kinds of questions that would be asked, but permission was not requested because the young adults were no longer minors. Interviewers obtained contact information for these young adults and attempted to complete telephone interviews with them. Telephone interviews were completed with approximately 2,490 young adults, 72 percent of the approximately 3,430 young adults who were eligible. If a youth could not be reached by phone or did not return a mailed questionnaire, an attempt was made to recontact the parent and complete the second part of the telephone interview with the parent, which included only items readily answerable by many parents about their adolescent and young adult children with disabilities. Approximately 2,300 telephone interview respondents to the Wave 4 telephone interview were young adults, the focus of this report.

Youth mail survey. If parent respondents to the Waves 2, 3, or 4 telephone interviews indicated that youth were not able to respond to questions about their experiences for themselves by telephone, interviewers asked whether youth would be able to complete a mail questionnaire. Parents of approximately 740 Wave 4-eligible youth responded affirmatively, making their children eligible for a mail survey. Permission for youth to be sent a mail questionnaire was not asked of parents because that questionnaire did not contain items considered potentially sensitive and because parents' providing a mailing address for the questionnaire was considered to be permission to send it. Mailing addresses were obtained for those sample members, and questionnaires were sent to the youth. Questionnaires were tailored to the circumstances of individual youth. For example, if a parent indicated in the telephone interview that a youth was employed, the questionnaire for that youth contained a section on employment experiences, which was not included in questionnaires for youth reported not to be employed. Questionnaires were returned by approximately 400 young adults, 54 percent of the approximately 740 young adults who were eligible. Approximately 360 mail questionnaire respondents were young adults who are part of the sample that generated the findings reported in this document.[9]

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[8] Parents of youth age 18 or older were told that interview questions would pertain to "school or work and social activities, as well as a few questions about things like [his/her] attitudes and experiences, including smoking, drinking, and ever having been arrested"; items related to these kinds of risk behaviors were asked only of youth age 18 or older. A total of 164 parents reported that their children could respond to the telephone interview but did not give permission for their children to be interviewed (4 percent of those reportedly able to respond); the interview then continued with the parents and obtained additional information on subjects such as employment and postsecondary education. Analyses of the disability category distribution and demographic factors of youth who were able to respond and given permission to do so and those who were not permitted to be interviewed revealed no significant or sizable differences between the two groups.

[9] Readers should be aware of the potential for differences in reports across modes of data collection (i.e., mail questionnaire vs. telephone interview). Differences between modes of data collection were explored and most

Parent/guardian interview. In addition to sample members who completed a telephone interview or mail survey, parents completed a telephone interview for approximately 2,300 sample members who did not respond for themselves, either because they were reported not to be able to do so or because young adults who were reported to be able to respond could not be reached or refused to respond.[10] In the latter case, parents were contacted to complete a subset of interview items that experience demonstrated could readily be answered by many parents (e.g., whether a youth was employed or enrolled in postsecondary education). A total of approximately 1,990 young adults for whom parents were the sole respondents were out of secondary school and are included in the sample that forms the basis of this report. Young adults whose parents responded for them did not differ significantly in their disability category, age identified as having a disability, or functional abilities (appendix B provides detailed information regarding comparisons between these groups).

Wave 2 and Wave 3 Data

Several variables created for this report indicate whether a young adult had had a particular experience "since high school" (e.g., postsecondary enrollment, employment, and parenting and marital status). Fifty-three percent of y respondents (approximately 2,490 young adults) had left high school since the Wave 3 data collection; thus, Wave 4 data are all that are required to generate values for these variables for them. However, the remainder of young adult respondents (approximately 2,160 young adults) were already out of high school in Wave 2 and/or Wave 3. Thus, data from Waves 2 and 3 needed to be taken into account to generate values for variables measuring experiences "since high school." Wave 2 and Wave 3 data also were used to determine whether young adults had completed high school or left without completing and the year in which they left. Waves 2 and 3 data collections mirrored procedures followed for Wave 4. The Wave 3 youth telephone interview produced data for approximately 1,360 young adults included in the sample that forms the basis of this report, the mail questionnaire generated data for approximately 160 young adults, and parent interviews provided data for approximately 640 young adults, for a total of approximately 2,160 sample members. The Wave 2 youth telephone interview produced data for approximately 570 young adults included in the sample that forms the basis of this report, the mail questionnaire generated data for approximately 50 youth, and parent interviews provided data for approximately 270 young adults, for a total of approximately 890 sample members.

Wave 1 Data

The initial wave of NLTS2 data collection involved parent telephone interviews and a mail survey of parents who could not be reached by telephone. Data for two demographic items (gender and race/ethnicity) were drawn from these Wave 1 sources for approximately 4,480 young adults with disabilities that forms the basis of this report.

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were minor and did not support further examination, The one exception was that more young adults with hearing impairments responded to the mail rather than the telephone survey.

[10] Youth respondents were informed that the study would contact parents and that the youth could ask that their parent not be contacted; 20 percent of parent part 2 interviews were completed by parents after young adult could not be reached.

High School Transcripts

High school completion status and high school leave date were based on data from high school transcripts. High school transcripts were requested for all NLTS2 sample members. Transcript data were collected for approximately 3,570 young adults included in this report. For those for whom transcript data were not available, school completion status and leave dates were based on information from parent/youth interviews.

School and School District Student Rosters

Information about the primary disability category of NLTS2 sample members came from rosters of students in the NLTS2 age range receiving special education services in the 2000–01 school year under the auspices of participating school districts and state-supported special schools. Additionally, data on the racial/ethnic background of sample members were taken from this source when they were included on rosters. In the absence of roster data on youth's racial/ethnic background, data were taken from the Wave 1 parent interview or mail survey; both sources provide similar racial/ethnic classifications.

Data Sources for Comparisons With Young Adults in the General Population

When similar data items were available, comparisons were made between young adults with disabilities and the same-age young adults in the general population. The analyses approach used for the general population databases mirrors the approach used for NLTS2 data.[11] Comparison data were taken from the following:

- The National Longitudinal Survey of Youth, 1997 (NLSY97). This study includes a nationally representative sample of approximately 9,000 youth who were 12 to 16 years old as of December 31, 1996. Round 1 of the survey took place in 1997. In that round, both the eligible youth and one of each youth's parents received hour-long personal interviews. Youth have continued to be interviewed annually. Comparison data for this report were taken from the 2003 data collection for young adults who were 19 to 23 years old and out of high school at the time, to match the sample of NLTS2 young adults included in this report. Calculations were made from public-use data available at http://www.nlsinfo.org/web-investigator/webgator.php. NLSY data collected in 2003 were the best match for NLTS2 2007 data because of the age of the young adults in both data sets at those time points, however readers should note the 4 year difference between the two data collection periods. Many of the comparisons between data from NLTS2 and NLSY used identical data items and response categories. Any differences in the wording of items and/or response categories are pointed out in footnotes. Readers also should be aware that the population of youth with disabilities in this age range differs from the general population of youth in ways other than disability status (e.g., the

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[11] Young adults with disabilities are included in the general population comparison sample because excluding them would require using self-reported disability data, which frequently are not an accurate indicator of disability, resulting in both over- and underestimations of disability. For example, a large proportion of self-identified disabilities in postsecondary are visual impairments because of confusion by students who wear glasses. In addition, NLTS2 findings indicate that less than one-third (32 percent) of youth who were identified by their secondary school as having a disability consider themselves to have a disability by the time they are age 17 or older.

population of youth with disabilities is 63 percent male; see appendix B for further description of the populations represented in NLTS2).

- The National Longitudinal Study of Adolescent Health, Wave 3. Comparisons with the general population regarding financial independence, reported in chapter 5, are based on the public-use version of the National Institutes of Health, National Institute of Child Health and Human Development (NICHD), National Longitudinal Study of Adolescent Health (Add Health), Wave 3*,* a nationally representative study that explores health-related behaviors of adolescents in grades 7 through 12 and their outcomes in young adulthood. Wave 3 data were collected in 2001–02. Comparisons included a subset of approximately 2,000 respondents who were 18 to 21 years old.

Young Adults Included in the Report

The young adults who are the focus of this report represent only a subset of young adults with disabilities who received special education services in secondary school in 2000–01, not the entire population. The full population to which the NLTS2 sample generalizes is a cohort of youth who were 13 to 16 years old and received special education services in grade 7 or above in participating schools and school districts as of December 1, 2000. Weights for analyses reported in this document were calculated so that all young adults who were out of secondary school and for whom a telephone interview or mail survey was completed or for whom parents responded to the second part of the parent interview generalize to all young adults who were out of high school. Weights were computed adjusting for various youth and school characteristics used as stratifying or poststratifying variables. (See appendix A for additional information related to sample weighting).

Analysis Approaches

Analyses reported in this document involve simple descriptive statistics (e.g., percentages, means) and bivariate relationships (i.e., cross-tabulations). All statistics were weighted to be representative of a larger population of students (as discussed earlier). These analysis approaches excluded cases with missing values; no imputation of missing values was conducted.[12]

Statistical tests examining differences between independent subgroups or between responses to different items given by the same group that involve categorical variables with more than two possible response categories were conducted by treating each of the possible response categories as separate dichotomous items.[13] For example, each of the four possible response categories to a

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[12] Given that interview/survey respondents were weighted to represent the universe and individuals who failed to respond to the survey as a whole were assigned a weight of zero, imputing missing values for nonrespondents would not affect analysis results. In addition, for those who responded to the interview/survey, item nonresponse was relatively low—item nonresponse ranged from less than 1 percent to less than 3 percent for the key outcome variables.

[13] All standard errors in this report were calculated using formula-based estimates rather than estimates based on replicate weights. See Appendix A for description of estimating standard errors. As a 10-year longitudinal study, NLTS2 has used this formula-based procedure to calculate standard errors throughout the duration of the study, rather than use currently available procedures. This decision to maintain consistency in analytical approaches was based on the need to support comparisons of findings across NLTS2 reports. To examine possible differences between approaches, replicate weights were created for chapter 5 of this report. Findings using the replicate weights were then compared with the findings using formula-based estimate. Of the 623 possible comparisons in

question regarding satisfaction with the amount of services youth received from their postsecondary school ("definitely getting enough," "probably getting enough," "probably not getting enough," and "definitely not getting enough") was treated as a separate dichotomous item. The percentages of young adults who gave each response were then compared across disability or demographic groups or across different questionnaire/interview items. This approach, rather than using scale scores (e.g., the average response for a disability group on a 4-point scale created by assigning values of 1 through 4 to the response categories), was adopted for two reasons: the proper scaling for the response categories was not apparent, and it was felt that reporting differences in percentages responding in each of the response categories would be more meaningful and easier for readers to interpret than reporting differences in mean values. Rather than test for differences between all independent subgroups (e.g., young adults in different disability categories) simultaneously (e.g., using a $k \times 2$ chi-square test of homogeneity of distribution, where k is the number of disability groups), the statistical significance of differences between selected pairs of independent subgroups was tested. This approach was followed because the intent was to identify significant differences between specific groups (e.g., young adults with visual impairments are significantly more likely than those with emotional disturbances to report ever having enrolled in a postsecondary program), rather than to identify a more general "disability effect" (e.g., the observed distribution across disability categories differs significantly from what would be expected from the marginal distributions) for the variable of interest.

The test statistic used to compare Bernoulli-distributed responses (i.e., responses that can be allocated into one of two categories and coded as 0 or 1) for two independent subgroups is analogous to a chi-square test for equality of distribution (Conover 1999) and approximately follows a chi-square distribution with one degree of freedom. However, because a chi-square distribution with one degree of freedom is the same as an *F* distribution with one degree of freedom in the numerator and infinite degrees of freedom in the denominator (Johnson and Kotz 1995), this statistic can be considered the same as an *F* value; it also can be considered "chi-squared."[14]

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the chapter, 19 differences (3 percent) were noted, supporting the decision to maintain the use of formula-based estimates.

[14] In the case of unweighted data, two percentages are usually compared by using nonparametric statistics, such as the Fisher exact test. In the case of NLTS2, the data were weighted, and the usual nonparametric tests would yield significance levels that are too small (Heeringa, West, and Berglund 2010) because the NLTS2 effective sample size is less than the nominal sample size. Instead, to test for the equality between the mean values of the responses to a single survey item in two disjoint subpopulations, we began by computing a ratio where the numerator was the difference of the sample means for those subpopulations. (In the case of Bernoulli variables, each mean was a weighted percentage.) The denominator for the ratio was the estimated standard error of the numerator, where the standard errors were adjusted to take into account clustering, stratification, and unequal weights. The adjustment to the variances was determined in a design effect study that compared traditionally calculated variances with those calculated using 32 balanced repeated replicate weights. Sample sizes (and consequently degrees of freedom) for Student *t* types of ratios were typically reasonably large (i.e., never fewer than 30 in each group), so the ratio follows, by the Central Limit Theorem, an approximately normal distribution. For a two-tailed test, the test statistic is the square of the ratio, which then follows an approximate chi-square distribution with one degree of freedom. Because a chi-square distribution with one degree of freedom is the same as an *F* distribution with one degree of freedom in the numerator and an infinite number of degrees in the denominator, the test statistic approximately follows an *F* (1, infinity) distribution. Since the application of adjustments from the design effect study tended to slightly overestimate the standard errors from balanced repeated replicates, the use of infinite

Tests also were conducted to examine differences in the rates at which young adults with disabilities as a whole provided specific kinds of self-representations (for example, the percentage of young adults who reported relying on parents for support "a lot" compared with the percentage who relied on friends "a lot"), using an analogous one-sample statistic based on difference scores.[15] The test statistic follows a chi-square distribution with one degree of freedom for sample sizes 30 or larger and, for similar reasons to those cited above, is considered roughly equivalent to an *F* (1, infinity) distribution.

Technical Notes

Readers should remember the following issues when interpreting the findings in this report:

- **Purpose of the report.** The purpose of this report is descriptive; as a nonexperimental study, NLTS2 does not provide data that can be used to address causal questions. The descriptions provided in this document concern the post-high school experiences of young adults. No attempt is made to "validate" respondents' reports with information on their understanding of the survey items or with third-party information on their experiences (e.g., from employers or postsecondary education institutions). Further, the report does not attempt to explain why parents or young adults responded as they did or why responses differ for young adults in different subgroups (e.g., disability categories).
- **Subgroups reported.** In each chapter, the descriptive findings are reported for the full sample of young adults; those findings are heavily influenced by information provided by young adults with learning disabilities, who constitute 64 percent of the weighted sample (see appendix B). Young adults with emotional disturbances, mental retardation, other health impairments, and speech/language impairments constitute 13 percent, 10 percent, 5 percent, and 3 percent of the weighted sample, respectively. The other seven categories together make up less than 5 percent of the weighted sample. Findings then are reported separately for young adults in each federal special education disability category in tables that are ordered by disability prevalence, as determined at the beginning of the study. Comparisons also were conducted between groups of young adults who differed with respect to years since leaving high school, school-leaving status, gender, race/ethnicity, and parents' household income. These bivariate analyses should not be interpreted as implying that a factor on which subgroups are differentiated (e.g., disability category) has a causal relationship with the differences reported. Further, readers should be aware that demographic factors (e.g., race/ethnicity and parents' household income) are correlated among young adults with disabilities, as well as being

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degrees of freedom, rather than 31 degrees of freedom, nevertheless resulted in actual *p* values that were slightly lower than nominal *p* values.

[15] Testing for the significance of differences in responses to two survey items for the same individuals involves identifying for each youth the pattern of response to the two items. The response to each item (e.g., the youth reported relying "a lot" on parents for support—yes or no—and reported relying on friends "a lot" for support—yes or no) is scored as 0 or 1, producing difference values for individual students of +1 (responded affirmatively to the first item but not the second), 0 (responded affirmatively to both or neither item), or -1 (responded affirmatively to the second item but not the first). The test statistic is the square of a ratio, where the numerator of the ratio is the weighted mean change score and the denominator is an estimate of the standard error of that mean. Since the ratio approaches a normal distribution by the Central Limit Theorem, this test statistic approximately follows a chi-square distribution with one degree of freedom, that is, an *F* (1, infinity) distribution.

distributed differently across disability categories (e.g., young adults in the category of mental retardation are disproportionately likely to be African American, and those in the other health impairment category are disproportionately likely to be White, relative to the general population; see appendix B table B-4, for percentage of young adults within each disability category, by demographic characteristics).[16] The complex interactions and relationships among subgroups relative to the other variables included in this report (e.g., postsecondary enrollment status) have not been explored.

- **Findings are weighted.** NLTS2 was designed to provide a national picture of the characteristics, experiences, and achievements of youth with disabilities in the NLTS2 age range as they transition to young adulthood. Therefore, all the statistics presented in this report are weighted estimates of the national population of students receiving special education in the NLTS2 age group and of each disability category individually who satisfied the study's eligibility requirement (i.e., who were out of high school).
- **Standard errors.** For each mean and percentage in this report, a standard error is presented that indicates the precision of the estimate. For example, a variable with a weighted estimated value of 50 percent and a standard error of 2.00 means that the value for the total population, if it had been measured, would, with 95 percent confidence, lie between 46 percent and 54 percent (i.e., within plus or minus 1.96 × 2, or 3.92 percentage points of 50 percent). Thus, smaller standard errors allow for greater confidence to be placed in the estimate, whereas larger ones require caution.
- **Combined young adults self-report and parent-report data.** If a Wave 4 youth interview/survey was completed, the young adult's responses to these items were used in this report. If a youth interview/survey could not be completed for an eligible young adult or if a young adult was reported by parents not to be able to participate in an interview/survey, parent responses were used. For the subsample of young adults included in this report, the youth interview/survey was the source of data for post-high school outcomes for 84 percent of young adults, and the parent interview was the source for 16 percent of young adults who did not have a youth interview. Combining data across respondents raises the question of whether parent and young adults' responses would concur—that is, would the same findings result if parents' responses were reported instead of young adults' responses. When both parents and young adults were asked whether the young adults belonged to an organized community group, currently worked for pay, and worked for pay in the past 2 years, and wages currently employed young adults earned per hour, their responses agreed from 69 percent to 80 percent of the time (analyses presented in appendix A).
- **Small samples.** Although NLTS2 data are weighted to represent the population, the size of standard errors is influenced heavily by the actual number of young adults in a given group (e.g., a disability category). In fact, findings are not reported separately for groups that do not include at least 30 sample members because groups with very small samples have comparatively large standard errors. For example, because there are relatively few young adults with deaf-blindness, estimates for that group have relatively

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[16] See Wagner et al. (2003) for relationships of demographic factors and disability categories for the full NLTS2 sample.

large standard errors. Therefore, readers should be cautious in interpreting results for this group and others with small sample sizes and large standard errors.

- **Significant differences.** A large number of statistical analyses were conducted and are presented in this report. Because no explicit adjustments were made for multiple comparisons, the likelihood of finding at least one statistically significant difference when no difference exists (i.e., "false positives" or type I errors) in the population is substantially larger than the type I error for each individual analysis. To partially compensate for the number of analyses that were conducted, we have used a relatively conservative p value of $< .01$ in identifying significant differences. The text mentions only differences reaching that level of significance. If no level of significance is reported, the group differences described do not attain at least the $p < .01$ level. Readers also are cautioned that the meaningfulness of differences reported here cannot be inferred from their statistical significance.

Organization of the Report

This report is envisioned as a brief overview of the primary achievements of young adults with disabilities who have been out of high school for up to 6 years, focusing on key outcomes in postsecondary education, employment, residential and financial independence and social and community involvement.[17] Chapter 2 describes two outcomes, the extent to which young adults with disabilities enrolled in postsecondary education and for those who had enrolled, the extent to which they had completed their postsecondary programs. Chapter 3 considers the employment status of young adults and current wages. Chapter 4 addresses the extent to which young adults with disabilities were productively engaged in school, work, or preparation for work after they left high school.

The household circumstances of young adults with disabilities are considered in chapter 5, including the extent to which young adults were living away from home, the prevalence of marriage and parenting, and aspects of their financial independence. Chapter 6 focuses on the social and community involvement in both positive and negative ways of young adults with disabilities, including their participation in organized groups and volunteer activities, and their involvement with the criminal justice system.

Appendix A provides details of the NLTS2 design, sample, measures, and analysis approaches. Appendix B presents data on the characteristics of young adults with disabilities included in the out-of-high school sample.

The following chapters provide the most recent national picture of multiple dimensions of the outcomes of young adults with disabilities who had been out of secondary school up to 6 years. These findings will be augmented in the next few years of NLTS2 as more youth transition to adulthood and have increasing exposure to opportunities for postsecondary education, employment, and independent living.

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[17] The final NLTS2 overview report, (Newman et al., 2011), based on 2009 data, when young adults with disabilities had been out of high school up to 8 years will include a description of outcomes (e.g. employment status) as well as experiences (e.g. type of job, number of hours worked).