File created 8/18/2009. This is not the final version of record. The following article was published in the *Journal of Visual Impairment & Blindness (JVIB)*, 104, 298-303. The final version of record can be found at http://www.jvib.org.

The Employment and Postsecondary Educational Status of Transition-Age Youths with Visual Impairments

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A limited amount of information is currently available about the employment and postsecondary educational status of transition-age youths with visual impairments. The National Longitudinal Transition Study (NLTS) provided valuable information about this population, but that data is now more than 15 years old. The NLTS2, a follow-up to the original NLTS, is updating our knowledge of the current status of all transition-age youths with disabilities, including youths with visual impairments. SRI International, the organization responsible for conducting the NLTS2, publishes comprehensive reports outlining the employment and postsecondary education results of the study. However, these reports tend to focus on overall results and usually do not provide detailed analyses of results by disability groups. The purpose of this report is to provide the most current data available on the employment and postsecondary educational status of youths with visual impairments. Detailed information about the employment experiences of these youths while in high school, percentages employed by educational status, and percentages attending postsecondary school are provided. Results are presented for the entire population of youth with visual impairments as their primary disability, and also with this group divided based on the presence of additional disabilities. Previous research has documented that the majority of youths with visual impairments have one or more additional disabilities (65%, including youths with deaf-blindness; Kirchner & Diament, 1999).

Method

Data Source

The National Longitudinal Transition Study 2 (NLTS2) was the source of this data. NLTS2 is restricted-use data that is available from the Institute of Education Sciences. It is an

ongoing longitudinal study, funded by the U.S. Department of Education, that documents the experiences of a nationally representative sample of students with disabilities as they move from secondary school to adult roles. Data is being collected on a wide range of topics, including high school coursework and grade, extracurricular activities, postsecondary education and training, employment, independent living, and community participation. At the time of this writing, data were available from Waves 1 (collected in 2000-2001) through 3 (collected in 2004-2005) and data from all three waves were used in these analyses.

Sample

The sample used for this study was limited to students with visual impairments identified as their primary disability. A total of 518 students were available who had employment data from at least two waves. The following number of observations were available at each wave: 507 at Wave 1, 503 at Wave 2, and 423 at Wave 3. Longitudinal analyses of work experience during the entire first three waves included all students, regardless of school status or age. Analyses of high school work experience were conducted with students attending school who were 16 years old or older during Wave 2 (n=358). These analyses were conducted with Wave 2 data because this wave provided the largest sample size of students still in high school. Demographic information for this subsample is provided in Table 1. Wave 3 data was used to determine current employment and postsecondary educational status of this population, as youths were older at this wave and this was the most recent data available.

Variables

The variables of interest to this study were the employment-related (all waves) and current educational status variables (Wave 3). These variables were all available from the parent or parent/youth interviews. The primary employment variable used for the longitudinal analysis

was a question answered at each wave by either the youth or the parent about whether the youth had worked during a preceding time period (12-months for Wave 1 and 24-months for Waves 2 and 3). Six different work-related items from Wave 2 were used to provide the data in Table 2. The variable used to determine employment by educational status presented in Table 3 was current employment ("Youth has a paid job now"), reported by the youth or the parent in Wave 3.

Data Analyses

All analyses were descriptive in nature, with weighted percentages and associated standard errors calculated for variables of interest. SAS version 9.2 was used for the analyses, and specifically the Surveyfreq procedure for complex survey designs was used to calculate the weighted frequencies and standard errors. Domain analyses were conducted, as the populations of interest were subpopulations of the sample of visually impaired youths (SAS Institute Inc., 2008). Weights from Wave 1 were used for the longitudinal analyses. Because differences were noted in several of the outcomes for youths without secondary disabilities and youths with secondary disabilities, analyses were conducted with these two groups separately in addition to the total group. Results in the data tables were provided for all three groups (i.e., all youths with visual impairments, youths without a secondary disability, and youths with a secondary disability). However, results discussed in the text were primarily limited to percentages for all youths with visual impairments. To compare the employment and educational status of youths with visual impairments to the general population, 2005 data was obtained from a U.S. Department of Labor report (Bureau of Labor Statistics, 2006). This data is presented in Table 3, along with the results of the NLTS2 analyses. Standard errors for each general population estimate are not available, but in general these standard errors are generally very low, usually

less than 1.50 (S. Hipple, Bureau of Labor Statistics, personal communication, June 17, 2009). For ease of reading the text, standard errors were only included when they were not provided in a data table.

Results

Longitudinal Analyses

A majority (67.0%, SE=2.17) of the youths reported working for pay at some point during the first five years of the study. A substantially greater percentage of those youths without a secondary disability worked during the study (77.0%, SE=3.16 vs. 51.8%, SE=3.37). Although a majority worked, they generally did not work continuously. Less than half (43.3% [SE=2.32]) of the participants reported working during more than one wave. The NLTS2 provides information about the length of employment for those who reported working during Waves 2 and 3, but only for youth who were no longer in high school. Because limited data is available the results are not reported here, but they illustrate that the majority of youths held jobs that lasted 6 months or less.

High School Work Experience

Table 2 provides detailed descriptive employment information for visually impaired youths aged 16 or older attending high school during the 2002-2003 school year. Half of these students reported working for pay at some time during the preceding two years. A much smaller percentage were working at the time of the interview (23.3%). The amount of actual work experience obtained was minimal for some youths: approximately one-third reported that they worked 5 hours or less per week. Students with a secondary disability were less likely to have worked, and if they did work, reported working fewer hours.

A small percentage of youths earned less than minimum wage at their jobs (19.3%), while more than half earned above minimum wage. The youths held a variety of jobs, and the most commonly reported jobs are listed in Table 2. The two most commonly reported jobs were babysitter (16.5%) and cashier (13.4%). The majority of youths with visual impairments rely on others to get to work – most often a family member (46.5%). Slightly more than one-third of youths get to work on their own, either by walking or riding a bike (13.9%), driving (12.9%), or using public transportation (8.4%).

Employment and Educational Status

Table 3 provides the most current employment and postsecondary educational status information available for youths with visual impairments. This information is also available for the general population and therefore that data is provided in the table to allow for a comparison between the groups. For some of the estimates for youths with visual impairments, the standard errors are large, indicating that we cannot be certain of the accuracy of the estimate. Nevertheless, these are the best estimates available and are therefore valuable to report.

Youths with visual impairments were less likely to be employed than youths in the general population in the following educational categories: in high school, not in high school or postsecondary, and in 2-year colleges. All post-high school youths with visual impairments (regardless of educational status) were also less likely to be employed than the general population. The difference between the general population and youths with visual impairments who were not attending any school was very large. Even with the large standard error associated with this value, we can be certain that there is a considerable difference in employment rates between these groups of youths. In addition, only 32.5% (SE=9.04) of the post-high school youths not attending postsecondary school were employed full-time. It should be noted that

although the difference in employment rates of the general population and of all youths with visual impairments in high school was large, previous waves of NLTS2 data for youths with visual impairments indicated current employment rates similar to the general population's rate in 2005. It is also relevant to note that the source of the difference in Wave 3 originates from youths with a secondary disability, who had a current employment rate of 2.8%. The current employment rate of youths without a secondary disability (19.3%) compared much more closely to the general population's rate.

In terms of educational status, youths with visual impairments were just as likely or more likely to attend postsecondary school. As an overall group they were slightly more likely than the general population to attend 2-year colleges, with the source of this difference being youths without a secondary disability. A high percentage (70.6%) of these youths without a secondary disability were attending a postsecondary institution at the time of the Wave 3 interview, which is a rate that is substantially higher than the general population.

Discussion & Conclusions

Many youths with visual impairments are obtaining some work experience in high school and/or postsecondary school, but only a few are consistently working. Questions pertaining to whether the student was currently working for pay (at the time of the interview) had low affirmative responses (10.9 to 23.3%) across all waves. In addition, many who do work report working a small number of hours and only keeping their jobs for a short period of time. Approximately one-third of the youths did not report any work experience at all during the first five years of the study, when youths were ages 13 to 21.

Comparisons between the general population and youths with visual impairments reveal that similar percentages of each group attend postsecondary school. Youths with a visual

impairment but without a secondary disability were more likely to attend 2-year colleges. Although some youths with visual impairments were more likely to attend postsecondary school, they were less likely to be employed post-high school. The largest and most concerning difference was seen for youths who were not attending high school or postsecondary school. Only 38.2% of these youths not engaged in education were employed at the time of the interview, which compares to 72.6% of the general population, and only about one-third of them held full-time employment.

Some aspects of these results are positive, but other aspects are cause for concern. Many youths are gaining some work experience, including working during high school. However, the quality of these work experiences is somewhat in question based on these results. Whether any type of work experience, regardless of how short or how limited in number of hours, will help these youths gain employment in the future is unknown. Another positive aspect of the results is that the percentage of those who report paid employment post-high school has increased over the original NLTS (Wagner, Blackorby, Cameto, Hebbeler, & Newman, 1993). A cause for concern is that approximately one-third report not having any work experience during the first five years of the study. Ideally, all youths with visual impairments would obtain some work experience while in high school and/or postsecondary school, as we know early work experiences are associated with future employment outcomes (e.g., Author, 2009; Stodden, Dowrick, Gilmore, & Galloway, 2001; Wright & Carr, 1995).

Another positive finding of this study is that many youths with visual impairments are attending postsecondary school. Their rates of attendance are the same or higher than the general population's rates. In addition, the rates reported here represent a substantial increase over the rates reported from the first NLTS (Wagner et al., 1993). How many of these youths graduate

from postsecondary school and what happens to these youths after graduation is an important question that can be answered when all data from the NLTS2 has been collected.

For those youths who are not attending postsecondary school, there is another area of concern: the low percentage of these youths who are employed. Despite the large standard errors associated with this estimate, we can be confident that there is a large difference in the employment rates of youths with visual impairments and the general population who are not attending school. The subpopulation of youths with visual impairments who do not attend postsecondary school is a group that may be most in need of extensive transition services to assist them in moving to adult roles in the community. Because so many youths with visual impairments attend postsecondary school, the majority of transition services seem to focus on them. These results indicate that those who do not attend postsecondary school may not be getting the assistance they need.

Note

The contents of this publication were developed under a grant from the Department of Education, NIDRR grant number H133A070001. However, these contents do not necessarily represent the policy of the Department of Education, and readers should not assume endorsement by the Federal Government.

References

Author (2009). Factors impacting employment success for transition-age youth with visual impairments. *Journal of Visual Impairment and Blindness, 103*(6), 329-341.

Bureau of Labor Statistics. (2006). *College enrollment and work activity of 2005 high school graduates*. Retrieved January 10, 2009 from http://www.bls.gov/news.release/archives/hsgec_04262007.pdf

Kirchner, C., & Diament, S. (1999). Estimates of the number of visually impaired students, their teachers, and orientation and mobility specialists: Part 1. *Journal of Visual Impairment & Blindness, 93*(9), 600-606.

SAS Institute Inc. (2008). *SAS/STAT 9.2 User's Guide.* Cary, NC: SAS Institute, Inc.

Stodden, R. A., Dowrick, P., Gilmore, S., & Galloway, L. M. (2001). *A review of secondary school factors influencing postschool outcomes for youth with disabilities.* A report from the National Center for the Study of Postsecondary Educational Supports (online). Retrieved May13, 2008 from http://www.rrtc.hawaii.edu/documents/products/phase1/043-H01.pdf

Wagner, M., Blackorby, J., Cameto, R., Hebbeler, K., & Newman, L. (1993). *The transition experiences of young people with disabilities: A summary of findings from the National Longitudinal Transition Study of special education students.* Menlo Park, CA: SRI International.

Wright, J. D., & Carr, R. (1995). *The effects of high school work experience a decade later: Evidence from the National Longitudinal Survey*. Washington, D.C.: Employment Policies Institute Foundation.

Table 1

Demographic Information for High School Students in Wave 2

Variable	Percent
Age at Wave 2	
16	30.9 (2.21)
17	34.4 (2.34)
18	25.8 (2.33)
19	8.9 (2.19)
Grade level in 2002/2003	
Ungraded class	9.0 (0.94)
5^{th}-8^{th} grade	2.1 (0.78)
9^{th} grade	10.0 (1.41)
10^{th} grade	24.5 (2.23)
11^{th} grade	32.4 (2.50)
12^{th} grade	21.1 (2.82)
13^{th} grade	0.8 (0.42)
Gender: Male	57.4 (2.78)
Race/Ethnicity	
White	54.0 (2.10)
African American	20.3 (2.06)
Hispanic	18.8 (2.03)
Asian/Pacific Islander	5.0 (0.74)

American Indian/Alaskan Native	2.0 (0.71)
Severity of visual impairment	
Completely blind	33.0 (2.12)
Other visual impairment	67.0 (2.12)
Has a secondary disability	47.7 (2.67)

Note. Values represent weighted percentages (standard errors).

Table 2

High School Work Experience (Wave 2)

Variable	All B/VI	No Secondary Disability	Has Secondary Disability
Has worked (past 24 months)	50.0 (2.62)	62.7 (4.11)	36.1 (2.98)
Currently working	23.3 (2.50)	31.4 (3.99)	14.4 (1.95)
Number of hours worked/week:			
5 or less	33.5 (2.38)	23.5 (2.64)	49.9 (4.46)
5.1 - 14.9	16.8 (2.39)	16.0 (2.49)	18.0 (4.29)
15 – 20.9	18.6 (3.74)	26.5 (5.50)	5.8 (1.85)
21 – 34.9	16.4 (2.79)	21.7 (4.37)	8.0 (1.34)
35 or more	14.6 (2.97)	12.35 (4.19)	18.3 (3.75)
Hourly wage earned at job			
Less than $5.15/hour	19.3 (2.75)	19.9 (3.96)	18.1 (3.64)
$5.15 - $6.00/hour	26.4 (2.64)	23.1 (3.81)	32.7 (3.51)
$6.01 - $7.00/hour	21.5 (3.05)	23.3 (6.01)	18.1 (5.51)
More than $7.00/hour	32.7 (2.82)	33.6 (4.15)	31.1 (3.96)
Type of job held			
Child care/babysitting	16.5 (1.98)	18.2 (2.70)	13.2 (3.13)
Cashier	13.4 (3.72)	13.5 (5.39)	13.3 (1.24)
Food service	6.9 (1.58)	10.1 (2.44)	1.0 (0.30)

Gardening/grounds mainten.	8.6 (0.96)	9.2 (1.52)	7.5 (0.64)
Cleaning	8.5 (1.86)	3.9 (0.75)	17.2 (4.05)
Skilled labor apprentice	8.3 (1.82)	8.3 (2.44)	8.4 (2.72)
Clerical	7.8 (1.79)	9.9 (2.44)	3.8 (2.24)
Transportation to work			
Ride from family member	46.5 (3.68)	44.6 (4.77)	49.8 (4.19)
Walks or rides bike	13.9 (1.84)	15.7 (2.80)	10.6 (1.79)
Drives him/herself	12.9 (1.58)	15.4 (2.19)	8.3 (2.38)
Ride from friend/coworker	8.6 (1.97)	5.8 (1.29)	13.8 (4.07)
Public transportation	8.4 (1.98)	10.5 (2.82)	4.7 (2.45)
Other	7.5 (1.55)	8.0 (1.95)	6.8 (2.72)

Note. Values represent weighted percentages (standard errors).

Table 3

Employment and Education Status in Wave 3: Comparisons to General Population

Variable	All B/VI	No Secondary Disability	Has Secondary Disability	General Population[a]
Employment by educ. status				
In HS	10.9 (2.31)	19.3 (4.22)	2.8 (1.07)	25.8
Not in HS or PS	38.2 (7.36)	47.2 (10.48)	23.8 (3.94)	72.6
In PS (2-year college)	50.4 (3.09)	48.5 (3.73)	59.0 (5.26)	61.6
In PS (4-year college)	44.8 (9.89)	51.8 (9.67)	28.3 (13.20)	51.9
All post-HS	41.7 (4.22)	48.5 (5.12)	26.0 (5.04)	65.1
Education status				
Attending PS	63.7 (3.95)	70.6 (4.34)	45.9 (8.96)	59.5[b]
Attending 2-year college	31.8 (2.38)	37.3 (3.27)	17.6 (3.20)	20.8 [b]
Attending 4-year college	34.9 (4.48)	35.6 (4.28)	33.0 (10.52)	38.7 [b]

Note. HS = high school; PS=postsecondary. Values represent weighted percentages (standard errors).

[a]Standard errors for these estimates are not available, but are reported to generally be below 1.50.

[b]Includes both high school graduates and dropouts.