Exploring Post-School Outcomes across Time Out of School for Students with Autism Spectrum Disorder

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Abstract: While one generally assumes the longer one is out of school the more positive his or her outcomes this may be, this may not be accurate. Little research systematically explores the relationship between time after exiting high school and post-school outcomes, especially for students with disabilities. This study represented a secondary analysis of the NLTS2 aimed at understanding the immediate and long-term post-school outcomes of students with autism spectrum disorder (ASD) and the relationship among those outcomes. The main findings suggest positive results for some post-school outcomes examined when considering improved success the longer one was out of school (e.g., attending and graduating from post-secondary education and employment). However, inconsistent, at best, and negative, at worst, results were found for working full time and wage earning the longer one with ASD is out of high school.

Exiting high school is an exciting – and critical – time for secondary students, often associated with increased freedom, responsibilities, and opportunities (Heckhausen, Chang, Greenberger, & Chen, 2013). In theory, students engage in choices regarding their future, including attending post-secondary education or obtaining employment; students may also select their living arrangements, such as living independently from their parents (Guo, Marsh, Morin, Parker, & Kaur, 2015). Data from the National Center for Education Statistics and the Institute of Education Sciences (IES) suggest 25.2 million students are enrolled as undergraduates in the United States, with 42.2% of those attending public two-year institutions and 31.4% attending public four-year institutions (Ginder & Kelly-Reid, 2013). Typically, if one does not attend a post-secondary institution, one enters the job market. Recent data from the United States Department of Labor indicated 38.8% of 18–19 year olds and 62.9% of 20–24 year olds were employed in labor market (Bureau Labor Statistics, 2014).

Beyond the post-school experiences for students in general, particular attention is paid to the post-school outcomes of students with disabilities. Historically, students with disabilities struggle during their years after high school (i.e., adult years), including experiencing lower rates of attendance at post-secondary institutions, lower rates of employment, and lower rates of independent living (Blackorby & Wagner, 1996). More recent data suggest attention is still needed to the post-school experiences of students with disabilities. Newman, Wagner, Cameto, & Knokey (2009) found that only 45% of students with disabilities attended any type of postsecondary education within four years of leaving school. They also reported that although 73% of students with disabilities reported being employed sometime after exiting school, only 58% were doing so full time. Finally, Newman et al. found only 25% of students with disabilities lived independently within four years after high school.

Given the heterogeneous nature of students with disabilities, often post-school outcomes are disaggregated by disability category (e.g., students with learning disabilities or autism spectrum disorder) to understand the different experiences. Previous research on outcomes for students with autism spectrum disorder (ASD), specifically, suggests less positive post-school experiences than students with disabilities in general. Shattuck, Narendorf,
Cooper, Sterzing, Wagner, & Taylor (2012) found that within six years of exiting high school, only 55.1% of students with ASD were ever employed for pay and 34.7% had ever attended a two- or-four year college. In contrast, approximately one-third of students with ASD have been neither employed nor attending postsecondary education within six years of leaving high school. Students with ASD also report low rates of independent living; Newman et al. (2011) found students with ASD experienced the lowest rates of independent living (i.e., not living with parents, guardians or another family member, aside from a spouse). Anderson, Shattuck, Cooper, Roux, and Wagner (2014) reported that less than one-fifth of students with ASD had ever lived independently after high school. These outcomes are disconcerting; additional research is needed and warranted on the post-school outcomes of individuals with ASD (Roux et al., 2013).

Post-School Outcomes across Time

Typically, one assumes the longer s/he is out of high school, the better his/her outcomes. In other words, it is logical to assume that one would make more money the longer one is out of high school – given additional time to obtain full-time employment and/or graduate from post-secondary education – as well as be more likely to live on one’s own (Carnevale, 2013). These are not unique expectations, but likely universal expectations for students with and without disabilities, although patterns are shaped by societal context (e.g., recessions) and generational factors (e.g., millennials vs. Generation X; The Council of Economic Advisers, 2014). However, one presumes most individuals expect their lives will improve the longer one is out of high school.

Previous researchers suggested a larger percentage of students with disabilities report experiencing adult life outcomes the longer they are out of school. For example, 24.7% of students with disabilities report living independently within four years of exiting high school, as compared to 35.7% of students with disabilities within six years and 44.7% within eight years. Likewise, the percentage of students with disabilities who indicate ever attending postsecondary education increased the longer the students were out of school, going from 44.7% (within four years) to 54.9% (within six years) and 60.1% (within eight years) (Newman et al., 2009; Newman et al., 2011; Sanford et al., 2011). However, the pattern was inconsistent for being currently employed, increasing from with four years of high school to within six years of high school (56.8% and 71.1%, respectively) and dropping for within eight years of high school (60.2%). For specifically students with mild intellectual disability, researchers also found inconsistent patterns for improvement of post-school outcomes the longer students were out of high school (Bouck, 2014). Yet, little-to-no research exists which explores the post-school outcome data pattern for individuals with ASD.

This particular research project – representing a secondary analysis of the National Longitudinal Transition Study-2 (NLTS2) data – sought to explore the relationship between length of time from exiting school and post-school outcomes for students with ASD. Given the unique characteristics of students with ASD relative to employment, postsecondary education, and independent living, the researchers felt it was important to isolate and explore the longitudinal nature of adult life outcomes for individuals with ASD. The specific research questions included (a) what are the immediate post-school outcomes of students with ASD; (b) what are the longer-term post-school outcomes of students with ASD; and (c) how do longer-term outcomes of students with ASD compare to the more immediate outcomes?

Method

In compliance with the regulations from the United States Department of Education Institute of Education Sciences (IES), no data for which the raw, unweighted sample size is less than three are reported. No raw data are reported in this article; data are reported as weighted using the mechanism provided for the NLTS2 by the original data collectors – SRI International (see Javitz & Wagner, 2003; Wagner, Newman, Cameto, Garza, & Levine, 2005 for a more in-depth discussion of weighting the data). Each survey has weights for each case within the database; the weighting accounts for the sample in the data within the
larger population from participating schools and districts (IES, n.d.). Weighting the data allows for a discussion of the population rather than the sample; the weighted data were analyzed using the Complex Samples package within SPSS.

Participants

A total of 4,665 secondary students with ASD are represented within these data. The majority of those individuals were male (93.8%, SE 1.9). The majority were also Caucasian (58.7%, SE 8.8), followed by African-American (36.7%, SE 8.5), Asian (2.2%, SE 1.7) and Hispanic (2.1%, SE 1.3). Given the focus on post-school outcomes, the majority of students were 17–18 years of age when in school (56%, SE 8.9), followed by 14 (19.1%, SE 3.7), 16 (16%, SE 4.1) and then 15 (8.8, SE 2.4). Although the majority of students identified as native English speakers (68%, SE 8.1), 1.3% (SE 0.3) indicated they were English language learners or bilingual and 30.8% (SE 8.0) did not produce verbal speech, as reported by parents or students themselves. The majority of the students were from families with annual income between $25,000 and $50,000 (54.8%, SE 10.3), followed by greater than $50,000 (28.3%, SE 6.7) and then less than $25,000 (16.8%, SE 7.9). Over half of the students lived in suburban communities (60.4%, SE 8.7), followed by urban (36.5%, SE 8.1) and then rural (3.1%, SE 1.3).

Data Collection

Data from this secondary analysis of the NLTS2 came from waves 1–4 of original data collection. Each wave represented a two-year period of data collection; the original NLTS2 data collection occurred across 10 years and five waves. Wave 1 data were collected in 2001 and 2002; wave 4 data collected in 2006 and 2007. Data from wave 1 and wave 2 represent in-school experiences and data from waves 2, 3, and 4 represent post-school experiences. Hence, the post-school experiences are discussed as within two years (waves 2 and 3), within four years (waves 3 and 4), and within six years of exiting high school (wave 4).

The data for the secondary analysis came from two of the six types of data collection: the parent/youth survey and the school program survey. The parent/youth survey was typically a 60-minute phone interview, completed by parents in wave 1 but, generally, by students in subsequent waves. However, if a student was unable to respond to the questions, a parent completed the interview in waves 2–4. Also, if participation in a phone interview was not possible, parents and/or youth were mailed a survey. The parent/youth survey provided demographic variables (e.g., gender, ethnicity) as well as variables representing the post-school experiences (e.g., employment, post-secondary education). The school program survey was a mail survey completed by the teacher most familiar with a student’s program. The school program survey solicited information relative to a student’s school experiences, such as curriculum and transition planning as well as demographics.

Procedure

To complete the secondary analysis, the researchers determined the variables needed to answer the research questions from the two survey instruments: the parent/youth survey (i.e., demographics and post-school experiences) and the school program survey (i.e., demographics). In terms of post-school experiences, the authors sought to represent independent living (i.e., living independently or dependently), employment (i.e., employed – defined as having a paid job, full time/part time employment, wage), and post-secondary education (i.e., attending and earning a diploma from four-year, community college, and/or vocational/technical school). Next, the researchers created in-school and post-school databases from the respective surveys; variables not used in the secondary analysis were deleted. The authors created in-school databases for waves 1 and 2 by first creating separate in-school databases for wave 1 for both parent/youth and school program surveys and then for both in wave 2. The two wave one in-school databases were merged together as were the two in-school databases from wave 2, resulting in a complete wave 1 in-school database and a complete wave 2 in-school database. The authors then created separate out-of-school parent/youth databases for waves 2, 3, and 4. Next, the authors merged databases...
to represent in school in wave 1 and out in waves 2 (within two years), 3 (within four years) and 4 (within six years of high school); the same was done for the in school in wave 2 and out in waves 3 (within two years) and 4 (within four years of high school). The authors used Complex Samples with SPSS 22 to merge via cases. To create one database, the authors then renamed all the variables within the two in and out databases to be identical and merged the two databases with Complex Samples via variables.

Data Analysis

To answer the research questions, the authors used frequency distributions and a test equivalent to a $F$-test. All analyses were conducted with SPSS 22 using Complex Samples (SPSS 22) and Excel (the equivalency to a $F$-test). Specifically, to answer research questions 1 and 2 – the immediate (i.e., within two years) and longer-term post-school outcomes (i.e., within four and six years) of students with ASD – the authors conducted frequency distributions on the variables of interest: attending and earning a diploma from (a) a community college, (b) vocational/technical school, and (c) a four-year institution; ever having a paid job within the period between surveys (i.e., generally two years), currently having a paid job; living independently; hourly wage; working full or part time; liking work; who found individual his/her job; and how one gets oneself to work (i.e., drives self, rides with family, uses public transportation, or walks/rides the bus). Please note, that due to student or parent preference, inherent skip logic within the survey, and attrition, not every question was asked and/or answered. Hence, the frequencies as reported are based out of the weighted number of individuals who responded to that question.

To answer the third research question – how the longer-term outcomes of students with ASD compare to the more immediate outcomes – the authors used the equivalent to an $F$-test provided with the NLTS2 restricted use data from the IES and SRI International to determine statistically significant differences between groups. The $F$-test equivalent, conducted within Excel, allowed the authors to input the frequencies and standard errors for two groups and determine a statistically significant difference. Use of the $F$-test equivalent assessment allowed the researchers to compare if the variances in two populations were equal. For the purposes of this secondary analysis, differences were compared between outcomes for students with ASD within two years and four years, within two years and six years and within four years and six years. The following post-school outcomes between the years were compared: ever paid job, current paid job, independent living, attended community college, attended four-year college and attended vocational/technical school.

Results

The majority of student with ASD who were out of school were out because they graduated (87.2%, $SE$ 3.2). Others were out because they dropped out or stopped going (7.5% $SE$ 2.6), some reason not specifically asked in the survey (3.0% $SE$ 1.0) (i.e., took test to receive diploma/certificate, dropped out or stopped out, permanently expelled, or graduated) or took a test to receive a diploma or certificate (1.6% $SE$ 1.2).

Post-Secondary Education

Between one-fourth and one-third of students with ASD attended some form of post-secondary education within two, within four (two-to-four), and within six (four-to-six) years after exiting high school: 27.5% ($SE$ 6.8), 30.6% ($SE$ 7.4), and 29.2% ($SE$ 6.9), respectively. Of the post-secondary education options, the most frequently reported was attending a community college (see Table 1). Attendance at community colleges experienced an increase in frequency the longer students were out of school 23.3% ($SE$ 5.8) of students with ASD attended within six years, 20.0% ($SE$ 4.9) within four years, and 15.1% ($SE$ 256 / Education and Training in Autism and Developmental Disabilities-September 2018
2.6) within six years of high school exit. Not surprisingly, the longer one was out of high school, the higher the frequency that those who attended earned a diploma (refer to Table 1). The highest frequency of students with ASD earned a diploma from postsecondary education institute when out of high school within six years.

**Employment**

Students with ASD reported an increased frequency of being both currently employed and ever employed within the wave of data collection the longer they were out of school (refer to Table 1). While only 17.1% ($SE$ 4.1) and 30.4% ($SE$ 5.5) were currently at the time of data collection or ever employed within the wave of data collection within two years of exiting high school, 52.6% ($SE$ 10.7) and 84.7% ($SE$ 4.4) were, respectively, within six years after high school. However, there was a decrease in the frequency of being currently employed between within four years and within six years (63.9%, $SE$ 9.7 and 52.6%, $SE$ 10.7, respectively). In contrast to the general positive trend of increasing employment the longer one was out of school, a decrease occurred in frequencies the longer one was out of school for both working full time as well as earning more than a minimum wage (see Table 2). The mean for minimum wage was $6.66 for within two years of exiting school, $5.46 for within two-to-four years of exiting school, and $5.26 for within six years of exiting school.

Students generally reported liking their employment very much or fairly well across the post-school times examined. The longer individuals were out of school, however, the more they reported liking their job (refer to Table 2). Yet, in contrast, the longer students were out of school the less likely they were to find their own job – decreasing from 25.6% ($SE$ 6.3) during the immediate outcomes to 15.8% ($SE$ 6.6) and 5.2% ($SE$ 2.4) with more long-term outcomes. Students increasingly drove themselves to work or rode with family the longer they were out school.

**Independent Living**

A relatively small percentage of students with ASD reporting living independently – defined in this secondary analysis as living on one’s own, living with a spouse or roommate, or living in a college or military dorm – throughout the post-school years examined. The high-

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**TABLE 1**

Post-school Outcomes: Postsecondary Education, Employment, and Independent Living

<table>
<thead>
<tr>
<th></th>
<th>Attend CC</th>
<th>Diploma CC</th>
<th>Attend Voc</th>
<th>Diploma Voc</th>
<th>Attend 4-year</th>
<th>Diploma 4-year</th>
<th>Paid Job</th>
<th>Current Paid Job</th>
<th>Ind. Living</th>
</tr>
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<tr>
<td><strong>Within 2 Years</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>Yes</td>
<td>15.1</td>
<td>—</td>
<td>10.2</td>
<td>—</td>
<td>7.2</td>
<td>0</td>
<td>30.4</td>
<td>17.1</td>
<td>3.1</td>
</tr>
<tr>
<td>($SE$)</td>
<td>(4.4)</td>
<td>(4.0)</td>
<td>(2.4)</td>
<td>(5.5)</td>
<td>(4.1)</td>
<td>(1.7)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$N$</td>
<td>4360</td>
<td>576</td>
<td>4400</td>
<td>432</td>
<td>4368</td>
<td>274</td>
<td>3268</td>
<td>3268</td>
<td>3737</td>
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<td><strong>Within 4 Years</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>20.0</td>
<td>19.4</td>
<td>6.6</td>
<td>0</td>
<td>10.8</td>
<td>0</td>
<td>46.1</td>
<td>63.9</td>
<td>23.4</td>
</tr>
<tr>
<td>($SE$)</td>
<td>(4.9)</td>
<td>(13.7)</td>
<td>(2.0)</td>
<td>(4.1)</td>
<td>(12.4)</td>
<td>(9.7)</td>
<td>(5.2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$N$</td>
<td>4307</td>
<td>815</td>
<td>4288</td>
<td>224</td>
<td>4307</td>
<td>441</td>
<td>4006</td>
<td>4291</td>
<td>4318</td>
</tr>
<tr>
<td><strong>Within 6 Years</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Yes</td>
<td>23.3</td>
<td>36.1</td>
<td>5.7</td>
<td>30.9</td>
<td>15.8</td>
<td>49.7</td>
<td>84.7</td>
<td>52.6</td>
<td>4.4</td>
</tr>
<tr>
<td>($SE$)</td>
<td>(5.8)</td>
<td>(10.9)</td>
<td>(2.6)</td>
<td>(12.9)</td>
<td>(4.8)</td>
<td>(15.1)</td>
<td>(4.4)</td>
<td>(10.7)</td>
<td>(1.6)</td>
</tr>
<tr>
<td>$N$</td>
<td>4303</td>
<td>1014</td>
<td>4260</td>
<td>328</td>
<td>4260</td>
<td>653</td>
<td>4240</td>
<td>4229</td>
<td>4303</td>
</tr>
</tbody>
</table>

*Note:* All percentages are based on the number of weighted responses; not all individuals responded to each question. The percent of students who received a diploma is based on the number who both indicated they attended and who responded to the question. Dashes represent that an insufficient raw numbers of cases existed to report the data, consistent with the specification of the IES.
The est rate of independent living occurred when students were within four years of exiting high school (23.4%, SE 5.2); the frequencies for within two years and within six years were both less than 5%.

Differences in Outcomes across Time

When analyzing for statistically significant differences in the frequencies of outcomes across the three points in time, none were found for attending any of the three post-secondary education options. Statistically significant differences were found for having a paid job any time within the time frame and for currently having a paid job. Statistically significant differences were found for having a paid job at some point during the two-year wave when comparing outcomes within two years of exiting school and within six years of exiting school \( (F = 59.42, p < .001) \) and within four years of exiting school and within six years of exiting school \( (F = 8.61, p < .01) \). Statistically significant differences were also found for students with ASD with regards to having a job at the time of data collection when comparing the frequencies for both within two years and within four years \( (F = 19.75, p < .001) \) and for within two years and within six years \( (F = 9.60, p < .01) \). Finally, the frequencies for living independently were statistically significantly different for both within two years and within four years \( (F = 13.77, p < .001) \) and within four years and within six years \( (F = 12.2, p < .001) \).

Discussion

This study represented a secondary analysis of the NLTS2 aimed at understanding the immediate and long-term post-school outcomes of students with ASD and the relationship among those outcomes. The findings suggest the longer an individual with ASD is out of high school the more likely s/he is to both attend and then graduate from most all forms of post-secondary education. The same is also generally true for having a paid job – both at the time of data collection and ever within the two-year window period. However, the results for independent living, earning more than minimum wage, and working full-time tell a different – and more confusing – story for individuals with ASD.
From a positive perspective, students with ASD were employed at the time of data collection at a rate of over 50% when out of school more than two years. However, the discrepancy between being ever employed throughout the time frame examined and being currently employed is concerning. For example, 84.7% of adults with ASD reported having a job at some point within six years after high school, yet only 52.6% were currently employed. These results suggest the need to more critically examine post-school services provided to individuals with ASD relative to employment. They also suggest value in secondary schools collaborating earlier and to a greater extent with post-school agencies, such as vocational rehabilitation (Wilczynski, Trammell, & Clarke, 2013). Perhaps adults with ASD need additional support in keeping a job, outside of just getting a job. Shattuck et al. (2012) suggested a key element in supporting students with ASD with employment was to carefully match work experiences to an individual’s area of strength. Also, it is also important to ensure that students with ASD leave high school with as many soft vocational skills, such as social skills, as possible, given the importance of these skills in obtaining and maintaining employment (Wilczynski et al., 2013).

When these services are not provided or skills are not obtained in high school, it becomes critical that individuals with ASD get access to services and then acquire the services as adults, such as through vocational rehabilitation and/or a state’s Developmental Disability Agency (Simonsen & Neubert, 2013). Also positive were the increasing number of individuals with ASD who attended a community college or a four-year institution the longer they were out of school, and the increasing frequency of individuals who earned a diploma from the institutions they attended. While one could suggest that rates of postsecondary education participation were low for adults with ASD, they were actually higher than other populations (see Table 3 for a comparison of some outcomes for students with ASD to other individuals with disabilities). Frequencies of postsecondary education attendance of 27.5% for within two years of high school exit, 30.6% for within four years, and 29.2% for within six years is higher than consistently reported with previous research (Shattuck et al., 2012; Wehman et al., 2014). However, the results suggest perhaps the need for additional supports to help adults with ASD complete their postsecondary education.

It is important to note that much of the postsecondary education data occurred prior to the increase in postsecondary education options and programs for individuals with disabilities, and specifically students with ASD. As evident on ThinkCollege (2016), there are now postsecondary education programs to support students with ASD specifically. These programs are designed to provide individuals with ASD opportunities to participate in postsecondary education outside of the traditional disability services offered on college campuses to any individuals with a disability following Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. The programs highlighted on ThinkCollege provide unique supports and services to students with ASD for whom education beyond high school might not be possible or presents large challenges (Hendrickson, Carson, Woods-Goves, Mendenhall, & Scheidecker, 2013). For example, postsecondary education programs targeting students with ASD often include specific supports focused on the social needs – including socialization and navigating social environment – of college of students with ASD as well as daily living skills (Cullen, 2015). Social communication challenges and supports are often noted as a major issue for individuals with ASD in terms of accessing and finding success in postsecondary educational settings (Zager & Alpern, 2010).

As one might predict, the rates of earning a diploma from a postsecondary institution increased the longer an individual with ASD was out of school. Yet, less than 50% of students who attended an institution of postsecondary education earned a diploma within six years. Additional supports and services for students with ASD should be investigated for both high school as well as post-secondary to increase student opportunities for the ultimate success of graduating. It is insufficient to attend; students need to earn a diploma – or certificate – from postsecondary education institutions. It is also imperative that as models for college attendance – like those on ThinkCollege (2016) – increase postsecondary education access to more individuals with ASD that data
are gathered to understand the impact of such programs (Hendrickson et al., 2013; Zeedyk, Tipton, & Blacher, 2014). Data released on specialized college programs for students with ASD – and/or students with intellectual disability – to date suggest positive implications for such programs, including rates of employment and independent living (Ross, Marcell, Williams, & Carlson, 2013).

From this secondary analysis, outcomes for individuals with ASD were obtained with regards to earning more than minimum wage and working full time the longer one was out of school. These were true both for individuals with ASD as well as in comparison to individuals with other disabilities (refer to Table 3). Although disappointing and perhaps not fully reflective of the skills of individuals with ASD, the tendency towards part-time employment is not inconsistent with previous research for individuals with ASD (Holwerda, van der Klink, Groothoff, & Brouwer, 2012). It is also important to evaluate the data in light of context. For example, data for within six years of exiting high school was collected during 2006 and 2007. In the United States, 2006 and 2007 marked the beginning of a slowdown and eventual recession in the economy (Koba, 2011; Weller, 2006). If 2006 was marked by an economic slowdown, individuals with disabilities may have experienced a decreased in hours employed or accepted jobs with lower pay or obtained through other means, such as supported employment or even in sheltered workshops. Employment in sheltered workshops is associated with lower wages earned as well as working fewer hours (Cimera, 2011; Cimera, Wehman, West, & Burgess, 2012). Of course, another hypothesis outside of the impact of the economic slowdown is that the individuals who remained longer in the longitudinal study were qualitatively different than those who left the study. In other words, attrition was a factor and students for whom data are available during wave 4 – within six years of school exit – are different in key qualities that contribute to employment, such as IQ, service needs, functional and/or communica-

### Table 3

<table>
<thead>
<tr>
<th></th>
<th>Students with ASD</th>
<th>Students with Other Disabilities</th>
<th>Students without Disabilities</th>
<th>Students with MID (Bouck, 2014)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Currently employed (within 2 years or shortly after leaving school)</td>
<td>17.7%</td>
<td>42.9% (Wagner et al., 2005)</td>
<td>79.6% (Bureau of Labor Statistics, 2012)</td>
<td>36.7%</td>
</tr>
<tr>
<td>Currently employed (within 4 years)</td>
<td>63.9%</td>
<td>56.8% (Newman et al., 2009)</td>
<td>53.9%</td>
<td>48.3%</td>
</tr>
<tr>
<td>Full/part time employment (within 4 years)</td>
<td>8.8%</td>
<td>57.9% (Newman et al., 2009)</td>
<td>9.20 (U.S. Department of Labor, 2001)</td>
<td>$7.35</td>
</tr>
<tr>
<td>Hourly wage (within 4 years)</td>
<td>$5.46</td>
<td>$8.20 (Newman et al., 2009)</td>
<td>48.3%</td>
<td>53.9%</td>
</tr>
<tr>
<td>4-year post-secondary attendance (within 4 years)</td>
<td>10.8%</td>
<td>45% (Newman et al., 2009)</td>
<td>61.1% (IES, NCES, n.d.)</td>
<td>3.0%</td>
</tr>
<tr>
<td>Post-secondary attendance</td>
<td>27.5% (within 2 years)</td>
<td>19.7% (Wagner et al., 2005)</td>
<td>19.2% (U.S. Department of Commerce, 2011)</td>
<td>17.1% (within 2 years)</td>
</tr>
<tr>
<td>Independent living</td>
<td>3.7% (within 2 years)</td>
<td>24.7% (Newman et al., 2009)</td>
<td>28% (Arnett, 1998)</td>
<td>30.9% (within 2 years)17.5% (within 4 years)</td>
</tr>
</tbody>
</table>
tion needs, and family support (Holwerda et al., 2012; Roux et al., 2013). A final hypothesis is that during the years examined the full extent of support was not available. For example, as previously noted researchers are finding positive results for individuals with ASD engaged in specialized college programs that provide additional education and supports for individuals with ASD and/or intellectual disability after high school, including increased rates of employment (Ross et al., 2013).

Finally, the lower rates of independent living for individuals with ASD are consistent with previous research regarding the residential status of this population after high school (Anderson et al., 2014; Newman et al., 2011). Perhaps concerning with these data is the lack of apparent improvement from living status within two years of high school exit to within six years of high school exit. Despite the hypothesis that one’s outcomes – including independent living – would improve the longer one was out of school, these results were not consistently obtained for adults with ASD. As previously discussed, perhaps the individuals for whom the longest amount of data were collected represent individuals with more needs, and adults with ASD with more positive outcomes were lost due to the attrition within the original study. It could also be that the decrease in independent living within four years – in which an increase occurred from within two years – and within six years of being out of school reflect the changing societal economic times previously mentioned with regards to a downturn in full time employment and wage earnings. Like previously suggested for employment and post-secondary education, additional research regarding the factors contributing to the differing rates of post-school success is warranted. Also warranted is additional attention in practice to preparing high school students and adults with ASD, via rehabilitation services, for independent living and trying to provide the prerequisite skills for success (Anderson et al., 2014).

Limitations

This secondary data analysis of the NLTS2 is subject to the same limitations of the original NLTS2 data. Thus, there exist concerns about missing data from individuals not being asked and/or not responding to every question. In addition, attribution occurred within the original NLTS2 data collection. Related, given the secondary nature of the data, researchers were only able to analyze the existing data from the NLTS2 or what could be recoded from the original data. Hence, particular nuances of post-school outcomes might be missing given the lack of original data collection. Limitations also exist relative to the original data collection. For example, for the variable employment the surveys inquired about paid employment, but did not differentiate between integrated employment or employment in a sheltered workshop. Finally, the NLTS2 data are based on self-report – by the student, parent, or educator – and self-reported data can be biased.

References


Cimera, R. E. (2011). Does being in sheltered workshops improve the employment outcomes of supported employees with intellectual disabilities?