
2. **Abstract** Little is known about postsecondary pathways and persistence among college students with an autism spectrum disorder (ASD). This study analyzed data from the National Longitudinal Transition Study-2, 2001–2009, a nationally representative sample of students in special education with an ASD who progressed from high school to postsecondary education. Findings suggest that most college students with an ASD enrolled in a 2-year community college at some point in the postsecondary careers (81%). Those in science, technology, engineering and mathematics (STEM) fields were more likely to persist in a 2-year community college and were twice as likely to transfer from a 2-year community college to a 4-year university than their peers in the non-STEM fields. College persistence rates varied by gender, race, parent education level, and college pathway and major. Educational policy implications are discussed.

3. **Summary** The authors track the postsecondary pathways and persistence rates of students with an ASD that are STEM majors and non-STEM majors. The pathways included students who only attended 2-year community college after high school, those who attended 2-year community college and transferred to a 4-year university, and those who attended a 4-year university immediately after high school.

   a. **Purpose of study** To investigate and understand the postsecondary pathways and persistence rates of college students with an ASD that are STEM majors and non-STEM majors.

   b. **Framework**

      - Studied men, women, and minority students
      - Studied students with high levels of autism and more mild cases as well.
      - Community colleges were extremely important to women and minorities especially in the STEM field because it gave them the necessary prerequisite work needed to excel at a 4-year university.
      - The rate of students with an ASD enrolling into postsecondary schools is increasing
      - Students with an ASD major in STEM significantly more than students who have other disabilities and those who in the general population.
        - This is due to their adherence to the rules which is key in STEM fields
c. **Population and sample** Original sample of 920 young adults with an ASD and/or their parents at wave 1. At wave 5, 660 of the original 920 remained.

d. **Overview of methods**
Researchers used data from the National Longitudinal Transition Study- 2 (NLTS2).

Data Selection:
- The NLTS2 first randomly sampled local education agencies (LEAs) and state supported schools.
- Students receiving special education from LEAs or special schools were randomly selected.
- Utilized phone, email, and in-person interviews to collect data.

Data Analysis:
The estimates in this report used cross-wave weights that were suitable for analyzing multiple waves of NLTS2 data.

e. **Variables** (or broad topics/sources of variance for qualitative studies)
    i. Control/Background variables
       - Students with an ASD receiving special education services
       - Students with an ASD in a STEM major or non-STEM major
    ii. Independent/Predictor variables of primary interest
       - Gender, age, race/ethnicity, annual household income, parents’ postsecondary education, conversation ability
    iii. Outcome/Criterion/Dependent variables
       - The persistence rates of the students

f. **Findings/Results**
1. A total of 81.33% of college students with an ASD attended a 2-year community college of which 49.73% only attended a 2-year community college and 31.60% attended both a 2-year and 4-year college. The remaining 18.67% of students attended a 4-year university directly after high school.

2. STEM Majors who only attended a 2-year community college were more likely to persist than non-STEM majors.

3. Students with an ASD that majored in STEM were twice as likely to transfer from community colleges to 4-year universities.

4. No difference in persistence rates between STEM majors and non-STEM majors whom only attended a 4-year university as well as who attended both a 2-year community college and a 4-year university.
5. STEM majors with an ASD were more likely to persist than non-STEM majors with an ASD.

6. Students with an ASD that attended both a 2-year college and a 4-year university had higher odds of persisting in college in comparison to their peers with an ASD that only attended a 2-year college or 4-year university. (Results the same for both STEM and non-STEM majors.

7. Students with an ASD whose parents attended postsecondary education were more likely to persist in college than their peers whose parents never attended postsecondary education both in STEM majors and non-STEM majors.

8. Minority college students with an ASD had higher odds of persisting in college than their White counterparts.

g. Implications
1. Provide community college professionals with professional development opportunities to help them effective transition services to students with an ASD.
2. Implement college outreach and retention programs to students with an ASD whose parents did not attend college.

4. Critiques & Limitations (In your own words, that make sense when skimmed)
   a. Conceptual The definition of autism has now been expanded and that means that more students are receiving services than before.
   b. Data
      • The study did not account for students with an ASD that did not qualify for special education services.
      • Analyses were correlational and not causal.
      • Conversational ability of the students with an ASD were based off of parent-reported judgment
      • The NLST tracked the persistence rates of students with an ASD ages 13-17 over the course of 10 years while freshmen in the general population were tracked for 6 years or longer.
      • Data in course enrollment were not available for all waves of the NLTS2 datasets, limiting our understanding of whether the number of courses taken may impact college persistence.
      • The persistence measure of the study did not track if the students graduated from college or how long it took for them to earn their degree.
c. **Analysis** Basing the conversation skills of the students from their parents' judgment is not as reliable as examining the students' conversation skills directly.

d. **Interpretation** Attending 2-year community college may be a great option for students with an ASD but some students may choose to attend a 4-year university directly. If a student decides to transfer from a 2-year to a 4-year school, making sure that supports are in place to facilitate a successful transition.

e. **Application** Improving the rate of persistence for college students with an ASD may be difficult if trying to account for background characteristics like family dynamics or race/ethnicity. Supports need to be put in place for educators, students, and staff to understand the difficulties students with ASD are facing and how the community college can help prepare students desiring to work in the STEM field.

5. **Follow-Up**
   a. **Little Questions** How will 2-year colleges prepare students with an ASD for the change in structure of 4-year universities?
      i. The article focuses on the success that women and minorities will have at the community college but how will men also benefit from attending a community college prior to a 4-year university?
   b. **Big Questions** How can 4-year universities emulate the structure of 2-year community colleges to better serve students with an ASD who want to proceed straight into university?
      i. What kind of training do transfer counselors and faculty at the community college level need to have in order to best help the students in this process?
   c. **Next Steps**
      1. More research needs to be done on the obstacles hindering college persistence.
      2. Government assistance should be given to students with an ASD that can no longer continue their studies due to financial hardship (research on the effectiveness of this initiative).
      3. Enrollments at community colleges could be impacted if administrators market the fact that starting at a community college can immensely help those wanting to aspire to STEM careers.
   d. **Other Resources**

6. **Summary/Utility**
   Students with an ASD major in STEM significantly more than students who have other disabilities and those who in the general population.
Template for Article Summary, Analysis, and Annotation

This article could have been more useful if it analyzed the 2-year community college structure and what caused students on the spectrum majoring in STEM to persist more there than at 4-year universities.