Title: Preparation for Postsecondary Education and Academic Aspirations of Individuals with ASD

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Introduction: Enrollment in postsecondary education is a particularly challenging achievement, requiring years of preparation. Although 70% of youth with autism spectrum disorder (ASD) test within the normal range of IQ, only 34.7% of individuals with ASD enroll in postsecondary education within 6 years of high school graduation (Shattuck et al., 2012), fewer than any other disability group excluding intellectual disability (Roux, Shattuck, Rast, Rava, & Anderson, 2015). Self-regulated learning strategies (e.g., communicate with professors), academic delinquency (e.g., late to class), socialization (e.g., hours per week socializing with friends), and interpersonal abilities (e.g., social self-confidence) are psychosocial and academic factors that contribute to academic success and retention in postsecondary education for typically developing young adults. Yet, we know little about how transition-age students with ASD fair in many of these psychosocial and academic domains relative to their peers.

Method: The present study aimed to evaluate differences in intended major, and psychosocial and academic domains between individuals who endorsed a diagnosis of ASD compared to a matched sample (gender, college selectivity, high school GPA, parent income, and self-reported level of depression) of individuals who endorsed no psychiatric diagnoses. The presented study used secondary data analysis of survey data from the 2012, 2014, and 2016 waves of the UCLA Higher Education Research Institute (HERI) national survey of US incoming freshmen (Total sample N = 615,253). Across the three survey years, N=2224 (N_{female} = 679; N_{male} = 1545) individuals endorsed a diagnosis of ASD. Confirmatory item factor analysis was used to evaluate the relationship between items theoretically representing each of the 4 psychosocial and academic constructs and the respective underlying traits. Scores on each trait were then generated using item response theory and expected a priori (EAP) scoring methods. Individuals with ASD diagnoses and the matched comparison group were then compared on each of the domains using separate general linear models by gender.

Results: The majority of individuals who endorsed a diagnosis of ASD were Caucasian (67%) and from high SES families (42% greater than $100k). Individuals with ASD, on average, attended competitive 4-year institutions, and took an average of 3 AP courses in high school (M=2.9). The most common intended majors for ASD males were Engineering (15%) and Mathematics or Computer Science (15%) and among females, Biological and Life Sciences (14%) and Fine Arts (11%). Although a similar proportion of individuals with no diagnosis intended to major in Engineering (20%; male) and Biological Sciences (14%; female), only 6% of females intended to major in Fine Arts, and only 7% of males intended to major in Mathematics or Computer Science. Relative to matched individuals reporting no diagnoses, males with ASD reported significantly greater use of self-regulated learning strategies (p < .001), less academic delinquency (p < .001), poorer interpersonal skills (p < .001), and less socialization with peers (p < .001), while females reported less academic delinquency (p = .01), less socialization (p < .001), and lower ratings of interpersonal ability (p < .001), but no difference in use of self-regulated learning strategies (p=.18).

Discussion: Those individuals with ASD who matriculate to postsecondary education are not only academically prepared, but more academically engaged than their matched peers. However, reflecting our knowledge of the ASD phenotype, report spending less time with friends, and endorse lower ratings of interpersonal abilities compared to their matched peers. While males with autism are primarily interested in STEM majors, females with autism were divided between biological sciences and fine arts. The current study provides important insight into the academic preparedness and aspirations of individuals with ASD.

References/Citations: