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Academic Preferences and Performance of Post-Secondary Autism Spectrum Disorder Students: A Comparative Analysis

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Abstract

A substantial body of literature has explored the barriers Autistic students face in completing post-secondary education, often citing challenges in social integration, academic engagement, and retention. However, much of this research relies on self-reported data. To address this gap, the present study used institutional transcript data to compare the academic profiles of Autistic students registered with the College's accessibility office to their peers in the same Associate of Science (AS) degree programs. From an initial pool of 2,488 students enrolled from Fall 2020 to Spring 2024, a final dataset of 731 students was analyzed, including 26 SAO-registered Autistic students. Key outcomes included student major, GPA, and credit completion ratio. Findings revealed that Autistic students disproportionately pursued majors such as Computer Programming (27%), Movie Production (27%), and Graphic Design (19%). GPA analysis showed that these students performed on par with their peers overall and outperformed them specifically in the Computer Programming/Networking track. Credit completion ratios were similar between groups, with Autistic students exceeding peers in Movie Production. The study demonstrates that, when provided with federally mandated accommodations, Autistic students achieve academic success equivalent to or greater than their peers. Their consistent interest and strong performance in specific technical and creative fields suggest valuable opportunities for targeted program development, advising, and ongoing efforts to promote equitable access that supports the strengths and goals of students with disabilities.

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Introduction

Autism Spectrum Disorder (ASD) is a neurodevelopmental diagnosis characterized by a range of symptoms, including challenges in social communication, repetitive behaviors, and a preference for routine (Chen et al., 2022; Ehsan et al., 2018; Shattuck et al., 2014). These characteristics can significantly influence the academic experiences and outcomes of Autistic individuals, especially in post-secondary education environments (Newman & Madaus, 2015; Pilotte & Bairaktarova, 2016; Watkins et al., 2019). This paper employs identity-first language (e.g., 'Autistic students') to describe individuals with ASD as this terminology is widely supported and recommended by the autistic self-advocate community (Botha et al., 2021). However, we acknowledge that not all individuals represented within this sample may personally identify with identity-first language, and their preferences may vary (Dwyer, 2022). In recent years, there has been a noticeable increase in the enrollment of Autistic students in higher education institutions (Bakker et al., 2019), a trend driven by greater awareness, early diagnosis, and improved support services at the K-12 level (Carter & Schutz, 2022; Cox et al., 2017; Viezel et al., 2022).

Transitioning to post-secondary education often presents unique challenges for Autistic students (Pilotte & Bairaktarova, 2016; Tsai et al., 2020; Viezel et al., 2022). These challenges include navigating more complex social environments (Unger et al., 2022), managing increased academic demands (Hughes-Lynch, 2022; Pratt et al., 2017), and adapting to less structured support systems (Wattanawongwan et al., 2022). Understanding these challenges is essential for developing effective educational strategies and interventions to support the success and well-being of autistic students in higher education settings (Whelan et al., 2023; Wong et al., 2015). This paper examines the academic preferences and performance of Autistic students compared to their peers, focusing on major selection and educational outcomes.

Literature Review

The existing literature highlights several barriers that Autistic students face in two-year post-secondary institutions, emphasizing the multifaceted nature of their challenges. Statistics on enrollment and completion rates provide a clearer picture of these barriers. Recent studies indicated that while the enrollment of Autistic students in higher education is on the rise, their retention and completion rates may remain significantly lower compared to their neurotypical peers. For example, oft-cited research by Newman et al. (Newman et al., 2011) found that only about 39% of Autistic students complete their post-secondary education compared to 59% of students without an ASD diagnosis. These statistics underscore the need for a deeper understanding of the specific challenges faced by this group.

Several studies utilizing survey data have shed light on the range of difficulties encountered by Autistic students in two-year colleges (Barnhill, 2016; McLeod et al., 2019). Social challenges are often reported by students during post-secondary education. Forming friendships (Anderson et al., 2019), understanding social cues (Hughes-Lynch, 2022), and participating in group activities (Wood-Downie et al., 2021) remain integral aspects of the college experience. Cognitive challenges are also prevalent, particularly those related to executive functioning

skills like organization, time management, and flexible thinking (Craig et al., 2016; Rosenthal et al., 2013). These cognitive difficulties can impede academic performance and increase stress levels, further impacting students' ability to succeed (Tsai et al., 2020). For example, Schaffer et al. (Schaffer et al., 2021) reported that the top three obstacles to academic success for Autistic students were feelings of anxiety/nervousness, procrastination on assignments, and underdeveloped organizational skills. Similarly, other studies observed anxiety, social skills deficiency, and coursework management as potential barriers to Autistic students' academic success (Barnhill, 2016; Pilotte & Bairaktarova, 2016).

Institutional barriers are another critical area highlighted by the literature (Cox et al., 2017; Jones, 2023). Autistic students have reported that the support services available at two-year institutions are not adequately tailored to their needs (Barnett et al., 2018; White et al., 2011). These reported deficiencies include a lack of individualized academic advising, insufficient mental health support, and limited access to assistive technologies that might help them manage their coursework more effectively (Munandar et al., 2020). Additionally, some faculty and staff may lack training in ASD awareness and inclusive teaching practices, leading to misunderstandings and inadequate accommodations (Unger et al., 2022).

Previous studies' reliance on survey data, while valuable for capturing self-reported experiences, may not fully characterize the dynamic complexity of challenges for Autistic students. Surveys typically focus on perceived barriers and support needs, which can provide a limited view of the broader educational environment (Rubenstein & Furnier, 2021). Further, this approach may overlook or misinterpret the structural and systemic issues that contribute to the academic outcomes of Autistic students. As a result, there is a need for other comprehensive research methodologies (i.e., a priori longitudinal studies, matched pairs, or aggregated and filtered institutional data) that apply rigorous experimental design methodology and utilize quantitative data to further explore these challenges. Such research may provide additional understanding of the barriers and challenges faced by Autistic students. Additional understanding in this area may help to inform the development of targeted strategies and interventions to enhance their academic success and overall student well-being at this post-secondary education institution.

Purpose of the Study

Limitations in the existing literature have prompted the current study to employ an alternate methodology that quantitatively measures the academic preferences and performances of Autistic students who are registered with the schools federally mandated (via The Office of Civil Rights) Student Accessibility Office (SAO), while maintaining the privacy and confidentiality of their medical documentation on file. Moving beyond self-report data, this study aims to provide an objective analysis of the unique academic profiles of these students, thereby addressing a critical gap in the quantification of data at the post-secondary level and offering additional insight into the preferences and performance efficiency of Autistic students registered for accommodations with their schools' SAO office.

The purpose of this study was to utilize an alternative methodology that de-identifies and aggregates institutional

academic data and cross-references, through the SAO, the institution's confidential disability and medical documentation. Unlike traditional survey-based approaches, this method allowed for a quantitative analysis of the academic profiles of Autistic students by objectively examining data such as GPA, credit completion rates, and major selection. By analyzing this comprehensive and de-identified dataset, the study provided a quantitative understanding of the academic preferences, performance, and the credit completion efficiency of Autistic students receiving accommodations at this post-secondary institution. Further, this methodology relies on objective academic metrics rather than self-reported perceptions, potentially enabling institutions to better allocate resources and support services tailored to the actual needs of their faculty, staff, and students.

The overarching research question guiding this investigation was "How do the academic performance profiles of Autistic students registered with the SAO for in-class accommodations within this institution's two-year Associate of Science degree pathway compare to their peers enrolled in the same degree programs over the same period?". The study addressed three specific research questions:

1) How do the academic preferences of SAO-registered Autistic students differ from their peers, as indicated by the percentage of students enrolled in each major?
2) What is the impact of ASD diagnosis and SAO registration on students' GPAs in each major?
3) How do the credit completion ratios of SAO-registered Autistic students compare to their peers in the same major?

The researchers hypothesized that Autistic students may exhibit different academic preferences compared to their peers. Furthermore, the researchers anticipated, based on prior research that shows Autistic students often face challenges in executive functioning, time management, and social communication (Craig et al., 2016; Hughes-Lynch, 2022; Rosenthal et al., 2013), that Autistic students may have lower GPAs compared to their peers. Similarly, the researchers posited that, based on prior research showing that Autistic students may experience difficulties with course load management and completing academic requirements on time (Newman et al., 2011). It was therefore hypothesized that Autistic students may have lower credit completion ratios compared to their peers within the same major.

Significance of the Study

The implications of this study are potentially far-reaching for faculty, administrators, and the college system, offering actionable insights that could transform how an institution may evaluate its Autistic students and their academic performance. First, the findings of this study could provide faculty members with a data-driven and aggregated understanding of the academic strengths and challenges faced by students in their respective departments. With access to specific information on how these students perform in different subjects, faculty can amend their curricula and teaching methods to better accommodate diverse learning styles and methods. Secondly, administrative leadership (i.e., Deans, Associate Deans, and Department Chairs) can use the study's findings to make informed decisions about resource allocation and support services for the community, campus, or even at the departmental and course levels. By understanding which departments attract a higher concentration of Autistic students and the specific academic outcomes in those areas, perhaps administrators might redirect funding and

training resources where they are most needed. Furthermore, college leadership and administrators might use this information to justify the creation or expansion of dedicated programs and support staff trained in Autism awareness and inclusive education practices, thereby fostering a more supportive academic environment.

At a systems level, the insights from this study could help steer policy changes and advocacy efforts to improve overall educational outcomes for Autistic students across multiple institutions. Additionally, the aggregated data on GPA and credit completion rates could provide benchmarks for this institution and potentially other institutions to measure their effectiveness in supporting Autistic students, fostering a culture of accountability and continuous improvement.

Methods

Data collection methodology was developed by the investigators in collaboration with the College's Department of Research and Effectiveness (DRE), which oversees the Institutional Review Board (IRB), and the Institution's federally mandated Student Accessibility Office (SAO). The study applied a comparative research design that integrated institutional academic data with confidential disability documentation, respectively, of students with verified documentation of an Autism diagnosis. The critical feature of this data collection was that identifying information of students with disabilities is never released outside of the SAO, who are the legal custodians of that data. The study compared the academic profiles of Autistic students registered with the SAO with those of their peers enrolled in degree programs over the same period (2020-2024). All students in the current study were enrolled in an Associate of Science (AS) degree pathway. The study design intended to provide an objective and comprehensive analysis of academic preferences, performance, and credit completion rates, overcoming the limitations of traditional survey-based research, which often relies on self-reported data.

Site Description

The study was conducted at a state college in the southeastern U.S. The institution is recognized for its diverse student population, including a wide range of age groups, racial and ethnic backgrounds, and socioeconomic statuses. The College offers certificate programs, associate degrees, and baccalaureate degrees. The Associate in Arts programs are designed for students intending to transfer to baccalaureate programs and encompass general education requirements. The College does not track majors in the AA programs. On the other hand, the Associate in Science programs are career-focused pathways aimed at preparing students for direct entry into the workforce, organized by degree pathways. The AS programs are structured around specific technical or professional fields, making them well-suited for comparative studies of academic outcomes across nine defined degree pathways encompassing 48 specific AS degree majors.

The College offers comprehensive disability support services through its federally mandated SAO, which oversees accommodations for students who self-identify with disability and provide official documentation to validate that disability. These disabilities range from physical disabilities, sensory impairments, learning disabilities, and neurodevelopmental disorders. Per federal law, students' choice to disclose a disability must be voluntary and

they need to provide documentation to access accommodations. This process is supported by faculty through syllabus statements and referrals to the SAO. Autistic students present unique challenges that the College addresses through individualized accommodations such as extended exam time, quiet testing environments, and note-taking assistance. These efforts reflect broader national trends in supporting Autistic students in post-secondary education. Nonetheless, this study aims to evaluate differences in student outcome measures based on diagnosis and does not focus on specific accommodations.

Data Collection

To evaluate the academic performance of Autistic students relative to their peers in the same degree programs, the investigators requested student academic data through the College's IRB. The IRB data request was limited to data for all AS students at the College from Fall 2020 to Spring 2024. The specific data requested included student identifying information (student number and name), student demographics (gender, race, and age), student academic preference (primary program of study), and a profile of student academic performance (a complete course list of attempted courses by academic period with earned course grades, student cumulative GPA, total credits attempted, and total credits completed).

In this study, the exposure variable was the diagnosis of ASD and the accessibility of related accommodations as determined by student self-identification and provision of documentation to support the diagnosis. However, some students in the peer group may have accessed institutional resources for other disabilities (i.e., ADD, ADHD, Dyslexia, etc.); unfortunately, these data were unavailable to the researchers for this study. Further, if there were any Autistic students concurrently enrolled in an AS degree program who chose not to disclose their diagnosis, they would have been included in the peer group. The outcome variables included three key academic metrics: GPA, credit completion rates, and declared majors. The GPA provided a quantitative measure of academic performance during the student's tenure at the College. Credit completion ratio (CR), reflecting the proportion of credits attempted versus credits completed, served as another quantitative measure of academic productivity. Declared majors, analyzed as categorical data, indicated students' chosen fields of study, offering insights into their academic interests and potential career paths.

Data Reduction

The initial dataset from the DRE contained 16,097 de-identified grade records, comprising 2,693 unique student identification numbers. The DRE dataset was submitted to the SAO, who took responsibility for verifying active students on the dataset with the students on file with SAO as having accepted documentation for a diagnosis of ASD. All actively registered and enrolled students were included in the process. The SAO added a binary indicator variable to the dataset to flag any Autistic students with documentation on file and de-identified all personal data before providing the final dataset to the investigators for analysis.

Prior to analyzing the data, the researchers examined the records to address missing data, identify outliers, and refine the scope to ensure comparability between SAO-registered Autistic students and their peers. First, the

researchers excluded all student records with incomplete information (6.7%, n = 178). Second, the researchers limited the dataset to include only AS degree programs represented by both SAO-registered Autistic students and their peers in the same programs. Given the small number of SAO-registered Autistic students in the individual majors (except for Graphic Design with 5 Autistic students), degree programs were merged based on programs with significant overlap of core or required courses:

- Computer Programming (n = 5) and Networking Administration (n = 2) were merged into a shared category – the researchers labeled this category as Computer Programming/Networking (n =7).
- Similarly, Motion Picture Production Technology - Digital Animation (n = 4) and Motion Picture Production Technology - Production (n =3) were merged into Movie Production (n = 7).
- Supply Chain Management (n = 1) and Business Administration and Management - Management, Supervision Concentration (n = 1) were merged into Business/Management (n = 2).
- The remaining degree programs had no curriculum overlap and could not be similarly re-categorized. The decision was made (for the sake of inclusion) to combine these programs into a shared category named Other (n = 5). This category included Human Services - General (n = 2), Human Services - Youth Development (n = 1), Environmental Science (n = 1), and Radiography (n = 1).

The data reduction steps resulted in a dataset of 731 student records, consisting of 26 Autistic students and 705 peer students across five categories: Business/Management, Movie Production, Computer Programming/ Networking, Graphic Design, and Other (consisting of majors in Human Services, Environmental Science, and Radiography).

Data Analysis Techniques

The final dataset included variables for ASD diagnosis (binary: non-ASD, ASD), gender (categorical: male, female, not declared), race (categorical), age (continuous), major (categorical with 46 categories), academic period (categorical), GPA (continuous, 0-4.0), credits attempted (continuous), and credits completed (continuous). A separate variable was computed to ascertain a ratio of course credits attempted to course credits achieved, computed as credits completed divided by credits attempted.

The primary statistical analysis involved conducting an independent samples t test to compare the mean post-test scores between the two groups. Before performing the t-test, routine assumption testing was carried out. Normality was assessed using the Shapiro-Wilk test, and homogeneity of variance was evaluated through Levene's test. To account for unequal variances, an independent samples Satterthwaite t test was conducted to compare the overall GPA and completion ratio of Autistic students and their peers. This test aimed to determine if there was a statistically significant difference between the means of the two groups. Additionally, post hoc t tests were used to compare specific majors of Autistic students with their corresponding GPAs and completion ratios. The effect size was calculated using an adjusted Cohen's d, corrected first for unequal variances (Glass's delta) and then for the small sample size (Hedge's g), to assess the practical significance of the difference between groups. A p-value of less than 0.05 was considered statistically significant, and the results, including the t-value, degrees of freedom, and p-value, were reported. All data cleaning and analyses were performed using R 4.2.3 (R Core Team, 2014).

Results

The purpose of this study was to examine the academic performance profiles of SAO-registered Autistic students compared to their peers enrolled in the same degree. Specifically, the research aimed to identify whether these two groups of students had any significant differences in GPA or credit completion ratios (CR). The findings are presented below, organized by three specific research questions:

Participant Description

Table 1 compares the sociodemographic characteristics of the two chosen groups (SAO-registered Autistic students vs. their peers) in a bivariate analysis. Autistic students (M = 24.04, SD = 4.5) were younger than their peers (M = 26.94, SD = 9.63) – t(30.43) = 2.98, p = .0052. The differences in the means (mean difference = 2.9, 95% CI: 9.1 to 10.02) were moderate (adjusted Cohen's d = 0.31).

Table 1. Comparative Demographic Characteristics of the Study Sample

Characteristic	**ASD**		**Non-ASD**		
	Count	*%*	*Count*	*%*	*p*
Student Age	26	*M* = 24.04 *SD* = 4.5	705	*M* = 26.94 *SD* = 9.63	0.0052
Student Gender: Female		16.7		39.0	0.0214
Student Race					---*
Asian		-		3.7	
Black		15.1		31.8	
Native American/Samoan		-		2.1	
White		69.8		47.5	
Other		15.1		14.9	
Hispanic Ethnicity		15.4		40.6	---*

* Small sample sizes in the data calls the p-value into question

A Chi-square test for independence indicated a significant association, yet a small effect size, between genders and ASD diagnosis—$\chi 2 = 7.67$, p = 0.0214, phi = .0932, with 2 missing observations. Within the Autism group, there are approximately 6 times the number of males, 20 (83.3%), to females, 4 (16.7%), while only 426 (56.9%) are males in the peer group. Additionally, no Autistic students chose the option to report their gender as "Not Declared", while approximately nine (1.4%) of their peers elected this option.

Racial demographics in the sample of students approximately mirror the population in Florida; however, the Autistic students identified as mostly White 17 (71%), the remainder identify as Black/African American 4

(15.4%) or Other 4 (15.4%), while the peer students continue to mirror the State. Ethnically, 297 (42%) of students reported identifying as being of Hispanic or Latino descent, and 9 (1.3%) of those were students who indicated an ASD diagnosis.

Characterizing the Academic Preference of Students' Declared Majors

The first research question sought to explore any patterns in students' major selection based on ASD diagnosis. Analysis of academic preferences among Autistic students revealed distinct patterns in their choice of majors compared to their peers. The data reported in Table 2 show that Autistic students appear more likely to select majors that emphasize technical skills, visual creativity, and structured learning.

Table 2. Academic Preferences Comparison Between Groups

Major	**ASD**		**Non-ASD**	
	Count	*%*	*Count*	*%*
Business/Management	2	8	105	15
Computer Programming/Networking	7	27	299	42
Graphic Design Technology	5	19	68	10
Movie Production	7	27	58	8
Other	5	19	175	25

These results appear to support the hypothesis of notable differences in academic preference (of major) between the two groups. Of the Autistic students, a significant proportion majored in Computer Programming/Networking (27%), Movie Production (27%), and Graphic Design (19%). Relative to the sample of all students, Autistic students were most represented in Movie Production and Graphic Design.

Differences in Grade Point Average

The second research question investigated whether there were statistically significant differences in the GPAs of SAO-registered Autistic students compared to their peers across different academic majors. Table 3 summarizes the descriptive and inferential statistics for the second research question. Initial analysis using an independent samples t test across the entire sample revealed no significant difference in overall GPAs between Autistic students ($M = 3.02$, $SD = 0.86$) and their in-program peers ($M = 2.96$, $SD = 0.83$), $t(26.5) = -0.41$, $p = .695$. The differences in the means (mean difference = .16, 95% CI: -1.1 to 0.65) were small (adjusted Cohen's $d = 0.081$), indicating that, generally, Autistic students performed on par with their peers in terms of GPA.

Table 3. Academic Performance Comparison - GPA

Major	ASD		Non-ASD		*t (df*)*	*p*	Cohen's *d***
	M	*SD*	*M*	*SD*			
All Majors	3.02	0.86	2.96	0.83	-0.41 (26.5)	0.695	0.08
Business/Management	3.18	0.21	2.93	0.79	-1.51 (1.6)	0.296	0.33
Computer Programming/Networking	3.49	0.33	2.89	0.81	-4.34 (7.7)	0.003	0.72
Graphic Design Tech.	2.80	0.73	3.05	0.62	-1.13 (4.4)	0.487	0.41
Movie Production	3.52	0.13	3.08	0.73	-4.01 (43.4)	0.000	0.61
Other	2.53	1.66	3.03	0.64	1.58 (4.2)	0.186	0.78

* The degrees of freedom (*df*) were adjusted using the Satterthwaite method because of unequal variances

** Cohen's *d* was adjusted for unequal variance (Glass' *delta*) and small sample size

Post hoc analysis focused on GPAs stratified by major and identified specific areas where GPAs differed between the SAO-registered Autistic students and peer groups. The Autistic students also exhibited higher GPAs in the Computer Programming/Networking pathway (M = 3.49, SD = 0.33) compared to their peers (M = 2.89, SD = .81)—t = -4.34, p = 0.0027. The differences in the means (mean difference = .133, 95% CI: -0.91 to 0.29) were high (adjusted Cohen's d = 0.72). Lastly, SAO-registered Autistic students had higher GPAs in the Movie Production pathway (M = 3.52, SD = .13) than their peers (M = 3.08, SD = 0.73), t = -4.01, p = 0.0002. The differences in the means (mean difference = .108, 95% CI: -.66 to 0.23) were high (adjusted Cohen's d = 0.61).

Differences in Credit Completion Ratios

The third research question examined whether SAO-registered Autistic students differ from their peers in CRs within the same academic pathways. Details of the statistics for this research question are included in Table 4. The overall analysis using an independent samples Sattterthwaite t test showed no significant difference in the credit completion ratios between Autistic students (M = 0.85, SD = 0.24) and their peers (M = 0.81, SD = 0.23), t(26.2) = -0.73, p = 0.47. The difference in means was minimal (mean difference = -0.03, 95% CI: -0.11 to 0.05, d = 0.17), indicating no statistically significant differences in credit completion rates between the two groups. Stratified post hoc analyses by pathway revealed an exception. In the Movie Production pathway, Autistic students had a significantly higher CR (M = 0.96, SD = 0.06) than their peers (M = 0.86, SD = 0.18), t(15.1) = -3.14, p = .007, although the differences in the means (mean difference = 0.03, 95% CI: -0.11 to 0.05) was small (adjusted Cohen's d = 0.17).

Table 4. Academic Performance – Credit Completion Ratio

Major	ASD		Non-ASD		*t* (*df**)	*p*	Cohen's *d***
	M	*SD*	*M*	*SD*			
All Majors	0.85	0.24	0.81	0.23	-0.73 (26.2)	0.470	0.17
Business/Management	0.96	0.06	0.8	0.22	-3.42 (1.5)	0.158	0.73
Computer Programming/Networking	0.86	0.12	0.79	0.21	-1.49 (6.8)	0.182	0.34
Graphic Design Tech.	0.86	0.09	0.84	0.16	-0.54 (5.7)	0.613	0.16
Movie Production	0.96	0.06	0.86	0.18	-3.14 (15.1)	0.007	0.64
Other	0.79	0.34	0.83	0.18	0.2 (4.0)	0.850	0.16

* The degrees of freedom (*df*) were adjusted using the Satterthwaite method because of unequal variances

** Cohen's *d* was adjusted for unequal variance (Glass' *delta*) and small sample size

Discussion

This study quantitatively demonstrated differences in the academic preferences and performance metrics of Autistic students, while preserving the confidentiality of institutional medical and academic records. Characterization of the student enrollment distribution by major shows some deviation in major preference within the AS degree pathway. By examining pathway enrollment patterns within the AS degree programs, we observed that Autistic students registered with the SAO were more likely than their peers to major in Movie Production and Graphic Design, suggesting distinct areas of academic interest. Moreover, while Autistic students generally performed comparably in GPA and credit completion ratios, they outperformed their peers in Movie Production and Computer Programming/Networking, indicating potential advantages in highly structured, detail-oriented domains. Rather than expanding disability services outright for Autistic students, these findings emphasize continuing and bolstering existing supports, increasing individualized interactions through the SAO, and fostering a college-wide focus on mental health and disability awareness.

Implications and Utility of the Findings

For educators, disability service providers, and institutional leaders, this study provides valuable, data-driven insights on supporting Autistic students through continued high-level service and personalized accommodations. While specific interventions were beyond the scope of this research, these findings underscore the importance of cultivating an inclusive environment in which Autistic students can thrive academically, particularly within AS

degree pathways. It is important to note that these results pertain only to AS programs, as sufficient data about students in AA programs was not available for this study, limiting the generalizability of our conclusions.

For researchers and clinicians in the field of ASD support services, this study illustrates a framework for measuring and comparing SAO-registered Autistic student academic preferences and performance in post-secondary settings. Future investigations at other institutions, particularly those examining additional degree pathways, could further illuminate how best to support the full range of neurodiverse learners. By sharing and aggregating these data, the broader community can refine evidence-based approaches to improving academic success for Autistic students across diverse contexts. Crucially, this work can be conducted with de-identified, aggregated data, maintaining student privacy while offering valuable insights. Through collaboration among institutional departments, privacy and confidentiality standards can be upheld, paving the way for continued research that benefits Autistic students across diverse educational contexts.

Novel Contributions of the Study

This study is novel in its application of quantitative methods to describe and analyze the academic profiles of SAO-registered Autistic students. Unlike prior research, which has often relied on surveys or small clinical samples, this study utilizes a more comprehensive approach by examining a large dataset of academic records from within the respective institution. This quantitative approach provides a robust framework for understanding the academic performance of SAO-registered Autistic students in a real-world educational setting, offering generalizable and actionable insights. The study fills a critical gap in the existing literature, primarily focused on qualitative data and self-reported experiences.

Institutional data also allows for a more nuanced analysis of academic outcomes across different majors and programs, providing a clearer picture of where and how SAO-registered Autistic students are most likely to succeed at a given institution. This proposed methodological innovation not only enhances our understanding of the academic capabilities of SAO-registered Autistic students but also offers a model for future research that combines quantitative data analysis with other research methods to develop a more comprehensive understanding of this student population.

Over the past three years, this institution's SAO has significantly enhanced its support for Autistic students by implementing new technologies and refining operational processes. Per the Director of the institution's SAO, the most significant enhancement was the introduction of a new student management software system that reduced administrative tasks by 75%, allowing staff to dedicate more one-on-one time to address academic advising support, social interactions, time management, exam preparation, and career or transfer planning. In addition, the SAO has made a speech-to-text application available at no cost, ensuring that Autistic students can concentrate on classroom engagement rather than manual notetaking. Through these innovations, the SAO has strengthened its ability to provide targeted, responsive support that aligns with the unique needs of its registered Autistic students.

Limitations of the Current Study

While the study provides valuable insights, a few limitations must be acknowledged. First, statistical tools such as the Satterthwaite test and Hedge's g, which effectively manage issues related to unequal variances and sample sizes, come with limitations. The Satterthwaite test, for instance, can result in reduced degrees of freedom when sample sizes are highly unequal or when there is an extreme variance ratio, potentially decreasing the precision and power of the test. This can complicate the interpretation of results and introduce bias, especially if the underlying assumptions do not hold. While applicable for small sample sizes, Hedge's g can be sensitive to outliers and may not accurately represent the true effect size in cases of non-normal distributions. These limitations suggest a need for careful consideration and complementary analyses when employing these statistical tools.

Second, the study's scope was limited to a single 2-year post-secondary institution, without including data from other 2-year colleges or from any 4-year institutions. This study, as a pilot methodology, only examined students with the diagnosis and documentation of autism, and did not consider students with diagnoses like ASD, such as Specific Learning Disorders. Furthermore, due to record-keeping limitations, the exclusion of data from the institution's Associate of Arts degree pathway (AA) could introduce potential selection bias. This is a particularly relevant point since the institution's SAO identified (n = 101) SAO-registered Autistic students enrolled in the AA pathway over the study period (2020-2024). Unfortunately, for reasons beyond the control of the researchers, the institutions DRE has not recorded the chosen major or students within the AA pathway for some years. Per the DRE, the reason AA majors had not been recorded is largely due to significant curriculum changes (i.e., added/removed degree programs, and course name/number changes) within the AA pathway. Therefore, any attempt to examine the degree preferences of students within the AA pathway would not be possible for this research. Since a significant proportion of Autistic students were on the AA pathway with intentions to transfer to a 4-year institution, a follow-up study with the institutions partnering with 4-year universities would help to gain insight into the outcomes of the SAO-registered Autistic students. These gaps indicate the need for a more inclusive study to gain a comprehensive understanding of Autistic students' academic performance.

A final limitation concerns the relatively small sample size of Autistic students and the limited diversity within that group, which restricts any claims regarding academic profiles by race or gender. Women and people of color are often underrepresented in such studies, making it challenging to draw broad conclusions without acknowledging that there may be unexamined differences in experiences and outcomes across these demographic subgroups. Therefore, it remains unclear whether the findings would generalize to specific demographic groups or be influenced by the unique strengths and challenges of individual Autistic students, given that aspects of the diagnosis and personal circumstances were beyond the scope of this study.

Recommendations for Future Research

Future research should consider expanding the scope to include both 2-year and 4-year institutions to provide a more comprehensive analysis of the academic experiences of Autistic students across different educational settings. Further, comparing the academic outcomes of Autistic students who transfer between institutions could

also offer valuable insights into their adaptability and success in varied environments. Additionally, intervention studies, particularly those that involve mixed-cohort work groups, could explore the impact of collaborative learning environments on the academic and social development of Autistic students. Such studies could leverage recommendations from the student accessibility office, highlighting the need for accommodation and support systems tailored to the unique challenges faced by Autistic students, including difficulties with social interactions and academic tasks such as understanding complex instructions or participating in group work.

The accessibility office has implemented various measures to support Autistic students, such as providing extended time for exams, alternative assessment methods, and access to academic advisors knowledgeable about the needs of students with disabilities. We recognize that detailed information on these specific variables would strengthen the study's conclusions about student outcomes. Unfortunately, due to data privacy concerns, we were unable to access detailed information on the specific support measures implemented by the SAO. As a result, our analysis is based on an exposure variable that only captures Autistic students in the sample who self-disclosed, provided documentation, and had access to accommodations. The absence of detailed SAO data limits our ability to draw direct correlations between specific support measures and student outcomes.

Future research could evaluate the effectiveness of these accommodations and explore additional strategies to enhance the academic experience for Autistic students. Moreover, introducing technology platforms like Clockworks has streamlined accommodation processes, allowing for more efficient support, though data integration and staff training challenges persist. Investigating the impact of these technological advancements on student outcomes could provide valuable insights for institutions seeking to improve their support services by providing a more nuanced understanding of the relationship between accessibility services and academic performance.

Lastly, fostering social integration through student-led clubs and organizations that promote neurodiversity could play a crucial role in enhancing the overall well-being and academic success of Autistic students. Research could examine the effectiveness of such initiatives in creating inclusive environments that facilitate peer relationships and potentially help to reduce social isolation among Autistic students. By addressing these areas, future research can build on the findings of this study to develop a more nuanced understanding of how to support the academic and social success of Autistic students in post-secondary education.

Conclusion

This study investigated the academic performance profiles of Autistic students enrolled in a two-year Associate of Science (AS) degree pathway compared to their peers. Through the analysis of institutional data, the research explored three primary areas: academic preferences as indicated by major selection, the impact of an Autism diagnosis on GPA, and the comparison of credit completion ratios. The findings revealed distinct academic preferences among Autistic students, with a notable concentration in structured, technical fields such as Computer Programming, Networking, and Movie Production. This preference aligns with characteristics frequently associated with Autism, including strengths in detail-oriented and highly structured environments, supporting

results reported by Wei et al. (Wei et al., 2013). These insights enhance our understanding of the alignment between individual aptitudes and academic interests among Autistic students, though further research is needed to generalize these trends to broader populations or other degree pathways.

In terms of GPA, Autistic students performed comparably to their peers across most disciplines. Contrary to prior assumptions that Autistic students may face widespread academic difficulties, they outperformed their peers in technical majors such as Computer Programming and Networking. This suggests that Autistic students can excel academically in fields that align with their individual strengths, highlighting the importance of these individual factors and contextual influences in shaping academic outcomes. These findings challenge previous research, which often highlighted academic challenges faced by ASD students (Anderson et al., 2019; Hughes-Lynch, 2022; Wood-Downie et al., 2021). The data from the current study suggests that when placed in environments that align with their strengths and interests, as well as registering with the institution's SAO to receive access to in-class accommodations, ASD students can perform academically, reaffirming the importance of aligning educational approaches with individual student needs.

The third research question, which proposed that ASD students would have lower credit completion ratios than their non-ASD peers, was also not supported by the data. Contrary to expectations from previous studies indicating that ASD students might struggle to complete academic credits at the same pace as their peers due to challenges in managing course loads (Newman et al., 2011), the findings suggest that both groups completed credits at similar rates. While the results are promising, they underscore the importance of considering the specific contexts and institutional supports available, which may have contributed to these outcomes.

In comparison to prior literature that often emphasized deficits among Autistic students, this study highlights the importance of recognizing the diversity within the Autistic population and tailoring support systems to align with their specific strengths. These findings contribute to a growing body of evidence that late teen/young adult Autistic students, when properly supported, can thrive academically, especially in fields aligned with their strengths, and that such achievements can be effectively quantified while ensuring the protection of sensitive student data. The feasibility of quantifying academic profiles of Autistic students through institutional data demonstrates the potential for systematic, privacy-preserving approaches to understanding the needs of neurodiverse students. While this study provides a foundational understanding of academic preferences and performance patterns, its findings should be interpreted cautiously. The data are limited to a single institution and exclude certain student demographics and pathways, such as those in Associate of Arts programs. Future research should expand the scope to include a more diverse range of institutions and degree programs, enabling broader generalizability and deeper insights into how educational settings can support the varied academic needs of Autistic students.

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