

**The School Counselor's Role in Supporting Students with High-Functioning
Autism Spectrum Disorder with the Transition to College**

Jennifer S. Barna

Marywood University

Matthew L. Nice

Indiana University of Pennsylvania

Abstract

Students with high-functioning autism spectrum disorder (HASD) have specific challenges that can impede their successful transition from high school to college. The unique expertise of school counselors put them in an ideal position to assist these students with this process. The purpose of this manuscript is to describe the social, communication/self-advocacy, and executive functioning deficits that impact the transition process and identify effective intervention strategies for school counselors.

Keywords: school counselors, high functioning autism, college transition

The School Counselor's Role in Supporting Students with High-Functioning Autism Spectrum Disorder with the Transition to College

As a direct result of their diagnosis, students with high-functioning autism spectrum disorder (HASD) may face significant challenges when making the transition from high school to college, including navigating the academic expectations and social norms of higher education. Research points to three main areas of deficit: executive functioning (Dijkhuis et al., 2020), communication/self-advocacy skills (Burgess & Turkstra, 2010), and social skills (Sung et al., 2019). Nevertheless, a college education has significant benefits for all students, including those with disabilities, that encompasses degree completion, positive employment outcomes, life skills, and increased interactions with peers (Hart et al., 2010). Students with HASD who participate in higher education are able to adopt a valued social role (e.g., college student) which can have a positive impact on confidence, self-determination, and self-esteem (Hart et al.). Additionally, students with a college degree have increased earning potential (U.S. Bureau of Labor Statistics, 2019) and are more likely to be gainfully employed (U.S. Department of the Treasury, 2012). Students with HASD have reported an increased desire to pursue post-secondary education because of the considerable benefits afforded by a college degree (Webb et al., 2008).

School counselors are uniquely qualified to support all students who pursue post-secondary education after graduation, including those with an autism spectrum diagnosis. This role includes assistance with a successful transition from high school to campus life, a process that can be difficult as students adjust to a higher degree of independence in their new environment (Gilson & Carter, 2016). Despite the need for

dedicated services in these areas, school counselors may lack preparedness to coordinate transition activities for students with disabilities (Hall, 2015; Milsom, 2002). Existing literature devoted to the post-secondary experiences of students with HASD, Asperger's Syndrome (AS), and Autism Spectrum Disorder (ASD) (Camodeca et al., 2020; Kulage et al., 2014; Nuske et al., 2019) lacks a specific focus on the school counselor's role in supporting a successful transition program. Adreon and Durocher (2007) detail a comprehensive guide of ASD-specific information for educators, however, the unique school counselor role is not explicitly addressed.

In contrast, Dipeolu et al. (2014) and Krell and Pérusse (2012) provide comprehensive strategies and essential tasks for school counselors including accommodation considerations, college classroom expectations, and increased use of appropriate social skills. While both studies offer useful recommendations, developing an intentional plan to specifically target executive functioning, communication/self-advocacy, and social skills – arguably the most challenging for students with an HASD diagnosis – is a necessary component of inclusive school counseling programs. It is important to extend this line of inquiry so that school counselors are in the best position to provide transition services to students with HASD that are tailored to address diagnosis specific deficits (e.g., social, executive functioning, and communication/self-advocacy skills). Therefore, the purpose of this manuscript is to offer school counselors literature supported information and strategies to support students diagnosed with high functioning autism with the college transition. First, a review of pertinent information about high functioning autism is provided. Then diagnostic specific deficits experienced by students with HASD as they relate to the college transition are outlined. Finally,

practical applications for school counselors to implement with students with HASD to ensure a successful transition to college are detailed.

Review of the Literature

High-Functioning Autism Spectrum Disorder Defined

Previously, high-functioning autism spectrum disorder was diagnosed and referred to as Asperger's disorder. Upon publication of the fifth edition of the Diagnostic and Statistical Manual (DSM-5), a broader diagnostic category of autism spectrum disorder (ASD) was introduced which included autism disorder, Asperger disorder, childhood disintegrative disorder, and pervasive developmental disorder not otherwise specified (American Psychiatric Association, 2013a). This change allowed for more accurate diagnoses because rather than several discrete disorders, symptoms are assessed within a range of severity. Individuals who exhibit more advanced cognitive (i.e., average IQ or higher) and verbal skills (i.e., verbal before age 2) are considered to be on the higher functioning end of the spectrum. Although a person can meet the diagnostic criteria at any age, the onset of ASD begins at about 12 to 18 months (Johnson & Myers 2007). Individuals with high functioning autism/Asperger's are often diagnosed much later due to a lack of intellectual and language delays that are more common in other forms of autism (Elder, 2012). According to the Center for Disease Control and Prevention (CDC; 2014), about half of those diagnosed with ASD have an average to above average IQ.

Autism spectrum disorders including HASD consist of two categories of broad diagnostic criteria. The first comprises persistent deficits in social communication and interaction across multiple contexts, including school. The manifestation of symptoms

consists of deficits in social or emotional reciprocity and an inability to initiate or maintain conversation. A persistent lack of understanding non-verbal communication and body language is usually present. Finally, weaknesses in the ability to initiate and maintain meaningful relationships is common (American Psychiatric Association, 2013b). The second diagnostic criteria category describes restricted, repetitive patterns of behavior, interests, or activities. Examples include strict adherence to routines, intense fixation on an object or event, and abnormal reactions to sensory stimuli such as sound or light.

College Transition Challenges for Students with HASD

Readiness for college often predicts the likelihood a student will make a successful college transition (Conley, 2008). College readiness has traditionally included academic preparation and the potential for academic success (Milsom & Lauren, 2009) but has recently expanded to include many intersecting areas such as life skills, cognitive strategies, ability to complete college coursework, and knowledge of the college transition process (Conley, 2014). College readiness is important because the transition from high school to college presents more stringent academic demands, increased responsibility for self-learning, a higher need to self-advocate, and more complex social interactions. For example, in college, students are expected to operate with higher levels of independence, exhibit self-directed learning, self-manage their time, and acclimate to less structured routines (Mitchell & Beresford, 2014).

Readiness expectations make the college transition process even more challenging for students with HASD in part because of social, communicative/self-advocacy, and executive functioning skill deficits imposed by the diagnosis. While

students with HASD may have the intellectual potential to succeed academically, they also possess an increased risk of academic and personal failure during college (Pinder-Amaker, 2014). Notably, students on the autism spectrum are less likely to enroll in postsecondary education and graduate less frequently than students without disabilities (Alverson et al., 2019). For those that enroll, less than 40% of students with HASD complete a postsecondary degree despite many having average to above average intelligence (Newman et al., 2011).

Another transition challenge includes a marked shift in service level (Browning et al., 2009). As defined by IDEA (2004), students who meet the criteria for an ASD diagnosis may be supported academically throughout high school by an individualized education plan (IEP) that includes accommodations and/or individualized instruction. A provision of this law states that beginning as early as age 14, transition goals, including college planning, must be incorporated into the IEP and evaluated on a yearly basis. In contrast, the Americans with Disabilities Act (ADA; Pub. L. No. 101-336, 104 Stat. 328, 1990), legislation that outlines equitable and accessible education requirements, governs services while the student is enrolled in college. This means that rather than the secondary school taking the lead in initiating and maintaining services, college students must self-identify as having a disability and provide the required documentation in order to receive accommodations. Unfortunately, only a small number of students self-disclose their ASD status while in college (Fleischer, 2012) impacting their ability to receive services. Whereas 87% of high school students with an identified disability receive accommodations, this is true for only 19% of those enrolled in postsecondary schools (Anderson et al., 2018). Of those students with HASD who were

enrolled in college, 35.6% reported receiving some form of formal or informal help with their schoolwork from their institution (Newman et al., 2011). Without this assistance, students with HASD are at risk of dropping out (Drake, 2014).

Even for those that choose to disclose their disability status, additional challenges exist. Research with students with ASD and their caregivers during the transition to adulthood suggests they perceive post-secondary opportunities as limited and difficult to obtain, creating feelings of concern, anxiety, and being overwhelmed (Cheak-Zamora, et al., 2015). A study that explored the college experiences of individuals with ASD found that individuals with ASD were aware that accommodations were necessary but found them difficult to access and maintain (Wiokowski, 2015). For example, an accommodation might include taking exams at the campus testing center. However, the student is taxed with the extra responsibility of scheduling an alternative testing date rather than taking the exam during the scheduled class time (Wiokowski).

Furthermore, the higher-level communication skills and average to above average intelligence (Crespi, 2016) typically exhibited by students with HASD make the disorder less obvious to others (Barnhill, 2016). The hidden nature of this disorder (Adreon & Durocher, 2007) may cause the campus community to be less aware of the challenges facing these students. Therefore, faculty and staff may not recognize the need for individualized or transition services (Longtin, 2014) until it is too late. Literature describes challenges directly linked to HASD including executive functioning, communication/self-advocacy, and social skill deficits which if left unaddressed, may interfere with the student's success in college (Roberts, 2010). A summary of key

research that can be used to inform school counselors and members of the transition team is summarized below.

Executive Functioning

Although many students with HASD are academically capable, many are impacted by deficits in executive functioning. Executive functioning is a broad set of cognitive processes that are necessary for goal directed behavior and is defined by the following skills: planning, goal setting, organizational and time management skills, and impulse inhibition (Adreon & Durocher, 2007; Retherford & Schrieber, 2015). In an exploratory study by LeGary (2017), ten advanced undergraduate students with ASD were asked about what college experiences caused them the most stress. Participants rated balancing coursework with self-care activities as being the most stressful. Similarly, unexpected change can be another source of stress, as students with ASD have a strong need for a predictable routine (Chown & Beavan, 2012). Regarding course completion, students with HASD show a preference for structured assignments as well as experiential learning whereas extensive group work or fieldwork were more challenging (Wiokowski, 2015). They may identify more strongly with particular subjects because these courses may align with an area of intense interest (Roberts, 2010). For example, a student with strong enjoyment of video games may thrive in courses with a technology concentration. However, this narrower academic focus combined with limited impulse control may cause the student to neglect less desirable classes which can negatively impact academic performance.

Communication and Self-Advocacy

Self-advocacy has been defined in many ways, but generally refers to the ability to effectively communicate one's wants and needs (Paradiz et al., 2018). During the transition to college, students with HASD may have particular difficulty understanding and communicating their needs to the appropriate people, especially when they lack understanding of their disability (Alverson et al., 2015). In fact, some evidence suggests that these students prefer communication by email or text, which may limit or distort critical information about campus services or resources (Alverson et al.). Elias and White (2018) found that self-advocacy was a challenge for college students with an ASD diagnosis in part because of deficits in listening, cooperating, and communicating effectively. During communication exchanges, students with HASD may have trouble accurately reading non-verbal cues (Chown & Beavan, 2011) and have great difficulty processing sarcasm, slang, or figures of speech (Graetz & Spampinato, 2008). Although students with HASD may develop an extensive vocabulary, they may speak in monotone or use odd words or phrases (Graetz & Spampinto, 2008). In one small qualitative study (N=5), participants described feeling anxious when having to engage in longer conversations because they feared they would uncontrollably gravitate toward their special areas of interest thereby annoying or frustrating others (Alverson et al., 2015).

Social Skills

For students with HASD, making the transition into college presents an array of social challenges. Students must simultaneously adjust to leaving familiar surroundings, family, peers, and routines (Kidwell, 2005) while at the same time navigate new

nuances, expectations, and pressures common in postsecondary settings (Adreon & Durocher, 2007; Klin & Volkmar, 2003). For many students with HASD, college may present the first opportunity to interact extensively and unsupervised with other students, including classmates, romantic partners, and potential friends (Wiorkowski, 2015). Orientating to campus living also includes a marked increase in independence, including living in a dormitory. Additional examples of typical university social norms which presents hardship for students with HASD include: forming and maintaining personal relationships, back and forth conversations, attending to emotions in others, demonstrating age-appropriate behaviors, living with a roommate, and participating in group activities (Adreon & Durocher, 2007; Browning & Miron, 2007; Kern Koegel et al., 2016; Kidwell, 2005). Students with HASD may have marked difficulty navigating the hidden curriculum, that is, “the skills we are not taught directly, yet are expected to know” (Myles & Simpson, 2001, p. 279) embedded in college culture.

Social deficits within the classroom could manifest in several ways such as a student unknowingly dominating instructional time by asking or answering too many questions (Lontin, 2014; Retherford & Schreiber, 2015). Due to challenges perceiving other points of view, the inability to compromise, disruptive repetitive behaviors, and issues with personal space, students with HASD may encounter negative peer and/or instructor interactions in the classroom (Longtin, 2014). Increased class size and reduced structure may contribute to distraction and anxiety in students (Jansen et al., 2017).

Neuroscientific research and diagnostic criteria offer potential explanations for these social challenges. Individuals diagnosed with autism are more likely to be

interested in systemizing (i.e., a desire to understand non-social, mechanistic, and rule-based aspects of life) as compared to emphasizing (i.e., a desire to connect socially or emotionally) their experiences (Crespi, 2016). Emotional processing, which impacts one's ability to recognize and label their emotions is another area of concern for students with HASD (Dijkhuis et al., 2017). HASD diagnoses have been repeatedly characterized by restrictive, repetitive, and stereotyped behaviors or interests (APA, 2013a; Klin & Volkmar, 2003) which can create a tendency for students to remain hyper focused on a singular activity rather than investing in building a campus social network. Therefore, students with HASD can be less motivated to perform in a socially acceptable manner (Alverson et al., 2015; Chown & Beavan, 2012; Muller et al., 2008) which can lead to mental health concerns (Adreon & Durocher, 2007) such as anxiety and depression (Gelbar et al., 2014, Jackson, et al., 2018). Research exploring the first-hand experiences of college students with ASD found that 53% of students reported feeling lonely and 24% reported experiencing peer rejection and isolation (Gelbar et al., 2014).

Practical Application for School Counselors

The support of school counselors is unquestionably essential in preparing students for the transition from high school to college (Nice, et al., 2020), especially since more and more students with HASD are striving to attend postsecondary institutions (Graetz & Spampinato, 2008). Seminal documents guiding professional practice echo school counselor responsibility to engage in the college transition process for all students, including those with disabilities. According to the American School Counselor Association (ASCA) National Model for School Counselors (2019), school

counselors are to be “concerned with students’ academic, career, and social/emotional needs and encourage each student’s maximum development” and are to “provide and advocate for individual students’ pre-K-postsecondary college and career awareness, exploration, and postsecondary planning and decision-making”. Also, the ASCA position statement guiding work with students with disabilities describes the role of the school counselor as providing assistance to students with IEPs and 504 plans with developing academic, transition and postsecondary plans (American School Counselor Association, 2016b). Similarly, the ASCA School Counselor Professional Standards and Competencies suggest “every student should graduate from high school prepared for postsecondary opportunities” (ASCA, 2019, p. 6). Likewise, the ASCA Ethical Standards for School Counselors states that school counselors should “recognize the strengths of students with disabilities as well as their challenges and provide best practices and current research in supporting their academic, career and social/emotional needs” and “provide and advocate for individual students’ preK– postsecondary college and career awareness, exploration and postsecondary planning and decision making” (American School Counselor Association, 2016a). The National Association of College Admissions Counseling (NACAC) outlines the responsibilities of school counselors for addressing students with special needs at the secondary level as keeping up-to-date on programs and other resources designed specifically for these students with disabilities and to make certain that the students are aware of them (NACAC, 1990).

Despite a powerful rationale, reality suggests daunting obstacles to the implementation of robust transition services in school counseling programs. Lack of preparation to work with students with disabilities (Hall 2015; Milsom, 2002), student to

counselor ratios above the ASCA recommendation of 250 to 1 (<https://www.schoolcounselor.org/asca/media/asca/home/Ratios18-19.pdf>), and responsibility for non-counseling duties (Cervoni & DeLucia-Waack, 2011; Scarborough & Culbreth, 2008) make time and resources scarce. Therefore, it is critical to provide school counselors with practical strategies that can be easily implemented into an existing school counseling program. To accomplish this, school counselors must first build rapport and trust with the student and their caregiver(s) involved in the college transition (Roberts, 2010). Importantly, an understanding of autism, especially HASD, will help counselors to personalize supports that meet the unique needs of this group (Mitchell & Beresford, 2014). For example, students with HASD may understand offers of assistance literally, so keeping appointments and following through on tasks is especially important for maintaining a collaborative relationship. School counselors should also become familiar with the student's IEP, especially any postsecondary transition goals. Once the foundational work has been completed, school counselors can implement specialized strategies to target diagnostic deficits in executive functioning, social, and communication skills.

Executive Functioning Strategies

Because students are expected to possess high levels of self-sufficiency at college (Dijkhuis et al., 2017), school counselors can help students make a list of critical life skills that need to be mastered (www.centerontransition.org). For example, managing money and doing laundry are a necessary part of the college experience. These life skills could be modelled and practiced in a small group setting. Because students with HASD are typically visual learners, creating graphics such as lists or

timelines could be helpful, such as how to complete a load of laundry (Graetz & Spampinato, 2008). Parents/guardians could be provided with the same visual to reinforce skill development at home. Technology has been found to be essential in addressing deficits related to executive functioning and self-determination (Retherford & Schrieber, 2015). Therefore, school counselors can teach students how to use popular tools found on smartphones and/or command enabled home devices such as calendars, alarms, and reminders to enhance their independence. For instance, students taking medication on a regular basis can use a smartphone to set a daily reminder to support compliance. Likewise, students could be taught how to set an alarm to ensure they get to class on time or dictate a list of steps to complete a project.

Emotional support is an important factor in supporting the collegiate success of students with ASD (LeGary, 2017). To help students manage feelings in their new setting, school counselors can provide emotional regulation training through individual or small group counseling. Students can be taught how to identify various emotions and practice self-care activities that are available on campus. They can identify their particular emotional triggers and develop a corresponding self-care strategy. School counselors can facilitate a meeting between the student and a university counseling center staff member who can explain the process of counseling, including how to make an appointment. Students can also participate in actual or virtual tours of the campus wellness spaces such as the recreational center, chapel, green spaces, walking trails, meditation rooms, pool, and/or relevant clubs such as POW (Peers on Wellness).

Parents/guardians can be instrumental in providing encouragement to their students during times of stress (Alverson et al., 2015; Mitchell & Beresford, 2014).

Additionally, parents are reported to be heavily involved in gathering information about college, helping students to process information related to college, and anticipating the move to college (Mitchell & Beresford). School counselors can reinforce this valuable resource by educating parents on how to balance their child's independence while remaining available for consultation. School counselors can also implement or connect parents to support groups so that they can learn about the college transition experiences of other families.

Communication/Self-Advocacy Strategies

School counselors can adopt a more meaningful role in transition facilitation by increasing students' understanding of what they need to be successful in college. A beneficial starting point is role-appropriate participation in transition meetings, especially those that deal with planning for college (Roberts, 2010). School counselors can then teach students how to better understand the impact of their diagnosis and any co-occurring disorders and their transition to college (Alverson et al., 2015; Jackson, et al., 2018). Students can also be educated about their IEPs and what university accommodations they may be eligible for to ensure their academic success (Roberts, 2010). According to one study, participants (N = 56) reported using an average of two support services offered by the university but 30% desired additional or improved options (Jackson, et al., 2018). School counselors, working with students individually or in groups, can reinforce the advocacy skills needed to locate and request services that fit their needs. Using role play, school counselors can also help students practice successful responses to common situations that occur on a university campus. For

example, if a student is struggling with an assignment, a role play could assist them with asking a professor for help.

Social Skill Strategies

School counselors can foster social connectedness in students using a variety of social skills training strategies. Although research suggests friendship quality plays a mediating role between emotional control and loneliness (Leif & Bohnert, 2017) for adolescents with HASD, 75% reported feeling left out during their college experience (Jackson, et al., 2018). School counselors can reinforce positive friendship skills such as conversational turn taking, flexibility, and attentiveness with students in individual counseling or small groups. Video modelling can also be introduced as a tool for recording the student's responses to typical social interactions (Auger, 2013). For example, the school counselor could record a conversation between themselves and the student discussing their previous weekend activities. The recording could be viewed and critiqued by the student to identify areas of strength and improvement. With success, Kern Koegal et al. (2016) has applied video modelling with a conversational framework to teach individuals with ASD to recognize and respond empathetically when talking to others. Participants were taught how to identify points in a conversation where empathy would be appropriate and then either express understanding or ask a question of their partner. Results showed participants' empathy level and conversational confidence improved following the 5–9-week intervention.

In another study, parents of young adults with ASD diagnoses (N = 52) cited a need for increased opportunities for social interactions to support students entering college (Elias & White, 2018). To address these concerns, school counselors can

schedule lunch meetings with college bound students, including those with HASD to facilitate relationship building skills. High school alumni with an ASD diagnosis who attend college can be invited to speak to students about how they navigated social situations. Finally, school counselors can educate students on how to locate social events on college campuses (Roberts et al., 2010). Using university websites, students can research student council sponsored, sporting, and cultural events which then can be recorded on their calendars. School counselors can discuss how to use university and community transportation to increase students' options for attending events (Retherford & Schreiber, 2015).

Discussion

It is clear school counselors must play an active role in the college transition process of students with HASD. As valued members of the transition team (e.g., parents/guardians, teachers, and universities), school counselors are in an ideal position to educate, support, and advocate for this student population. Their unique professional expertise includes not only training in college and career development, but also experience working with families. Their collaborative work with the transition team is necessary to provide students with HASD with the best opportunity of enrolling and persisting in college, which will increase students' opportunities for gainful employment. Below are recommendations that will compliment any of the efforts school counselors have in place to counteract students with HASD's deficits in social, communication/self-advocacy, and executive functioning skills.

It is imperative that school counselors approach any intervention using a strength-based approach. It is an important reminder that besides having immense

academic promise, students with HASD are out of the box thinkers, pay great attention to detail, have intense interests, and can be extremely goal orientated (Barnhill, 2016). These are not only qualities that are important for college, but also valuable in the workplace. When focusing on essential transition skills, involving families is just as crucial. An overwhelming amount of research in college transition strategies (Hendricks & Wehman, 2009; Webb et al., 2004) and support programs (Rando et al., 2016; Shmulsky et al., 2015) describe parents/guardians and caretakers as critical throughout the process.

Equally significant is the task of educating students and families about university resources such as tutoring that can assist with the adjustment to college. Information on university-based support can be conveyed to students through regular advisement and individual counseling sessions (Curry & Milsom, 2017) Notably, although all universities offer some form of support to students with HAS (Gelbar et al., 2014), not all provide the programming or resources necessary for a successful transition for students with an HASD diagnosis. These meetings can also assist students with coping with the stress of universities lacking options to support their unique ASD related needs (Camarena & Sarigiani, 2009).

The university's office of disability services is an opportune first point of contact for school counselors to both collaborate with and educate students about. All universities offer a center that provides support to students with disabilities which can be useful for school counselors when preparing students with HASD for the college transition. One of its most common functions is to facilitate the process of securing university accommodations for students with documented disabilities. The most

common accommodations provided to students with HASD are the use of advisors, extra time on exams, tutoring/note taking, and classes on social and life skills (Barnhill, 2014). Additionally, the disability office may have an expert on HASD who can meet with students and parents to explain specific services available to the student while enrolled (Dipleolu et al., 2014). School counselors can also coordinate with this office to schedule a personalized campus visit to help students gain familiarity with the college environment and layout. During this tour, students can be shown a dorm room, how to navigate the cafeteria, and where to go to purchase books.

In addition to the disability services office, many colleges offer transition programs for students with autism diagnoses. Unfortunately, finding a transitional program that specifically addresses the unique needs of students with HASD can be challenging. Accardo et al. (2019) found that 70% of incoming college students with ASD prefer a summer college transition program, yet many programs do not begin making accommodations until the beginning of students' first academic semester. Additionally, some college transition interventions are inconsistent in giving support during students' first academic year (Pinder-Amaker, 2014). Finally, some programs are viewed as dissatisfying to students because of previous participation in unhelpful interventions in their elementary and secondary education (Barnhill, 2014).

Despite these concerns, effective college transition programs can be highly beneficial with supporting the enrollment and retention of students with HASD (Trammel, 2013). Therefore, it is important for school counselors to know how to identify viable options so that this information can be shared with families. One example includes the Raiders on the Autism Spectrum Excelling (RASE,

<https://www.wright.edu/sites/www.wright.edu/files/page/attachments/RASE-Brochure.pdf>; Rando et al., 2016). Housed at Wright State University, RASE offers intense support for the first year of college for students on the autism spectrum, followed by less frequent intervention in ensuing years to encourage increased independence and growth. The program provides students with transition coaches consisting of peers of similar age and college status who work with students on academic and social skills needed to navigate the college experience. Topics for meetings with coaches include resiliency, time management and organization, social skill development, technology use, and self-advocacy. Prospective students are interviewed during the summer before college to assess levels of needs which are continuously assessed throughout the student's transition. In one study, students enrolled in the RASE program obtained an average GPA of 2.71 at the end of two semesters, a first-year retention rate of 72.7% (higher than the overall university average first year retention rate of 61.5%), and a significant decrease in behavioral incidences (Rando et al., 2016).

Another transitional program example with similar successful outcomes is the support services at Landmark University (<https://www.landmark.edu/student-life/social-pragmatic-support-services>). The Landmark University autism support program includes six transitional practices: (1) contacting students and parents before the beginning of the academic year, (2) bringing small groups of students to campus early to acclimate them to the campus, (3) building alliances with parents, (4) assigning trained advisors to assist students, (5) predicting and meeting students' residential needs, and (6) providing ongoing support during the first year. The cumulative GPA for students in their first year

of the program was 2.74, which was higher than the overall GPA (2.58) of all first-year students at the institution. The program also had positive effects on college retention as evidenced by 90% of students in the program completing their first year which was higher than the university average first year retention rate (84%) of all students (Shmulsky et al., 2015).

Future research should begin with an exploration of current practices in school counseling programs which specifically pertain to the college transition of students with HASD. It is important to have a full understanding of the extent to which interventions are being utilized, whether or not they are effective, and if particular components are absent. Having this information will help guide future studies and professional development for school counselors. Additionally, research is needed to discover the most effective ways for school counselors to integrate students with HASD when providing college transition programming to the entire student body. Many of the supports and interventions for college adjustment often segregate students with HASD from regular education students (Barnhill, 2016). Considering that students with HASD are often integrated with mainstream students for classes at the college level, emulating these circumstances during high school may be a useful transitional technique in itself.

Although research has established the important role of parents/guardians in helping their children with HASD with the transition to college (Elias & White, 2016), future studies should explore which transitional strategies are best implemented in the home. Parents/guardians have a unique vantage point of understanding their children outside of the academic setting, which can potentially provide a useful environment to practice executive functioning, social, and self-advocacy/communication skills that can't

be fully learned during the school day. Research that focuses on the contributing role of families would strengthen the connection between the efforts of the school counselor and parental partners.

Conclusion

Many students with HASD possess the academic competence to be successful in college. However, due to social, communication/self-advocacy, and executive functioning deficits caused by their diagnoses, they may struggle with the transition from high school to the university. School counselors are in a unique position to stand in this gap and support these students with achieving this important milestone. By understanding the specific challenges faced by students with HASD and developing programming to meet these needs, school counselors can be instrumental in ensuring these students are college ready.

References

- Accardo, A. L., Kuder, S. J., & Woodruff, J. (2019). Accommodations and support services preferred by college students with autism spectrum disorder. *Autism, 23*(3), 574–583. <https://doi.org/10.1177/1362361318760490>
- Adreon, D., & Durocher, J. S. (2007). Evaluating the college transition needs of individuals with high-functioning autism spectrum disorders. *Intervention in School and Clinic, 42*(5), 271–279. <https://doi.org/10.1177/10534512070420050201>
- Alverson, C. Y., Lindstrom, L. E., & Hirano, K. A. (2015). High school to college: Transition experiences of young adults with autism. *Focus on Autism and Other Developmental Disabilities, 34*(1), 52–64. <https://doi.org/10.1177/1088357615611880>
- American Psychiatric Association. (2013a). Diagnostic and statistical manual of mental disorders. (5th ed.). Arlington, VA: American Psychiatric Publishing.
- American Psychiatric Association. (2013b). DSM-5 and diagnoses for children. https://www.psychiatry.org/File%20Library/Psychiatrists/Practice/DSM/APA_DSM-5-Diagnoses-for-Children.pdf
- American School Counselor Association. (2016a). ASCA ethical standards. <https://www.schoolcounselor.org/getmedia/f041cbd0-7004-47a5-ba01-3a5d657c6743/Ethical-Standards.pdf>
- American School Counselor Association. (2016b). The professional school counselor and students with disabilities. *American School Counselor Association Position Statement*.

<https://www.schoolcounselor.org/asca/media/asca/PositionStatements/PositionStatements.pdf>

- American School Counselor Association (2019). *The ASCA national model: A framework for school counseling programs* (4th ed.). Alexandria: Author.
- Americans with Disabilities Act of 1990, Pub. L. No. 101-336, §2, 104 Stat. 328 (1991).
- Anderson, A. H., Carter, M., & Stephenson, J. (2018). Perspectives of university students with autism spectrum disorder. *Journal of Autism and Developmental Disorders, 48*, 651–665. <https://doi.org/10.1007/s10803-017-3257-3>.
- Auger, R.W. (2013). Autism Spectrum Disorders: A research review for school counselors. *Professional School Counseling, 16*, 256–268. <https://doi.org/10.1177/2156759X12016002S02>
- Barnhill, G. P. (2016). Supporting students with Asperger syndrome on college campuses: Current practices. *Focus on Autism and Other Developmental Disabilities, 31*(1), 3–15. <https://doi.org/10.1177/1088357614523121>
- Browning, S., & Miron, P. (2007). Autism and Asperger's syndrome: A primer for success as a social being and a student. In J. A. Lippincott & R. B. Lippincott (Eds.), *Special populations in college counseling: A handbook for mental health professionals* (pp. 273–283). American Counseling Association.
- Browning, J., Osborne, L., & Reed, P. (2009). A qualitative comparison of perceived stress and coping in adolescents with and without autistic spectrum disorders as they approach leaving school. *British Journal of Special Education, 36*, 36–43. <https://eric.ed.gov/?id=EJ833693>

- Burgess, S., & Turkstra, L. S. (2010). Quality of communication life in adolescents with high-functioning autism and Asperger syndrome: A feasibility study. *Language, Speech, and Hearing Services in Schools, 41*(4), 474–487.
[https://doi.org/10.1044/0161-1461\(2010/09-0007\)](https://doi.org/10.1044/0161-1461(2010/09-0007))
- Camarena, P. M., & Sarigiani, P. A. (2009). Postsecondary educational aspirations of high-functioning adolescents with autism spectrum disorders and their parents. *Focus on Autism and Other Developmental Disabilities, 24*, 115–128.
<https://doi.org/10.1177/1088357609332675>
- Camodeca, A., Todd, K. Q., & Croyle, J. (2020). Utility of the Asperger Syndrome Diagnostic Scale in the assessment of autism spectrum disorders. *Journal of Autism and Developmental Disorders, 50*(2), 513–523.
<https://doi.org/10.1007/s10803-019-04272-x>
- Center for Disease Control and Prevention (CDC). (2014). Prevalence of autism spectrum disorder among children aged 8 years—Autism and Developmental Disabilities Monitoring Network, United States, 2010. *MMWR, 63* (SS-2), 1–21.
- Cervoni, A., & DeLucia-Waack, J. (2011). Role conflict and ambiguity as predictors of job satisfaction in high school counselors. *Journal of School Counseling, 9*, 1–30.
Retrieved from <http://jsc.montana.edu/articles/v9n1.pdf>
- Cheak-Zamora, N.C., Teti, M., & First, J. (2015). Transitions are scary for our kids, and they're scary for us: Family member and youth perspectives on the challenges of transitioning to adulthood with autism. *Journal of Applied Research in Intellectual Disabilities, 28*, 548–560. <https://doi.org/10.1111/jar.12150>

- Chown, N. & Beavan, N. (2012). Intellectually capable but socially excluded? A review of the literature and research on students with autism in further education. *Journal of Further and Higher Education*, 36(4), 477–493.
- Conley, D. T. (2008). Rethinking college readiness. *New Directions for Higher Education*, 2008(144), 3–13. <https://doi.org/10.1002/he.321>
- Conley, D. T. (2014). New conceptions of college and career ready: A profile approach to admission. *Journal of College Admission*, 223, 12–23.
- Crespi, B. J. (2016). Autism as a disorder of high intelligence. *Frontiers in Neuroscience*, 10, 300. <https://doi.org/10.3389/fnins.2016.00300>
- Curry, J. R., & Amy Milsom, D. (2017). *Career and college readiness counseling in P-12 schools*. Springer Publishing Company.
- Dijkhuis, R., Ziermans, T. B., Van Rijn, S., Staal, W. G., & Swaab, H. (2017). Self-regulation and quality of life in high-functioning young adults with autism. *Autism*, 21(7) 896–906.
<http://aut.sagepub.com/content/early/2016/10/20/1362361316655525.full.pdf+html>
- Dijkhuis, R., de Sonnevile, L., Ziermans, T., Staal, W., & Swaab, H. (2020). Autism symptoms, executive functioning and academic progress in higher education students. *Journal of Autism and Developmental Disorders*, 50, 1353–1363.
<https://doi.org/10.1007/s10803-019-04267-8>
- Dipleolu, A. O., Storlie, C., & Johnson, C. (2014). Transition to college and students with high functioning autism spectrum disorder: Strategy considerations for school

- counselors. *Journal of School Counseling*, 12(11), 1–38.
<https://eric.ed.gov/?id=EJ1034736>.
- Drake, S. (2014). College experience of academically successful students with autism. *Journal of Autism*, 1(5), 1–4. <http://dx.doi.org/10.7243/2054-992X-1-5>
- Elder, L. (2012, September 21). *Why the delay in Asperger diagnosis?*
<https://www.autismspeaks.org/expert-opinion/why-delay-asperger-diagnosis>
- Elias, R., & White, S. W. (2018). Autism goes to college: Understanding the needs of a student population on the rise. *Journal of Autism and Developmental Disorders*, 48, 732–746. <https://dx.doi.org/10.1007/s10803-017-3075-7>
- Fleischer, A. S. (2012). Support to students with Asperger syndrome in higher education—the perspectives of three relatives and three coordinators. *International Journal of Rehabilitation Research*, 35(1), 54–61.
<https://doi.org/10.1097/MRR.0b013e32834f4d3b>
- Gelbar, N. W., Smith, I., & Reichow, B. (2014). Systematic review of articles describing experience and supports of individuals with autism enrolled in college and university programs. *Journal of Autism and Developmental Disorders*, 44(10), 2593–2601. <https://doi.org/10.1007/s10803-014-2135-5>
- Gilson, C. B., & Carter, E. W. (2016). Promoting social interactions and job independence for college students with autism or intellectual disability: A pilot study. *Journal of Autism and Developmental Disorders*, 46(11), 3583–3596. <https://doi.org/10.1007/s10803-016-2894-2>

- Graetz, J. E., & Spampinato, K. (2008). Asperger's Syndrome and the voyage through high school: Not the final frontier. *Journal of College Admission, 198*, 19–24. <https://eric.ed.gov/?id=EJ829415>
- Hall, J. G. (2015). The school counselor and special education: Aligning training with practice. *The Professional Counselor, 5*(2), 217-224. <https://doi.org/10.15241/jgh.5.2.217>
- Hart, D., Grigal, M., & Weir, C. (2010). Expanding the paradigm: Postsecondary education options for individuals with autism spectrum disorders and intellectual disabilities. *Focus on Autism and Other Developmental Disabilities, 25*(3), 134–150. <https://doi.org/10.1177%2F1088357610373759>
- Hendricks, D. R., & Wehman, P. (2009). Transition from school to adulthood for youth with autism spectrum disorders: Review and recommendations. *Focus on Autism and Other Developmental Disabilities, 24*(2), 77–88. <https://doi.org/10.1177%2F1088357608329827>
- Individuals with Disabilities Education Act. (2004). 20 U.S.C. § 1400.
- Jackson, S. L. J., Hart, L., Thierfed Brown, J., & Volkmar, F. R. (2018). Brief report: Self-reported academic, social, and mental health experiences of post-secondary students with autism spectrum disorder. *Journal of Autism and Developmental Disorders, 48*, 643–650.
- Jansen, D., Petry, K., Ceulemans, E., Noens, I., & Baeyens, D. (2017). Functioning and participation problems of students with ASD in higher education: Which reasonable accommodations are effective? *European Journal of Special Needs Education, 32*, 71–88. <https://doi.org/10.1080/08856257.2016.1254962>

- Jekel, D., & Loo, S. (2002). *So you want to go to college: Recommendations, helpful tips, and suggestions for success at college*. Asperger's Association of New England.
- Johnson, C. P., & Myers, S. M. (2007). Identification and evaluation of children with autism spectrum disorders. *Pediatrics*, *120*(5), 1183–1215.
<https://doi.org/10.1542/peds.2007-2361>
- Kern Koegel, L., Ashbaugh, K., Navab, A., & Koegel, R. L. (2016). Improving empathic communication in adults with autism spectrum disorder. *Journal of Autism and Developmental Disorders*, *46*, 921–933. <https://doi.org/10.1007/s10803-015-2633-0>
- Kidwell, K. S. (2005). Understanding the college first-year experience. *The Clearing House: A Journal of Education Strategies, Issues and Ideas*, *78*, 253–256.
<https://doi.org/10.3200/TCHS.78.6.253-256>
- Klin, A., & Volkmar, F. R. (2003). Asperger syndrome: Diagnosis and external validity. *Child and Adolescent Psychiatric Clinics of North America*, *12*, 1–13.
<https://doi.org/10.1080/03004279.2019.1664401>
- Krell, M., & Perusse, R. (2012). Providing college readiness counseling for students with autism spectrum disorders: A Delphi study to guide school counselors. *Professional School Counseling*, *16*(1), 29–39.
<https://doi.org/10.1177/2156759X1201600104>
- Kulage, K. M., Smaldone, A. M., & Cohn, E. G. (2014). How will DSM-5 affect autism diagnosis? A systematic literature review and meta-analysis. *Journal of Autism*

- and Developmental Disorders*, 44(8), 1918-1932. <https://doi.org/10.1007/s10803-014-2065-2>
- Landmark College (2014). ASD support services. <https://www.landmark.edu/campus-life/vice-president-for-student-affairs/asd-program/>
- LaGary, R. A. (2017). College students with autism spectrum disorder: Perceptions of social supports that buffer college-related stress and facilitate academic success. *Journal of Postsecondary Education and Disability*, 30(3), 251–268.
- Lieb, R. W., & Bohnert, A. M. (2017). Relationships between executive functions, social impairment, and friendship quality on adjustment among high functioning youth with autism spectrum disorder. *Journal of Autism and Developmental Disorders*, 47, 2861–2872. <https://doi.org/10.1007/s10803-017-3205-2>
- Longtin, S. E. (2014). Using the college infrastructure to support students on the autism spectrum. *Journal of Postsecondary Education and Disability*, 27(1), 63–72. <https://files.eric.ed.gov/fulltext/EJ1029568.pdf>
- Milsom, A. S. (2002). Students with disabilities: School counselor involvement and preparation. *Professional School Counseling*, 5, 331–338.
- Milsom, A., & Lauren, D. (2009). Defining college readiness for students with learning disabilities: A Delphi study. *Professional School Counseling*, 12(4), <https://doi.org/10.1177/2156759X0901200405>
- Mitchell, W., & Beresford, B. (2014). Young people with high-functioning autism and Asperger’s syndrome planning for and anticipating the move to college: What supports a positive transition? *British Journal of Special Education*, 41(2), 151–171. <https://doi.org/10.1111/1467-8578.12064>

- Muller, E., Schuler, A. & Yates, G. (2008) 'Social challenges and supports from the perspective of individuals with Asperger syndrome and other autism spectrum disabilities', *Autism*, 12(2), 173–190. <https://doi.org/10.1177/1362361307086664>
- Myles, B. S., & Simpson, R. L. (2001). Understanding the hidden curriculum: An essential social skill for children and youth with Asperger's syndrome. *Intervention in School and Clinic*, 36(5), 279–286. <https://doi.org/10.1177%2F105345120103600504>
- Newman, L., Wagner, M., Knokey, A. M., Marder, C., Nagle, K., Shaver, D., & Wei, X. (2011). *The post-high school outcomes of young adults with disabilities up to 8 years after high school: A report from the national longitudinal transition study-2 (NLTS2)*. Resource document. National Center for Special Education Research. http://www.nlts2.org/reports/2011_09_02/nlts2_report_2011_09_02_complete.pdf
- Nice, M. L., Kolbert, J. B., Joseph, M., Crothers, L. M., Hilts, D., & Kratsa, K. (2020). School counselors' self-efficacy in knowledge of the college process. *Professional School Counseling*, 24(1). <https://doi.org/10.1177/2156759X20976374>
- Nuske, A., Rillotta, F., Bellon, M., & Richdale, A. (2019). Transition to higher education for students with autism: A systematic literature review. *Journal of Diversity in Higher Education*, 12(3), 280–295. <https://doi.org/10.1037/dhe0000108>
- Paradiz, V., Kelso, S., Nelson, A., & Earl, A. (2018). Essential self-advocacy and transition. *Pediatrics*, 141(Supplement 4), S373-S377. <https://doi.org/10.1542/peds.2016-4300P>

- Pinder-Amaker, S. (2014). Identifying the unmet needs of college students on the autism spectrum. *Harvard Review of Psychiatry*, 22(2), 125–137.
<https://doi.org/10.1097/HRP.0000000000000032>
- Rando, H., Huber, M. J., & Oswald, G. R. (2016). An academic coaching model intervention for college students on the autism spectrum. *Journal of Postsecondary Education and Disability*, 29(3), 257–262.
<https://eric.ed.gov/?id=EJ1123790>
- Retherford, K. S. & Schreiber, L.R. (2015). Camp campus: College preparation for adolescents and young adults with high-functioning autism, Asperger syndrome, and other social communication disorders. *Topics in Language Disorders*, 35(4), 362–385. <https://doi.org/10.1097/TLD.0000000000000070>
- Roberts, K. (2010). Topic areas to consider when planning transition from high school to postsecondary education for students with autism spectrum disorders. *Focus on Autism and Other Developmental Disabilities*, 25, 158–162.
<https://doi.org/10.1177/1088357610371476>
- Scarborough, J. L., & Culbreth, J. R. (2008). Examining discrepancies between actual and preferred practice of school counselors. *Journal of Counseling & Development*, 86, 446–459. <https://doi.org/10.1002/j.1556-6678.2008.tb00533.x>
- Shmulsky, S., Gobbo, K., & Donahue, A. (2015). Groundwork for success: A college transition program for students with ASD. *Journal of Postsecondary Education and Disability*, 28(2), 235–241. <https://eric.ed.gov/?id=EJ1074676>

- Sumner, E. (2018). Factors related to college students' self-directed learning with technology. *Australasian Journal of Educational Technology*, 34(4).
<https://doi.org/10.14742/ajet.3142>
- Sung, C., Connor, A., Chen, J., Lin, C. C., Kuo, H. J., & Chun, J. (2019). Development, feasibility, and preliminary efficacy of an employment-related social skills intervention for young adults with high-functioning autism. *Autism*, 23(6), 1542–1553. <https://doi.org/10.1177/1362361318801345>
- Trammell, J. (2013). Practice belief: Modeling positive behaviors for postsecondary students with Autism/Asperger's: The use of "television coaching." *Journal of Postsecondary Education and Disability*, 26(2), 98–103.
<https://eric.ed.gov/?id=EJ1026832>
- U.S. Bureau of Labor Statistics. (2019, September). Earnings and unemployment rates by educational attainment (Employment Projections).
http://www.bls.gov/emp/ep_chart_001.htm
- U.S. Department of the Treasury. (2012). *The economics of higher education*. Springer.
- Webb, B. J., Miller, S. P., Pierce, T. B., Strawser, S., & Jones, W. P. (2004). Effects of social skills instruction for high-functioning adolescents with autism spectrum disorders. *Focus on Autism and Other Developmental Disorders*, 19, 53–62.
<https://doi.org/10.1177/10883576040190010701>
- Webb, K., Patterson, K., Syverud, S., & Seabrooks-Blackmore, J. (2008). Evidenced based practices that promote transition to postsecondary education: Listening to a decade of expert voices. *Exceptionality: A Special Education Journal*, 16(4), 192–206. <https://doi.org/10.1080/09362830802412182>

Wiorowski, F. (2015). The experiences of students with autism spectrum disorders in college: A heuristic exploration. *The Qualitative Report*, 20(6), 847–863.

<https://nsuworks.nova.edu/tqr/vol20/iss6/11>

Biographical Statements

Jennifer S. Barna, Ph.D., NCC, ACS is an Associate Professor and Director of the School Counseling Program at Marywood University in Scranton, PA. She holds PK-12 school counseling certification with an autism endorsement. Her research interests include the school counselor's role in supporting students on the autism spectrum, college and career readiness for diverse students, and experiential learning and school counselor preparation.

Matthew L. Nice, Ph.D., LPC, NCC, ACS is an Assistant Professor in the Department of Counseling at Indiana University of Pennsylvania. He is a certified school counselor PK-12, a licensed professional counselor, nationally certified counselor, and an approved clinical supervisor. His scholarship includes the school counselor's role in students' transition to college and the college process.