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Support Systems for Students with Autism Spectrum Disorder During their Transition to Higher Education: A Qualitative Analysis of Online Discussions

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SUPPORT SYSTEMS FOR COLLEGE STUDENTS WITH AUTISM SPECTRUM DISORDER

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This study was an exploration into how college students with autism spectrum disorder identify and use support systems during the transition to higher education. In particular, this study explored how these students described their experiences within an online environment among their peers. The study used unobtrusive qualitative methods to collect and analyze data on online forum discussion posts from college students with autism spectrum disorder. Results indicated that students found their support systems in various ways. Many report using services provided by their Office of Disability Services, but students must be aware that these services exist first, and often must have a diagnosis to receive such supports. This study makes suggestions for higher education institutions to identify and promote their support services, both those that are accessible through Offices of Disability Services, and those that are available without diagnosis or disclosure.

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Individuals with autism spectrum disorder (ASD), including those formerly diagnosed with Asperger syndrome, are graduating from high school and entering institutions of higher education (IHE) in greater numbers than ever before (Barnhill, 2014). Transitioning from high school to college can be challenging for all students, but might be particularly difficult for students with ASD, who often are especially uncomfortable during periods of transition (Van Hees, Moyson, & Roeyers, 2014). Although a growing number of colleges and universities have begun developing programs to support these students, these efforts differ dramatically across institutions and are often too new to have yet yielded data to confirm their effectiveness.

This study is an exploration into how college students with ASD describe their support systems during conversations about the transition to higher education. These support systems could be emotional, physical, or academic support systems; provided at home, at school, or otherwise – simply a means of support while they are in college.

Because formal or focused ASD programs are new, few, and small, most students with ASD have had to draw support from other sources and services. But, beyond assumptions about the use of the Office of Disability Service centers for formal ADA-required academic accommodations, there is little literature identifying or describing other support systems sought or used by college students with ASD. Additionally, to receive formal accommodations, a student must actively self-disclose his or her diagnosis, and the burden to disclose is on the students themselves. If students are not accessing supports through disability service centers, there is little opportunity to learn how students find such supports. Finally, there is little evidence of service effectiveness or student satisfaction with such services (Marshak, Van Wieren, Ferrell, Swiss, & Dugan, 2010).

Therefore, the research questions addressed are as follows:

Research Question 1: Who or what are the support systems that college students with ASD describe?

Research Question 2: How do college students with ASD find these support systems?

Research Question 3: How do students use support systems?

Research Question 4: Why are these services valued, effective, or not?

This paper examines the literature related to this topic, followed by a qualitative analysis of online conversations students with ASD have about the transition to college, with a particular focus on how they describe their systems of support during conversations about the transition to college. The paper closes with a discussion of practical implications for institutions of higher education.

Background

The most current data suggests that as many as one in 59 eight-year-old children in the United States are diagnosed with ASD (Centers for Disease Control and Prevention, 2014). Individuals who fall on the high functioning end of the autism spectrum frequently have difficulties in social engagement and communication, and show repetitive behaviors and fixed interests, though they usually have typical language development (Adreon & Durocher, 2007).

As the prevalence in diagnosis increases, so does the prevalence of individuals with ASD entering into higher education (Adreon & Durocher, 2007; Barnhill, 2014; Gelbar, Smith, & Reichow, 2014; Pinder-Amaker, 2014; Zager, Alpern, Mckee, Maxam, & Mulvey, 2013). As of 2011, ASD was reported as the sixth-largest population of students receiving services through their Office of Disability Services (Chiang, 2011). More recently, in a 2014 study, one university reported 100 students with ASD out of 550 total students registered with a disability (Barnhill, 2014).

ASD Program Development at Institutions of Higher Education

Though implementation may differ depending on institution, some educational supports are already in place to assist college students with ASD. Legislation such as the Individuals with Disabilities Education Act (IDEA) and the Americans with Disabilities Act (ADA) have made the college experience increasingly more accessible to students with ASD and other disabilities in the United States (Barnhill, 2014; Zager et al., 2013). IDEA first included autism as a disability category for special education in 1990 (Hart, Grigal, & Weir, 2010).

Furthermore, on every college campus, Section 504 of the Rehabilitation Act requires institutions' Offices of Disability Services to provide accommodations as needed per student (Zager et al., 2013). The Higher Education Act of 2008 similarly focuses on postsecondary opportunities for individuals with intellectual disabilities with an emphasis on educational practices based in Universal Design for Learning (UDL) (Zager et al., 2013).

Formal accommodations provided vary depending on the individual, and Barnhill (2014) suggests an individualized approach in addressing the unique needs of each individual with ASD. Some examples of accommodations available for this population include extended time for exams, access to note takers, and use of assistive technologies. However, accommodations are only provided if a student chooses to disclose his or her diagnosis and provides sufficient documentation (Zager et al., 2013).

Autism-Specific Programs

Some IHEs provide even more targeted services specifically for students diagnosed with ASD. An examination of commonly used programs notes that information about outcomes for college students with ASD is limited, but that "researchers have pointed to some practices that are effective in supporting students with ASD and ID [intellectual disabilities] to have successful,

inclusive college experiences that lead to competitive employment and an enhanced quality of life" (Hart et al., 2010, p. 141).

To provide adequate services, multiple studies suggest that collaboration both within and across organizations is helpful (Barnhill, 2014; Dillon, 2007; Fleury et al., 2014). By partnering with a rehabilitation agency, an IHE might be able to provide mentoring or coaching for a student with ASD (Barnhill, 2014; Dillon, 2007). Collaboration can also occur through partnerships on campus as well, and IHEs might find success in working with residence hall assistants to serve as liaisons and student guides (Barnhill, 2014).

Though programs and supports for students with ASD seem to be increasing, there is little data with which one may determine the relative efficacy of these programs. One recent study (Barnhill, 2014) surveyed 30 colleges and universities that offered specific support for students with ASD, as discovered from both internet and literature searches. Of those institutions that offered support for students with ASD, very few had student outcomes data. One reason might be that more than half of the programs had been providing services for less than five years, though "several IHEs [institutions of higher education] reported that they would like to start collecting outcomes data in the future on the graduation rates and post-college employment of their students with AS [Asperger's syndrome] and ASD" (Barnhill, 2014, p. 9).

Of course, formal outcomes assessment data is but one source of evidence regarding the experiences of college students with ASD. Indeed, the literature on experiences and outcomes of college students with ASD has been filled primarily with the voices of parents, administrators, instructors and other stakeholders (Gelbar, Smith, & Reichow, 2014). Student voices are largely missing.

However, securing interviews with college students with ASD has often proven difficult. One recent study, for example, was able to arrange interviews with only nine students from a potential pool of more than

120 registered with a local agency for individuals with an official ASD diagnosis (Cox et al., 2017). Additionally, it is suggested that, as of 2015, the empirical literature on college students with autism is based on reports from only 68 students (Cox et al., 2015).

To overcome these concerns, we went online in search of authentic voices from a large group of individuals with ASD, as the internet is increasingly used as a tool for communication, community building, and self-advocacy for members of this population, allowing for their voices to be heard (Giles, 2013; Davidson, 2008; Brownlow, O'Dell, & Taylor, 2006).

Methods and Procedures

An internet site designed for and by individuals with ASD was used for data collection for this study. The website user base skews toward individuals with high functioning autism spectrum disorder, formerly diagnosed as Asperger's Syndrome (AS). At the time of this study, this site had more than 80,000 registered users.

This study focuses on the site's discussion board topic focused on school and college life and explores conversations between individuals with ASD regarding their support systems during the transition to higher education.

Data Collection

Discussion board conversations, or threads, were collected from the site according to the following inclusion criteria. Discussion threads were collected from a span of two years, and included those that were initiated between January 1, 2012, and December 31, 2013. Discussion threads were only collected from those that were initiated on the "School and College Life" forum, which, at the time of data collection, included more than 46,000 posts. Discussion threads were only included if they contained at least five total posts, generally indicating a conversation with multiple members took place. Finally, discussion threads were only

collected if keywords associated with the transition to higher education were included in the initial post or discussion thread title. A comprehensive list of all such keywords is available upon request; examples include "starting college," "transition," and "first year of college." Threads were excluded if it was determined that concepts were not related to the United States' higher education system or the student was transitioning to graduate school.

Data was collected unobtrusively from a forum focused on school and college life, which is a publicly viewable discussion forum. The site does offer private forums in which members can login and discuss more personal topics; this research, however, only collected data from that which is publicly available. Members of the site post to discussion threads using user names, not their given names. While the researchers had access to these user names, they are not used as identifiers in this study's findings, to further protect members' identities and information.

Data Analysis

Data analysis occurred through a three-step process, with several efforts taken throughout the analyses to maximize trustworthiness and validity. This study used unobtrusive content analysis, which ensures that participants were not affected by the research process. Furthermore, content analysis as a method allows researchers to return to the data for multiple coding opportunities and fact checking. Doing so typically leads to more consistent coding (Babbie, 2007) and allows for the researchers to leave "audit trails" (Denzin & Lincoln, 2000, p. 393) which describe in detail how the data were collected and analyzed. Memos were taken extensively throughout the coding process such that all authors could be informed of each team member's coding process. In providing these details, reliability was established, as replication of the study would be straightforward.

The first round of coding, conducted by

this paper's first and third authors, used a set of a priori provisional codes (Miles & Huberman, 1994; Saldana, 2009) derived from Astin's (1993) Inputs-Environments-Outputs (I-E-O) framework. Astin's framework is commonly used when studying how college affects students; it has also been applied to the study of college students with disabilities (O'Neill, Markward, & French, 2012). The "Inputs" reflect students' pre-college characteristics, experiences, and assumptions that support or impair students' consideration of, aspirations for, or access to postsecondary education. The "Environments" (or "Experiences") reference the manner in which students navigate the college environment and highlight issues that arise after students have begun their postsecondary education. The "Outputs" (or "Outcomes") represent broad indicators of student success in college (e.g., learning, development, graduation).

To maximize intercoder reliability, the coders began by independently coding the same three discussion threads (about 15% of the total data) and this paper's first three authors met to discuss and reconcile discrepancies. At this meeting, a fourth discussion thread was jointly coded to ensure agreement across coders. The remaining discussion threads were split, with the first and third author each coding roughly half the threads. First-round coders also wrote reflective memos, created in-vivo codes as they recognized patterns of interview segments that did not fit into the a-priori coding structure, and met periodically with this paper's second author to discuss any questions that arose during coding. This opening round of analysis yielded 925 instances of text being coded using 12 a priori and in vivo codes.

The second round of coding was performed by the fourth author, who was not involved in data collection or initial coding. This time, coding was done inductively using only data coded in the first round as a source. Open coding was employed to create conceptual labels, which identified emerging

themes from the data (Bryant & Charmaz, 2007). This second round of analysis yielded generated 22 new codes referencing 533 pieces of text.

This paper focuses on data related to the experience of "support systems." The research team operationalized support systems as: networks, individuals, or services that students seek and/or use in an effort to succeed in college.

Limitations

Several limitations should be noted that affect this study. The website itself presents a few limitations for data collection, as search functionality is difficult. For example, if a post was initiated in 2012 or 2013 but responded to in 2014 it will not appear in this data. However, it appears that most posts receive prompt replies, and efforts were made to ensure that all data that met the requirements for inclusion were incorporated.

The authors are unable to confirm diagnoses of participants. Moreover, no data was coded from people who indicated that they were not students with ASD, and data was collected over a single year. The conversations analyzed were often brief, and there was no follow up to determine if or how the students who posted questions implemented the advice they were given. Furthermore, we cannot track long-term outcomes for students in the forums. Nevertheless, many students' posts included references to multiple parts of Astin's IEO model, using their own words for support systems and outcomes they associated with use of the system.

Findings

This section addresses findings associated with the study's overarching theme of support systems. First, we discuss what support systems students describe. Next, we address how students find these supports. Then, we explore how students use support systems. Finally, we looked at how these supports affect students' outcomes. Partic-

ipants are not identified by user name; instead, all quotations will be simply ascribed to students or site members in order to help ensure anonymity.

What Support Systems do Students Describe?

Support systems described by students with ASD include both institutionally developed initiatives, in the sense of formal academic advisors and disability services officers, and more informal, self-initiated networks of support, such as a social networks, parents, or friends. These support systems ranged from individuals, such as an academic advisor or trusted faculty member, to groups, such as ASD support groups or informal student clubs. While some of the support systems described required students to disclose their ASD diagnosis, many others were available without a formal diagnosis or need for disclosure, especially when it came to casual networks and supports. Although many students referenced family and friends as valuable sources of support, colleges and universities have little role in developing such systems. Therefore, we focus our presentation of findings on institutionally-affiliated support systems over which IHEs can exert direct influence.

Academic advisors. Many of the support systems discussed by students with ASD were those put in place by the college or university to benefit all incoming and existing students – not just those with ASD or in need of disability services. One example frequently described was the academic advisor or academic support staff. One student says that she now has “weekly meetings with an academic support person,” while another student mentions that academic advisors will help to “make sure you don’t take a lot of unnecessary classes.” Advisors are also described in assisting students with life skills, such as helping to set up a regular schedule, joining extracurricular clubs, and otherwise keeping students motivated to succeed.

Academic advisors are often described

as a source of support that is available to all students, regardless of a diagnosis. One student provides the following advice to another, who is seeking help after an unsuccessful semester:

You need to talk to your academic adviser. Explain everything you’ve just laid out here [in the forum]. After that, go to your parents, too. They will probably be more receptive to you asking for help than if you tell them you’ve failed entirely without first asking for help when things got bad. You may need a DX [diagnosis] to receive accommodations. Accommodations may be the difference between failure and success.

In the exchange described, the student requesting help does not have an official diagnosis of ASD; as such, an academic advisor is suggested as a support service, followed by parents. The use of personal connections and institutional support systems in complementary ways was mentioned by several students. For example, another student describes bringing her mom to an advising session as “she knows me so well, and I felt more comfortable with her there, and figured it was important that she be there.”

Counseling centers. College and university counselors are also mentioned as a source of support, especially for students who either do not have an official ASD diagnosis or do not wish to disclose their diagnosis. Counseling centers appear to be particularly important as a support during the initial transition to college as noted by one student: “most colleges have plenty of services to support people finding it difficult to adjust and I made good use of my college’s free counseling center.” Another student describes counselors as a help not only during the first phase of college life, but as a support throughout the college experience:

Some colleges have counselors for the students for free. So see if this is an option for you... it might be what you. Red [you need] to get through that first year, or your diploma... I know mine helped me!

Tutors. Several students in the forums mention tutors as valuable sources of academic support. Tutoring services were most frequently described at community colleges, where students suggested such services were typically free. As one student noted,

"I'm at a community college, so they're pretty supportive I just actually need to go to them myself when I have problems. I believe tutors at my college are free for attending students."

Offices of Disability Services. Though some support systems (e.g. "essay editing services" and "study skills classes, writing labs...[and] free tutoring) are available to all students, site members describe how with a diagnosis opens up even more opportunities for support. Registering through the Office of Disability Services is described as necessary for certain accommodations, and one student describes how "If you have an Aspergers diagnosis, a lot of support should be available to you." Registration with an office of disability service, which often requires a formal diagnosis, opens up opportunities for formalized accommodations. Students often believed registration and accompanied accommodations would be helpful for their eventual success, as described by a student who says: "Hopefully things will improve next year when accommodations are put in place for my specific needs like extra time on tests etc."

Registering with the disability services office was also viewed as a gateway to other support systems. One student describes the support she received from her residential hall staff after her parents contacted the Office of Disability Services:

Transitioning to college was really hard for me. I stopped eating and ended up getting really ill. My parents called the dorm staff and disability services because they were worried about me and I had both my RA and the hall director checking in on me and making sure I was eating and going to classes and stuff. The staff really care about the students.

Professors. Professors can also provide support, especially after a student registers with the disability services office. One student describes how it is important it is to make contact with one's professors, even describing them as potential advocates:

If you need any accommodations in the classroom (like extra time on tests, for instance,) talk to each of your professors after class on the first day and let them know. This will also give you a chance to meet your professors, which is extremely important to do in college. In addition to determining your grade, they can write you letters of recommendation which will help you get a job, and they may offer advice or even advocate for you if have any trouble adjusting.

How Do Students Find Support Systems?

Students describe finding their support systems in various ways, including presentations at orientation, through online searches, and through simply "exploring" on campus. The most common avenue for finding support was registration with the Office of Disability Services. Students emphasize that while there are often many opportunities for support, it is up to the student him or herself to register with the Office of Disability Services. As one student states, "There's a lot of help there for people with any disability in college, they can give you copies of their notes, learning support etc. you just have to get in touch with them."

Of course, students have to know about a disability service center before they can register for it. Students learn about the Office of Disability Services through a variety of means, including websites and orientation materials. An effective orientation presentation can both introduce the Office and encourage students to register for services. After seeing a video at orientation, one student noted: "I'll definitely consider heading to the counselor's office if I feel like I need to. They seemed pretty nice on the video presentation."

Though some students learn about sup-

port services from formal presentations such as orientations, many students describe how they have to proactively seek out or develop comprehensive support systems. For some students, seeking support beyond the Office of Disability Services was needed just to get by. One student describes the following: "My diagnosis was disclosed to the college, but no extra help was offered despite my clear struggles. I did pass but with average grades due to these struggles." For other students, the services offered by other institutional units allowed them to excel. One student, who urged others to "(l)earn about all the services out there" highlighted three services he found outside of traditional accommodations: libraries, peer mentors, and career centers:

Many college libraries will have the ability to book the time to teach you how to use databases and research. This is golden as there are many individual quirks to resources and databases. They can even help you organize research. Learn about all the supports they can offer to people with Asperger's. Learn if there are student mentors who can help you navigate first year. Invest some time in the career center and get one of their professionals to set you up with their services, like finding internships.

Some supports are more informal, such as club members or social groups, and are found in an equally informal manner. One student describes how he found his group of "interesting people" in a student association: "I prefer to meet people in a group that is interest-focused and where there is enough room to accommodate to slow processing speed and sensory processing differences."

Despite the numerous ways students reported connecting with support services, some students never find the help that they need during their college transition. One student complained that the Office of Disability Services, "wasn't mentioned to me or the services they offered to those with disabilities."

How do Students Use Support Services?

Not surprisingly, the Office of Disability Services serves as the hub for many of the support systems that students with ASD discuss. Offices of disability services provide options for students regarding testing, presentations, tutoring, and other tools for academic success. As one student told another:

Does your university have a disabilities &/or counseling services? They may be able to work out a plan but you may first need to 'stop the clock' with your academics right now so your transcript is not damaged. You ought to have been given options about taking exams privately and accommodations regarding presentation.

These offices were mentioned by many students, often as the first place where their peers should look for support.

Along with tools for academic success, students with ASD discuss how Offices of Disability Service also address life skills support: "There are many support programs as well that can assist with the executive functioning issues, extra tutoring, and all the other things that come up like handling relationships, advocating, budgeting (a huge one), etc." One student describes the services received as helping to manage her particular problems as associated with manifestations of ASD including "sensory overload," and receiving accommodations to help with exams and in obtaining a "semi" individual study space.

Registering with the Office of Disability Services can also lead to help with housing. Some individuals write about the potential for getting a private dorm room or other special accommodations. This is important as some with sensory processing issues could become overwhelmed by shared living spaces.

Students mention that while formal documentation and registration with the disabilities office is required to get accommodations in order to get a single room, attaining such housing accommodations can

still be very difficult. Another discussion describes the want for a single room, though one would need “an official diagnosis” or “a documented disability.”

Disability Services, along with housing staff, helped one student in a time of particular need during the college experience:

As far as dorms are concerned, the staff are usually super amazing. Transitioning to college was really hard for me. I stopped eating and ended up getting really ill. My parents called the dorm staff and disability services because they were worried about me and I had both my RA and the hall director checking in on me and making sure I was eating and going to classes and stuff. The staff really care about the students.

Not all housing experiences are described as positive ones. One student describes how she disclosed her situation to the Office of Disability Services, and actually ended up in a worse situation than she expected due to her ASD disclosure: “I’m a freshman in college, and the disability office decided to pair me up with another girl with Asperger’s. Originally, I thought it would work out, but so far it hasn’t.” This became an uncomfortable living arrangement and was deemed by the student to be an unsuccessful system of support.

The Office of Disability Services can also set up ASD groups, as mentioned in detail by one student:

I am enrolled in an Asperger’s specific program through my school’s Center for Students with Disabilities (CSD)...3 times a week, I meet with the Graduate Assistant who is essentially the person who assists with the AS Program (it’s called SEAD, that’s what I’m calling it from here out.) For the record, the GA meets with all the students in SEAD on a regular basis; the director handles administrative tasks and communication with university staff, instructors, etc. and meets with students only if something comes up.

There is a limit to the services that of-

fices of disability services provide. One student says that his or her classroom is too loud, something that is not addressed by available support systems. Instead, the student states, “I’ve seen our office give accommodations to allow students to take a break during class and disability people do work with students to help with planning but I’ve never really seen the class to [too] loud addressed.”

Support Systems and Related Outcomes

As is true of the literature, discussions highlighted many instances of support, but offered little evidence that these systems contributed to student success. However, a few members do make direct connections between services, lack of services, and outcomes. One student laments his lack of support from career services, and says: “In retrospect I wish I’d had access to better career guidance; it took me many months after graduation to land my first job, and many years to land a good job.” Another student encourages students to develop their own skills, as the school’s support services will not help with this:

Spend as much time developing social skills and networking as you do studying. I’ve learned that who you know will have more to do with your getting a job after college (and keeping it) than your grades ever will. The school WILL NOT try to help you do this. They will be more than happy to let your socially awkward ass fail in life. They presume you should learn all that stuff on your own without help.

Some students even feel like supports might vary depending on the size of the IHE: “At a large university, there are few supports in place and you have to be proactive in seeking them. In retrospect, I would have attended a community college for two years to ease myself into the college experience.”

Discussion

Student comments reveal that support services do not work in isolation. Many students described multiple support systems working in conjunction with one another during their transition to higher education. This type of collaboration is described in multiple studies, which suggest that IHEs can collaborate with outside services, as well as through partnerships with multiple departments across campus (Barnhill, 2014; Dillon, 2007; Fleury et al., 2014). Previous work has suggested the residence hall assistants might collaborate with other campus agencies to provide support for these students (Barnhill, 2014); this study found that, in fact, some students do depend on residence hall assistants, in conjunction with Offices of Disability Services, for support.

Multiple students also mentioned academic advisors in the same discussion as their parents. These conversations about parent involvement are reflected in a research synthesis (Gelbar et al., 2014) that describes parent involvement as second only to mentoring programs for IHE support for students with ASD.

The students with ASD clearly believe that the burden is on them to seek help. Whether by registering with the disability services office, or searching the school's website, or by otherwise exploring what the college or university has to offer, these students describe it as being up to them to discover their own support systems. Though institutions' Offices of Disability Services are legally required to provide accommodations as needed per student (Zager et al, 2013, p. 17), the students with ASD describe actively seeking their supports and sometimes not even being aware that supports exist.

Further, some students with ASD acknowledge the difficulties of not having a formal diagnosis for ASD, despite displaying characteristics of the disorder. In these cases, members mention seeking help on campus in places other than the Offices of Disability Services, such as with academic

advisors or counselors available to all students. This provides more evidence for the argument that college campuses should create inclusive environments that are supportive to students with ASD regardless of diagnosis or services provided by disability services offices (Zager & Alpern, 2010). This also reinforces the idea that training and education should be made available for all departments (Barnhill, 2014), as some students with ASD, perhaps because they are not officially diagnosed, will seek help from departments other than the disability services offices.

Nonetheless, though members noted that they sought support from other departments on campus, many students were quick to describe the Office of Disability Services as a strong resource. This is consistent with the current literature, which suggests that many students with an ASD diagnosis access at least some type of accommodation as provided through these offices (Gelbar et al., 2014).

Interestingly, academic success and support systems are rarely coded together within this data set. Perhaps the students with ASD were not generally "successful" in college. Perhaps the support they received was not entirely helpful. More optimistically, perhaps the value of these support systems was so abstract, or pervasive, or indirect that students simply could not isolate their effects. Regardless, it should be noted that this study is specifically looking at the transition to college so a more complete look at data about student outcomes would likely generate more information here.

Online forums, such as the one explored in this study, allow students with ASD the opportunity to communicate with one another in an unmediated environment. This communication also allows for researchers to gain a better understanding about the barriers these students face in making the transition to institutions of higher education and, in particular, the barriers they might only feel comfortable sharing with their online peers rather than with higher education

administrators.

Conclusion and Practical Implications

Results from this study provide practical implications for higher education administrators, individuals with ASD themselves, and their social support systems including parents, caregivers, and teachers. By having a better understanding of the support systems of these students as they transition into IHEs, members of these support teams will be more well equipped to provide targeted services that help college students with ASD successfully into, through, and out of college. There are many suggestions for supports and services for college students with ASD in the literature, though evidence of their outcomes is not conclusive. From this study, it is apparent that the voices of college students with ASD themselves are crucial in designing and implementing support services, as well as creating more inclusive environments in which informal support systems can develop and thrive.

Implications

The students with ASD are not always made aware of the support services available to them on campus. Thus, it is important that IHEs effectively promote their Offices of Disability Services, as well as other related supports, for students with ASD. IHEs should aggressively market these available services to students who need them the most. These services could be described in freshman orientations, through school websites, or even included on the syllabi of required undergraduate coursework. IHEs make sure that students know about available services, and reduce the barriers that potentially divert them from seeking the services they need for college success.

Though many students with ASD reported using supports from the Office of Disability Services, many others were unable to access these services due to lack of diagnosis. Still others described receiving assistance from other campus organizations, such as housing and advising. Because the students

in this study covered a number of overlapping challenges that necessitate assistance from a variety of institutional support personnel, college and university administration should work with multiple departments to provide supports for students with ASD (Barnhill, 2014; Dillon, 2007; Fleury et al., 2014). Therefore, all departments on college and university campuses must be equipped to meet the needs of members of this growing student population, not just those employed with the Office of Disability Services. As ASD is manifested differently in every student, a one-size-fits-all approach will not work. Instead, campus departments and services must be prepared to work together to provide a collection of supports from which a student with ASD can choose the most appropriate for his or her needs.

If a student does not have a formal diagnosis or chooses not to disclose, we hope that IHEs will train all departments, and be prepared to provide a variety of support services that these students deserve, from which they can pick and choose to best supplement their individualized needs. All students deserve a quality higher education experience, and the burden should not be on them to seek supports. Instead, these supports should be readily available and accessible, and all students should know what services are accessible to them, and where to find them. IHEs should take measures to implement and promote the support services available for student with ASD, so that their support options are both plentiful and clear.

While this study is largely concerned with how colleges and universities can best support their students with ASD, there are also implications for how students with ASD can set themselves up for college success. Beyond disclosing their diagnoses to the Office of Disability Services, college students with ASD should work to educate themselves about potential accommodations available without a formal diagnosis as well. Students with ASD might also seek support through informal mechanisms such as in-

terest-based groups. And finally, students with ASD can consider off-campus support structures, perhaps even including online support groups.

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