The Needs of College Students with Autism Spectrum Disorders and Asperger's Syndrome

Jennifer A. Cullen
Widener University

Abstract

Many colleges and universities have seen increases in students identified as having autism spectrum disorders (ASD) or Asperger's syndrome (AS). The purpose of this study was to analyze the needs of college students with autism spectrum disorders. The study implemented a naturalistic inquiry design incorporating three data collection formats. A total of 24 students from five universities were asked about their primary social needs and how those needs were met in college. Data were analyzed in a two-step process to examine the emergence of both a main category set as well as subcategories. Data analysis revealed the emergence of a main category entitled Needs Related to College as well as four subcategories- Social Needs, Academic Needs, Daily Living Needs, and How Those Needs Are Met. Implications for higher education services and programming for students with ASD are discussed as are suggestions for future research.

Keywords: Autism, Asperger's Syndrome, services in college, college needs

The prevalence of autism spectrum disorders (ASD), which currently also includes Asperger's syndrome (AS), has increased over the past several years. According to the Center for Disease Control (2012), reports of the prevalence of ASD among children in the United States represents a 23% increase from 2006 to 2008. While the exact numbers of individuals diagnosed with ASD or Asperger's syndrome in college is challenging to ascertain due to the reluctance of some students to identify with the disability service programs, it is purported that some 50,000 adolescents with ASD were 18-years-old in 2012 (Wilkinson, 2012). While not all individuals with ASD may be qualified to attend college, the numbers of individuals with ASD able to attend postsecondary institutions may increase. Thus, postsecondary institutions may need to consider programming to meet the needs of students with ASD attending their schools and seeking services. The purpose of the current study was to give a voice to the needs of college students who had self-identified as having AS or ASD. The current research study was designed to enable students to discuss their needs at the postsecondary level in order to enlighten administration and support providers in the creation of more appropriate and beneficial services.

The diagnosis of AS has undergone significant changes. The most significant change came with the release of the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM 5) in May 2013 (American Psychiatric Association, 2013). Prior to the publication of the DSM 5, there was much controversy and speculation around the diagnosis of AS, as it was anticipated that the diagnostic criteria were to be integrated into the umbrella of ASD. Those familiar with Asperger's syndrome have come to recognize the strengths-based identification that those with AS or "Aspies," as they often refer to themselves, have developed (Holliday, 1999). Attwood (1999) proposed a method of diagnosis that emphasized attributes such as being focused on truth seeking, unconstrained by social conventions in social conversations, being extremely loyal and dependable as well as having intellectual gifts such as a strong vocabulary. Attwood (1999) proposed a more strengths-based, rather than the deficits-based, model that focuses on impairments in social interactions and social communication. As anticipated, AS no longer exists as a distinctive diagnosis in the DSM 5 with criteria that separate it from the autism spectrum. Instead, those currently identified as having AS would now be classified as having an ASD with a specifier

such as without intellectual or without language impairments (American Psychiatric Association, 2013).

Diagnostic Characteristics

Individuals diagnosed with ASD (now including AS as well) struggle with challenges in the form of atypical social development, which includes difficulties with nonverbal communication (American Psychiatric Association, 2013). According to the DSM 5, the classification of ASDs now encompass disorders such as autism disorder, Asperger's disorder and pervasive developmental disorder NOS and include those individuals with symptoms such as "deficits in social communication," and "restricted, repetitive patterns of behavior" (American Psychiatric Association, 2013, p.50).

Lorna Wing identified the characteristics of Asperger's syndrome as consisting of social impairments to imagination, communication, and interaction (Wing & Potter, 2002). These impairments create difficulties for individuals diagnosed with ASD as they include difficulties in navigating the nuances of socialization including the idiosyncrasies of facial expressions, body language, and the reciprocity of conversations (Adreon & Stella, 2001; Attwood, 2004; Myles & Simpson, 2001).

Although the social challenges for some individuals with ASD and AS can make peer interactions difficult, many individuals do not have intellectual impairments and therefore are at the same level as their birth cohort in their academic achievements. While specific data related to the number of students with ASD in college are not currently available, one study conducted at a university indicated that about "1 in 130 and 1 in 53 college students likely meet criteria for HFASD [high-functioning autism spectrum disorder]" (White, Ollendick, & Bray, 2011, p.694). Thus, some individuals with ASD are in college or preparing for postsecondary education. However, as Dillon (2007) explained, the services available for college students are designed to support the academic needs of students with few services provided that include social support. Students with average or even superior intellectual ability but who require support in social interactions and social communication, such as those with ASD without language or intellectual impairments, may have difficulty finding the support they need at the postsecondary level.

Significance to Disability Services Programs

Services and accommodations provided by disability services programs are governed by the Americans with Disabilities Act (ADA) of 1990 and its amendments in the Americans with Disabilities Amendments Act (ADAAA) of 2008. The origins of the ADA date back to the Civil Rights Act of 1964 and the Rehabilitation Act of 1973 (Gordon & Keiser, 2000). The purpose of the ADA, particularly the Amendments of 2008, was to ensure that organizations and institutions *provide reasonable accommodations* to individuals with disabilities. The term reasonable accommodations did not originate with the ADA; it was instituted by the Rehabilitation Act of 1973. However, this concept of 'reasonable' was often interpreted as referring to the financial costs to the institutions to make accommodations (Rubenstein and Milstein, 1993). The ADA and the ADAAA were attempts by the United States Congress to limit discriminatory practices of institutions and organizations with regard to accommodating individuals with disabilities (Americans with Disabilities Act, 2008). Terminology within the legislation mandates that *reasonable accommodations* be made to ensure equal access to education provided the accommodations do not alter the essential elements of the academic programs (Americans with Disabilities Act, 2008). However, there are no specific legislative elements that provide guidelines or mandates for specific services at the college level for students with disabilities (Smith, 2007). Services provided by institutions are at the discretion of the service coordinators to determine the appropriateness of an accommodation. Thus, social support services are usually not indicated as a form of accommodation through disability service offices. The significance of this study for colleges and universities is to provide insights into the service needs of individuals with ASD in college related to social challenges that extend beyond the typical academic support services but assist in providing them better access to the social elements and participation requirements in the classroom. Results from this study will help service providers at the postsecondary level have a better understanding of the needs of this population, and therefore help them design more appropriate services that may be able to increase the academic success and retention of this population of students.

The challenge for disability service providers is that "no laws have been set stating what 'reasonable accommodations' should be" (Smith, 2007, p. 519), thus, services that can address the social challenges that face students with ASD in college may not be required or deemed "reasonable" by an educational institution. For disabilities service providers working to support individuals with ASD in college, the research provided in this article may provide insight into the social supports that would help individuals be more successful in their academics.

Research on Services at the Postsecondary Level

The challenge for families and individuals with ASD is that there continues to be a notable lack of research on supports for students with ASD in college or the perspectives of individuals regarding their social needs in college, in spite of the increase in research on etiology and treatment. Research on services for individuals with disabilities in college indicated that services should be designed more specifically to the needs of the stakeholders (Getzel, 2008; Tagayuna, Stodden, Chang, Zeleznik, & Whelley, 2005). There are several services to support individuals and their families in their pursuit of a college education. Programs such as Achieving in Higher Education with Autism/Developmental Disabilities ([AHEADD], n.d.), Treatment and Education of Autistic and related Communication handicapped Children ([TEACCH], n.d.), Online Asperger's Syndrome Information and Support ([OASIS], n.d.) center, and Think College (n.d.) are just a few services available to provide information and online support for students and families [for URL's see the reference page]. Additionally, there are several institutions that have programs for students with ASD such as Drexel University and Saint Joseph University's Kinney Center for Autism and Support (Hochman, 2011, p. E2) or the College Program at Marshall University in West Virginia (Hansen, 2011). However, these programs may have additional costs to the university's tuition. In one review of research on opinions of students regarding disability services, Stumbo, Martin and Hedrick (2009) indicated that students reported that disabilities service programs, in general, would be more effective if they had more personnel and created support networks based on the individual needs of students rather than attempting to create generic supports.

In order for services to benefit individuals with ASD they must provide supports that the individual identifies as meeting their needs. Support services in college are voluntary and individuals with ASD must seek out these services independently, which is a transition from the specialized education services many received in high school. Thus, for young adults diagnosed with ASD to invest in services to support their needs, the services must be created with their needs as the main goal. Many support service programs are designed to address diagnostic deficits, and while those services may be beneficial, students who did not identify with those needs may not utilize the services.

The voice of autism. "The loneliest thing in the world is having nobody understand you" (Adler, 2006, p. 163). There are a number of studies related to the diagnostic criteria, treatment groups, and treatment methods pertaining to individuals diagnosed with ASD (Barnhill, Hagiwara, Smith Myles, & Simpson, 2000; Bowler, 2007; Klin, Volkmar & Sparrow, 2000). However, there is limited information aside from books and autobiographies that attempts to explain the meaning and experiences of individuals with ASD from their viewpoint. In creating a research study designed to give a voice to the social experiences of individuals with AS and ASD in college, it was necessary to begin with a general understanding of the experiences of individuals living with autism or Asperger's syndrome. Many individuals and family members described their experiences of feeling disconnected from others. Several accounts addressed language and communication barriers that kept any connections with others superficial. One author wrote:

> People would say they were laughing with me, not at me, but I wasn't laughing. So I copied them, and made what they said correct. Then they would laugh at my strange laugh, and I would laugh with them, and they would think I was amused and amusing. This would prove useful when I was older. I'd get invited back again (Williams, 1992, p. 16).

A common theme in these accounts included feelings of isolation and loneliness as the authors began to realize their difference and how it created barriers in their ability to connect with others (Ariel & Naseef, 2006). In addition, some individuals who began to understand their difference in terms of social challenges tried techniques to feign fitting in. Some accounts indicated that communication and the subtleties of nonverbal mannerisms were little more than mimicry with little connection to meaning or independent thought. Williams (1994) explained that there was no connection to or understanding of her "self" and so she was susceptible to manipulation and programming because she did not differentiate her "self."

This discussion of the experiences of individuals diagnosed with ASD raises awareness of the challenges that they face in daily social interactions as well as their attempts to fit in socially. It also illuminates the necessity of research to understand the needs of individuals living with ASD as they define them rather than as professionals define them based on diagnostic deficits. Specifically, research such as this study may enlighten professional service providers at the postsecondary level as to the needs of the population of college students with ASD in order to design services that might better address the exploration of their emerging professional adult self as well as their social needs.

Method

Naturalistic inquiry utilized in this study examined the phenomena of students with AS or ASD in colleges, their perceptions of their social needs, and their experience of how their social needs were met. Naturalistic inquiry enables the researcher, as the human instrument, to assess the multiple realities of a phenomenon within the context of the phenomenon (Guba & Lincoln, 1985). Examining their perspectives through a naturalistic approach enabled the researcher to develop an understanding of the multiple realities for college students living with ASD in the context of their college experience. This provided an opportunity to identify the needs and recommendations of students with ASD. For the purpose of this study three methods of data collection were incorporated: questionnaires, individual interviews, and focus groups. Using these methods of data collection allowed for the triangulation of the emergent themes by enabling the cross analysis of themes in order to assess the validity of the findings. This study also utilized three different collection methods in order to accommodate the comfort level of the participants, as some individuals might have felt less inhibited participating in the anonymous questionnaire than with the social exposure of an interview or focus group.

A questionnaire was sent to the disability service offices at five participating universities in the southeastern Pennsylvania area to be disseminated through an email link to those individuals who had self-identified as having AS or ASD. In addition, a link to the questionnaire was sent to individuals who contacted the researcher and expressed interest in participating in the study through snowball sampling or Internet message boards. Snowball sampling is a participant recruitment process in which participants are referred to the study by other participants (Patton, 1987). The Internet message board called wrongplanet.net, a blog site that enables individuals, caregivers and providers with opportunities to communicate through online postings, was used to post a link to the survey. In addition to data gathered through questionnaires, five individual interviews were incorporated to further interpret and elicit emergent themes. Finally, two focus groups consisting of two to five individuals were conducted to add a richer description of the perspectives of students with ASD in college as to their social needs, their experiences related to having those needs met, as well as services available to them in college.

Specifically, the research questions for this study were:

1. What do students with Asperger's syndrome in college perceive as their primary social needs?
2. What is the experience of students with Asperger's syndrome in college as to how their social needs are met?

Sampling Process

The researcher obtained approval from an Institutional Review Board (IRB) to ensure the protection of human subject procedures used in this research methodology. The approval process included an application format that required an explanation of the participant's rights throughout the study and how those rights were protected. In addition, informed consent forms for each method of data collection were incorporated. An informed consent page was included as the first page of the online questionnaire as well as at the beginning of each interview and focus group.

As a part of the scientific rigor in naturalistic inquiry, thick description of both the setting and sampling process supports transferability (Erlandson, Harris, Skipper, & Allen, 1993). In order to maintain scientific rigor in such a study, it was essential to incorporate an audit trail to guard against assumptions and biases. Scientific rigor was preserved through use of a reflexive journal, member checks throughout to incorporate the feedback of the participant members to enhance credibility, and thick description of the context to ensure transferability (Erlandson et al., 1993; Guba & Lincoln, 1985). In this study, the thick description of the setting and the sampling process enables transferability of the findings to similar students in similar settings. Additionally, the settings for the individual interviews and the focus groups from this study were particularly important as to enhance the comfort of the participants who might have been inhibited in certain social settings.

Sampling method for questionnaires. Participants for the online questionnaires were obtained through disability services offices at four-year colleges or universities, through snowball sampling as well as through postings on message boards of Internet support websites such as wrongplanet.net. The disability service directors at five universities in southeastern Pennsylvania emailed a link to the questionnaire to students who had self-identified with their office as having AS or ASD. The postings on wrongplanet.net included the purpose of the study, the researcher's contact information as well as a link to the anonymous questionnaire.

Sampling method for the individual interviews. Participants who received the questionnaire were asked

if they were interested in participating in an individual interview, both a focus group and interview, or neither option. Participants had the option of providing contact information on the questionnaire in order to have an interview arranged or they could contact the researcher directly. Those who expressed interest in the interview portion of the study, and who qualified based on inclusion criteria were then contacted by phone or through email. The purpose, procedure, and data collection process as well as the informed consent forms were explained.

Sampling method for the focus group. Participants for the focus groups were obtained through two methods. First, the participants who completed the questionnaire were asked through one of the items if they were interested in participating in a focus group. Participants who expressed interest in the focus group and who qualified based on inclusion criteria were then contacted through email or by phone, if contact information was provided on the questionnaire. The second method through which participants for the focus groups were accessed was through disability services (DS) offices. The DS directors at the participating colleges were asked to assist in the arrangement of several focus groups at their offices. The directors were then asked to send an email to all of the original recipients of the questionnaire link to invite them to participate in the focus groups.

Inclusion criteria. There were several inclusion criteria for participation. First, individuals were included who self-identified as having AS or ASD. Additionally, to be included, students had to be enrolled in or had to have completed at least one semester of an undergraduate program at a four-year college or university. A final criterion for inclusion was that individuals who were not currently enrolled in a college or university had to have graduated from a college or university with a Bachelor's degree within the previous five years. Therefore, individuals who were in graduate school or who were recent graduates would have been included in the study. Changes in legislation such as those in the ADAAA may have changed DS in colleges. Service providers are required to provide reasonable accommodations to support students with disabilities and the nature of the legislative changes are designed to prohibit institutions from making excessive requirements of students for proving disabilities through documentation (Americans with Disabilities Act, 2008). Therefore, with this change in the impetus for institutions to provide accommodations, students having attended college longer than five years ago may not have had the access to support and services such as those available since the changes to the ADAAA.

Participants

Based on the inclusion criteria, 24 students participated in the study. Demographic information was elicited from participants completing the online questionnaire; however, in order to protect the confidentiality and anonymity of the students in the focus groups and interviews, no self-identifying information was elicited. Participants in all three methods were asked their grade level. Participants' most frequent response to the question of grade level was "freshman." While graduate students would have been included based on the inclusion criteria, no students directly indicated that they were currently in graduate school. The majority of the participants were undergraduate students; however, some participants who did not respond to the question of grade level may have already received their Bachelor's degree. Participants consisted of 10 female students and 14 male students. The range of ages for the participants was 18 to 29 with a mean age of 22.5 years and a mode of age of 19. Table 1 represents all of the demographic information for participants separated by the collection method. All of the data represented in Table 1 are from distinct individuals.

Setting

As indicated in the discussion of the naturalistic inquiry method of data collection, thick description of the setting facilitates the transferability of the findings. The settings for the interviews as well as the focus groups were located either on the campus of the participating colleges and universities or, in one case, the participant's room via Skype. The settings were chosen by the student participants in conjunction with the researcher to assure the comfort of the students and decrease any anxiety or intimidation related to social settings. Two of the interviews were conducted separately in small, private study rooms in the libraries of the universities that the students attended. As mentioned, one interview was conducted via Skype. The remaining interviews were coordinated with the DS directors and the student to enable use of private rooms in the DS offices. The two focus groups were coordinated with the assistance of the directors of the disabilities programs by sending detailed email invitations to students who had originally been sent the link to the online questionnaire. These focus groups were conducted in a conference room at the DS offices.

Data Analysis

This was a qualitative study that employed a naturalistic inquiry where the researcher is the human instrument that conducted the interviews and focus groups as well as the data analysis. The researcher ana-

Table 1

Participant Demographics

Collection Group	Age	Gender	Ethnicity	Grade	College Type
Questionnaire					
	18	M	Caucasian	Freshman	*
	18	M	*	Freshman	Public
	19	M	*	Freshman	Public
	19	F	Caucasian	Freshman	Private
	19	F	Caucasian	*	Public
	19	F	Caucasian	Freshman	Private
	19	F	Caucasian	Sophomore	Public
	19	F	Caucasian	Freshman	Public
	20	M	Caucasian	Sophomore	Public
	20	M	Caucasian	Sophomore	Public
	21	M	Caucasian	Senior	Public
	22	M	Caucasian	Senior	Private
	24	F	Caucasian	*	Private
	25	F	Caucasian	Freshman	Public
	27	F	Caucasian	Junior	Public
	27	M	Caucasian	*	Public
	29	M	Caucasian	*	Public
Interviews					
	22	F	*	Senior	Private
	26	F	*	Junior	Private
	21	M	*	Sophomore	Private
Focus Group					
	22	M	*	Junior	Public
	28	M	*	Senior	Public
	28	M	*	Sophomore	Public
	29	M	*	Senior	Public

* Indicates missing data

lyzed the data in a continuous two-step process. The first step in the process involved a line-by-line analysis of the responses for all three collection methods to assess for the emergence of converging themes. This first set of main themes or categories was then analyzed in a second line-by-line step to assess for the emergence of any newly identifiable main themes or the divergence of the categories into subcategories. The main categories that emerged consisted of general discussions of experiences in college, social experiences, needs, and services at the postsecondary level. With each new set of responses to the questionnaires, interviews, and focus groups, the data were coded according to the existing category sets and the researcher assessed for the emergence of new categories. Data analysis continued to the point of saturation at which time no new themes emerged from the responses. Throughout the analysis, the researcher maintained scientific rigor by periodically performing member checks and peer reviews of the emerging themes. The purpose of this article is to explore the student responses to their needs at the postsecondary level.

Results

Needs Related to College

The purpose of this research study was to identify the needs of students with ASD in college to provide information to administrators and service providers at the postsecondary level to assist in the development of supports for students. As students were asked to identify their social needs, the responses and discussions related to social needs expanded to include discussion of some elements related to daily living skills and academic needs; therefore, a general category of Needs Related to College emerged. The main category of Needs Related to College further diverged into four subcategories: Social Needs, Academic Needs, Daily Living Needs, and How Those Needs Are Met.

Social needs. The first subcategory that emerged in the responses related to Needs indicated that social needs were a prevalent although not exclusive need. Thirty-nine responses from all three data collection methods related to the subcategory of Social Needs. There was a dichotomous sentiment related to meeting new people. Nine responses revealed that meeting more people was a social need, while seven reported that they did not feel a need to meet people. Student responses on the questionnaires expressed, "I would have preferred an easier way to find others who went to college to study and not goof off" and "I definitely needed places to talk to people." For those who indicated that they had social needs, these needs were

in the form of finding places to meet people. One student explained, "You just want to get out there, but you don't know where to go or what to do." Another student shared:

> It's just really challenging socially… kind of the feeling of not really knowing what to say and what to do and as a result of that people kind of leave me out or think I'm a little weird or quirky or more likely just shy… when that is not really true at all. I just really don't know what to do.

Other responses indicated they were not able to conceptualize their needs. One student responded, "I am not sure what my social needs would be." Another student stated, "I don't really feel the *need* to socialize outside of my limited social circle." However, the themes that evolved from this data cluster indicated that students who did express a desire to meet people, expressed needs in terms of finding places to meet others with similar interests. In order to facilitate the meeting of people, students indicated that their needs related to knowing how to meet people and what to do or say to meet people. This need for some social skills around initial socialization bridged with the second subcategory that developed related to Academic Needs. Several students indicated that their Academic Needs related to assistance with social elements of group work.

Academic needs with group work. College students with ASD who may be challenged by social communication skills may find that the group work environments simply accentuate their difficulties with social communication. This was a common theme that emerged in terms of Academic Needs, while addressing social needs relevant to college. Several students indicated that their social needs were related to needing assistance with social interactions during group work, thereby bridging the theme of Academic Needs and Social Needs through the teaching methods of group work. Students who responded to the online questionnaire reported that they struggled with navigating the group process. One questionnaire respondent stated:

> In class, every time I am placed into a group, slowly everyone starts to act distant and angry with me, leaving me to become the scapegoat and take the blame for anything that goes wrong, despite being a straight A student. When I contact instructors about my concerns, I am often told to talk it out with my group, which goes nowhere.

Through the individual interviews, the needs of college students with ASD became clearer. The academic skills

were not as much a concern as the social elements of the classroom. For example, one student shared in the interview that, "the other big challenge was definitely managing people in class, particularly when I was at the liberal arts college. There was a lot of group work and that was a major problem."

The challenge of group work related to managing the social elements of the group process. Individuals with AS or ASD had to discuss, problem solve, and cooperate with other students in a way that increased social interaction and required the ability to lead in some circumstances. One student explained:

> It's like, okay, the other people in the group are already interacting with each other. Sometimes it's a little bit social and not just getting into the assignment. Like, there is a lot of stuff that has to be done… all that little small talk and stuff, and I just kind of freeze up.

In terms of addressing specific needs, the common theme that emerged was the sense that group work was a source of difficulty for college students with ASD. Group work required utilization of social skills that were a challenge to participants. They struggled with knowing how to engage in the group as well as how to navigate the distribution of assignments. Students with ASD in college, as was evident from this study, have social skills needs relating to how to navigate social settings in both the social arenas of college as well as the classroom setting.

Daily living needs. Participants reported a variety of living arrangements: some lived at their parents' homes, others reported living in dorms, while others reported commuting from their own apartments. Thus, the living arrangements of students varied greatly, but a common theme emerged in terms of needing support in daily living skills. Specifically, a student reported, "I have difficulties taking the bus due to anxiety issues. In addition, the bus routes and schedules are often changed, which flusters me quite a bit." In the individual interviews students elaborated further, explaining that independent living posed a challenge. Maintaining a schedule for functional skills such as eating, sleeping, and organization was difficult for some of the students. One student shared:

> Even just things like figuring out what to eat and things like that. I mean, it seems like a simple thing and in isolation it is a simple thing, but when there are all these things that I also have to – that are otherwise really simple – they start to feel a lot more complicated or I just forget about them.

Part of the daily living difficulties involved prioritizing. As one student explained, when he became overwhelmed in his course work, his daily living needs began to suffer. He indicated that his hygiene and self-care suffered due to his coursework. Thus, part of the adjustment to college for students diagnosed with ASD involved Daily Living Needs and help navigating tasks such as where and when to eat, sleep, how to navigate transportation and so on. Even students who commuted from home struggled with these issues related to independence. For example, as one student explained:

> I missed my first train today because I couldn't find my keys and I know that is not something that is limited to people on the spectrum but the reason I couldn't find them was because I don't remember to just put them in the same spot when I come home. Like, unless somebody is there to tell me, like, "Oh, you have to put your keys in the same spot every time you come home," I just have to rely on visual memory of like where I last saw my keys. You know, um, it is just simple things like that, that like in isolation are pretty insignificant but then when things like that are kind of like the building blocks of your life, it gets really difficult.

As students were addressing their needs in college they discussed the challenges they faced with daily tasks. It became clear through the discussion that Needs Related to College expanded beyond social needs to include social supports in both the Academic as well as Daily Living activities.

How Needs are Met

Analysis of the data clusters of Needs Related to College revealed a subcategory entitled, How Needs Are Met. In discussion of their needs, students identified three avenues for having their needs met: Through family, school, or social media.

Family. Thirty-three responses to questions related to needs pertained to How Those Needs Are Met. Of those 33, 11 responses indicated that students had their social needs met through their family. Responses to online questionnaires indicated that several students, particularly those who indicated that they commuted, regularly socialized with their parents. While that is logical for students who lived at home, social needs met through family interaction was still a common response for those students living on campus as well. Take as example statements from both questionnaires and interviews. One student stated, "I was so lonely in college, I would drive home to be with family a lot on weekends." Another student stated, "I come home

to visit my parents every other weekend; they live an hour and a half away. They don't share my interests, but it's nice to have people talk to me."

School. While family satisfied the social needs for many students, others indicated that some of their socialization needs were met through friends they had made at college. Of the 33 responses regarding how social needs are met, 15 responses indicated that students socialized with classmates or through other school related activities. One student indicated, "I've found friends in various areas. For example, I found one friend at a school club and another one outside during a fire alarm at my dorm." Responses in the interviews and focus groups corroborated this sentiment. One student stated:

> I got along like with everybody in my classes and stuff, um, so I can actually like, I can actually do like the witty banter and stuff so that helps, um, I find that if you can be funny people react well to you.

Finally, other students shared that their colleges sponsored group activities that facilitated their social interactions and helped them meet people. The students indicated that they had met individuals and benefited socially from these groups.

Social media. The third divergent theme related to How Needs Are Met was through social media. Students indicated that they utilized Internet sites and social media sites to engage other individuals with similar interests. One interviewee explained:

> I use Facebook and I have met other people on the spectrum, which has been nice. Um, and I have been able to interact with females on the spectrum that way. So that's nice because like you can just post certain things and they just get it, you know? Like, if I am trying to explain an experience… people will try to make you feel better about it by saying, "Oh well, I think a lot of people have trouble with that"…[but] it is really invalidating… Then you can just go online to these other girls you have met with autism and say, like, "Oh my gosh! This happened today." They are like, "Oh gosh! Not that" and they just get it because it has happened to them too… that has been nice.

Discussion

Responses to the question of social needs in college expanded to include discussion of college needs in general. These responses clustered to form a main category entitled Needs Related to College. Through further analysis, this main category diverged into subcategories: Social Needs, Academic Needs, Daily Living Needs, and How Needs Are met. The subcategory of How Needs Are Met further diverged into three means through which the students' social needs were met: through family, school activities or classmates, and social media. While many students indicated that they interacted socially with their families, some indicated they had met friends through college and had some of their social needs filled through social interactions at college. In addition, other students indicated that social media was a source of social satisfaction that enabled them to meet people with similar interests.

While the divergent themes emerged as separate subcategories, there was some linking and bridging among the subcategories in Needs Related to College. In particular, social needs statements centered on needs related to skills and opportunities to meet other students with similar interests. Also, Academic Needs bridged with Social Needs such that students indicated that their Academic Needs centered on the social elements of group work in the classroom and navigating the social challenges of the classroom environment. Additionally, Academic Needs linked to Daily Living Needs as student statements indicated that their daily living needs suffered at times, due to difficulties managing challenging course loads and daily routines.

The findings of this study mirror earlier findings about the need for support for social interaction and social communication to navigate a variety of social situations (Müller, Schuler, & Yates, 2008; Sperry & Mesibov, 2005; Taylor, 2005). In addition, findings related to the main research question of social needs indicated that students needed support beyond socialization to include supports for navigating the social elements of the classroom such as appropriate participation and group work. These findings are important for professionals who provide campus services. In addressing the main research questions, students discussed their needs in terms of the social challenge of knowing how and where to meet people who might share their interests. Beyond that, some students also shared their social needs in terms of navigating the social elements of the classroom setting such as group work and group assignments.

In a study of students without disabilities and the significance of organized activities in college transition, Bohnert, Aikins, and Edidin (2007) found that increased time spent participating in activities in college was more beneficial to students who had difficulties with social transitions, which was identified through reports of loneliness and social dissatisfaction. Researchers speculated that students whose social ex-

perience was more negative were more likely to benefit from organized activities. As the researchers explained:

> Emerging adults with a poor history of social adaptation may carry forward social information processing biases or social skills deficits that make the transition to college particularly difficult. For those individuals, involvement in organized activities may provide a smaller, structured social context…which facilitates the creation of high-quality friendships and feelings of social acceptance (Bohnert et al., 2007, p.203).

While the Bohnert et al. study's respondents were neurotypical college students, the findings could be applicable to college students diagnosed with ASD, as many of them come to college with a sense of social anxiety in light of their past experiences of social challenges. Thus, the needs for a way of meeting individuals with similar interests, as expressed by students in this research, supported the idea that organized activities such as new student orientation meetings, dormitory floor meetings, clubs, or other socialization groups could not only fulfill the social needs of students with ASD in college but also increase their sense of social acceptance.

Implications for Disability Service Providers

While changes to the ADA in the Amendments of 2008 do not specify accommodations to be made for college students with disabilities, many DS programs provide an array of services that meet the needs of students from academic accommodations to accommodations to support individuals with physical needs such as those with hearing or visual impairments. The challenge as highlighted by Dillon (2007) is that services specifically designed to support the social needs of individuals are not universally considered to be necessary elements of the postsecondary programming. However, some institutions already incorporate programming to increase socialization among students with peer mentoring services as well as orientation groups and other social clubs and services to coordinate the transition process (Fatscher & Naughton, 2012). Results of this study such research that indicates that success in the postsecondary environment can be enhanced by activities and services that encourage the development of social relationships and social interactions for students with ASD (Fatscher & Naughton, 2012).

When considering the implications of this research, services that promote the development of social communication skills, particularly in the classroom and during group work, would help individuals with ASD be more successful in their academic endeavors as well as their social endeavors. Thus, programs that create opportunities for students to practice appropriate classroom behaviors, groups that encourage students to discuss techniques for successful group work experiences, as well as experiences for students with ASD to interact with neurotypical students to begin to feel more comfortable with their own style of communicating in groups, would ultimately benefit students academically. Disability services coordinators attempting to better accommodate the needs of students diagnosed with ASD may need to conceptualize accommodations for the social elements of the classroom. Doing so may enhance students' access to the learning experiences that professors and postsecondary institutions are attempting to create through group assignments and collegial learning environments.

Potential services to be considered as identified by participants in this study might include, as one student suggested, a peer mentor that was "there for whatever I need her for." A peer mentoring program designed to support students with ASD in the transition to college could not only provide opportunities for those students to practice social skills in a variety of college settings (dorm living, cafeterias, study groups) but such opportunities could also benefit neurotypical students by enhancing their sense of belonging and connection to the university or college. Fatscher and Naughton (2012) discuss the benefit of programs to support students with ASD such as peer mentoring and training programs to increase awareness for the needs of the population of fellow students struggling with the social challenges associated with the diagnosis of ASD. In addition to helping and supporting students with ASD in navigating the transition to college, peer mentoring programs available in many colleges also provide opportunities for students to engage other students through group activities (Fatscher & Naughton, 2012).

Other services that could support students with ASD would include groups through which they could meet other students with similar needs and interests. Often universities and colleges have clubs, meetings, and social events such as orientation activities that enable and encourage students to meet and connect with other students. Results of this study support research of first year students related to the importance of developing a sense of belonging (Pittman &Richmond, 2008) and peer led support groups in college (Mattanah et al., 2010). Students who reported an increase in their sense of belonging in terms of college adjustment also reported increased self-perceptions associated with academic competence (Pittman & Richmond, 2008). Additionally, students who participated in peer led sup-

port groups reported increased feelings of adjustment (Mattanah et al., 2010). While these two studies were conducted with neurotypical first year students, results from the current study support earlier findings about increased social adjustment and sense of belonging. Services that took student needs and recommendations from this research into consideration would enable students to achieve autonomy in service selection and would encourage them to identify their academic and social needs and interest. In addition, administrators could use information from this study to create trainings for student staff members such as Resident Assistants and Teaching Assistants in ways to better understand the needs and communication styles of college students with ASD. Results of this study could also be used to help administrators create professional development opportunities for faculty, administrators, counseling center staff and other support personnel, focusing on the communication patterns and classroom needs they may encounter with this population.

Limitations

Limitations to be considered in reviewing these findings involved aspects of the population studied. Specifically, due to potential communication challenges experienced by some individuals with ASD, misinterpretation of the questions in the three collection methods was possible. However, steps were taken to ensure opportunities for clarification and discussion should misinterpretation or misunderstandings of the questions have arisen. These measures included provision of the researcher's contact information for the online questionnaire as well as discussion and examples provided during the interviews and focus groups for clarification purposes. Also related to population elements, the majority of the participants were obtained through the disabilities services offices of their colleges or universities. Therefore, students who may have ASD but were not connected with their DS offices would not have had the opportunity to participate aside from the snowball sampling approach. Therefore, there may have been larger numbers of individuals with ASD on the college campuses who could have participated but were otherwise unaware of the study. Thus, responses and themes may only be applicable to students with ASD in college who are comfortable seeking support from the DS programs at their colleges.

Future Research

Several implications for future research emerged from the data. First, as individuals discussed the use of social media to accommodate their social needs,

further exploration of this medium for socialization might prove beneficial not only to students but also to service providers. Specifically, as social media is becoming more widely utilized, studies to assess the use by individuals with ASD as a means of not only socializing, but also gaining and practicing social skills, would be insightful. For example, researchers could study interest groups or orientation groups that were conducted via an online format, chat room, or message board. Such a study could explore social media as a potential avenue for supporting the success and transition of students with ASD at the postsecondary level. Finally, postsecondary education is conceptualized to prepare young adults for careers in their chosen field of study. The academic curriculum at the postsecondary level is designed to prepare students for their future employment. Many students with ASD may succeed academically but find it very difficult to navigate the job search process, including the interview phase, in order to obtain employment. Thus, services that teach skills for navigating group work in courses should be studied for their effectiveness in supporting the development of professional social communication etiquette that would also support students in the job search process. Future studies should assess the effectiveness of social support services for their significance in helping students with ASD as they enter the job market and in their search for employment.

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About the Author

Jennifer Cullen received her M.A. in social work from the University of Pennsylvania and Ph.D. from Widener University. Her experience includes working as a therapist in a residential treatment facility, a support staff training coordinator and a support coordinator in a disabilities service office at a four year university. She is currently an assistant professor in the Center for Social Work education. Her research interests include working with vulnerable adults and supporting young adults diagnosed with ASD in the transition to adulthood. She can be reached by email at: jacullen@mail.widener.edu.