

A NATIONWIDE SURVEY OF DISABILITY SUPPORT PERSONNEL REGARDING
TRANSITION AND SERVICES FOR POSTSECONDARY STUDENTS WITH
AUTISM SPECTRUM DISORDER

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ABSTRACT

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The purpose of this exploratory study was to analyze the perceptions (through survey data) of Disability Support Services (DSS) personnel regarding the transition process for students with Autism Spectrum Disorder (ASD) from secondary to postsecondary institutions. Participants from 408 postsecondary institutions completed the survey with 60.4% from public and 39.5% from private institutions, and 66.8% from 4-year and 33.2% from 2-year institutions. The majority of participants considered ASD to be a life-long disorder. Only 52.7% of participants accept a diagnosis from a school psychologist, and 73.3% indicated that high school reports range from not useful to somewhat useful in determining eligibility. The majority of participants (66.2%) indicated that reports must be more recent than 3-years old to qualify for services. Furthermore, this study attempted to determine the availability of mental health services, social skills services, academic supports, and activities of daily living services for students with ASD. Comparisons were made between public versus private institutions, 2-year versus 4-year institutions, and across the Northeast, West, Midwest and Southern regions of the United States. Significantly more 4-year and public institutions conducted mental health services at a

counseling center. More 4-year institutions were likely to provide social skills services. Private institutions were more likely to provide job coaching and peer-mentorship services as social skills services. There were no significant differences between the overall numbers of social skills, academic, and activities of daily living services offered between the various regions in the United States. These results provide information regarding the perceptions of ASD by DSS personnel and the availability of services for students with ASD across the United States.

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CHAPTER I

INTRODUCTION

Individuals with Autism Spectrum Disorders (ASD) generally have impaired communication skills, poor social skills, stereotyped or repetitive behaviors, and difficulties managing activities of daily living (American Psychiatric Association [*DSM-IV-TR*], 2000). Although ASD is generally conceptualized as a disorder affecting childhood, the symptoms of ASD have serious implications for adolescence and adulthood. The prevalence of ASD has increased greatly. Recent estimates from the Centers for Disease Control (Rice, 2009) estimate the prevalence of ASD to be 1 in 110 children with the rates increasing to 1 in 70 for males.

The autism spectrum includes individuals with a wide variety of cognitive impairments ranging from mental retardation ($IQ < 70$) to superior intelligence ($IQ > 130$). Although the majority of research has focused on individuals with more severe forms of ASD, most individuals diagnosed with ASD have intact cognitive functioning ($IQ > 70$) (Rice, 2009). As students with ASD age, individuals with intact cognitive functioning are seeking to continue their education.

Each year, more students with disabilities are matriculating from secondary schools (high schools) into postsecondary (college and university) settings. According to the American Council of Education's (ACE) HEATH resource center (Henderson, 1999) over 9.4 percent of all first-year college students report having some form of disability.

The percentage of first-year college students with a disability has tripled since the 1970s (Henderson, 1999). While more children are diagnosed annually with ASD, over 80% of individuals with ASD are under the age of 18 (Rice, 2009). This implies that as the population of students with ASD ages, more students with ASD will seek entry into postsecondary institutions.

There are significant medical costs associated with ASD. A recent study estimated that on average, individuals with ASD spend 4.1 – 6.2 times more on medical expenditures when compared to those without ASD (Shimabukuro, Grosse, & Rice, 2008). Ganz (2007) measured the lifetime costs of caring for an individual with ASD. The study included both direct costs such as the costs of goods and services, and indirect costs such as loss of productivity and income. For example productivity loss includes the loss of income potential between someone with ASD and without ASD; it also captures the lost income potential for parents due to a reduction and/or loss of work hours to care for their offspring with ASD.

Overall, it costs society 35 billion dollars annually to treat and care for individuals with ASD (Ganz, 2007). Ganz estimated these costs to be a staggering 3.2 million dollars per capita. The largest direct cost was adult care for individuals with ASD (Ganz, 2007). When the costs are measured, the societal benefits of postsecondary education and continued preventative measures for individuals with ASD throughout their lifespan becomes clear.

The Individuals with Disabilities Education Act of 2004 (IDEA) guarantees a free and appropriate education to all children in primary and secondary public institutions. ASD is one of the 13 specific categories of disability within the IDEA (2004). Thus, when students with ASD have an academic need, they receive accommodations (adjustments to their environment or academic materials) to give them the greatest opportunity to succeed.

Individuals with ASD need customized accommodations to enable their access to educational materials because of the variety of symptoms that an individual may display. Some common accommodations that are needed by individuals with ASD include explicit training to facilitate social skills which are the pro-social behaviors necessary in order to have a positive social interaction (Rao, Beidel, & Murray, 2007). Students frequently need help with effectively using and understanding verbal and non-verbal communication. Additionally, students may need modifications to their environment to support sensory issues such as fear of loud noises.

In addition to the social, communication, and behavioral symptoms associated with ASD, individuals often suffer from co-occurring (comorbid) psychological disorders such as anxiety and depression (VanBergeijk, Klin, & Volkmar, 2008), and/or have a learning disability (Barnard, Muldoon, Hasan, O'Brien, & Stewart, 2008). These students may need modified curriculum to ensure that they are adequately accessing the academic material.

When students graduate from secondary institutions, they are no longer under the protection and jurisdiction of the IDEA. The law protecting the rights of students with disabilities in postsecondary institutions is the Americans with Disabilities Act of 1990 (ADA) or Section 504 of the Rehabilitation Act of 1973. Both the ADA and Section 504 are federal laws that require postsecondary institutions to provide equal access to the educational environment for students with disabilities.

Unlike IDEA, which attempts to maximize a student's educational material by adjusting the curriculum to best fit the student's strengths and weaknesses, the goal of the ADA and Section 504 is to provide equal access to educational materials and prevent discrimination. The accommodations and modifications available to a high school student are not necessarily available to a college student. Thus, educational supports that students have had through their entire educational career (K-12) may no longer be available to the students when they matriculate to postsecondary institutions.

Furthermore, students in postsecondary institutions are required to self-disclose their disability and seek out services. This is usually done by contacting the institution's Disability Support Services (DSS) office. There is no unified process for determining eligibility for services or the level of accommodations that will be provided to the student. Thus, students with the same diagnosis (i.e., ASD) attending different postsecondary institutions may go through entirely different processes to determine their eligibility for services and the corresponding appropriate accommodations.

Accessing services is especially difficult for students with ASD because they have an invisible disability that is not immediately evident to outside observers (Burgstahler, 2008). Unlike more visible disabilities (i.e., mobility, sight, hearing) it is often unclear what constitutes a reasonable accommodation for a student with ASD under the ADA and Section 504. As greater numbers of students with ASD enter postsecondary education, there will be difficulties for DSS personnel determining reasonable accommodations. The difficulty of transitioning to a postsecondary institution is exacerbated for students with ASD because these students are accustomed to accommodations and protections under the IDEA.

Statement of the Problem

Professionals working within secondary education and postsecondary education operate under separate policies, laws, and systems of governance. Thus, their systems remain disjointed and effective transition for students can suffer because of the separate governance and policy systems (Kirst & Venezia, 2007). There have been many calls for improving the documentation and transition process for students matriculating from secondary institutions to postsecondary institutions (Kirst & Venezia; NJCLD, 2007; VA HELP, 2007).

The drastic increase in children diagnosed with ASDs during the 1990's created a new group of students now approaching college age (Rice, 2009). These students are accustomed to the accommodations afforded to them under the IDEA within the secondary school setting. As these students transition into postsecondary institutions the

types of accommodations that are available will change. Some of the questions posed by this study will be: How is ASD perceived by Disability Support Services (DSS) personnel? Do transition reports from secondary institutions meet the requirements of postsecondary institutions in determining eligibility and appropriate accommodations? What accommodations are currently available to students with ASD within the postsecondary setting?

Statement of Purpose

Professionals within both secondary and postsecondary institutions must be trained to facilitate the transition process for students with ASD. It is essential to maximize the time and resources of secondary institutions that are responsible for writing the transition reports to ensure that these reports meet the eligibility criteria set forth by postsecondary institutions. It is also important for personnel at the secondary level to develop reports that outline accommodations that are linked to the diagnosis of ASD and are appropriate for students at the postsecondary level.

The purpose of this dissertation will be to gather information that could aid school psychology professionals with the transition of students with ASD between secondary and postsecondary institutions. Another goal of this dissertation will be to describe accommodations that are currently available to students with ASD within postsecondary institutions. Specifically, what mental health, social, academic, activities of daily living, and general supports are available for students with ASD. An understanding of the current state of accommodations is necessary for students, parents, and professionals to

effectively advocate for additional accommodations and to help students transition smoothly.

Significance of Study

This dissertation will add to the overall knowledge base in psychology by increasing the awareness of transition services between secondary and postsecondary institutions and highlighting areas of opportunity for communication between secondary and postsecondary personnel. In addition, this study will survey specific accommodations and modifications that students with ASD can expect to receive as they begin to enter college and university systems.

The specific research questions are:

1. How do DSS personnel perceive ASD?
2. What documentation standards are acceptable to postsecondary institutions in determining eligibility and appropriate accommodations for students with ASD seeking disability support services?
3. What types of services are available to students with ASD attending postsecondary institutions?
4. How do disability support services that are provided for students with ASD differ between the public and private university system?
5. How do disability support services that are provided for students with ASD compare between 2-year and 4-year institutions?

6. How do disability support services for students with ASD differ from region-to-region across the United States?

Definition of Terms

The following definitions are provided to ensure clarity of understanding for the purposes of this study:

Activities of Daily Living - “Adaptive skills, or skills that are involved in coping with the demands of the everyday environment” (Liss et al., 2001, p. 219).

Accommodation - an adjustment that is made to the environment or academic material to allow individuals with disabilities equal access.

Americans with Disabilities Act (ADA) - Civil rights legislation signed in 1990 that prohibits discrimination against individuals with disabilities.

Asperger’s Disorder - A Pervasive Developmental Disorder that is characterized by limited and difficult social interactions, problems with communication, and “restricted repetitive and stereotyped patterns of behavior, interest, and activities” (*DSM-IV-TR*, 2000, p. 84). For the purpose of this dissertation, Asperger’s Disorder will be combined with autism and referred to as Autism Spectrum Disorder (ASD).

Autism - A Pervasive Developmental Disorder that is characterized by limited and difficult social interactions, problems with communication, and “restricted repetitive and stereotyped patterns of behavior, interest, and activities” (*DSM-IV-TR*, 2000, p. 75). Unlike Asperger’s Disorder, there is “abnormal functioning in

at least one of the following areas, with onset prior to age 3 years: (1) social interaction, (2) language as used in social communication, or (3) symbolic or imaginative play” (*DSM-IV-TR*, p. 75). For the purpose of this dissertation, autism will be combined with Asperger’s Disorder and referred to as Autism Spectrum Disorder (ASD).

Autism Spectrum Disorder (ASD) - A group of disorders which includes Asperger’s Disorder, High Functioning Autism, and Pervasive Developmental Disorder - Not Otherwise Specified. Throughout this dissertation, the term Autism Spectrum Disorder (ASD) will refer to this group of disorders.

Comorbidity - “Broadly refers to combinations of any types of psychiatric disorders that co-occur in the same individual” (Bennett & Gjonbalaj-Morovic, 2007, p. 34).

Disability Support Services - the department on postsecondary campuses that is responsible for determining the eligibility and appropriate accommodations for individuals with disabilities.

Individuals with Disabilities Education Act (IDEA)-a federal law signed in 2004 that helps to guarantee a free and appropriate primary and secondary school education for children ages 3 – 21.

Invisible or Nonvisible disabilities- disabilities that are not readily identified by an observer such as: learning disabilities, Attention-Deficit/Hyperactivity Disorder (ADHD), psychological disorders, and Autism Spectrum Disorders. (Burgstahler, 2004).

Postsecondary school - any education or schooling that occurs after secondary school (high school).

Primary school - also referred to as grade school. Primary school usually encompasses the first 6 to 8 years of a child's education.

Secondary school - also referred to as high school. Secondary school usually encompasses grades 9 through 12. For students in special education, eligibility for services may be extended through 21 years of age.

Section 504 - A section of the Rehabilitation Act of 1973, a federal law that requires postsecondary institutions to provide services and accommodations to qualified students.

Social Skills - the skills necessary to facilitate a positive social interaction that encompasses both verbal and non-verbal communication (Rao, Beidel, & Murray, 2007).

Transition - the process of moving from a secondary educational institution to a postsecondary educational institution.

CHAPTER II

LITERATURE REVIEW

While a great deal of literature exists on services provided to students with Autism Spectrum Disorders (ASD) at the primary and secondary educational levels, there is a dearth of research regarding disability support services for students with ASD attending postsecondary institutions. The literature relevant to this dissertation includes: providing background information on ASD; examining the relevant laws guiding disability support within secondary and postsecondary institutions; describing the transition process between secondary and postsecondary institutions and the current state of post-secondary disability support service organizations; analyzing the diagnostic criteria of ASD and highlighting potentially helpful accommodations for postsecondary students with ASD. Finally, conclusions will be made and the specific research questions will be outlined.

History and Background of Autism Spectrum Disorder

Leo Kanner's 1943 article was one of the first to introduce and describe autism. In the article, he described 11 children who preferred to relate to objects rather than people, insisted on strict daily routines, and had language delays and difficulties marked by echolalia. Kanner concluded that autistic children come "into the world with innate inability to form the usual, biologically provided affective contact with people..." (p. 250). The following year, Hans Asperger (1944) published a description of what would

later become known as Asperger's disorder (as cited in Rinehart, Bradshaw, Brereton, & Tongue, 2002).

Frequently conceptualized as a spectrum disorder, autism encompasses varying levels of cognitive and adaptive functioning. Five pervasive developmental disorders are described in the *Diagnostic and Statistical Manual of Mental Disorders* of the American Psychiatric Association (*DSM-IV-TR*; 2000): autistic disorder, Rett's disorder, childhood disintegrative disorder, Asperger's disorder, and pervasive developmental disorder-not otherwise specified (PDD-NOS). Generally, as intelligence increases, the number and severity of autistic symptoms decrease (Sattler & Hoge, 2006).

In the *DSM-IV-TR* (2000) autism is defined as a pervasive developmental disorder with "impairments in social and communication function, and repetitive and stereotyped behavioral patterns" (p. 63). Although a distinction is not made in the *DSM-IV-TR* between low-functioning and high-functioning autism, the literature on autism often makes a distinction between the two subtypes (Rinehart et al., 2002). High-functioning autism is often associated with an Intelligence Quotient (IQ) greater than 70, and relatively intact verbal functioning (Thede & Coolidge, 2007).

While there is some controversy as to whether autism and Asperger's disorder are distinct disorders or whether Asperger's disorder is contained within the autistic spectrum, essentially the only distinction between Asperger's disorder and high-functioning autism is the absence of a clinical delay in language acquisition (*DSM-IV-TR*, 2000). Both autism and Asperger's disorder share common core characteristics such as

impaired social interaction and communication. Thus, for the purpose of this dissertation both high-functioning autism and Asperger's disorder will be grouped under the term Autistic Spectrum Disorder (ASD).

Individuals with Disabilities Education Act

According to the Centers for Disease Control (CDC), autism rates are estimated to be 1 in 110 children with rates of 1 in 70 for males (Rice, 2009). Special education programs report the numbers of students ages 3 to 21 served by type of disability each year. During the 1995-1996 school year, 28 thousand students throughout the United States were being served in special education under the disability category of autism (National Center for Education Statistics [NCES], 2008). That has increased to 258 thousand during the 2006-2007 school year. Thus, the percentage of students with an ASD served through special education increased from 0.5 percent (1995-1996) to 3.9 percent (2006-2007) (NCES, 2008). Based on the significant increase in autism rates, more students with ASD will be seeking access to special education services, and presumably more students with ASD will be matriculating to postsecondary education upon their graduation.

The Individuals with Disabilities Education Act of 2004 (IDEA) is the federal law that guarantees a free and appropriate education to all individuals who qualify with a disability. There are 13 different disability categories, including autism, under which a student age 3-21 may qualify for services. In the IDEA, autism is defined as follows:

Autism means a developmental disability significantly affecting verbal and nonverbal communication and social interaction, generally evident before age three, that adversely affects a child's educational performance.

Other characteristics often associated with autism are engagement in repetitive activities and stereotyped movements, resistance to environmental change or change in daily routines, and unusual responses to sensory experiences. (§ 300.8 (c)(1)(i))

To qualify for services under IDEA, the student must demonstrate an academic need. Therefore, not all students with ASD will qualify for or receive services under the IDEA. Consequently, the prevalence data (reported above) does not likely capture the entire population of students in public schools with ASD because if there is not an academic need, then the student will not be included in special education population counts. These students may, however, need disability services as academic and social demands increase when they transition to postsecondary institutions.

According to the National Center for Special Education Research (NCES, 2007) more than 9 out of 10 students in special education who are identified with ASD receive accommodations and modifications. The most commonly provided accommodations provided to students with ASD include: additional time to complete assignments (52%); more time on tests (52%); alternative tests or methods of assessment (49%); instruction that is slower in pace (41%); shorter or different assignments (38%); modified tests; (33%); modified grading standards (30%); tests read to student (25%), and modifications

to the physical environment of the classroom (16%) (NCES, 2007). Students frequently receive multiple accommodations from the above list. By the time students are in secondary school, the percentage of students in special education with ASD receiving accommodations increases to 97 percent (NCES, 2007).

Since so many students with ASD at the secondary level receive services, it is especially important to provide these students with the tools that would allow them to become eligible for services when they matriculate to postsecondary institutions. A significant change in the IDEA 2004 reauthorization, however, specified that students do not have to be reevaluated when their termination of eligibility is due to graduation. As indicated by the following statement, schools are required to provide a summary of progress such that, “a public agency must provide the child with a summary of the child's academic achievement and functional performance, which shall include recommendations on how to assist the child in meeting the child's postsecondary goals” (§ 300.305 (e)(3)). The intent is to provide postsecondary professionals with the information necessary to aid transition and further eligibility and accommodation decisions.

Unfortunately, a study of postsecondary institutions revealed that 45% of respondents required testing to be more recent than 3 years old for consideration of services (NJCLD, 2007). This disconnect between the transition reports provided by the secondary institution and the requirements of the postsecondary institution can force

students to seek expensive and time consuming outside testing to become eligible for services.

Americans with Disabilities Act

As secondary students transition to postsecondary institutions, the laws governing their access to education changes from IDEA to the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act. Thus, IDEA has no jurisdiction over educational access after the students exits the secondary system. The ADA covers public, private, community, and vocational institutions, and Section 504 covers any institution that receives federal funding. For most postsecondary schools, there is not a practical difference between the ADA and Section 504 because only private schools receiving no federal funding are covered under Title III of the ADA; these schools are still required to provide equal access to educational materials, but their standard of burden is reduced because they receive no federal funding (Leuchovius, 2003). Since there is little practical difference between the ADA and Section 504, they will be grouped together as ADA/504 for the purposes of this dissertation.

There is a fundamental difference between the purpose of IDEA and the ADA/504. IDEA mandates a free and appropriate education for students with disabilities, with the goal of maximizing educational potential. The ADA/504 are civil rights laws concerned with access and nondiscrimination for individuals with disabilities. Specifically, the ADA/504 ensures that “no otherwise qualified person with a disability is

denied access to, benefits of, or is subject to discrimination solely on the basis of disability” (Differences between, n.d.).

Transition Challenges

The responsibility for accessing services also changes with the transition to postsecondary education. Once students reach the age of maturity and are released from the secondary school’s special education program they bear the onus of self-advocacy. Under the ADA/504, the student is required to self-identify as an individual with a disability and provide appropriate documentation to the Disability Support Services (DSS) office. If the documentation provided is not deemed acceptable by the institution, the student bears the financial burden to obtain another evaluation. If the documentation is deemed acceptable, accommodations are determined by the DSS office to provide students with equal access to the institution’s programs and activities (Differences between, n.d.).

Age

Unlike secondary institutions, students within postsecondary institutions have (most likely) reached the age of legal maturity. This means that parents can no longer legally take the lead to advocate for their child. The students are now responsible to act on their own behalf. Furthermore, because the Family Educational Rights and Privacy Act (FERPA, 2008) guarantees confidentiality, students must sign documents releasing the university to speak with their parents.

Documentation

In general, a student's Individualized Educational Plan (IEP) is not sufficient documentation to support the existence of a disability at the postsecondary level (USDOE, 2007). Gormley, Hughes, Block, and Lendman (2005) conducted a survey of 100 postsecondary institutions which reported that 39% use the IEP from secondary institutions "when considering eligibility and requests for accommodations, but do not consider them [IEP plans] sufficient in making eligibility and accommodation decisions" (NJCLD, 2007, p. 269). Additionally, postsecondary educational institutions are not required to conduct or pay for evaluations to validate the student's disability.

Financial Burden

School districts serving large populations of economically disadvantaged students are often understaffed and unable to provide non-mandated evaluations (NJCLD, 2007). Parents and students who are economically disadvantaged will find the additional expense of financing an outside evaluation a financial hardship. The inconsistency of services across schools, districts, states, and regions poses a social justice issue in that students who are unable to pay for additional testing are likely to be denied services within postsecondary settings (NJCLD). Students may qualify for testing from their state Vocational Rehabilitation Services Department, but in general, the cost of acquiring appropriate documentation for a disability can inhibit students without sufficient financial supports from accessing legally-mandated accommodations (VA HELP, 2007).

The increased financial burden to students will likely necessitate additional access to financial aid to help with the costs of postsecondary education. The recently passed Higher Education Opportunity Act of 2008 (HEOA) contains important provisions for students with intellectual disabilities accessing postsecondary institutions. HEOA allows students with intellectual disabilities access to, “Pell Grants, Supplemental Educational Opportunity Grants, and the Federal Work-Study Program” (Smith, 2009, p. 1).

Lack of Clear Criteria

Under the ADA/504, universities are not required to establish a uniform delivery of services to all students (Pingry, 2007, as cited in VA HELP, 2007). This allows for flexible delivery of services tailored to the individual, but the lack of specific criteria can create barriers for students in advocating for their needed academic accommodations (Pingry, 2007, as cited in VA HELP, 2007). Consequently, the depth and quality of services may differ between postsecondary institutions. One institution may interpret the governing codes to provide academic accommodations that another institution does not consider appropriate.

Challenges for Individuals with Autism Spectrum Disorder

Times of transition are especially critical in the lives of individuals with an ASD. Stress is a normal component of transitioning to postsecondary institutions and adulthood. The amount of stress for individuals with an ASD is compounded because of their significant difficulties in managing transitions effectively and adapting to new and

changing routines which are hallmark traits of the disorder (VanBergeijk, Klin, & Volkmar, 2008).

Individuals with ASD often have average to above average cognitive abilities (Klin, Volkmar, & Sparrow, 2000). Despite cognitive strengths, these individuals have significant challenges with the basic academic and social demands of college (Morrison, Sansosti, Hadley, 2009). As discussed earlier, postsecondary institutions are governed by the ADA/504 with the goal of providing access to academic material whereas the goal of IDEA is to maximize educational potential. Since IDEA has provisions for much more robust academic accommodations, when the student transitions to postsecondary institutions, the array of services that are available are more limited.

In addition to the change in services, the student must begin to act more independently and self-advocate. In postsecondary institutions the student has the opportunity to develop independent living skills, but they may no longer be entitled to the resources to help develop these skills (i.e., social skills training, life skills coaching). Successful integration into postsecondary institutions may be in serious jeopardy without the considerable supports and accommodations the student with ASD received at the secondary level (Morrison et al., 2009).

Morrison et al. (2009) surveyed parents regarding their perceptions of the support needs for their college-bound students with ASD. Major support themes emerged that would help students with ASD such as: working with DSS offices to match students with instructors who have an understanding of ASD; pairing students with instructors who

employ best practice teaching strategies; assisting students with self-advocacy; providing networks for social supports. Finally, parents believed that their children would be helped by having access to aids that would help with activities of daily living.

Adding to the challenges of transition are the requirements by postsecondary institutions to determine eligibility for services and designate appropriate accommodations. Dedicated secondary personnel seeking to facilitate smooth and effective transitions between high school and college settings will need to have a greater understanding of what is necessary to document a disability to meet the eligibility requirements for postsecondary institutions. In addition, the language substantiating the need for specific accommodations must match postsecondary institutions' standards. Since academic accommodations are limited within the postsecondary setting, students must be forewarned and prepared for this change when transition meetings begin in secondary school.

Disability Support Services

The ADA (1990) defines a disability as an impairment that substantially limits a major life activity. In a study of 108 postsecondary students with disabilities, 65% of the participants reported having one primary disability whereas 35% reported having two or more disabilities; the most common disability (39%) was a learning disability (Kurth & Mellard, 2006). In the study, the most effective accommodation (87.5% reported effective) was note takers followed closely by extended time on tests (85.7%). The researchers concluded that the culture of the university affects the satisfaction that

postsecondary students feel when accessing services; specifically, institutions embracing the “spirit of the law” (p. 81) governing disability services have more satisfied and integrated students.

Once students transition to postsecondary institutions what types of accommodations are appropriate for individuals with ASD? Narrow interpretations of the ADA/504 as discussed above would imply that only accommodations that allow for equal access to the educational material are covered. However, many primary and secondary institutions conduct social skills groups and trainings within the educational system in an attempt to provide students with ASD access to the entire educational experience.

Social encounters are major life activities, as they occur daily. Glennon (2001) suggests the advancement of academic achievement may be the primary goal of postsecondary institutions, but it is not the only goal. Additional goals include, “developing skills for adulthood, forming life-long relationships, identifying a vocational pathway, and/or participating in extracurricular activities” (p. 185).

Society tends to judge an individual based on outward appearances, and since individuals with ASD “look normal” it can be quite confusing to understand the social barriers experienced by individuals with ASD (Glennon, 2001). The nature of ASD includes marked difficulties with social interaction, communication, and restricted patterns of behavior, interests, and activities. Additionally, there are frequent psychological correlates, comorbid conditions, and learning differences. The social and

organizational difficulties experienced by individuals with ASD would likely prohibit them from fully accessing the major life activities inherent in the postsecondary experience (VanBergeijk et al., 2008). The following sections will further describe the specific areas of concern, psychological correlates, as well as provide insight to potential accommodations that would bolster students' postsecondary functioning.

Social Interaction

Research suggests that individuals with ASD demonstrate deficits in social behavior even when age, IQ, and adaptive behavior abilities have been controlled for (Rodrigue, Morgan, & Geffken, 1991). According to the *DSM-IV-TR* (2000), individuals with ASD have marked difficulties with social interaction including: impaired use of non-verbal behaviors (eye contact, facial expressions, gestures, body postures); a failure to develop age-appropriate peer relationships; the absence of spontaneous social sharing; and, a lack of social emotional reciprocity.

The literature suggests that approximately 70 to 80 percent of individuals diagnosed with ASD during childhood continue to have marked social impairment throughout adolescence and adulthood (VanBergeijk et al., 2008). Thus, students entering into postsecondary institutions will continue to need supports with social functioning such as: initiating conversations; getting along with roommates; initiating appropriate behaviors towards individuals he or she finds attractive (Volkmar, 2004); establishing boundaries; and entering into healthy sexual relationships (VanBergeijk et al.).

Cognitive and cognitive behavioral therapeutic techniques have empirical support for helping individuals with ASD develop social skills and extinguish maladaptive behaviors (Lopata, Thomeer, Volker, & Nida, 2006). These therapies must be explicit, giving step-by-step directions. Furthermore, since individuals with ASD have difficulty generalizing behaviors across settings, they will need explicit teaching/role play and social skills groups across a variety of environments (VanBergeijk et al., 2008). Students matriculating to postsecondary institutions will likely need continued access to services oriented towards building their social skills.

Communication

Even when individuals with ASD have normal cognitive functioning, they will likely have significant deficits in communication including: limited ability to initiate/sustain a conversation; repetitive and stereotyped use of language; and, use of idiosyncratic or concrete language (*DSM-IV-TR*, 2000). According to Bishop (2000), children with ASD may have excellent knowledge of grammar and phonology, but their ability to use language appropriately in conversation is extremely poor. Since communication is the means by which individuals interact socially, appropriate use of language constitutes a social skill (Windsor, 1995).

Difficulties with both expressive and receptive language are common. While the individual may have advanced verbal skills, limited comprehension of the pragmatics of language is frequently observed. Individuals with ASD often communicate in ways that fail to take into account the physical or social setting, and/or the social cues presented by

the conversational group (Bellon-Harn & Harn, 2006). In a study conducted by Rutherford et al. (2002) results showed an impaired ability to interpret the speaker's mental state. Having the ability to infer the mental states of others facilitates emotionally appropriate speech.

Prosody is the rhythm and intonation of speech. Expressive prosody in individuals with ASD is often "described as exaggerated, monotonous, or [a] singsong" quality to an individual's speech (McCann, Peppe, Gobbm, O'Hare, & Rutherford, 2007, p. 684). Individuals with ASD often have difficulty with expressive prosody; either failing to communicate their emotion through voice modulation or speaking in a tone that is too monotonous. According to Shriberg et al. (2001), participants with ASD frequently produced conversation marked by: inappropriate phrasing, non-fluent phrasing; inappropriate verbal stress patterns and voice parameters (i.e., too loud or quiet). In addition, individuals with ASD have difficulty with receptive prosody, understanding the emotional content conveyed through another person's quality of speech.

The difficulties experienced by individuals with ASD in understanding and conveying emotional content through speech is a barrier to the normal give and take of social communication (Sattler & Hoge, 2006). Furthermore, the difficulties with pragmatics may cause problems for individuals with ASD within postsecondary settings because students may not modify their speech for appropriate communication across different situations (i.e., with professors, students, staff). Based on the significant

communication difficulties experienced by adolescents and adults with ASD, they will likely need continued supports to help with their functional communication throughout their postsecondary education.

Associated Features and Psychological Correlates

Individuals transitioning to postsecondary institutions experience a great amount of stress. In a study conducted by D’Zurilla and Sheedy (1991) the researchers found that all college students have significant stress resulting from the challenges faced throughout the process of transitioning between secondary and postsecondary institutions. As the amount of stress increases, it can lead to unhealthy levels of loneliness, nervousness, and excessive worrying (Wright, 1967). Individuals with ASD are particularly vulnerable to stress, worry, and changes in routine.

According to research by Kim, Szatmari, Bryson, Streiner, and Wilson (2000) and Klin, Volkmar, and Sparrow (2000) the most common co-morbid conditions for adolescents and young adults with ASD are anxiety and depression. More specifically, higher IQs are associated with higher levels of anxiety (Sukhodolsky et al., 2008). Many studies corroborate that adolescents and adults with ASD have levels of anxiety significantly higher than the general population and are equivalent with adolescents diagnosed with anxiety disorders (Farrugia & Hudson, 2006).

Another psychological correlate is loneliness. Individuals with ASD often report high levels of both social and emotional loneliness (Bauminger, Shulman & Agam, 2003). Increased levels of anxiety are often related to increased social loneliness (White

& Roberson-Nay, 2009). Thus, individuals with ASD tend to feel more emotionally disconnected and alone, and anxiety may reduce the degree of social interaction and involvement on the part of the individual with ASD (White & Roberson-Nay).

Individuals with ASD do not display stress the same as neurologically intact persons. Stress reactions of individuals with ASD may include tuning out, daydreaming, having a flat affect, or refusing to respond (Glennon, 2001). The student's coping mechanisms may be misinterpreted by peers and faculty as defiance, disinterest, or inattention. As a result, it will be difficult for postsecondary faculty and staff to detect the need for assistance.

Another frequent complaint of individuals with ASD is insomnia. Tani et al. (2003) found that adults with ASD often have difficulty falling asleep and maintaining healthy sleep. Moving to a postsecondary institution may exacerbate sleep problems. Common experiences of college students include sharing a dorm room. Roommates may keep different sleeping hours or make excessive noise (as perceived by the individual with ASD). Navigating the new social environment and attempting to gain healthy sleep will be a challenge for students with ASD. Providing students with an outline of what to expect in living with a roommate, giving the student the ability to room alone, having access to "quiet dorms" with strictly enforced quiet hours may help the student with ASD develop healthy sleep routines.

Learning Differences and Attention Span

According to Gillberg and Coleman (2000), 65 to 85 percent of students with ASD also have learning disabilities. It has been argued that tasks of Executive Functioning and Working Memory pose the greatest challenge for individuals with ASD (Barnard, Muldoon, Hasan, O'Brien, & Stewart, 2008; Roberts & Pennington, 1996). In a study of adults with ASD with comorbid LD, Barnard et al. (1996) found significant dysfunction in the areas of planning/organization and working memory. This finding has implications for students in postsecondary institutions because of the significant emphasis placed on planning, organizing, and the use of working memory for note taking, test taking, and planning and organizing long-term assignments.

Many individuals with ASD also exhibit attentional difficulties. Hofvander et al. (2009) conducted a study on 122 adults with ASD and a normal-IQ. The researchers found that 43% of the individuals had been diagnosed with ADHD, and 14% of the subjects had been diagnosed with a reading learning disorder. In a study of attention conducted by Goldstein, Johnson, and Minshew (2001), the researchers found that individuals with ASD have differences in attentional processes that are related to cognitive flexibility and psychomotor speed, but found no difference in the areas of sustained attention and accuracy on attentional measures. The results from the Goldstein et al. study imply that individuals with ASD have difficulty with tasks that require cognitive flexibility and complex decision making.

Individuals with ASD often have restricted or repetitive patterns of behavior, interests, and activities such as: an intense preoccupation with a particular interest; an inflexible adherence to routines/rituals; repetitive and stereotyped motor movements; preoccupation with the individual components of an object (*DSM-IV-TR*, 2000). In a study conducted by Klin, Danovitch, Merz, and Volkmar (2007) their results indicated that all-consuming interests are frequent within the ASD population with 75% of younger subjects and 88% of older subjects having them. This intense level of interest frequently interferes with activities such as social interactions, communication, and adaptive behaviors because the particular area of interest is pursued to the exclusion of other important information (Klin et al., 2007). Additionally, individuals with ASD pursue their area of interest often by collecting information about it, reading about it, collecting objects related to the area of interest, and engaging in the rote memorization and repetition of facts (Klin et al.).

Some of the most common restricted interests included Japanese animation, space/physics, video games/Internet, gadgets, power heroes, and dinosaurs (Baron-Cohen & Wheelwright, 1999). The all-encompassing nature of restricted interests may disrupt learning in important academic, social, and real-life adaptive domains (Klin & Volkmar, 1997). It would seem logical that the all-consuming nature of these interests may affect educational performance. If the interest is germane to the academic area being pursued, this will bolster the individuals performance, but if the academic area is outside of an area of interest, the individual may have no desire to study the material being put forth.

Activities of Daily Living

Activities of daily living include personal and domestic skills such as dressing, personal hygiene, performing household tasks, managing finances, and spending leisure time (Lee & Park, 2007). Study results from an integrated literature review give an overall indication that individuals with ASD have a moderately low adaptive level (Lee & Park). Thus, adequate intellectual capability does not imply effective daily living skills.

Prince-Hughes (2002), an individual with ASD, detailed some of the areas of daily living that she has difficulty with including uncomfortable furniture, lights being too bright, restricted food interests, and tending to personal hygiene. Other common areas in which adults with ASD need help in are shopping, budgeting and money management, setting alarms, being on-time for appointments, handling fire drills, and using public transportation (Adreon & Durocher, 2007). When parents of individuals with ASD were asked what would be most helpful to their children in college, they responded with the following: pairing their child with an understanding/accommodating instructor, having work that is alternative to group work, independent study arrangements, note-takers, and a program that would provide social support and help with teaching their child how to self-advocate (Morrison, Sansosti, & Hadley, 2009).

Conclusion

Students with ASD entering into postsecondary institutions will have significant social, academic, communication, activities-of-daily living, and mental health needs

which could be supported through campus disability support service organizations. The transition process from secondary to postsecondary institutions will be especially stressful and challenging for these students. In order to gain from the full experience of attending a postsecondary institution, these individuals will need significant academic and social supports.

It is essential that personnel from both secondary and postsecondary institutions coordinate their actions to facilitate a smooth transition between educational environments. To further the understanding between secondary and postsecondary support personnel, it is important to determine what eligibility documentation is acceptable to postsecondary professionals. In addition, it is vital to gather a greater understanding of the services that are currently delivered to students with ASD at the postsecondary level. Having an understanding of the current services will enable students with ASD (and professionals in the support of students with ASD) to advocate for an appropriate expansion of services to ensure adequate access to postsecondary education.

Research Questions

Since this is an exploratory study and there is a lack of research in the area of transition services for students with ASD, specific literature-based hypotheses are not possible. Therefore, several research questions will be examined:

1. How do DSS personnel perceive ASD?

- a. Is ASD perceived to be a psychological, neurological, behavioral, genetic, or social disorder?
 - b. Is ASD perceived to be a life-long disorder or a curable disorder?
2. What documentation standards are acceptable to postsecondary institutions in determining eligibility and appropriate accommodations for students with ASD seeking disability support services?
 - a. What type of professionals can provide a diagnosis of ASD for eligibility?
 - b. How often are high school reports accepted to determine eligibility for services?
 - c. Are high school reports useful in determining eligibility?
 - d. Are high school reports useful in determining appropriate accommodations?
 - e. How recent must reports be?
 - f. Are out of state reports acceptable for the documentation of ASD?
3. What types of services are available to students with ASD attending postsecondary institutions?
 - a. What mental health services are available?
 - b. What social skills services are available?
 - c. What academic services are available?
 - d. What services addressing activities of daily living are available?

4. How do disability support services that are provided for students with ASD differ between the public and private university system?
5. How do disability support services that are provided for students with ASD compare between 2-year and 4-year institutions?
6. How do disability support services for students with ASD differ from region-to-region across the United States?

CHAPTER III

METHODOLOGY

The purpose of this exploratory study was to analyze previously collected information regarding the transition process and services available for students with Autism Spectrum Disorders (ASD) between secondary and postsecondary institutions from the perspective of Disability Support Services (DSS) personnel at postsecondary institutions. The following chapter describes the participants, procedures, survey, research methodology, and statistical analyses used in the current dissertation.

Study Design

The data used in the current study was taken from a survey conducted of Disability Support Personnel across the United States. The original study was headed by Kathy DeOrnellas, Ph.D. at a state university in northern Texas. Responses to items were utilized to address questions about the process of transition between secondary and postsecondary institutions and the services available for students with ASD at postsecondary institutions. Both descriptive and predictive analyses were used to evaluate the research questions. Since this is an exploratory study and there is a dearth of research in the area of transition services for students with ASD, research questions were used instead of specific (directional) hypotheses.

Participants

The participants in the current study were DSS personnel employed by 2-year and 4-year institutions across the United States. Solicitation emails were sent to DSS personnel at 2,781 postsecondary institutions, and professionals from 408 institutions completed the survey with 66.8% of the surveys being returned from 4-year and 33.2% from 2-year institutions.

Procedures

For the original data collection, a nationwide list of all two-year and four-year institutions was gathered by visiting the University of Texas' list of regionally-accredited postsecondary institutions at <http://www.utexas.edu/world/univ/state/> (for the 4-year institutions) and <http://www.utexas.edu/world/comcol/state/> (for the 2-year institutions). Next, email addresses for DSS personnel were compiled.

A research team of trained undergraduate and graduate students visited the website for each postsecondary institution and searched for the DSS department, using the terms "disability," "student services," "disability services," "academic support," "Americans with Disabilities Act," and "Section 504." If there was no email address on the DSS website, then a search of the faculty directory was performed on the individual's name. Of the 3,215 postsecondary institutions listed, email addresses could be found for 2,607 DSS personnel (81%). If the email address could not be found, members of the research team telephoned the institution and requested the contact information for the

DSS office. Of the remaining 608 institutions, 264 email addresses were found using this technique.

After the email addresses were compiled, DSS personnel were sent an email with a hyperlink to the survey. Participants who clicked on the hyperlink were taken directly to the survey, which was hosted by www.psychdata.com. The survey was encrypted using Secure Sockets Layering (SSL) to protect the confidentiality of the participants.

A consent document was on the first page, and only participants who agreed to the consent form gained access to the survey. After survey completion, participants were directed to a separate survey asking if they wished to enter a drawing for three Amazon.com gift cards worth \$250 each. This personally identifying data was collected and stored separately from the original data. The current study used a subset of the data collected in the original survey regarding the topics of transition, attitudes towards ASD, and services available to students with ASD.

Two reminder emails were sent after the initial solicitation email. The first reminder email was sent three weeks after the initial email. The final reminder email was sent two months after the initial solicitation email. The final date of survey availability for this dissertation was September 24, 2010.

Instrumentation

Questionnaire

A 49-question survey (see Appendix A) was developed containing items regarding: attitudes of DSS personnel towards ASD; common practice of DSS

institutions regarding the transition, eligibility, and accommodation process; and, available services for students with ASD within the postsecondary system. The final page of the questionnaire solicits feedback and demographic information. The feedback page also solicits any additional comments the participant would like to share.

For this dissertation, 27 items from the survey were used, and these items were divided into three broad categories. The first category included questions concerning attitudes of DSS personnel towards ASD. The second category included questions concerning common practices during the transition process between secondary and postsecondary institutions. The final category gathered information regarding services commonly available for students with ASD within the postsecondary setting.

There were a variety of question types in the survey including yes/no questions, single selection questions, multiple response questions, 5-point Likert scale questions, and free response questions. The specific questions that were used for this dissertation are marked with an asterisk in the appendix of this document. The purpose of the original survey was exploratory with the intent to gather information. Thus, there is no information regarding reliability and validity of the instrument.

Research Design and Analysis Plan

Research Questions

Since this is an exploratory study and there is a lack of research in the area of transition services for students with ASD, specific literature-based hypothesis are not possible. Therefore, several research questions will be examined:

1. How do DSS personnel perceive ASD?
 - a. Is ASD perceived to be a psychological, neurological, behavioral, genetic, or social disorder?
 - b. Is ASD perceived to be a life-long disorder or a curable disorder?
2. What documentation standards are acceptable to postsecondary institutions in determining eligibility and appropriate accommodations for students with ASD seeking disability support services?
 - a. What professionals can provide a diagnosis of ASD for eligibility?
 - b. How often are high school reports accepted to determine eligibility for services?
 - c. How useful are high school reports in determining eligibility?
 - d. How useful are high school reports in determining appropriate accommodations?
 - e. How recent must reports be to qualify for services?
 - f. Are out of state reports acceptable for the documentation of ASD?
3. What types of services are available to students with ASD attending postsecondary institutions?
 - a. What mental health services are available?
 - b. What social skills services are available?
 - c. What academic services are available?
 - d. What services addressing activities of daily living are available?

4. How do the disability services that are provided for students with ASD differ between the public and private university system?
5. How do disability services that are provided for students with ASD compare between 2-year and 4-year institutions?
6. How do disability support services for students with ASD differ from region-to-region across the United States? The regions are based on the United States Census Bureau's (USCB, nd) regions and were divided into four regions as follows:
 - a. Northeast: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont
 - b. West: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming
 - c. Midwest: Kansas, Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin
 - d. South: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Mississippi, Maryland, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia

Statistical Analysis

Preliminary Analyses

Statistical Package for Social Sciences (SPSS) Version 15.0 was used to analyze the data. Measures of central tendency including means and standard deviations, as well

as frequencies and percentages were calculated to describe the universities and colleges. Demographic information included university characteristics such as public versus private institutions, 2-year versus 4-year institution, whether the school has a religious affiliation, number of DSS staff, number of students enrolled, number of students served by the DSS office, and number of students with ASD served by the office. Relationships among the categorical demographic variables were examined using crosstabulations.

In addition, frequencies and percentages were used to describe how DSS personnel perceive ASD. Means and standard deviations, as well as frequencies and percentages, were used to describe acceptable documentation standards for postsecondary institutions in determining appropriate accommodation for student with ASD. Finally, means and standard deviations were used to describe how often various mental health, social skills, academic, and daily living services are available to students with ASD.

Primary Analyses

A series of crosstabulations with chi square and non-parametric Mann-Whitney U tests were used to assess the differences in disability services provided between public and private institutions. The individual mental health, social skills, academic services, and services of daily living items were assessed in separate analyses. In addition, scaled scores were created for each type of service (i.e., overall score for academic services) and were compared. The same procedure was followed to examine differences between 2-year and 4-year institutions and between various regions. In addition, a series of regressions predicting the availability of each of the four categories of services (mental

health services, social skills services, academic services, and activities of daily living services) from the university characteristics was conducted in SPSS.

CHAPTER IV

RESULTS

The results section begins with a description of the demographic characteristics of the sample as well as an examination of relationships among the primary demographic characteristics of interest (university type, length, size, and region). The primary analysis section follows the research questions in order. Frequencies and percentages, means and standard deviations, crosstabulations with chi-square, one-way ANOVAs, as well as non-parametric statistics are used to address each research question individually. The chapter concludes with several predictive analyses which predict each type of service available from the key demographic variables of interest.

Demographics

As shown in Table 1, there were 408 participating postsecondary institutions in the current study. A majority of the postsecondary institutions were public institutions (60.4%) and, remaining 39.6% were reported as being private institutions. Additionally, a higher percentage reported being 4 year institutions (66.8%) compared to 33.2% of institutions reported as 2-year universities. When reporting the size of the postsecondary institution, over 40% reported being medium-sized schools (2,500-10,000 students; 43.3%) whereas, one-third (33.8%) reported being small sized-schools (under 2,500 students) and, 22.9% reported being large-sized school (more than 10,000 students). In terms of religious affiliation, the majority of participating schools were not religiously

affiliated (74.8%). When comparing the demographic regions, 24.2% of the postsecondary institutions were located in the Northeast region of the US, 17.5% in the West, 25.8% in Midwest and, 32.5% in the South. The specific distribution by states is detailed in the table. The non-respondents are individuals who did not answer the questions regarding institution type, length, size, religious affiliation, and/or region.

Table 1

Frequencies and Percentages of Categorical Demographic Variables

	n	%
Postsecondary Institution Type		
Public	197	60.4
Private	129	39.6
Non-Respondents	82	
Postsecondary Institution Length		
4-year	207	66.8
2-year	103	33.2
Non-Respondents/Other	82	
School Size		
Under 2,500	106	33.8
2,500-10,000	136	43.3
More than 10,000	72	22.9
Non-Respondents	94	
Religious Affiliation		
Yes	82	25.2
No	244	74.8
Non-Respondents	82	
Region		
Northeast	79	24.2
West	57	17.5
Midwest	84	25.8
South	106	32.5
Non-Respondents	82	

(continued)

Table 1, continued

	n	%
State		
Alabama	4	1.2
Arizona	7	2.1
Arkansas	1	.3
California	25	7.7
Colorado	4	1.2
Connecticut	6	1.8
Delaware	2	.6
Florida	7	2.1
Georgia	18	5.5
Idaho	3	.9
Illinois	13	4.0
Indiana	8	2.5
Iowa	7	2.1
Kansas	1	.3
Kentucky	6	1.8
Louisiana	5	1.5
Maine	1	.3
Maryland	1	.3
Massachusetts	10	3.1
Michigan	14	4.3
Minnesota	4	1.2
Mississippi	3	.9
Missouri	7	2.1
Montana	1	.3
Nebraska	3	.9
Nevada	1	.3
New Hampshire	1	.3

(continued)

Table 1, continued

	n	%
States, continued		
New Jersey	4	1.2
New Mexico	1	.3
New York	23	7.1
North Carolina	15	4.6
North Dakota	1	.3
Ohio	13	4.0
Oklahoma	4	1.2
Oregon	6	1.8
Pennsylvania	25	7.7
Rhode Island	2	.6
South Carolina	6	1.8
South Dakota	2	.6
Tennessee	2	.6
Texas	25	7.7
Utah	4	1.2
Vermont	5	1.5
Virginia	6	1.8
Washington	4	1.2
Washington, DC	1	.3
West Virginia	2	.6
Wisconsin	11	3.4
Wyoming	1	.3
Non-Respondents	82	
Title		
Director	174	53.4
Coordinator	124	38.0
Other	28	8.6
Non-Respondents	82	

(continued)

Table 1, continued

	n	%
Highest Degree		
PhD	30	9.2
EdD	20	6.1
MA	115	35.3
MS	71	21.8
BS/BA	26	8.0
Other	64	19.6
Non-Respondents	82	
Federal Funding		
Yes	301	92.3
No	25	7.7
Non-Respondents	82	
Historically Black College/University		
Yes	5	1.5
No	321	98.5
Non-Respondents	82	

Note. Percentages are calculated as the valid percent of participants who responded

A majority of individuals filling out the survey reported their title level as Directors (53.4%), 38.0% worked as Coordinators while the remaining 8.6% replied “other” as their title level. Nearly two-thirds of the participants reported a graduate level degree or higher as their highest education level. More specifically, 35.3% had a Masters in Arts, 21.8% had a Masters degree in Science, 9.2% had a Ph.D., and 6.1% had an Ed.D. Only 8% reported having only a Bachelor’s degree. Furthermore, a greater proportion of universities reported receiving some form of federal funding (92.3%).

Finally, nearly all (98.5%) of the participating universities reported not being a historically black college/university (HBCU).

Relationships among Demographic and Independent Variables

Crosstabulations with Pearson's chi square and Cramer's V tests were conducted to examine the relationship between the categorical variables. As shown in Table 2, there was a significant relationship between institution type and length, $\chi^2(1) = 95.21, p < .001$, Cramer's $V = .55$. A greater proportion of the private schools were 4-year institutions (99.2%) compared to public (45.7%). Thus a greater proportion of the public schools were 2-year institutions (54.3%) compared to private (.8%). Also shown in Table 2, crosstabulations with Pearson's chi square and Cramer's V tests were also conducted between postsecondary institution type and other categorical variables. There was a significant relationship between university type and school size, $\chi^2(2) = 72.51, p < .001$, Cramer's $V = .48$. A greater proportion of the private schools were small sized (59.5%) compared to public (16.5%). In contrast, a greater proportion of the public schools were medium and large sized (48.9% and 34.6% respectively) compared to private schools (34.9% and 5.6% respectively). There was also a significant relationship between postsecondary institution type and the region, $\chi^2(3) = 18.52, p < .001$, Cramer's $V = .24$. A greater proportion of public schools were in the South (39.6%) compared to private schools (21.7%) and a greater proportion of private schools were in the Northeast (34.9%) compared to public schools (17.3%).

Table 2

Frequencies and Percentages of Postsecondary Institution Length, School Size, and Region by Institution Type

	Public		Private		χ^2	<i>p</i>
	<i>n</i>	%	<i>n</i>	%		
Postsecondary Institution Length					95.22	<.001
4-year	86	45.7	121	99.2		
2-year	102	54.3	1	.8		
School Size					72.51	<.001
Under 2,500	31	16.5	75	59.5		
2,500-10,000	92	48.9	44	34.9		
More than 10,000	65	34.6	7	5.6		
Region					18.52	<.001
Northeast	34	17.3	45	34.9		
West	37	18.8	20	15.5		
Midwest	48	24.4	36	27.9		
South	78	39.6	28	21.7		

Crosstabulations with Pearson's chi square and Cramer's *V* tests were conducted to examine the relationship between postsecondary institution length and other categorical variables (see Table 3). As previously stated, there was significant relationship between institution length and type. A greater proportion of 2-year schools were public institutions (99.0%) compared to 4-year schools (41.5%). There was also a

significant relationship between institution length and school size, $\chi^2(2) = 9.60, p < .01$, Cramer's $V = .18$. A greater proportion of 4-year institutions (39.2%) compared to 2-year (22.0%) were small schools. In contrast, a greater proportion 2-year institutions were both medium and large sized schools (47.0% and 31.0%, respectively) compared to 4-year schools (40.2% and 47.0%, respectively). Finally, there was also a significant relationship between institution length and region, $\chi^2(3) = 8.20, p < .05$, Cramer's $V = .16$. A greater proportion of 4-year institutions were in the Northeast (27.1%) compared to 2-year schools (14.6%). In addition, a greater proportion of the 2-year institutions (15.5% and 30.9%, respectively) as compared to 4-year institutions (23.3% and 37.9%, respectively) were in the West and South.

As shown in Table 4, crosstabulations with Pearson's chi square were also computed between postsecondary institution size and the other categorical variables. As previously mentioned, there was a significant relationship between region and institution type. A greater proportion of large schools were public (90.3%) compared to medium sized (67.6%) and small schools (29.2%). Also as mentioned previously, the relationship between school size and institution length was significant. A greater proportion of small schools were 4-year institutions (78.0%) compared to medium sized (63.0%) or large schools (56.9%). Finally, the results failed to reveal significant relationships between school size and regions of the USA ($p > .05$).

Table 3

Frequencies and Percentages of Postsecondary Institution Type, School Size, and Region by Institution Length

	4-year		2-year		χ^2	<i>p</i>
	n	%	n	%		
Postsecondary Institution Type					95.22	<.001
Public	86	41.5	102	99.0		
Private	121	58.5	1	1.0		
School Size					9.60	.008
Under 2,500	78	39.2	22	22.0		
2,500-10,000	80	40.2	47	47.0		
More than 10,000	41	20.6	31	31.0		
Region					8.20	.043
Northeast	56	27.1	15	14.6		
West	32	15.5	24	23.3		
Midwest	55	26.6	25	24.3		
South	64	30.9	39	37.9		

Table 4

Frequencies and Percentages of Postsecondary Institution Type, Length, and Region by School Size

	Under 2,500		2,500- 10,000		More than 10,000		χ^2	p
	n	%	n	%	n	%		
Postsecondary Institution Type							75.51	<.001
Public	31	29.2	92	67.6	65	90.3		
Private	75	70.8	44	32.4	7	9.7		
Postsecondary Institution Length							9.60	.008
4-year	78	78.0	80	63.0	41	56.9		
2-year	22	22.0	47	37.0	31	43.1		
Region							7.89	.246
Northeast	32	30.2	30	22.1	10	13.9		
West	17	16.0	22	16.2	16	22.2		
Midwest	27	25.5	34	25.0	21	29.2		
South	30	28.3	50	36.8	25	34.7		

Crosstabulations with Pearson's chi square were also computed between region and the other categorical variables. As shown in Table 5, results revealed a significant relationship between region and university type. A greater percentage of schools located in the South (73.6%), West (64.9%), and Midwest (57.1%) were public schools compared

to the Northeast (43.0%). For the significant relationship between school size and region, a greater proportion of institutions located in the Northeast (78.9%) were 4-year schools compared to the Midwest (68.8%), South (62.1%), or West (57.1%).

Table 5

Frequencies and Percentages of Postsecondary Institution Type, Length, and School Size by Region

	Northeast		West		Midwest		South		χ^2	<i>p</i>
	n	%	n	%	n	%	n	%		
Postsecondary Institution Type									18.52	<.001
Public	34	43.0	37	64.9	48	57.1	78	73.6		
Private	45	57.0	20	35.1	36	42.9	28	26.4		
Postsecondary Institution Length									8.17	.043
4-year	56	78.9	32	57.1	55	68.8	64	62.1		
2-year	15	21.1	24	42.9	25	31.3	39	37.9		
School Size									7.89	.246
Under 2,500	32	44.4	17	30.9	27	32.9	30	28.6		
2,500-10,000	30	41.7	22	40.0	34	41.5	50	47.6		
More than 10,000	10	13.9	16	29.1	21	25.6	25	23.8		

Research Question One

Table 6 shows frequencies and percentages of Disability Support Services (DSS) personnel's perception of students with ASD (Autism Spectrum Disorder).

Approximately half of the participants did not considering ASD to be psychological disorder (52.5%). However, nearly two-thirds of the participants considered ASD to be a neurological disorder (73.5%). Additionally, a greater percentage of the participants do not consider ASD to be a genetic disorder (66.4%), compared to 33.6% who believe ASD is a genetic disorder. Similarly, a majority of participants reported they do not consider ASD to be a behavioral disorder (55.6%), compared to 44.4% of participants who classified ASD as a behavioral disorder. Finally, a majority of participants believe that ASD is a social disorder (58.3%) whereas, 41.7% do not see ASD as a social disorder. In conclusion, participants are most likely to consider ASD a neurological or social disorder.

The participants also reported their perception of ASD as a life-long disorder. As shown in Table 7, a majority of participants perceived ASD as a life-long condition (80.6%). Over 10% of respondents specifically stated their belief that the symptoms of ASD can be mitigated over time (11.5%). Only a small percentage of the participant believed that it depends on the individual (1.5%), and an even smaller percentage believe ASD can be cured (1.0%).

Table 6

Frequencies and Percentages of DSS Personnel's Perceptions of Students with ASD

	No		Yes	
	n	%	n	%
Psychological Disorder	214	52.5	194	47.5
Neurological Disorder	108	26.5	300	73.5
Genetic Disorder	271	66.4	137	33.6
Behavioral Disorder	227	55.6	181	44.4
Social Disorder	170	41.7	238	58.3

Table 7

Frequencies and Percentages of Perception of ASD as a Lifelong Disorder

	n	%
Perception of ASD as Lifelong Disorder		
Depends on Individual	6	1.5
Symptoms can be Mitigated	47	11.5
Not Enough Known	5	1.2
Depends on Age	3	.7
Don't Know	7	1.7
Other	7	1.7
Are Life-Long	329	80.6
Can be Cured	4	1.0

Note. Percentages are calculated as the valid percent of participants who responded

Research Question Two

As shown in Table 8, frequencies and percentages of professionals who can provide ASD diagnoses for eligibility are reported. A majority of participants reported that a licensed psychologist can provide an ASD diagnosis for eligibility (88.3%). Just over one-half of participants 52.7% reported that their university accepts ASD documentation when provided by a school psychologist. A majority of participants reported that psychiatrists can also provide documentation for ASD (77.8%) compared to 22.2% who do not accept documentation from psychiatrists. When provided by a neurologist, 73.9% of the participants accepted ASD eligibility documentation. When asked if their school accepts ASD eligibility documentation from other medical doctors, a greater proportion of participants reported that they do not (60.6%). Furthermore, a large proportion of participants reported they do not accept eligibility documentation from Speech and Language Pathologists (80.2%). Finally, a majority of participants reported they do not accept diagnosis documented by a social worker (81.6%) whereas only 12.3% indicated they do accept such documentation provided by a social worker. In summary, ASD documentation was most likely to be accepted from a licensed psychologist, psychiatrist, or neurologist.

The participants also reported the documentation standards in determination of appropriate accommodations for students with ASD. As shown in Table 9, when asked how often they accepted reports from high schools to determine eligibility for disability services, a majority of the schools reported sometimes (25.9%), often (30.0%), or almost

always (22.7%), whereas only 6.3% reported never accepting the reports from high schools.

Table 8

Frequencies and Percentages of Professionals Who Can Provide ASD Diagnosis for Eligibility

	No		Yes	
	n	%	n	%
Licensed Psychologist	45	11.7	338	88.3
School Psychologist	181	47.3	202	52.7
Psychiatrist	85	22.2	298	77.8
Neurologist	100	26.1	283	73.9
Other Medical Doctor	232	60.6	151	39.4
Speech Language Pathologist	307	80.2	76	19.8
Social Worker	333	86.9	50	13.1

Table 9

Frequencies and Percentages of Documentation Standards in Determination of Appropriate Accommodations for Students with ASD

	n	%
How Often Accepts Reports from High Schools		
Never	25	6.3
Rarely	60	15.1
Sometimes	103	25.9
Often	119	30.0
Almost Always	90	22.7
Non-Respondents	11	
Find Transition Reports Useful in Determining Eligibility		
Not Useful	61	15.4
A Little Useful	81	20.4
Somewhat Useful	149	37.5
Useful	72	18.1
Very Useful	34	8.6
Non-Respondents	11	
Find Transition Reports Useful in Determining Appropriate Accommodations		
Not Useful	34	8.6
A Little Useful	73	18.4
Somewhat Useful	169	42.6
Useful	87	21.9
Very Useful	34	8.6
Non-Respondents	11	

(continued)

Table 9, continued

	n	%
To be Considered for Services a Student's Evaluations must be More Recent than		
6 months	3	.8
1 year	17	4.4
1.5 years	2	.5
2 years	13	3.4
2.5 years	2	.5
3 years	204	52.6
3.5 years	23	5.9
4 years	22	5.7
4.5 years	2	.5
5 years	53	13.7
5+ years	47	12.1
Non-Respondents	20	
Out of State Reports Acceptable		
Yes	395	99.5
No	2	.5
Non-Respondents	11	

Note. Percentages are calculated as the valid percent of participants who responded

When asked if they find transition reports from high schools helpful in determining eligibility, a greater proportion of the responses ranged from not useful to somewhat useful (73.3%) whereas, only 8.6% of the participants found reports from high school to be very useful in determining eligibility. Likewise, when asked if the

participants find transition reports from high schools to be helpful in determining appropriate accommodation, the majority of the responses ranged from not useful to somewhat useful (69.5%) whereas, only 8.6% of the participants found the reports to be very useful in deciding appropriate accommodations for disabled students.

The participants were also asked how recent should be student's ASD evaluation to be considered for services. As shown in table 9, the majority only accepted evaluations conducted within in the past 3 years (62.2%). An aggregate 25.8% reported they accepted evaluations conducted 5 or more years prior. Finally, when asked if their institution accepts out-of-state documentation, nearly all participants reported that they accept documentation for a disability of ASD from out of state (99.5%).

Research Question Three

Frequencies and percentages of mental health services available for students with ASD at the DSS office and at the counseling center are reported in Table 10. Over one third of universities report offering mental health services for Students with ASD at the DSS office (35.3%) and 86.5% reported they provide counseling services at their designated counseling center.

Table 10

Frequencies and Percentages of Mental Health Service Locations for Students with ASD

	No		Yes	
	n	%	n	%
DSS Office	244	64.7	133	35.3
Counseling Center	51	13.5	326	86.5

Participants provided information on the available social skills interventions for students with ASD. As shown in Table 11, only 12.8% of the participating schools provided social skills groups. In addition, a greater proportion of the schools provided individual social skills counseling (53.4%) compared to 46.6% of schools that do not have such services available. A majority of participating schools did not have life skills coaching available for students with ASD (84.5%). Similarly, a greater proportion of participating schools do not provided job coaching to students with ASD (85.6%). Additionally, a greater percentage of participants reported that they do not have peer mentorship services available for ASD student (73.3%). More participants reported they do not provide social skills practice in real work settings (91.0%) compared to only 9.0% of those who provide the service. Overall, nearly one-third of the participants reported they do not provide any of the social skills services (33.5%). Finally, a small percentage of participants reported offering other services (1.6%).

Table 11

Frequencies and Percentages of Available Social Skills Services for Students with ASD

	n	%
Social Skills Group		
No	320	87.2
Yes	47	12.8
Non-Respondents	41	
Individual Social Skills Counseling		
No	196	53.4
Yes	171	46.6
Non-Respondents	41	
Life Skills Coaching		
No	310	84.5
Yes	57	15.5
Non-Respondents	41	
Job Coaching		
No	314	85.6
Yes	53	14.4
Non-Respondents	41	
Peer Mentorship		
No	269	73.3
Yes	98	26.7
Non-Respondents	41	

(continued)

Table 11, continued

	n	%
Social Skills Practice		
No	334	91.0
Yes	33	9.0
Non-Respondents	41	
None		
No	244	66.5
Yes	123	33.5
Non-Respondents	41	
Other		
Faculty/Staff Mentorship	1	.2
Peer Support	1	.2
Social Skills Class for Credit	4	1.0
Workshop	1	.2
Non-Respondents	0	

Note. Percentages are calculated as the valid percent of participants who responded

The participants also reported the availability of academic support services for students with ASD at their respective universities. The frequencies and percentages of their responses are displayed in Table 12. In terms of classroom size, a majority of participants indicated that they never/do not offer smaller class sizes exclusively for students with ASD (45.8%) compared to 32.2% school that often or almost always

provide such services. Additionally, nearly two-thirds of the schools reported they often or almost always provided preferential seating arrangements for students with ASD (67.8%). The majority also reported that they often or almost always provide note taker services to students with ASD (69.0%). In terms of providing copies of instructor's notes, 36.5% reported they sometimes provide the service and, a similar percentage reported they often or almost always provided the service (35.4%). Additionally, more than half of the participants reported they often or almost always have taped lectures available for students with ASD (54.3%). Similarly, nearly half of the schools indicated that they had testing centers available almost always for students with ASD (49.6%). When asked if they permit students with ASD to have extra time on tests, 84.5% responded that they often or almost always allow it.

The participants were also asked if they permitted students with ASD to avoid group projects, presentations, and public speaking (see Table 12). A majority of participants reported that they never or rarely permit students with ASD to avoid group projects (69%); however, 27.0% reported that they sometimes allow it. Similarly, approximately 69.4% never or rarely allowed students with ASD to avoid presentations. Likewise a greater percentage of participants indicated that they never or rarely permit students with ASD to avoid public speaking opportunities (66.5%). The participants were also asked if they allow students with ASD to take oral rather than written exams. A greater percentage of participants indicated that they rarely or sometimes do allow oral exams (64.9%). Participants also reported if they allowed flexible due dates for students

with ASD. Almost 58.1% of the participants reported they never or rarely allow flexibility in due dates, however 29.2% reported they sometimes allow it. Similarly, only a small proportion indicated they often or almost permit students to attend other sections of the same class (10.6%), whereas the remaining majority never, rarely or only sometimes allowed such instances (89.4%).

Finally, participants report the availability of class substitution to avoid a specific class (such as to avoid taking a speech class) or to gain an exemption from a specific class. In both instances, the majority of participants reported that they never or rarely provide class substitution (70.5%) and, never or rarely allow class exemption (86.1%).

Table 12

Frequencies and Percentages of Academic Support Services Available to Students with ASD

	n	%
Smaller Class Size		
Never/Not Offered	168	45.8
Rarely	38	10.4
Sometimes	66	18.0
Often	52	14.2
Almost Always	43	11.7
Non-Respondents	41	

(continued)

Table 12, continued

	n	%
Preferential Seating		
Never/Not Offered	22	6.0
Rarely	16	4.4
Sometimes	80	21.8
Often	105	28.6
Almost Always	144	39.2
Non-Respondents	41	
Note Taker		
Never/Not Offered	7	1.9
Rarely	11	3.0
Sometimes	96	26.2
Often	121	33.0
Almost Always	132	36.0
Non-Respondents	41	
Copies of Instructor's Notes		
Never/Not Offered	43	11.7
Rarely	60	16.3
Sometimes	134	36.5
Often	84	22.9
Almost Always	46	12.5
Non-Respondents	41	

(continued)

Table 12, continued

	n	%
Taped Lectures		
Never/Not Offered	9	2.5
Rarely	17	4.6
Sometimes	142	38.7
Often	107	29.2
Almost Always	92	25.1
Non-Respondents	41	
Testing Center		
Never/Not Offered	21	5.7
Rarely	1	.3
Sometimes	65	17.7
Often	98	26.7
Almost Always	182	49.6
Non-Respondents	41	
Extra Time on Tests		
Never/Not Offered	2	.5
Rarely	2	.5
Sometimes	53	14.4
Often	110	30.0
Almost Always	200	54.5
Non-Respondents	41	

(continued)

Table 12, continued

	n	%
Permission to Avoid Group Projects		
Never/Not Offered	110	30.0
Rarely	143	39.0
Sometimes	99	27.0
Often	11	3.0
Almost Always	4	1.1
Non-Respondents	41	
Permission to Avoid Presentations		
Never/Not Offered	108	29.4
Rarely	147	40.1
Sometimes	96	26.2
Often	12	3.3
Almost Always	4	1.1
Non-Respondents	41	
Permission to Avoid Public Speaking		
Never/Not Offered	106	28.9
Rarely	138	37.6
Sometimes	105	28.6
Often	14	3.8
Almost Always	4	1.1
Non-Respondents	41	

(continued)

Table 12, continued

	n	%
Oral Rather than Written Exams		
Never/Not Offered	65	17.7
Rarely	135	36.8
Sometimes	116	31.6
Often	31	8.4
Almost Always	20	5.4
Non-Respondents	41	
Flexible Due Dates		
Never/Not Offered	96	26.2
Rarely	117	31.9
Sometimes	107	29.2
Often	38	10.4
Almost Always	9	2.5
Non-Respondents	41	
Permission to Attend other Section of Same Class		
Never/Not Offered	90	24.5
Rarely	121	33.0
Sometimes	117	31.9
Often	26	7.1
Almost Always	13	3.5
Non-Respondents	41	

(continued)

Table 12, continued

	n	%
Class Substitution		
Never/Not Offered	107	29.2
Rarely	134	36.5
Sometimes	96	26.2
Often	15	4.1
Almost Always	15	4.1
Non-Respondents	41	
Class Exemption		
Never/Not Offered	186	50.7
Rarely	130	35.4
Sometimes	40	10.9
Often	5	1.4
Almost Always	6	1.6
Non-Respondents	41	

Note. Percentages are calculated as the valid percent of participants who responded

As part of the survey, participants provided information on activities of daily living available to students in ASD (see Table 13). In terms of understanding university rules and procedures, the majority reported that they often or almost always assist students (59.3%). A greater percentage reported that they sometimes or often also help students with problem solving (72.7%). Nearly 70.1% rated that they sometimes or often help students with organization. Similarly, a greater proportion was sometimes or often

involved in helping students with time management skills (73.3%). In terms of study skills training, the majority of participants rated that they often or almost always provide study skills training to students with ASD (62.3%). When asked about availability of self-advocacy training, approximately one-third of participants rated that they often provide the training (33.2%) and a similar percentage rated they sometimes provide such training activities (32.6%). In terms of assistance with managing medication, three-fourth of the participants rated that they never or rarely offer such assistance (75.0%). In addition, 44% rated that they often or almost always help students with navigating campus whereas, a little over one-third rated they sometimes help students with navigating campus. Furthermore, the majority rated never or rarely providing help to students with accessing transportation (59.3%). Nearly two-thirds of participants also reported that assistance with maintaining personal hygiene was never or rarely offered to students with ASD (67.6%). Similarly, the majority rated never or rarely assisting students with dressing appropriately (71.2%). A greater percentage of participants never or rarely offered assistance with setting alarm clocks for students with ASD (80.6%). In terms of assisting students with ASD with handling fire drills, most of the participants reported that they never or rarely provide such assistance (52.5%). However, 24.3% rated they sometimes provide such assistance and, almost 22.9% often or almost always provided assistance with handling fire drills. In terms of help with managing personal budgets, just over 86.8% rated never or rarely providing such assistance. On the other hand, nearly 63.9% reported that they provide additional help to student with specific

classes or faculty. Finally, over half of the participants reported that they never provided assistance to students with ASD with eating in the cafeteria (50.1%) and, a vast majority had never or rarely provided help with shopping (94.4%).

Table 13

Frequencies and Percentages of Activities of Daily Living Available to Students with ASD

	n	%
Understanding University Rules and Procedures		
Never/Not Offered	13	3.5
Rarely	24	6.5
Sometimes	114	30.7
Often	125	33.7
Almost Always	95	25.6
Non-Respondents	37	
Problem Solving		
Never/Not Offered	14	3.8
Rarely	26	7.0
Sometimes	130	35.0
Often	140	37.7
Almost Always	61	16.4
Non-Respondents	37	

(continued)

Table 13, continued

	n	%
Organization		
Never/Not Offered	9	2.4
Rarely	27	7.3
Sometimes	121	32.6
Often	139	37.5
Almost Always	75	20.2
Non-Respondents	37	
Time Management		
Never/Not Offered	7	1.9
Rarely	18	4.9
Sometimes	123	33.2
Often	149	40.2
Almost Always	74	19.9
Non-Respondents	37	
Study Skills Training		
Never/Not Offered	9	2.4
Rarely	18	4.9
Sometimes	113	30.5
Often	154	41.5
Almost Always	77	20.8
Non-Respondents	37	

(continued)

Table 13, continued

	n	%
Self-Advocacy Training		
Never/Not Offered	25	6.7
Rarely	35	9.4
Sometimes	121	32.6
Often	123	33.2
Almost Always	67	18.1
Non-Respondents	37	
Managing Medication		
Never/Not Offered	192	51.8
Rarely	86	23.2
Sometimes	57	15.4
Often	25	6.7
Almost Always	11	3.0
Non-Respondents	37	
Navigating Campus		
Never/Not Offered	27	7.3
Rarely	54	14.6
Sometimes	127	34.2
Often	100	27.0
Almost Always	63	17.0
Non-Respondents	37	

(continued)

Table 13, continued

	n	%
Accessing Transportation		
Never/Not Offered	97	26.1
Rarely	123	33.2
Sometimes	98	26.4
Often	30	8.1
Almost Always	23	6.2
Non-Respondents	37	
Maintaining Personal Hygiene		
Never/Not Offered	133	35.8
Rarely	118	31.8
Sometimes	91	24.5
Often	19	5.1
Almost Always	10	2.7
Non-Respondents	37	
Dressing Appropriately		
Never/Not Offered	142	38.3
Rarely	122	32.9
Sometimes	79	21.3
Often	17	4.6
Almost Always	11	3.0
Non-Respondents	37	

(continued)

Table 13, continued

	n	%
Setting Alarm Clock		
Never/Not Offered	208	56.1
Rarely	91	24.5
Sometimes	41	11.1
Often	25	6.7
Almost Always	6	1.6
Non-Respondents	37	
Handling Fire Drills		
Never/Not Offered	91	24.5
Rarely	105	28.3
Sometimes	90	24.3
Often	46	12.4
Almost Always	39	10.5
Non-Respondents	37	
Help Managing Personal Budget		
Never/Not Offered	224	60.4
Rarely	98	26.4
Sometimes	33	8.9
Often	12	3.2
Almost Always	4	1.1
Non-Respondents	37	

(continued)

Table 13, continued

	n	%
Additional Help with Specific Class/Faculty Selection		
Never/Not Offered	24	6.5
Rarely	27	7.3
Sometimes	83	22.4
Often	141	38.0
Almost Always	96	25.9
Non-Respondents	37	
Eating in a Cafeteria		
Never/Not Offered	186	50.1
Rarely	92	24.8
Sometimes	65	17.5
Often	19	5.1
Almost Always	9	2.4
Non-Respondents	37	
Shopping		
Never/Not Offered	277	74.7
Rarely	73	19.7
Sometimes	15	4.0
Often	4	1.1
Almost Always	2	.5
Non-Respondents	37	

Note. Percentages are calculated as the valid percent of participants who responded

Frequencies and percentages of total number of social skills services, academic support services, and services addressing activities of daily living for students are listed in Table 14. As shown in table, approximately 40.9% reported not providing any social activity, 25.1% provide at least one social skills activity and, 34.1% provided between 2 to 6 social skills activities. Additionally, 39.0% of participants indicated that they provide 11 to 14 academic services, 37.6% provide 15-16 academic services and 23.4% provide 0 to 10 academic services for students with ASD. Finally, nearly one-third of participants reported providing between 15 to 17 activities of daily living, whereas, nearly 36.1% provided between 11-14 daily living activities. The remaining 30.6% provided between 0 to 10 activities of daily living.

Academic support availability scores were calculated by summing the frequency score for each academic service, only for schools providing at least one academic service. This score provides an index of both how many and how frequently academic services are provided. Higher scores indicate that the school offers more academic services and also offers them more frequently than schools with lower scores. Availability scores for activities of daily living were also calculated using the same procedure. The means and standard deviation of availability of academic support services and services addressing activities of daily living for students are displayed in Table 15. Of schools offering academic support services, scores for availability ranged from 8 to 56, with an average of about 31 ($M = 31.01$, $SD = 9.01$). The availability of services addressing activities of daily living ranged from 4 to 68 with an average over 29 ($M = 29.68$, $SD = 10.46$).

Table 14

Frequencies and Percentages of Total Number of Social Skills Services, Academic Support Services, and Services Addressing Activities of Daily Living for Students

	n	%
Total Number of Social Skills Activities		
No Social Skills Activities	150	40.9
One Social Skills Activity	92	25.1
2-6 Social Skills Activities	125	34.1
Non-Respondents	41	
Total Number of Academic Services		
0-10 Academic Services	86	23.4
11-14 Academic Services	143	39.0
15-16 Academic Services	138	37.6
Non-Respondents	41	
Total Number of Activities of Daily Living		
0-10 Daily Living Activities	113	30.5
11-14 Daily Living Activities	134	36.1
15-17 Daily Living Activities	124	33.4
Non-Respondents	37	

Note. Percentages are calculated as the valid percent of participants who responded

Table 15

Means and Standard Deviations of Availability of Academic Support Services, and Services Addressing Activities of Daily Living

	N	Mean	SD	Min	Max
Academic Support Services	367	31.01	9.09	8	56
Services Addressing Activities of Daily Living	371	29.20	11.03	0	68

Note. Availability of Social Skills Activities was not a survey item

Research Question Four

Crosstabulations with Pearson's chi square and Cramer's V tests were conducted to examine the relationship between university type and mental health service locations. As shown in Table 16, the relationship between university type and availability of mental health services was significant, $\chi^2(1) = 3.94, p < .05$, Cramer's $V = .11$. A greater proportion of public universities (38.6%) compared to private (27.9%) offered counseling at the DSS office. Although most schools offered counseling services for students with ASD at a counseling center, a greater proportion of private universities offered mental health services at the counseling center (94.6%) compared to public schools (79.7%), $\chi^2(1) = 13.99, p < .001$, Cramer's $V = .21$.

Table 16

Frequencies and Percentages of Mental Health Service Locations by University Type

	Public		Private		χ^2	<i>p</i>
	<i>n</i>	%	<i>n</i>	%		
DSS Office					3.94	.047
No	121	61.4	93	72.1		
Yes	76	38.6	36	27.9		
Counseling Center					13.99	<.001
No	40	20.3	7	5.4		
Yes	157	79.7	122	94.6		

Crosstabulations with Pearson's chi square and Cramer's *V* tests were also computed to examine the relationship between university type and social skills services. As seen in Table 17, there was a significant relationship between university type and job coaching, $\chi^2(1) = 5.70, p < .05$, Cramer's *V* = .13. Nearly twice as many private institutions had job coaching services available to students with ASD (20.2%) compared to public institution (10.7%). Additionally, the results revealed a significant relationship between university type and peer mentorship services, $\chi^2(1) = 6.39, p < .05$, Cramer's *V* = .14. One-third of private institutions (33.3%) had peer mentorship services available compared to 20.8% of public schools. Finally, no significant relationships were found between university type and social skills group, individual social skills, life coaching skills, social skills practice and no social skills services, all *ps ns*.

Table 17

Frequencies and Percentages of Social Skills Services by University Type

	Public		Private		χ^2	p
	n	%	n	%		
Social Skills Group					.18	.676
No	171	86.8	114	88.4		
Yes	26	13.2	15	11.6		
Individual Social Skills Counseling					.24	.622
No	106	53.8	73	56.6		
Yes	91	46.2	56	43.4		
Life Skills Coaching					3.29	.070
No	172	87.3	103	79.8		
Yes	25	12.7	26	20.2		
Job Coaching					5.70	.017
No	176	89.3	103	79.8		
Yes	21	10.7	26	20.2		
Peer Mentorship					6.39	.011
No	156	79.2	86	66.7		
Yes	41	20.8	43	33.3		
Social Skills Practice					1.55	.213
No	177	89.8	121	93.8		
Yes	20	10.2	8	6.2		
None					.63	.429
No	126	64.0	88	68.2		
Yes	71	36.0	41	31.8		

Table 18 shows both the relationship between university type and whether schools offered various academic services (as shown in the left hand side of the table) as well as the differences in the frequency of availability between public and private schools who do offer the service (as shown on the right side of the table). Crosstabulations with Pearson's chi square and Cramer's V tests were computed to examine the relationship between university type and whether or not various services were offered.

Table 18

Frequencies and Percentages of Whether Various Academic Services are Offered and Means and Standard Deviations of Frequency of Services Offered by School Type

	Service Offered				Availability of Services for Schools with Service					
	No		Yes		χ^2	p				
	n	%	n	%			Mean	SD	Med	Z^*
Smaller Class Size					2.35	.125				-2.05
Public	98	49.7	99	50.3			2.40	1.12	2	
Private	53	41.1	76	58.9			2.74	.93	3	
Preferential Seating					.51	.474				-.62
Public	10	5.1	187	94.9			3.05	.95	3	
Private	9	7.0	120	93.0			3.14	.85	3	
Note Taker					.752					-1.56
Public	4	2.0	193	98.0			2.95	.87	3	
Private	2	1.6	127	98.4			3.10	.84	3	

(continued)

Table 18, continued

Table 18, continued

	Service Offered				Availability of Services for Schools with Service					
	No		Yes		χ^2	<i>p</i>				
	<i>n</i>	%	<i>n</i>	%			Mean	<i>SD</i>	Med	<i>Z</i> * <i>p</i>
Copies of Instructor's Notes					.48	.488				-.21 .836
Public	21	10.7	176	89.3			2.32	.92	2	
Private	17	13.2	112	86.8			2.35	.98	2	
Taped Lectures					.15					-1.40 .162
Public	6	3.0	191	97.0			2.81	.90	3	
Private	3	2.3	126	97.7			2.67	.87	3	
Testing Center					4.69					-.39 .696
Public	7	3.6	190	96.4			3.34	.78	4	
Private	12	9.3	117	90.7			3.30	.81	4	
Extra Time on Tests					3.07					-.72 .471
Public	0	.0	197	100.0			3.35	.78	4	
Private	2	1.6	127	98.4			3.42	.73	4	
Permission to Avoid Group Projects					2.06	.151				-.28 .778
Public	54	27.4	143	72.6			1.50	.63	1	
Private	45	34.9	84	65.1			1.54	.67	1	

(continued)

Table 18, continued

	Service Offered				Availability of Services for Schools with Service					
	No		Yes		χ^2	<i>p</i>				
	<i>n</i>	%	<i>n</i>	%			Mean	<i>SD</i>	Med	<i>Z</i> [*] <i>p</i>
Permission to Avoid Presentations					2.69	.101				-1.16 .246
Public	52	26.4	145	73.6			1.48	.64	1	
Private	45	34.9	84	65.1			1.58	.68	1.5	
Permission to Avoid Public Speaking					3.96	.046				-.61 .545
Public	50	25.4	147	74.6			1.54	.64	1	
Private	46	35.7	83	64.3			1.61	.71	2	
Oral Rather than Written Exams					.05	.828				-.25 .805
Public	37	18.8	160	81.2			1.79	.89	2	
Private	23	17.8	106	82.2			1.81	.90	2	
Flexible Due Dates					6.28	.012				-1.82 .069
Public	63	32.0	134	68.0			1.68	.79	2	
Private	25	19.4	104	80.6			1.87	.84	2	
Permission to Attend Other Sections of Same Class					.60	.440				-1.22 .221
Public	46	23.4	151	76.6			1.66	.75	2	
Private	35	27.1	94	72.9			1.82	.89	2	

(continued)

Table 18, continued

	Service Offered				Availability of Services for Schools with Service					
	No		Yes		χ^2	p				
	n	%	n	%			Mean	SD	Med	Z* p
Tutoring					.113					-.54 .592
Public	12	6.1	185	93.9			3.41	.85	4	
Private	3	2.3	126	97.7			3.47	.80	4	
Class Substitution					1.31					-.75 .455
Public	54	27.4	143	72.6			1.62	.80	1	
Private	43	33.3	86	66.7			1.74	.94	1	
Class Exemption					.05					-1.08 .279
Public	103	52.3	94	47.7			1.34	.66	1	
Private	69	53.5	60	46.5			1.50	.83	1	

Note. *Test for differences using non parametric Mann-Whitney Test

As shown in Table 18, the relationship between university type and availability of testing center was significant, $\chi^2(1) = 4.69, p < .05$, Cramer's $V = .12$. A significantly greater proportion of public schools (96.4%) than private schools (90.7%) have testing centers. In addition, the relationship between permission to avoid public speaking and university type was also found significant, $\chi^2(1) = 3.96, p < .05$, Cramer's $V = .11$. A greater proportion of public schools gave permission to avoid public speaking (74.6%) than private schools (64.3%). The results also indicated a significant relationship

between university type and flexible due dates, $\chi^2(1) = 6.28, p < .05$, Cramer's $V = .14$. A significantly greater proportion of private schools offer flexible due dates (80.6%) compared to public schools (68.0%).

Also shown in Table 18 are the differences in availability of academic services between public and private schools for only schools who offer the service. A significant difference was found between public and private schools who offer smaller class size, $Z = -2.65, p < .05$. Of schools who offer smaller class sizes to students with ASD, the service is more frequently available in private schools ($M = 2.74, SD = .93$) than public schools ($M = 2.40, SD = 1.12$). Finally, no significant relationship was found between university type and preferential seating, availability of note-taker, instructor notes, taped lecture, allowing extra time on tests, permission to avoid group projects, permission to avoid presentations, oral examinations, allowing students to attend other sections, tutoring, class substitutions and, class exemption; all ps ns .

Similar analyses were conducted on the various activities of daily living between public and private universities. Crosstabulations with Pearson's chi square and Cramer's V tests were computed to examine the relationship between university type and whether or not the university offered each of the activities of daily living. As shown in Table 19, the results revealed significant relationships between university type and managing medications, accessing transportation, maintaining personal hygiene, dressing appropriately, setting alarm clocks, handling fire drills, help managing personal budget, additional help with selecting class/faculty, eating in cafeteria, and shopping than public

schools, all $ps < .05$. Specifically, a significantly greater proportion of private schools offer managing medications services (62.0%) compared to public schools (39.1%). Similarly, a greater proportion of private schools (80.6%) compared to private schools (67.5%), offered transportation access to students with ASD. A greater proportion of private schools also offer help to students with ASD with maintaining personal hygiene (72.9%) compared to private schools (59.4%). Similarly, a greater percentage of private schools offer assistance to dress appropriately (71.3%) than private schools (56.3%). The results also revealed that a greater proportion of private schools provided assistance with setting alarm clocks (62.8%) compared to 31.5% of public schools. Furthermore, a greater proportion of private schools (81.4%) than public schools (70.6%) provided assistance with handling fire drills.

Of schools that offer help with time management to students with ASD, the service is more frequently available at private institutions ($M = 2.87, SD = .83$) than at public institutions ($M = 2.67, SD = .84$), $Z = -2.28, p < .05$. Similarly, of the schools that offer assistance with managing medications to students with ASD, the service is more frequently available at private institution ($M = 1.95, SD = .97$) than public institutions ($M = 1.62, SD = .80$), $Z = -2.18, p < .05$. Furthermore, of the schools that offer assistance with handling fire drills, the service is more frequently available in private schools ($M = 2.22, SD = 1.10$) than public schools ($M = 1.93, SD = 1.00$), $Z = -2.06, p < .05$.

Table 19

Frequencies and Percentages of Whether Various Activities of Daily Living are Offered and Means and Standard Deviations of Frequency of Activities Offered by School Type

	Service Offered				χ^2	<i>p</i>	Availability of Services for Schools with Service				
	No		Yes				Mean	<i>SD</i>	Med	<i>Z</i> *	<i>p</i>
	<i>n</i>	%	<i>n</i>	%							
Understanding University Rules and Procedures					1.11	.293				-.48	.629
Public	9	4.6	188	95.4			2.76	.88	3		
Private	3	2.3	126	97.7			2.79	.91	3		
Problem Solving					1.54					-.90	.366
Public	10	5.1	187	94.9			2.61	.82	3		
Private	3	2.3	126	97.7			2.68	.86	3		
Organization						.903				-1.90	.057
Public	5	2.5	192	97.5			2.64	.86	3		
Private	3	2.3	126	97.7			2.81	.91	3		
Time Management					.10					-2.28	.023
Public	4	2.0	193	98.0			2.67	.84	3		
Private	2	1.6	127	98.4			2.87	.83	3		
Study Skills Training					.36					-1.61	.106
Public	5	2.5	192	97.5			2.72	.81	3		
Private	2	1.6	127	98.4			2.86	.84	3		
Self-Advocacy Training					.43	.514				-.46	.648
Public	13	6.6	184	93.4			2.62	.89	3		
Private	11	8.5	118	91.5			2.66	.91	3		

(continued)

Table 19, continued

	Service Offered				Availability of Services for Schools with Service						
	No		Yes		χ^2	<i>p</i>	Mean	<i>SD</i>	Med	<i>Z</i> *	<i>p</i>
	<i>n</i>	%	<i>n</i>	%							
Managing Medication					16.42	<.001				-2.18	.029
Public	120	60.9	77	39.1			1.62	.80	1		
Private	49	38.0	80	62.0			1.95	.97	2		
Navigating Campus					.09	.766				-.05	.961
Public	15	7.6	182	92.4			2.49	.97	2		
Private	11	8.5	118	91.5			2.50	.99	2		
Accessing Transportation					6.75	.009				-.58	.562
Public	64	32.5	133	67.5			1.77	.91	2		
Private	25	19.4	104	80.6			1.85	.94	2		
Maintaining Personal Hygiene					6.20	.013				-1.34	.179
Public	80	40.6	117	59.4			1.63	.79	1		
Private	35	27.1	94	72.9			1.78	.84	2		
Dressing Appropriately					7.44	.006				-1.00	.315
Public	86	43.7	111	56.3			1.60	.80	1		
Private	37	28.7	92	71.3			1.73	.88	2		
Setting Alarm Clock					31.05	<.001				-1.88	.060
Public	135	68.5	62	31.5			1.52	.76	1		
Private	48	37.2	81	62.8			1.81	.95	2		

(continued)

Table 19, continued

	Service Offered				χ^2	<i>p</i>	Availability of Services for Schools with Service				
	No		Yes				Mean	<i>SD</i>	Med	<i>Z</i> *	<i>p</i>
	<i>n</i>	%	<i>n</i>	%							
Handling Fire Drills					4.86	.027				-2.06	.039
Public	58	29.4	139	70.6			1.93	1.00	2		
Private	24	18.6	105	81.4			2.22	1.10	2		
Help Managing Personal Budget					7.67	.006				-.39	.698
Public	131	66.5	66	33.5			1.45	.75	1		
Private	66	51.2	63	48.8			1.52	.84	1		
Additional Help w Specific Class/ Faculty Selection					3.95	.047				-1.03	.301
Public	17	8.6	180	91.4			2.91	.89	3		
Private	4	3.1	125	96.9			2.81	.91	3		
Eating in Cafeteria					19.49	<.001				-.93	.353
Public	121	61.4	76	38.6			1.61	.77	1		
Private	47	36.4	82	63.6			1.74	.87	2		
Shopping					19.58	<.001				-1.41	.160
Public	166	84.3	31	15.7			1.26	.68	1		
Private	81	62.8	48	37.2			1.42	.71	1		

Note. * Test for differences using non parametric Mann-Whitney Test

Table 20 shows a summary of the total number of social skill services, academic services, and activities of daily living offered in public and private schools. Also shown are the differences in availability between public and private schools for academic services and activities of daily living. Private schools offer significantly more activities of daily living ($M = 13.50, SD = 3.63$) than public schools ($M = 11.73, SD = 3.43$), $Z = -.73, p < .001$. In addition, only considering schools who offer activities of daily living, private schools offer these services more frequently ($M = 32.23, SD = 11.48$) than public schools ($M = 27.61, SD = 9.91$), $Z = 14.66, p < .001$.

Research Question Five

Crosstabulations with Pearson's chi square and Cramer's V tests were conducted to examine the relationship between university length and location of mental health services. As shown in Table 21, the relationship between university type and mental health services offered at a DSS office was significant, $\chi^2(1) = 24.05, p < .001$, Cramer's $V = .28$. A greater percentage of 2-year universities offered counseling services at the DSS office (51.5%) compared to 4-year universities (23.7%). The relationship between university type and location of mental health services was also significant, $\chi^2(1) = 60.33, p < .001$, Cramer's $V = .44$. A greater percentage of 4-year universities offered counseling services for students with ASD at their counseling center (97.1%) compared to 2-year schools (65.0%).

Table 20

Means and Standard Deviations of Number of Social Skills Services, and Number and Availability of Academic Services and Activities of Daily Living by University Type

	<i>n</i>	Mean	SD	Med	Min	Max	Test Statistic	<i>p</i>
Total Number of Social Skills Activities							-1.05 [†]	.293
Public	110	1.86	1.07	2	1	5		
Private	78	1.90	.85	2	1	5		
Total Number of Academic Services							-.33 [†]	.743
Public	197	12.87	2.80	14	3	16		
Private	129	12.65	3.09	14	2	16		
Sum of Availability of Academic Services							.372 [‡]	.543
Public	197	30.58	9.09	30	8	55		
Private	129	31.22	9.58	32	8	56		
Total Number of Activities of Daily Living							-4.73 [†]	<.001
Public	197	11.73	3.43	12	0	17		
Private	129	13.50	3.63	14	0	17		
Sum of Availability of Activities of Daily Living							14.66 [‡]	<.001
Public	194	27.61	9.91	27	4	68		
Private	127	32.23	11.48	32	8	68		

Note. [‡]F Statistic; [†]Z Score; Availability of Social Skills Activities was not a survey item

Table 21

Frequencies and Percentages of Mental Health Service Locations by University Length

	4-year		2-year		χ^2	<i>p</i>
	n	%	n	%		
DSS Office					24.05	<.001
No	158	76.3	50	48.5		
Yes	49	23.7	53	51.5		
Counseling Center					60.33	<.001
No	6	2.9	36	35.0		
Yes	201	97.1	67	65.0		

Crosstabulations with Pearson's chi square and Cramer's *V* tests were conducted to examine the relationship between university length and various types of social skills services (see Table 22). Results revealed a significant relationship between university type and social skills group, $\chi^2(1) = 4.28$, $p < .05$, Cramer's *V* = .12. A greater proportion of 4-year institutions reported that they have social skills group services available (15.0%) compared to 6.8% of 2-year institutions. A significant relationship was also found between university length and availability of individual social skills counseling, $\chi^2(1) = 3.94$, $p < .05$, Cramer's *V* = .11. A greater proportion of 4-year institutions offered individual social skills counseling (48.8%) compared to 2-year institutions (36.9%). Additionally, a significant relationship was found between

university length and availability of life skills coaching, $\chi^2(1) = 5.36, p < .05$, Cramer's $V = .13$. A greater proportion of 4-year institutions provided life skills coaching (18.8%) compared to 8.7% of 2-year institutions. The results also revealed a significant relationship between university type and job coaching skills services, $\chi^2(1) = 5.66, p < .05$, Cramer's $V = .14$. Nearly 17.9% of 4-year institutions provided job coaching skills services compared to only 7.8% of 2-year institutions. Furthermore, the results revealed a significant relationship between university type and peer mentorship services available, $\chi^2(1) = 4.36, p < .05$, Cramer's $V = .12$. A greater proportion of 4-year institutions had peer mentorship services available (29.5%), compared to 18.4% of 2-year institutions. There was a significant relationship between university length and no social skills services available, $\chi^2(1) = 5.32, p < .05$, Cramer's $V = .13$. A greater proportion of 2-year institutions did not offer any of the social skills services (43.7%) compared to 4-year institutions (30.4%). Finally, no significant relationship was found between university length and social skills practice, $p > .05$.

Table 22

Frequencies and Percentages of Social Skills Services by University Length

	4-year		2-year		χ^2	p
	n	%	n	%		
Social Skills Group					4.28	.039
No	176	85.0	96	93.2		
Yes	31	15.0	7	6.8		
Individual Social Skills Counseling					3.94	.047
No	106	51.2	65	63.1		
Yes	101	48.8	38	36.9		
Life Skills Coaching					5.36	.021
No	168	81.2	94	91.3		
Yes	39	18.8	9	8.7		
Job Coaching					5.66	.017
No	170	82.1	95	92.2		
Yes	37	17.9	8	7.8		
Peer Mentorship					4.36	.037
No	146	70.5	84	81.6		
Yes	61	29.5	19	18.4		
Social Skills Practice					.17	.678
No	188	90.8	95	92.2		
Yes	19	9.2	8	7.8		
None					5.32	.021
No	144	69.6	58	56.3		
Yes	63	30.4	45	43.7		

Table 23 shows both the relationship between university length and whether schools offered various academic services (as shown in the left hand side of the table) as well as the differences in the frequency of availability between 2-year and 4-year schools that do offer the service (as shown on the right side of the table). Crosstabulations with Pearson's chi square and Cramer's V tests were computed to examine the relationship between university length and whether or not various services were offered.

As shown in Table 23, the relationship between university length and availability of preferential seating was significant, $\chi^2(1) = 4.21, p < .05$, Cramer's $V = .12$.

Significantly more 2-year schools have availability of preferential seating (98.1%) than 4-year schools (92.3%). Similarly there was significant relationship between availability of and oral rather than written exams and university length, $\chi^2(1) = 4.67, p < .05$, Cramer's $V = .12$. A greater proportion of 2-year schools had the availability of oral rather than written exams for students with ASD (88.3%) compared to 4-year schools (78.3%).

There was no significant relationship between availability of instructor's notes and university type, $p > .05$. However, of those schools that offer the service, the availability of copies of instructor's notes are significantly more frequent at 2-year schools ($M = 2.53, SD = .93$) than at 4-year schools ($M = 2.25, SD = .94$), $Z = -2.19, p = .029$.

Table 23

Frequencies and Percentages of Whether Various Academic Services are Offered and Means and Standard Deviations of Frequency of Activities Offered by School Length

	Service Offered				χ^2	<i>p</i>	Availability of Services for Schools with Service					
	No		Yes				Mean	<i>SD</i>	Med	<i>Z</i> *	<i>p</i>	
	<i>n</i>	%	<i>n</i>	%								
Smaller Class Size					.01	.906					-1.59	.113
4-Year	95	45.9	112	54.1			2.47	1.01	2			
2-Year	48	46.6	55	53.4			2.75	1.14	3			
Preferential Seating					4.21	.040					-1.46	.145
4-Year	16	7.7	191	92.3			3.03	.89	3			
2-Year	2	1.9	101	98.1			3.16	.96	3			
Note Taker					.00	.995					-.78	.435
4-Year	4	1.9	203	98.1			3.03	.83	3			
2-Year	2	1.9	101	98.1			2.94	.94	3			
Copies of Instructor's Notes					2.55	.110					-2.19	.029
4-Year	29	14.0	178	86.0			2.25	.94	2			
2-Year	8	7.8	95	92.2			2.53	.93	2			
Taped Lectures					.51	.477					-1.73	.084
4-Year	7	3.4	200	96.6			2.70	.86	3			
2-Year	2	1.9	101	98.1			2.89	.92	3			

(continued)

Table 23, continued

	Service Offered				χ^2	<i>p</i>	Availability of Services for Schools with Service				
	No		Yes				Mean	<i>SD</i>	Med	<i>Z</i> *	<i>p</i>
	<i>n</i>	%	<i>n</i>	%							
Testing Center					3.83	.053				-1.08	.280
4-Year	15	7.2	192	92.8			3.29	.81	4		
2-Year	2	1.9	101	98.1			3.40	.76	4		
Extra Time on Tests					.50	.480				-.31	.760
4-Year	1	.5	206	99.5			3.36	.75	4		
2-Year	0	.0	103	100.0			3.38	.78	4		
Permission to Avoid Group Projects					.35	.554				-.35	.730
4-Year	63	30.4	144	69.6			1.50	.63	1		
2-Year	28	27.2	75	72.8			1.55	.68	1		
Permission to Avoid Presentations					1.92	.166				-.24	.809
4-Year	66	31.9	141	68.1			1.52	.64	1		
2-Year	25	24.3	78	75.7			1.51	.68	1		
Permission to Avoid Public Speaking					1.70	.193				-.78	.436
4-Year	65	31.4	142	68.6			1.58	.67	1.5		
2-Year	25	24.3	78	75.7			1.53	.68	1		

(continued)

Table 23, continued

	Service Offered				χ^2	<i>p</i>	Availability of Services for Schools with Service				
	No		Yes				Mean	<i>SD</i>	Med	<i>Z</i> *	<i>p</i>
	<i>n</i>	%	<i>n</i>	%							
Oral Rather than Written Exams					4.67	.031				-1.23	.218
4-Year	45	21.7	162	78.3			1.75	.88	2		
2-Year	12	11.7	91	88.3			1.88	.92	2		
Flexible Due Dates					.15	.698				-.07	.943
4-Year	54	26.1	153	73.9			1.73	.78	2		
2-Year	29	28.2	74	71.8			1.74	.81	2		
Permission to Attend Other Sections of Same Class					.12	.726				-.21	.834
4-Year	52	25.1	155	74.9			1.71	.81	2		
2-Year	24	23.3	79	76.7			1.67	.76	2		
Tutoring					.92	.338				-.25	.801
4-Year	11	5.3	196	94.7			3.40	.87	4		
2-Year	3	2.9	100	97.1			3.46	.77	4		
Class Substitution					.73	.392				-.83	.407
4-Year	64	30.9	143	69.1			1.65	.87	1		
2-Year	27	26.2	76	73.8			1.70	.80	2		
Class Exemption					2.21	.137				-.42	.676
4-Year	115	55.6	92	44.4			1.40	.77	1		
2-Year	48	46.6	55	53.4			1.36	.59	1		

Note. * Test for differences using non parametric Mann-Whitney Test

Similar analyses were conducted on the various activities of daily living between 2-year and 4-year institutions. Table 24 shows crosstabulations with Pearson's chi square and Cramer's V tests which were conducted to examine whether various activities of daily living were offered by university length. As shown in table, significantly greater proportion of 4-year schools offer managing medications, accessing transportation, setting alarm clock, eating in cafeteria, and shopping than 2-year schools, all $ps < .05$. In addition, of schools who offer assistance with organization to students with ASD, the service is more frequently offered at a 4-year school ($M = 2.77, SD = .89$) than at a 2-year school ($M = 2.56, SD = .87$), $Z = -2.09, p = <.05$. Similarly, of those who offered help to students with ASD with accessing transportation, the services were more frequently offered at 4-year ($M = 1.91, SD = .96$) than 2-year schools ($M = 1.57, SD = .74$), $Z = -.240, p < .05$. Furthermore, of those schools that helped students with ASD with maintaining personal hygiene, service is offered more frequently at 4-year ($M = 1.80, SD = .85$) than 2-year schools ($M = 1.53, SD = .75$), $Z = -2.33, p < .05$. On the other hand, of those schools that offered additional help with Specific Class/Faculty Selection, the service was more frequently offered at 2-year schools ($M = 3.06, SD = .81$) than at 4-year schools ($M = 2.76, SD = .93$), $Z = -2.55, p = .011$.

Table 24

Frequencies and Percentages of Whether Various Activities of Daily Living are Offered and Means and Standard Deviations of Frequency of Activities Offered by School Length

	Service Offered				χ^2	<i>p</i>	Availability of Services for Schools with Service				
	No n	%	Yes n	%			Mean	SD	Med	Z*	<i>p</i>
Understanding School Rules and Procedures					.05	.822				-.33	.742
4-Year	7	3.4	200	96.6			2.76	.92	3		
2-Year	4	3.9	99	96.1			2.80	.84	3		
Problem Solving					.00	.994				-.26	.797
4-Year	8	3.9	199	96.1			2.66	.83	3		
2-Year	4	3.9	99	96.1			2.63	.85	3		
Organization					1.16	.282				-2.09	.036
4-Year	6	2.9	201	97.1			2.77	.89	3		
2-Year	1	1.0	102	99.0			2.56	.87	2		
Time Management					.76	.385				-1.85	.064
4-Year	5	2.4	202	97.6			2.82	.84	3		
2-Year	1	1.0	102	99.0			2.63	.83	3		
Study Skills Training					1.16	.282				-.30	.763
4-Year	6	2.9	201	97.1			2.78	.84	3		
2-Year	1	1.0	102	99.0			2.75	.83	3		
Self-advocacy Training					1.48	.224				-.65	.516
4-Year	18	8.7	189	91.3			2.65	.92	3		
2-Year	5	4.9	98	95.1			2.59	.86	3		

(continued)

Table 24, continued

	Service Offered						Availability of Services for Schools with Service					
	No		Yes		χ^2	p	Mean	SD	Med	Z^*	p	
	n	%	n	%								
Self-advocacy												
Training					1.48	.224				-.65	.516	
4-Year	18	8.7	189	91.3			2.65	.92	3			
2-Year	5	4.9	98	95.1			2.59	.86	3			
Managing												
Medication					21.48	<.001				-1.55	.122	
4-Year	91	44.0	116	56.0			1.84	.89	2			
2-Year	74	71.8	29	28.2			1.55	.74	1			
Navigating Campus					1.80	.180				-1.08	.279	
4-Year	19	9.2	188	90.8			2.43	1.00	2			
2-Year	5	4.9	98	95.1			2.56	.94	2			
Accessing												
Transportation					4.40	.036				-2.40	.016	
4-Year	49	23.7	158	76.3			1.91	.96	2			
2-Year	36	35.0	67	65.0			1.57	.74	1			
Maintaining												
Personal Hygiene					.01	.909				-2.33	.020	
4-Year	73	35.3	134	64.7			1.80	.85	2			
2-Year	37	35.9	66	64.1			1.53	.75	1			
Dressing												
Appropriately					.04	.844				-1.70	.089	
4-Year	78	37.7	129	62.3			1.75	.88	2			
2-Year	40	38.8	63	61.2			1.52	.74	1			

(continued)

Table 24, continued

	Service Offered				χ^2	<i>p</i>	Availability of Services for Schools with Service				
	No n	%	Yes n	%			Mean	SD	Med	Z*	<i>p</i>
Setting Alarm Clock					16.17	<.001				-1.17	.244
4-Year	101	48.8	106	51.2			1.74	.92	1		
2-Year	75	72.8	28	27.2			1.50	.75	1		
Handling Fire Drills					.58	.446				-1.65	.098
4-Year	50	24.2	157	75.8			2.13	1.08	2		
2-Year	29	28.2	74	71.8			1.86	.96	2		
Help Managing Personal Budget					.76	.383				-.34	.733
4-Year	122	58.9	85	41.1			1.48	.80	1		
2-Year	66	64.1	37	35.9			1.54	.80	1		
Additional Help w Specific Class/ Faculty Selection					1.69	.194				-2.55	.011
4-Year	16	7.7	191	92.3			2.76	.93	3		
2-Year	4	3.9	99	96.1			3.06	.81	3		
Eating in a Cafeteria					13.40	<.001				-1.14	.255
4-Year	91	44.0	116	56.0			1.71	.83	2		
2-Year	68	66.0	35	34.0			1.54	.78	1		
Shopping					17.65	<.001				-.99	.321
4-Year	142	68.6	65	31.4			1.37	.72	1		
2-Year	93	90.3	10	9.7			1.20	.63	1		

Note. * Test for differences using non parametric Mann-Whitney Test

Table 25 shows a summary of the total number of social skill services, academic services, and activities of daily living offered in 4-year and 2- year schools. Also shown

are the differences in availability between 4-year and 2-year institutions for academic services and activities of daily living. As shown in Table 25, 4-year schools offer significantly more activities of daily living ($M = 12.74$, $SD = 3.87$) than 2-year schools ($M = 11.73$, $SD = 2.89$), $Z = -289$, $p < .05$. In addition, only considering schools who offer activities of daily living, 4-year schools offer activities of daily living services more frequently ($M = 30.36$, $SD = 11.54$) than 2-year schools ($M = 27.50$, $SD = 8.69$), $Z = 4.89$, $p < .05$.

Research Question Six

Crosstabulations with Pearson's chi square and Cramer's V tests were conducted to examine the relationship between region and location of mental health services. As shown in Table 26, no significant relationships were found between region and location of mental health services, all ps *ns*.

Crosstabulations with Pearson's chi square and Cramer's V tests were conducted to examine the relationship between region and various types of social skills services (see Table 27). Results revealed significant relationship between region and availability of individual social skills services, $\chi^2(3) = 13.26$, $p < .05$, Cramer's $V = .20$. A greater proportion of schools located in Southern region of the USA had individual social skills services available (56.6%) compared to the other three regions. Similarly, there was a significant relationship between region and availability of job coaching services, $\chi^2(3) = 8.27$, $p < .05$, Cramer's $V = .16$. Compared to other three regions, schools located in the West had the greatest percentage of job coaching services available (26.3%).

Table 25

Means and Standard Deviations of Number of Social Skills Services, and Number and Availability of Academic Services and Activities of Daily Living by School Length

	<i>n</i>	Mean	<i>SD</i>	Med	Min	Max	Test Statistic	<i>p</i>
Total Number of Social Skills Activities							-1.63 [†]	.104
4-year	129	1.95	.99	2	1	5		
2-year	49	1.71	.94	1	1	4		
Total Number of Academic Services							-1.70 [†]	.089
4-year	207	12.61	3.01	14	2	16		
2-year	103	13.23	2.62	14	6	16		
Sum of Availability of Academic Services							3.81 [‡]	.052
4-year	207	30.12	9.25	30	8	56		
2-year	103	32.28	9.09	32	12	55		
Total Number of Activities of Daily Living							-2.89 [†]	.004
4-year	207	12.74	3.87	14	0	17		
2-year	103	11.73	2.89	12	0	17		
Sum of Availability of Activities of Daily Living							4.89 [‡]	.028
4-year	203	30.36	11.54	29	8	68		
2-year	102	27.50	8.69	27	8	61		

Note. [†]F Statistic; [‡]Z Score; Availability of Social Skills Activities was not a survey item

Table 26

Frequencies and Percentages of Mental Health Service Locations by Region

	Northeast		West		Midwest		South		χ^2	<i>p</i>
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%		
DSS Office									1.54	.673
No	53	67.1	34	59.6	54	64.3	73	68.9		
Yes	26	32.9	23	40.4	30	35.7	33	31.1		
Counseling Center									4.81	.186
No	9	11.4	13	22.8	9	10.7	16	15.1		
Yes	70	88.6	44	77.2	75	89.3	90	84.9		

Table 28 shows both the relationship between region of the USA where the school was located and whether schools offered various academic services (as shown in the left hand side of the table) as well as the differences in the frequency of availability between schools located in the Northeast, West, Midwest, and South that do offer the service (as shown on the right side of the table). Crosstabulations with Pearson's chi square and Cramer's *V* tests were computed to examine the relationship between region and whether or not various services were offered.

As shown in Table 28, the relationship between region and testing centers services was significant, $\chi^2(3) = 12.63$, $p < .05$, Cramer's *V* = .20. Testing center are most often found in the Midwest (97.6%) and least often in the West (86.1%). A comparison of schools with the services showed no difference in the frequency of services offered between the various regions, all *ps ns*.

Table 27

Frequencies and Percentages of Social Skills Services by Region

	Northeast		West		Midwest		South		χ^2	<i>p</i>
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%		
Social Skills Group									1.76	.624
No	68	86.1	52	91.2	75	89.3	90	84.9		
Yes	11	13.9	5	8.8	9	10.7	16	15.1		
Individual Social Skills Counseling									13.26	.004
No	41	51.9	34	59.6	58	69.0	46	43.4		
Yes	38	48.1	23	40.4	26	31.0	60	56.6		
Life Skills Coaching									1.92	.588
No	69	87.3	50	87.7	70	83.3	86	81.1		
Yes	10	12.7	7	12.3	14	16.7	20	18.9		
Job Coaching									8.27	.041
No	71	89.9	42	73.7	74	88.1	92	86.8		
Yes	8	10.1	15	26.3	10	11.9	14	13.2		
Peer Mentorship									4.18	.242
No	54	68.4	45	78.9	59	70.2	84	79.2		
Yes	25	31.6	12	21.1	25	29.8	22	20.8		
Social Skills Practice									6.24	.101
No	74	93.7	54	94.7	79	94.0	91	85.8		
Yes	5	6.3	3	5.3	5	6.0	15	14.2		
None									5.85	.119
No	56	70.9	36	63.2	47	56.0	75	70.8		
Yes	23	29.1	21	36.8	37	44.0	31	29.2		

Table 28

Frequencies and Percentages of Whether Various Academic Services are Offered and Means and Standard Deviations of Frequency of Services Offered by Region

	Service Offered				Availability of Services for Schools with Service						
	No		Yes		χ^2	p	Mean	SD	Med	Z^*	p
	n	%	n	%							
Smaller Class Size					6.01	.111				2.34	.505
Northeast	44	55.7	35	44.3			2.46	1.07	2		
West	28	49.1	29	50.9			2.62	1.01	3		
Midwest	31	36.9	53	63.1			2.70	.99	3		
South	48	45.3	58	54.7			2.43	1.11	2		
Preferential Seating					1.38	.710				4.75	.191
Northeast	6	7.6	73	92.4			3.19	.89	3		
West	4	7.0	53	93.0			2.92	.90	3		
Midwest	3	3.6	81	96.4			3.21	.83	3		
South	6	5.7	100	94.3			3.00	.98	3		
Note taker					3.60	.308				2.41	.491
Northeast	1	1.3	78	98.7			2.96	.89	3		
West	0	.0	57	100.0			3.04	.82	3		
Midwest	1	1.2	83	98.8			3.12	.89	3		
South	4	3.8	102	96.2			2.95	.85	3		
Copies of Instructor's Notes					.26	.968				3.04	.386
Northeast	9	11.4	70	88.6			2.21	1.09	2		
West	6	10.5	51	89.5			2.35	.77	2		
Midwest	11	13.1	73	86.9			2.45	1.00	2		
South	12	11.3	94	88.7			2.32	.87	2		

(continued)

Table 28, continued

	Service Offered				Availability of Services for Schools with Service						
	No		Yes		χ^2	<i>p</i>	Mean	<i>SD</i>	Med	<i>Z</i> *	<i>p</i>
	<i>n</i>	%	<i>n</i>	%							
Taped Lectures					.18	.981				.68	.878
Northeast	2	2.5	77	97.5			2.71	.97	3		
West	2	3.5	55	96.5			2.71	.88	3		
Midwest	2	2.4	82	97.6			2.77	.89	3		
South	3	2.8	103	97.2			2.80	.84	3		
Testing Center					12.63	.006				3.09	.378
Northeast	11	13.9	68	86.1			3.25	.82	3		
West	2	3.5	55	96.5			3.25	.80	3		
Midwest	2	2.4	82	97.6			3.44	.77	4		
South	4	3.8	102	96.2			3.32	.79	4		
Extra Time on Tests					6.29	.098				.97	.809
Northeast	2	2.5	77	97.5			3.40	.75	4		
West	0	.0	57	100.0			3.32	.74	3		
Midwest	0	.0	84	100.0			3.39	.81	4		
South	0	.0	106	100.0			3.37	.75	4		
Permission to Avoid Group Projects					.54	.910				4.97	.174
Northeast	26	32.9	53	67.1			1.45	.64	1		
West	16	28.1	41	71.9			1.71	.75	2		
Midwest	24	28.6	60	71.4			1.42	.56	1		
South	33	31.1	73	68.9			1.53	.63	1		

(continued)

Table 28, continued

	Service Offered				Availability of Services for Schools with Service						
	No		Yes		χ^2	<i>p</i>	Mean	<i>SD</i>	Med	<i>Z</i> *	<i>p</i>
	<i>n</i>	%	<i>n</i>	%							
Permission to Avoid Presentations					.67	.881				4.23	.238
Northeast	24	30.4	55	69.6			1.49	.66	1		
West	15	26.3	42	73.7			1.74	.80	2		
Midwest	24	28.6	60	71.4			1.43	.56	1		
South	34	32.1	72	67.9			1.49	.60	1		
Permission to Avoid Public Speaking					.42	.936				3.92	.270
Northeast	23	29.1	56	70.9			1.55	.69	1		
West	15	26.3	42	73.7			1.79	.81	2		
Midwest	25	29.8	59	70.2			1.47	.57	1		
South	33	31.1	73	68.9			1.53	.63	1		
Oral Rather than Written Exams					3.75	.290				1.20	.754
Northeast	15	19.0	64	81.0			1.83	.86	2		
West	9	15.8	48	84.2			1.85	.87	2		
Midwest	11	13.1	73	86.9			1.73	.87	2		
South	25	23.6	81	76.4			1.80	.95	2		
Flexible Due Dates					6.74	.081				.91	.822
Northeast	13	16.5	66	83.5			1.74	.83	2		
West	15	26.3	42	73.7			1.81	.83	2		
Midwest	25	29.8	59	70.2			1.71	.85	2		
South	35	33.0	71	67.0			1.79	.77	2		

(continued)

Table 28, continued

	Service Offered				Availability of Services for Schools with Service						
	No		Yes		χ^2	<i>p</i>	Mean	SD	Med	<i>Z</i> *	<i>p</i>
	<i>n</i>	%	<i>n</i>	%							
Permission to Attend Other Sections of Same Class					.02	.999				2.16	.539
Northeast	20	25.3	59	74.7			1.78	.91	2		
West	14	24.6	43	75.4			1.56	.73	1		
Midwest	21	25.0	63	75.0			1.73	.77	2		
South	26	24.5	80	75.5			1.75	.80	2		
Tutoring					3.69	.296				3.25	.355
Northeast	3	3.8	76	96.2			3.47	.77	4		
West	2	3.5	55	96.5			3.33	.84	4		
Midwest	7	8.3	77	91.7			3.55	.75	4		
South	3	2.8	103	97.2			3.38	.91	4		
Class Substitution					.96	.812				2.48	.479
Northeast	25	31.6	54	68.4			1.56	.79	1		
West	15	26.3	42	73.7			1.79	.87	2		
Midwest	23	27.4	61	72.6			1.70	.88	1		
South	34	32.1	72	67.9			1.64	.86	1		
Class Exemption					.74	.863				3.45	.327
Northeast	39	49.4	40	50.6			1.30	.61	1		
West	29	50.9	28	49.1			1.36	.87	1		
Midwest	46	54.8	38	45.2			1.50	.86	1		
South	58	54.7	48	45.3			1.44	.65	1		

Note. * Test for differences using non parametric Kruskal-Wallis Test

Similar analyses were conducted on the various activities of daily living between universities in the four regions. Crosstabulations with Pearson's chi square and Cramer's

V tests were computed to examine the relationship between region and activities of daily living. As shown in Table 29, there was a significant relationship between shopping assistance and region where school is located, $\chi^2(3) = 8.05, p < .05$, Cramer's $V = .16$. The schools in the Northeast are more likely to provide shopping assistance (31.6%) than those in Midwest (28.6%), West (24.6%) or South (15.1%). Of schools who offer assistance with organization to students with ASD, the services are more frequently offered in the Northeast ($M = 2.90, SD = .82$) compared to the Midwest ($M = 2.77, SD = .98$), West ($M = 2.60, SD = .84$) and, South, ($M = 2.57, SD = .86$), $Z = 8.20, p = .042$. Similarly, of those schools that offered help with time management to students with ASD, the services were more frequently offered in the Northeast ($M = 2.91, SD = .81$), $Z = 8.29, p < .05$. Also, study skills training was offered significantly more in the Northeast ($M = 2.96, SD = .81$), compared to other regions, $Z = 11.29, p < .05$.

Table 30 shows a summary of the total number of social skill services, academic services, and activities of daily living offered in the four US regions. No significant differences were found between region and number of services, all ps *ns*. Also shown are the differences in availability between schools in the four regions for academic services and activities of daily living. Again no significant differences were found between regions, all ps *ns*.

Table 29

Frequencies and Percentages of Whether Various Activities of Daily Living are Offered and Means and Standard Deviations of Frequency of Activities Offered by Region

	Service Offered				Availability of Services for Schools with Service						
	No		Yes		χ^2	<i>p</i>	Mean	<i>SD</i>	Med	<i>Z</i> [*]	<i>p</i>
	<i>n</i>	%	<i>n</i>	%							
Understanding University Rules and Procedures					3.41	.333				3.40	.334
Northeast	3	3.8	76	96.2			2.66	.96	3		
West	0	.0	57	100.0			2.89	.86	3		
Midwest	5	6.0	79	94.0			2.85	.92	3		
South	4	3.8	102	96.2			2.73	.83	3		
Problem Solving					2.09	.555				2.56	.465
Northeast	2	2.5	77	97.5			2.66	.82	3		
West	1	1.8	56	98.2			2.75	.72	3		
Midwest	4	4.8	80	95.2			2.66	.94	3		
South	6	5.7	100	94.3			2.55	.82	2		
Organization					1.94	.586				8.20	.042
Northeast	2	2.5	77	97.5			2.90 ^a	.82	3		
West	0	.0	57	100.0			2.60 ^{bc}	.84	2		
Midwest	3	3.6	81	96.4			2.77 ^{ac}	.98	3		
South	3	2.8	103	97.2			2.57 ^{cd}	.86	3		
Time Management					2.61	.456				8.29	.040
Northeast	1	1.3	78	98.7			2.91 ^a	.81	3		
West	0	.0	57	100.0			2.63 ^{bc}	.79	3		
Midwest	3	3.6	81	96.4			2.85 ^{ac}	.87	3		
South	2	1.9	104	98.1			2.62 ^{cd}	.84	3		

(continued)

Table 29, continued

	Service Offered				Availability of Services for Schools with Service						
	No		Yes		χ^2	<i>p</i>	Mean	<i>SD</i>	Med	<i>Z</i> [*]	<i>p</i>
	<i>n</i>	%	<i>n</i>	%							
Study Skills Training					2.59	.459				11.29	.010
Northeast	1	1.3	78	98.7			2.96 ^a	.81	3		
West	0	.0	57	100.0			2.65 ^{bc}	.83	3		
Midwest	3	3.6	81	96.4			2.89 ^{ac}	.82	3		
South	3	2.8	103	97.2			2.61 ^{bd}	.81	3		
Self-advocacy Training					4.30	.231				3.20	.362
Northeast	2	2.5	77	97.5			2.75	.91	3		
West	4	7.0	53	93.0			2.68	.89	3		
Midwest	9	10.7	75	89.3			2.63	.90	2		
South	9	8.5	97	91.5			2.53	.88	3		
Managing Medication					4.35	.226				.82	.845
Northeast	38	48.1	41	51.9			1.80	.98	2		
West	35	61.4	22	38.6			1.68	.84	1.5		
Midwest	38	45.2	46	54.8			1.76	.90	1.5		
South	58	54.7	48	45.3			1.85	.87	2		
Navigating Campus					.90	.826				2.70	.440
Northeast	6	7.6	73	92.4			2.47	1.07	2		
West	3	5.3	54	94.7			2.33	1.03	2		
Midwest	8	9.5	76	90.5			2.51	.90	2		
South	9	8.5	97	91.5			2.59	.93	3		

(continued)

Table 29, continued

	Service Offered				Availability of Services for Schools with Service						
	No		Yes		χ^2	<i>p</i>	Mean	<i>SD</i>	Med	<i>Z</i> *	<i>p</i>
	<i>n</i>	%	<i>n</i>	%							
Accessing Transportation					5.65	.130				2.35	.503
Northeast	16	20.3	63	79.7			1.92	1.00	2		
West	13	22.8	44	77.2			1.73	.95	1		
Midwest	23	27.4	61	72.6			1.70	.86	1		
South	37	34.9	69	65.1			1.84	.88	2		
Maintaining Personal Hygiene					4.29	.232				.30	.961
Northeast	24	30.4	55	69.6			1.67	.75	2		
West	26	45.6	31	54.4			1.71	.94	1		
Midwest	26	31.0	58	69.0			1.76	.88	2		
South	39	36.8	67	63.2			1.66	.77	2		
Dressing Appropriately					4.44	.218				.14	.986
Northeast	28	35.4	51	64.6			1.67	.79	1		
West	28	49.1	29	50.9			1.72	.96	1		
Midwest	27	32.1	57	67.9			1.67	.89	1		
South	40	37.7	66	62.3			1.62	.78	1		
Setting Alarm Clock					6.04	.110				3.09	.377
Northeast	37	46.8	42	53.2			1.86	.90	2		
West	38	66.7	19	33.3			1.53	.77	1		
Midwest	45	53.6	39	46.4			1.64	.84	1		
South	63	59.4	43	40.6			1.63	.95	1		

(continued)

Table 29, continued

	Service Offered				Availability of Services for Schools with Service						
	No		Yes		χ^2	<i>p</i>	Mean	SD	Med	<i>Z</i> *	<i>p</i>
	<i>n</i>	%	<i>n</i>	%							
Handling Fire Drills					3.68	.298				.61	.893
Northeast	16	20.3	63	79.7			2.10	1.03	2		
West	15	26.3	42	73.7			2.02	1.12	2		
Midwest	18	21.4	66	78.6			2.11	1.10	2		
South	33	31.1	73	68.9			1.99	1.01	2		
Help Managing Personal Budget					1.98	.577				2.94	.400
Northeast	47	59.5	32	40.5			1.47	.72	1		
West	37	64.9	20	35.1			1.25	.44	1		
Midwest	46	54.8	38	45.2			1.47	.89	1		
South	67	63.2	39	36.8			1.64	.87	1		
Additional Help w Specific Class/ Faculty Selection					5.61	.132				.43	.933
Northeast	2	2.5	77	97.5			2.92	.82	3		
West	2	3.5	55	96.5			2.84	.86	3		
Midwest	6	7.1	78	92.9			2.82	.98	3		
South	11	10.4	95	89.6			2.87	.93	3		
Eating in a Cafeteria					.85	.837				1.42	.702
Northeast	38	48.1	41	51.9			1.71	.64	2		
West	31	54.4	26	45.6			1.58	.81	1		
Midwest	42	50.0	42	50.0			1.69	.87	1		
South	57	53.8	49	46.2			1.69	.94	1		

(continued)

Table 29, continued

	Service Offered				Availability of Services for Schools with Service						
	No		Yes		χ^2	<i>p</i>	Mean	<i>SD</i>	Med	<i>Z</i> [*]	<i>p</i>
	<i>n</i>	%	<i>n</i>	%							
Shopping					8.05	.045				1.96	.582
Northeast	54	68.4	25	31.6			1.32	.56	1		
West	43	75.4	14	24.6			1.14	.36	1		
Midwest	60	71.4	24	28.6			1.29	.55	1		
South	90	84.9	16	15.1			1.69	1.14	1		

Note. ^{*} Test for differences using non parametric Kruskal-Wallis Test; Different superscripts indicate median differences using non parametric Mann-Whitney Test

Table 30

Means and Standard Deviations of Number of Social Skills Services, and Number and Availability of Academic Services and Activities of Daily Living by Region

	<i>n</i>	Mean	<i>SD</i>	Med	Min	Max	Test Statistic	<i>p</i>
Total Number of Social Skills Activities							.28 ^Ψ	.963
Northeast	47	1.87	.92	2	1	4		
West	31	1.94	1.06	2	1	5		
Midwest	40	1.93	1.05	2	1	5		
South	70	1.83	.96	2	1	5		

(continued)

Table 30, continued

	<i>n</i>	Mean	<i>SD</i>	Med	Min	Max	Test Statistic	<i>p</i>
Total Number of Academic Services							1.17 ^Ψ	.760
Northeast	79	12.67	3.14	14	2	16		
West	57	12.98	2.91	14	4	16		
Midwest	84	12.95	2.87	14	5	16		
South	106	12.62	2.80	13	3	16		
Sum of Availability of Academic Services							.53 [‡]	.662
Northeast	79	30.13	10.40	31	8	56		
West	57	31.35	9.64	31	12	55		
Midwest	84	31.70	9.18	32	14	54		
South	106	30.41	8.27	31	8	53		
Total Number of Activities of Daily Living							5.46 ^Ψ	.141
Northeast	79	12.99	3.50	13	2	17		
West	57	12.16	3.42	12	6	17		
Midwest	84	12.64	4.01	13.5	0	17		
South	106	11.99	3.44	12	0	17		
Sum of Availability of Activities of Daily Living							1.51 [‡]	.211
Northeast	79	30.85	10.59	32	4	59		
West	57	28.14	10.38	27	8	57		
Midwest	81	30.59	11.08	28	11	66		
South	104	28.18	10.83	27	10	68		

Note. ^ΨChi Square; [‡]F Statistic; Availability of Social Skills Activities was not a survey item

Predictive Analysis

As shown in Table 31, multiple logistic regressions were conducted to predict location of mental health services from university type, university length, region of USA, and school size. The overall model was significant for counseling services provided at a DSS office, $\chi^2(7) = 29.66, p < .001$, accounting for 13% of the variance. Examination of individual predictors indicated that university length was associated with location of mental health services (*Odds Ratio* = .252, $p < .001$), indicating that 4-year schools were associated with decreased odds of having counseling services available at the DSS office. The remaining predictors were not significant, *ns*. Similarly, the overall model was also significant for counseling services provided at counseling office, $\chi^2(7) = 59.52, p < .001$, accounting for 34% of the variance. Examination of individual predictors indicated that university length was again a significant predictor of location of mental health services (*Odds Ratio* = 25.77, $p < .001$), indicating that 4-year schools were associated with greatly increased odds of having counseling services available for students with ASD at a counseling office. In addition, the region was a significant predictor of counseling services at a counseling office (*Odds Ratio* = .210, $p < .05$). Specifically, schools in the West region had lower odds of having a counseling office that provide counseling services for students with ASD as compared to the Northeast Region. The remaining predictors were not significant, *ns*.

Table 31

Summary of Logistic Regression Tables Predicting Mental Health Services Availability

	DSS Office Odds Ratio	Counseling Office Odds Ratio
University Type		
Private School ^a	.940	.489
University Length		
4 Year School ^b	.252 **	25.773 **
Region		
West ^c	.825	.210 *
Midwest ^c	.808	.542
South ^c	.565	.430
School Size		
2,500-10,000 ^d	.621	1.029
More than 10,000 ^d	.728	2.132

Note. * $p < .05$, ** $p < .001$; ^aCompared to public school; ^bCompared to 2-Year Schools; ^cCompared to Northeast region; ^dCompared to Less than 2,500

As shown in Table 32, multiple linear regressions were conducted to predict number of social skills activities, availability of academic services, and availability of activities of daily living from university type, university length, region of USA, and school size. The overall model predicting number of social skills services was

significant, $F(7, 291) = 2.26, p < .05$, accounting for 2.9% of the variance. An examination of individual predictors indicated that 4-year schools were associated with an increased number of social skills activities provided ($Beta = .234, p < .01$) as compared to 2-year schools. The overall model predicting availability of academic services was significant, $F(7, 291) = 3.08, p < .01$, accounting for 4.7% of the variance. An examination of individual predictors indicated that school size was associated with academic service availability. Specifically medium sized schools were associated with less academic service availability ($Beta = -.245, p < .01$) as compared to small schools. Similarly, large sized schools were associated with less academic service availability ($Beta = -.216, p < .01$) as compared to small schools. Finally, the overall model predicting availability of activities of daily living was significant, $F(7, 291) = 2.29, p < .05$, accounting for 2.9% of the variance. An examination of individual predictors indicated that school size was associated with availability of activities of daily living. Specifically medium sized schools were associated with less availability of activities of daily living ($Beta = -.138, p < .05$) as compared to small schools. In summary, university length was a predictive factor in mental health counseling location and number of social skills activities while school size was a predictive factor in the availability of academic services and activities of daily living.

Table 32

Summary of Multiple Regression Tables Predicting Social Skills Services, Academic Services and Activities of Daily Living from Institutional Characteristics

	Social Skills Activities Beta	Academic Services Beta	Activities of Daily Living Beta
University Type			
Private School ^a	-.105	.022	.130
University Length			
4 Year School ^b	.234 **	-.127	.013
Region			
West ^c	.029	.072	-.055
Midwest ^c	-.042	.102	-.031
South ^c	.077	.045	-.078
School Size			
2,500-10,000 ^d	-.068	-.245 **	-.138 *
More than 10,000 ^d	-.006	-.216 **	-.023

Note. ⁺ $p < .10$; ^{*} $p < .05$; ^{**} $p < .01$; ^aCompared to public school; ^bCompared to 2-Year Schools; ^cCompared to Northeast region; ^dCompared to Less than 2,500

Summary

In conclusion, the demographic characteristics of the study are presented and are followed by an in-depth examination of both the perception and treatment of ASD at the level of the DSS personnel. Next, the services offered to students with ASD are detailed and examined by the key demographic variables of interest. The chapter concludes with several regression analyses predicting availability of various services for students with ASD from the key demographic variables. Findings will be discussed in the next section.

CHAPTER V

DISCUSSION

The previous chapters reviewed the available literature on the transition to postsecondary institutions for students with Autism Spectrum Disorders (ASD). Multiple research questions were examined for this study. Significant results were reported for several of the questions. For clarity, the final chapter of this study is divided into sections. The first section of this chapter restates the purpose of this study. Next, the study findings will be integrated with relevant literature including suggestions for future research. The third section reports implications of the findings relevant to the practice of school psychology. Lastly, the limitations of the current study will be discussed and conclusions will be made.

Statement of Purpose

Separate policies, laws, and systems of governance dictate how students with disabilities are treated within secondary and postsecondary settings. Students in primary and secondary public schools are guaranteed a free and appropriate education under the Individuals with Disabilities Education Act (IDEA, 2004). When students transition to postsecondary school, their rights are protected under the Americans with Disabilities Act (ADA, 1990). These laws have different goals and provisions. The disjointed governance systems can result in less effective transitions for students (Kirst & Venezia, 2007). There have been many calls for improving the documentation and transition

process for students matriculating from secondary institutions to postsecondary institutions (Kirst & Venezia; NJCLD, 2007; VA HELP, 2007).

The dramatic increase in children diagnosed with ASDs during the 1990's created a new group of students now approaching college age (Rice, 2009). These students are accustomed to the accommodations provided to them under the IDEA within the secondary school setting. As these students transition into postsecondary institutions it is important to prepare them for the types of accommodations that will be available.

Often, school psychologists are responsible for writing the transition reports for students graduating from secondary schools. It is essential to maximize resources and ensure that school psychologists understand the criteria for eligibility and accommodations set forth by postsecondary institutions. A goal of this research was to help clarify the criteria for determining eligibility and appropriate accommodations to aid school psychologists in creating reports that are the most useful for students with ASD matriculating to postsecondary education.

Another goal of this dissertation was to describe accommodations that are currently available to students with ASD within postsecondary institutions. Specifically, what mental health, social, academic, activities of daily living, and general supports are available for students with ASD? Students, parents, and professionals need to understand the current state of available accommodations to help students with ASD transition more smoothly.

Examination of Research Question One

The first research question examined by this study was to explore how personnel working within Disability Support Services (DSS) offices perceive ASD. Specifically the study examined whether DSS personnel perceived the disorder to be life-long or curable. The majority of respondents (80.6%) answered that they believe ASD is a life-long disorder. Only 1% of participants indicated that ASD was a curable disorder. Of the individuals who selected the “other” option of the survey many of the responses (11.5%) fell into the “symptoms can be mitigated” category. The specific write-in answers given by the participants indicated a belief that appropriate supports and interventions could help to lessen the negative impact of symptoms for individuals with ASD. These responses are encouraging because they acknowledge the serious, life-long implications of ASD. The belief that symptoms can be mitigated through appropriate supports adds emphasis to the need for continued supports for individuals with ASD throughout their postsecondary education.

Additionally, the study examined whether DSS personnel perceived ASD to be a psychological, neurological, behavioral, genetic, or social disorder. Participants were able to select from any of the options and most frequently endorsed that ASD is a neurological disorder (73.5%), followed by social disorder (58.3%), psychological disorder (47.5%), behavioral disorder (44.4%), and lastly a genetic disorder (33.6%).

Since most of the participants believed that ASD is a social disorder, it would follow that individuals with ASD will need social supports to help them. This endorsement could be used to help explain to DSS professionals the necessity of socially

supporting services. It is interesting how few DSS personnel indicated a belief that ASD is a genetic disorder, when genetics is currently a hot area of research.

Examination of Research Question Two

The purpose of this research question was to examine what documentation standards are acceptable to postsecondary institutions in determining eligibility and appropriate accommodations for students with ASD seeking disability support services. Participants overwhelmingly endorsed (99.5%) the acceptance of out of state reports as acceptable for the documentation of ASD. The diagnosis of ASD is most likely to be accepted by a licensed psychologist (88.3%), followed by psychiatrist (77.8%), neurologist (73.9%), school psychologist (52.7%), other medical doctor (39.4%), speech language pathologist (19.8%), and social worker (13.1%). It is encouraging that over half of respondents indicated that school psychologists could provide the diagnosis of ASD for eligibility. Since many students receive documentation from a school setting, future researchers may wish to examine why DSS personnel do not accept more diagnoses from school psychologists. Additionally, since a school psychologist may have a dual role as both a school psychologist and a licensed psychologist it would be interesting to understand how this impacts the acceptance of an ASD diagnosis from DSS personnel.

When examining how useful high school reports are participants indicated high school reports range from not useful to somewhat useful to determine eligibility (73.3%) and appropriate accommodations (69.6%). These numbers are in-line with previous research indicating that only 39% of postsecondary institutions use the Individualized Education Plan (IEP) from secondary institutions “when considering eligibility and

requests for accommodations, but do not consider them [IEP plans] sufficient in making eligibility and accommodation decisions” (NJCLD, 2007, p. 269). The current study also substantiates the USDOE’s (2007) finding that a student’s IEP is generally not sufficient documentation to support the existence of a disability at the postsecondary level.

Since secondary and postsecondary institutions are governed by separate laws and policies, it is logical that there would be differences in criteria for eligibility and accommodations. However, creating transition reports for students exiting the secondary system takes significant time and resources. It seems important to further analyze this research question to determine what would make these reports more useful so that the time and resources of the school psychologist, parent, and student is maximized.

When asked how recent must reports be to qualify for services, the majority of participants (66.2%) indicated that reports must be more recent than 3 years old. Only 12.1% of participants indicated that they would accept reports that are older than 5 years. This is particularly interesting when paired with the result that 80.6% of participants believed that ASD is a life-long disorder. If ASD is a life-long disorder, then why are the requirements so onerous to have new reports?

Examination of Research Question Three

The researcher attempted to determine what types of services are available to students with ASD attending postsecondary institutions. This includes what types of mental health, social skills, academic services, and services addressing activities of daily living area available. The following sections will discuss each of the results individually.

Mental Health Services

The goal for this section was to determine what specific mental health services (e.g., help managing anxiety) were available to students with ASD. One of the overall challenges of this section is the participants' interpretation of the questions. For example, too many participants would select that they did not have any mental health services for students with ASD, but then answer a different survey question indicating that students accessed counseling services. This pattern of answering could mean that no services specifically tailored for students with ASD were available, or it could have been a misinterpretation of the question. Since the data for the specific mental health services was not interpretable, the location of service was analyzed. Overall, most postsecondary institutions provided mental health services through their counseling center. Only 35.3% of participants responded that services were available through the DSS office. Based on some of the responses from the mental health question, it was unclear if this was mental health counseling (in the therapeutic sense) of academic counseling, or guidance counseling.

The most common co-morbid conditions for adolescents and young adults with ASD are anxiety and depression (Kim et al., 2000 & Klin et al. 2000). Increased levels of anxiety are often related to increased social loneliness (White & Roberson-Nay, 2009). Thus, individuals with ASD tend to feel more emotionally disconnected and alone, and anxiety may reduce the degree of social interaction and involvement on the part of the individual with ASD (White & Roberson-Nay). Students with ASD will likely need services in this area throughout their postsecondary education. Future researchers may

wish to reexamine this area with clearer definitions to gain a better understanding of what specific mental health services are available.

Social Skills

Participants were asked if their institution provided assistance with social skills activities. The most frequent answer was that the postsecondary institution provided no social skills activities (40.9%), followed by 2-6 social skills activities (34.1%), and lastly one social skill activity (25.1%). The most frequent activity provided was individual social skills counseling (46.6%). Only 12.8% of respondents indicated that social skills groups are available.

The literature suggests that approximately 70% to 80% of individuals diagnosed with ASD will continue to have marked social impairment throughout adolescence and adulthood (VanBergeijk et al., 2008). In addition, individuals with ASD have difficulty generalizing behaviors across settings needing explicit teaching/role play and social skills groups across multiple environments to be effective (VanBergeijk et al., 2008). The necessity of adequate social skills training is apparent to many professionals working with individuals with ASD. Professionals, parents, and students with ASD may wish to seriously consider the availability of social skills supports when choosing a postsecondary institution.

Academic Services

The current study examined the frequency and percentages of academic services that were provided to students with ASD. The most frequent answer was that the

postsecondary institution provided 11-14 academic services (23.4%), followed by 15-16 academic services (37.6%), and finally 0-10 academic services (23.4%).

Many of the commonly thought of academic accommodations were endorsed by participants. When evaluating the often and almost always responses, items such as preferential seating (67.8%), note taker (69.0%), extra time on tests (84.5%), and testing center (76.3%) were endorsed. While many of these academic accommodations are necessary and helpful, they do not address the specific social deficits that individuals with ASD face.

According to Gillberg and Coleman (2000), 65 to 85 percent of students with ASD also have learning disabilities. It has been argued that tasks of Executive Functioning and Working Memory pose the greatest challenge for individuals with ASD (Barnard, Muldoon, Hasan, O'Brien, & Stewart, 2008; Roberts & Pennington, 1996). In a study of adults with ASD with comorbid LD, Barnard et al. (1996) found significant dysfunction in the areas of planning/organization and working memory. This finding has implications for students in postsecondary institutions because of the significant emphasis placed on planning, organizing, and the use of working memory for note taking, test taking, and planning and organizing long-term assignments.

Previous research has shown how difficult appropriate social interactions are for individuals with ASD (VanBergeijk et al., 2008). These students frequently have comorbid anxiety disorders greater than the average population (Farrugia & Hudson, 2006). Thus, the questions addressing whether students with ASD could avoid group projects, class presentations, and public speaking were designed to target specific

concerns brought forth by parents and individuals with ASD (Morrison et al., 2009).

Based on the pattern of responding these three potential accommodations are very infrequently offered with 4.1%, 4.4% and 4.9 percent of participants endorsing that these services are often or almost always offered.

Activities of Daily Living

Participants in the current study were asked how often their postsecondary institution provided assistance for their students with activities of daily living. The most frequent answer was that the postsecondary institution provided assistance with 11-14 activities of daily living (36.1%), followed by 15-17 activities of daily living (33.4%), and finally 0-10 activities of daily living services (30.5%).

Study results from an integrated literature review give an overall indication that individuals with ASD have a moderately low adaptive level (Lee & Park, 2007). Thus, adequate intellectual capability does not imply effective daily living skills. The survey questions for this section were specifically selected based on reports made by parents and individuals with ASD indicating areas that are particularly difficult for them (Morrison et al., 2009). When given the opportunity to add extra information (through free response) some of the participants wrote that their response to this section were in reference to a freshman orientation or a class that students could take that would assist them in some of these areas. Future researchers may wish to clarify the location and nature of where these services are provided. One-on-one assistance may be more beneficial for students with ASD when compared with a one-time orientation that covers these topics.

Examination of Research Question Four

One of the goals of this dissertation was to provide useful information to school psychologists, parents, and students with ASD in developing strategies for smooth transitions to postsecondary education. As such, the researcher examined if there were differences in the availability of services between public and private institutions, 2-year and 4-year institutions, and the various regions across the country. The researcher could not find previous literature to guide this discussion relating to previous expectations. Therefore, the discussion for these sections is limited.

The current study examined how disability services that are provided for students with ASD differed between public and private postsecondary institutions. With regards to mental health services significantly more public institutions provided services within the DSS office whereas significantly more private institutions provided mental health services at the counseling center. A possible explanation of this may be that some private institutions do not appear to have a formalized DSS office.

The only significant results for university type and social skills services were with regards to job coaching and peer mentorship. Nearly twice as many private institutions reported having job coaching services, and significantly more private institutions provided peer mentorship to their students. These findings may indicate that private institutions have a greater focus on post-graduation job placement.

Regarding academic services, significantly more public schools had testing centers available to students with ASD. A greater number of public schools allowed students to avoid public speaking, but a greater proportion of private schools offered

flexible due dates. Finally private institutions provided a significant number of smaller class sizes.

The final comparison for university type was conducted on activities of daily living. Private schools provided significantly more help in the area of activities of daily living including: managing medication, accessing transportation, maintaining personal hygiene, dressing appropriately, setting alarm clocks, handling fire drills, managing a personal budget, help selecting class/faculty, eating in the cafeteria, and shopping. These findings may indicate that private schools are more able to tailor their services to the needs of the student. Data was not collected to determine whether any of these areas of assistance incurred extra expense on the part of the student. This may be an area of opportunity for future research.

Examination of Research Question Five

Data comparing how disability services that are provided for students with ASD between 2-year and 4-year institutions were examined. With regards to mental health services significantly more 2-year institutions provided services within the DSS office whereas significantly more 4-year institutions provided mental health services at the counseling center. Similar to the examination of the type of institution, a possible explanation of this may be that some 2-year institutions do not appear to have a formalized counseling center.

When examining the availability of social skills services, 4-year institutions were significantly more likely to provide social skills services. Specific significant results include: social skills groups, individual social skills counseling, life skills coaching, job

coaching, and peer mentorship. These results may be tied to the increased presence of counseling centers at 4-year institutions. Future researchers may wish to contact counseling centers directly to gain a better understanding of the specific services that they can provide to students with ASD.

Regarding academic services, 2-year institutions were significantly more likely to assist students with preferential seating. Additionally, 2-year institutions more frequently offered oral rather than written exams for students with ASD. Finally, the likelihood of services to assist with activities of daily living was examined. Four-year institutions were significantly more likely to offer help managing medications, accessing transportation, setting alarm clocks, eating in the cafeteria, and shopping.

Examination of Research Question Six

The current study examined how disability support services for students with ASD differed from region-to-region across the United States. No significant results were reported across the various regions when examining the availability of mental health services.

Significant results were reported for region regarding the availability of social skills services with individual social skills services being offered in the Southern region. The Western region was significantly more likely to offer job coaching services. The only significant result for the availability of academic services was the availability of testing centers which were most often found in the Midwest and least often found in the West. Regarding activities of daily living, the Northeast was significantly more likely to

provide assistance with shopping, and more frequently offered assistance with organization, time management, and study skills training.

Finally, there were no significant differences between the overall numbers of social skills, academic, and activities of daily living services offered between the regions. This result may indicate that while there are some significant differences in the specific services that are provided across the various regions, the overall quantity of services are in-line.

Limitations

As with most research, there are several limitations for this study. Since this is an exploratory study, the researcher attempted to evaluate some of the main characteristics such as institution type (public/private), institution length (2-year/4-year) and region. It is acknowledged that other factors could influence the presence or absence of services for students with ASD. Future researchers may wish to evaluate more characteristics of the institutions to determine if there is an influence on the availability of services.

The sample size of this study was adequate to conduct all of the analyses presented in this dissertation. One of the goals of this research is to provide useful tools to help individuals select postsecondary institutions to meet their needs. Additional participants from various states would have made it possible for t an analysis to be conducted for each state. Future researchers may wish to gather more samples from states to create this tool.

Another limitation of the study was the definition of terms for the participants. Since this was an exploratory study, no validity or reliability measures of the

questionnaire were taken. When asking about counseling services, the researcher had the intent to ask about mental health counseling (in the therapeutic sense). Based on the pattern of responding, DSS personnel interpreted the term counseling more broadly to include both academic counseling and guidance counseling. Further studies should take care to clearly define the terms for the participants who operate outside of the field of psychology.

Recommendations for Future Research

More research needs to be done in the area of transitions to postsecondary institutions for students with ASD. Several areas of opportunity were outlined within the examination of research questions. This section specifically addresses future areas of research to address professionals working in secondary settings, for parents, and for students with ASD.

Another area of future research is regarding what professionals are able to diagnosis ASD. While the majority of participants (52.7%) endorsed that school psychologists could diagnose ASD, many school districts employ multi-disciplinary teams to diagnose autism. These teams could include a school psychologist, speech language pathologist, and occupational therapist. DSS personnel may be more receptive to reports that come from multi-disciplinary teams.

This study captured how often DSS personnel find reports from secondary institutions useful in determining eligibility and appropriate accommodations. Future researchers may wish to conduct qualitative studies or in-depth interviews with DSS personnel would be useful to help determine what would make reports from high schools

more useful. It would also be helpful to parents and school psychological personnel to better understand what they can do to better prepare students with ASD for the transition to postsecondary institutions.

It would be useful for longitudinal research to be conducted with individual students with ASD throughout their transition process from secondary to postsecondary institutions. This type of research would better target the strengths and weaknesses of the process. It would give researchers the information to better understand the specific needs of the individuals, and to target interventions that help to make for a successful transition.

Conclusion

The findings from this dissertation provide multiple areas of practical application for school psychology. Firstly, data collected from this dissertation can be used to further the dialogue between professionals working at secondary and postsecondary institutions. For example, if more than 80% of DSS personnel believe that ASD is a life-long disorder, then why do 66.2% percent require testing to be more recent than 3 years? There seems to be an area of opportunity for school psychologists to reach out to postsecondary DSS professionals and advocate for students with ASD. Additionally, if school psychologists better understand the requirements set forth by postsecondary institutions, then this will help them better prepare transition reports to ensure that students meet the requirements for eligibility and academic accommodations. From an organizational standpoint, leaders from the National Association of School Psychologist (NASP) and Association on Higher Education And Disability (AHEAD) could

collaborate to develop clearly-defined standards for transition reports that would help students more easily access post-transition services.

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APPENDIX A

Survey of Disability Support Services Personnel Regarding Transition and Support Services for Postsecondary Students.

Survey of Disability Support Services Personnel regarding Transition and Support Services for Postsecondary Students.

Note: Submission of your completed questionnaire constitutes your informed consent to act as a participant in this research.

Thank you for agreeing to participate in this survey. The questions below have to do with your experiences as a professional working with Disability Support at a postsecondary institution. .

Please answer all of the questions included in this survey. Participation in this survey is voluntary and you may withdraw at any time. The survey was created to be as efficient as possible and it can be completed in 30 minutes or less by most individuals. You can stop at the end of a page, save your answers, and return to the survey later if you wish to.

This survey is posted on Psychdata.com, which uses SSL encryption methods to minimize the risk of loss of confidentiality. However, there is a potential risk of loss of confidentiality in all email, downloading, and internet transactions. You will have the option of sharing the name of your postsecondary institution. The name of the institution will be used to collect additional demographic data by looking at the university's website. It will not be reported in the results.

Autism and Asperger's disorders are frequently thought of as occurring on a spectrum from mild to severe. For the purposes of this survey, both disorders will be referred to as Autism Spectrum Disorder (ASD). Unless it is otherwise stated, all of the questions are

directly related to the services available for students with Autism Spectrum Disorder at your postsecondary institution.

If you have any questions before or after you complete the survey, please contact Kathy DeOrnellas, Ph.D. at info@beyondtransitions.com

- 1) Do students with Autism Spectrum Disorders receive any special considerations during the admissions process?
 - a) Yes
 - b) No
 - c) I don't know
- 2) Does a student need to be accepted to the University before they can register for disability services?
 - a) Yes
 - b) No
- 3) Do you make a distinction between Asperger's Disorder and Autism?
 - a) Yes
 - b) No
- 4) * I believe that Autism Spectrum Disorders:
 - a) Are life-long
 - b) Can be cured
 - c) Other (please specify)

- 5) * I consider Autism Spectrum Disorders to be a (check all that apply)
- a) Psychological disorder
 - b) Neurological disorder
 - c) Genetic disorder
 - d) Behavioral disorder
 - e) Social disorder
- 6) Students enrolled in special education during their k-12 years have access to special education services such as accommodations and learning supports. When students with the following disabilities transition to postsecondary institutions, how prepared are they to succeed academically in college? [1-5 Likert Scale with: 1 = Not at all prepared, 2, 3=Somewhat prepared, 4, 5=Very prepared]
- a) Autism Spectrum Disorder
 - b) Attention Deficit Hyperactivity Disorder (ADHD)
 - c) Learning Disability
 - d) Traumatic Brain Injury
- 7) Students enrolled in special education during their k-12 years have access to special education services such as accommodations and learning supports. When students with the following disabilities transition to postsecondary institutions, how prepared are they to succeed with the social/independent living aspects of college? [1-5 Likert Scale with: 1 = Not at all prepared, 2, 3=Somewhat prepared, 4, 5=Very prepared]
- a) Autism Spectrum Disorder
 - b) Attention Deficit Hyperactivity Disorder (ADHD)

- c) Learning Disability
 - d) Traumatic Brain Injury
- 8) * Will your postsecondary institution accept documentation for a disability of Autism Spectrum Disorders from out of state?
- a) Yes
 - b) No
- 9) * How often do you work with High Schools to develop transition plans? [1-5 Likert Scale with: 1=Never, 2=Rarely, 3=Sometimes, 4=Often, 5=Almost Always]
- 10) * How often do you accept reports from High Schools to determine eligibility for disability services? [1-5 Likert Scale with: 1=Never, 2=Rarely, 3=Sometimes, 4=Often, 5=Almost Always]
- 11) * Do you find the transition reports (from secondary institutions) useful in determining [1-5 Likert Scale with: 1= Not useful, 2, 3=Somewhat useful, 4, 5=Very useful]
- a) Eligibility
 - b) Appropriate Accommodations
- 12) What would make transition reports from high schools (special education professionals) more useful to your eligibility and accommodation process? [Free response]

- 13) To be considered for services, a student's evaluation must be more recent than: [6 mo., 1 year, 1.5 year, 2 years, 2.5 years, 3 years, 3.5 years, 4 years, 4.5 years, 5 years, 5+ years]
- a) * Autism Spectrum Disorder
 - b) Attention Deficit Hyperactivity Disorder (ADHD)
 - c) Learning Disability
 - d) Traumatic Brain Injury
- 14) To be considered for services, can a student be diagnosed as an adult with: [Answer choices: Yes, No]
- a) * Autism Spectrum Disorder
 - b) Attention Deficit Hyperactivity Disorder (ADHD)
 - c) Learning Disability
 - d) Traumatic Brain Injury
- 15) * Which disorders can the following list of providers document? [* Autism Spectrum Disorder, Attention Deficit Hyperactivity Disorder (ADHD), Learning Disability, Traumatic Brain Injury]
- a) Licensed psychologist
 - b) School psychologist
 - c) Psychiatrist
 - d) Neurologist
 - e) Other Medical Doctor
 - f) Speech Language Pathologist

g) Social Worker

16) If a current assessment is needed, where is the eligibility assessment conducted?

a) University assessment

b) Non-University assessment (outside of the university setting)

c) Both

d) Other (please specify)

17) If a current assessment is needed, who is responsible to pay for qualifying evaluation?

a) Student/Parent

b) University

c) Other (please specify)

18) Do students have a contact person on campus during breaks (ex. winter break, spring break, summer) to ensure continuity of services?

a) Yes

b) No

19) Please endorse any of the following health care services that are coordinated for students by your office: (Check all that apply)

a) General healthcare/wellness

b) Dentistry

c) Occupation therapy

d) Physical therapy

e) Speech therapy

f) None

g) Other (please specify)

20) Where do students access counseling services provided by your postsecondary institution? (check all that apply)

a) Disability Support Services Office

b) Counseling Center

c) Other (please specify)

21) How many counseling sessions are students eligible for: (enter #) [Disability Support Services Office Counseling Center]

a) Students registered with disability services

b) Students NOT registered with disability services

22) * What mental health services are available to students with Autism Spectrum Disorders?

a) Managing anxiety

b) Managing depression

c) Managing stress

d) Managing loneliness

e) Psychological education

f) None

g) Other (please specify)

23) If a student with an Autism Spectrum Disorder violates your postsecondary institution's code of conduct, is his/her disability status taken into consideration when determining disciplinary action?

- a) Yes
- b) No
- c) I don't know

24)* The following is a list of support services that various universities offer to support students with Autism Spectrum Disorders regarding activities of daily living. Please rate how often your institution helps students with these activities. ? [1-5 Likert Scale with: 1=Never, 2=Rarely, 3=Sometimes, 4=Often, 5=Almost Always]

- a) Understanding university rules and procedures
- b) Problem solving
- c) Organization
- d) Time management
- e) Study skills training
- f) Self-advocacy training
- g) Managing medication
- h) Navigating campus (help finding all classes)
- i) Accessing transportation
- j) Maintaining personal hygiene
- k) Dressing appropriately
- l) Setting alarms clocks

- m) Handling fire drills
- n) Help managing personal budget
- o) Additional help with specific class/faculty selection
- p) Eating in a cafeteria
- q) Shopping

25) What types of living arrangements are available to students with Autism Spectrum Disorders? (check all that apply)

- a) General on campus
- b) General off campus
- c) Special housing for students with disabilities on campus
- d) Special housing for students with disabilities off campus
- e) Single-occupant rooms
- f) Communal bathrooms
- g) Private bathrooms
- h) Other (please specify)

26) * What social skills services are available to students with Autism Spectrum Disorders? (check all that apply)

- a) Social skills groups
- b) Individual social skills counseling
- c) Life skills coaching
- d) Job coaching
- e) Peer Mentorship

- f) Social skills practice across multiple real-life settings
- g) None
- h) Other (please specify)

27) * Are the following academic supports available to students with Autism Spectrum Disorders? ? [1-5 Likert Scale with: 1=Never/Not Offered, 2=Rarely, 3=Sometimes, 4=Often, 5=Almost Always]

- a) Smaller class size
- b) Preferential seating
- c) Note taker
- d) Copies of instructor's notes
- e) Taped lectures
- f) Testing center
- g) Extra time on tests
- h) Permission to avoid group projects
- i) Permission to avoid presentations
- j) Permission to avoid public speaking
- k) Oral rather than written exams
- l) Flexible due dates
- m) Permission to attend other sections of the same class
- n) Tutoring
- o) Class substitution (taking an extra class to avoid a class like speech)
- p) Class exemption (a specific class like speech)

28) Describe the culture of your university as it pertains to accessing disability services.

[Free response]

29) What do you think high schools could do to better prepare students with Autism

Spectrum Disorders for the college environment? [Free response]

30) What do you think parents can do to better prepare their students for college? [Free response]

31) If you are a professional working at a 4-year institution, what would you like community colleges to do to better prepare their students for university? [Free response]

32) * Title level of individual filling out survey

- a) Director
- b) Coordinator
- c) Other (please specify)

33) * Your highest level of degree attained

- a) PhD
- b) EdD
- c) MA/MS
- d) BS/BA
- e) Other (please specify)

34) * How many staff are in your Disability Support Services office? [enter # of people]

- a) Full-time (40+ hours):
- b) Part-time (under 40 hours):

c) Student Assistants

35) * Is your school a public or private institution?

a) Public

b) Private

36) * Does your institution receive any federal funding?

a) Yes

b) No

37) * Is your school a 4-year or 2-year institution?

a) 4-year

b) 2-year

38) * Is your school a religiously-affiliated institution?

a) Yes

b) No

39) * Is your institution an historically black college/university (HBCU)

a) Yes

b) No

40) * What state is your institution located in?

a) Alabama

b) Alaska

c) Arizona

d) Arkansas

e) California

- f) Colorado
- g) Connecticut
- h) Delaware
- i) Florida
- j) Georgia
- k) Hawaii
- l) Idaho
- m) Illinois
- n) Indiana
- o) Iowa
- p) Kansas
- q) Kentucky
- r) Louisiana
- s) Maine
- t) Maryland
- u) Massachusetts
- v) Michigan
- w) Minnesota
- x) Mississippi
- y) Missouri
- z) Montana
- aa) Nebraska

bb) Nevada

cc) New Hampshire

dd) New Jersey

ee) New Mexico

ff) New York

gg) North Carolina

hh) North Dakota

ii) Ohio

jj) Oklahoma

kk) Oregon

ll) Pennsylvania

mm) Rhode Island

nn) South Carolina

oo) South Dakota

pp) Tennessee

qq) Texas

rr) Utah

ss) Vermont

tt) Virginia

uu) Washington

vv) Washington, DC

ww) West Virginia

xx) Wisconsin

yy) Wyoming

41) * Are you willing to share the name of your institution? [Note: The name the institution will be used to gather demographic information. The name of your institution will NOT be released in the results of this survey; however, if you give the name of your institution there is a risk of loss of anonymity]

a) Yes

b) No

42) * What is the name of your postsecondary institution? [Note: this question is only visible if the participant selects "yes" to the previous question]

43) * What is the total population of your postsecondary institution? (enter #)

44) * How many students are served by your Disability Support Services department?

45) * How many students with an Autism Spectrum Disorder are served by your office?

46) Which state and national agencies do you interface with on behalf of students with Autism Spectrum Disorders? (check all that apply)

a) State vocational rehabilitation department

b) Mental Health Mental Retardation (MHMR)

c) None

d) Other (please specify)

47) Are there community agencies or religious organizations you regularly coordinate with on behalf of students with disabilities?

a) Yes

b) No

48) Does your department receive any specific grants or community support your outside university funding?

a) Yes

b) No

49) Please list any specific grants or community support that your department receives funding from. [Free response]

Thank you for participating in the survey. Please feel free to enter any additional comments below. [Free response]

We appreciate your time and feedback. When you click submit you will be taken to a separate survey that will collect information for the prize drawing.

Survey of Disability Support Services-Prize information.

You have been automatically directed to a new survey. This data is not connected to your responses in the previous survey.

1) Do you want to be entered into the drawing for a \$250 Amazon.com gift card?

a) Yes

b) No

- 2) Are you interested in being contacted to publish a document with information for parents of students with Autism Spectrum Disorders?
- a) Yes
 - b) No
- 3) If you answered yes to the prize question or the future study question, please fill in your name and email address. [Note: if you do not submit contact information, there will be no way to send you the prize].
- a) First Name
 - b) Last Name
 - c) enter email address