

A QUALITATIVE INQUIRY INTO THE TWO-YEAR COLLEGE EXPERIENCES OF
STUDENTS WITH AUTISM SPECTRUM DISORDER

by

JAMES MICHAEL ANDERSON

(Under the Direction of Diane L. Cooper)

ABSTRACT

Due to the limited availability of research involving postsecondary students with autism spectrum disorder and the anticipated increase in the number of these students enrolling in the postsecondary setting, there is an urgent need for additional research on their college experiences. This qualitative study reflects the perspectives of a group of postsecondary students with autism spectrum disorder. Two data collection methods, semi-structured interviews and photo elicitation, employed to provide an understanding of how these students perceive their college experiences and how the triad deficits (communication, social interaction, and repetitive or circumscribed behaviors) influenced each of the participants' postsecondary experiences. Six themes and three additional findings emerged to illustrate the shared experiences of the participants. The discovered themes were 1) importance of the academic environment, 2) favorable college experiences, 3) relationship formation and social interaction, 4) co-curricular activities, 5) communication with faculty and staff, and 6) college attendance and institution selection. The additional findings were faculty and staff training, specialized programs, and literal thinking.

INDEX WORDS: Autism spectrum disorder, Asperger's Syndrome/Disorder, and Triad of deficits.

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by

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DEDICATION

This work is dedicated to all postsecondary students diagnosed with autism spectrum disorder. I especially salute the eight participants in this study for sharing their college experiences and giving me a glimpse into their lives. Without you, this finished work would not have been possible.

I also dedicate this work to my family and friends, whose unyielding support propelled me to this moment. Your encouragement and understanding will always be remembered, and I hope that my accomplishment will inspire each of you to achieve your dreams.

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CHAPTER 1

INTRODUCTION

College campuses are rapidly becoming a microcosm of society as more diverse individuals at increasing rates enroll in college. One of these diverse groups is individuals with disabilities. According to a report released by the U.S. Department of Education's National Center for Education Statistics (NCES) in 2011, some 707,000 students with disabilities enrolled in two- and four-year colleges and universities during the 2008-09 academic year (Raue & Lewis, 2011). Nearly half of these students enrolled in public two-year institutions. Institutions participating in the study reported that 86% of the students had learning disabilities, 79% had been diagnosed with Attention Deficit Disorder or Attention Deficit Hyperactivity Disorder, 76% disclosed mobility impairments, and 76% were diagnosed with a psychological condition (Raue & Lewis, 2011). In this report, students diagnosed with multiple disabilities were accounted for in each disability category, but were only counted once in the total number of students with disabilities enrolled in two- and four- year colleges and universities. Parker and Boutelle (2009) noted that for nearly a decade, students with learning disabilities represented a majority of reported cases of postsecondary students with disabilities.

Although the 2011 NCES report provided a view into the enrollment trends of students with disabilities, it is important to note that these numbers may not accurately depict the total number of students with disabilities enrolled in colleges and universities. It is difficult to pinpoint this number accurately, as many students with disabilities remain

unaccounted for because they fail to disclose or seek assistance from institutions regarding their disabilities. Additionally, some institutions do not accurately report the population of students with disabilities. Thus, it is very likely that a number of students are unaccounted for in the study completed by NCES (Raue & Lewis, 2011).

Terminology

In this study, the researcher uses the term *autism spectrum disorder* (ASD) as a descriptor for Asperger's disorder. This designation aligns with that of the American Psychiatric Association and reflects the terminology that appears in the *Diagnostic and Statistical Manual of Mental Disorders (5th edition)*. "Autism spectrum disorder encompasses disorders previously referred to as early infantile autism, childhood autism, Kanner's autism, high-functioning autism, atypical autism, pervasive developmental disorder not otherwise specified, childhood disintegrative disorder, and Asperger's disorder" (American Psychiatric Association, 2013, p. 53). The term *Asperger's syndrome* is used intermittently to illuminate its historical significance, but in all cases, the reference refers to autism spectrum disorder.

Occurrence of Autism Spectrum Disorder

The Centers for Disease Control and Prevention established the Autism and Developmental Disabilities Monitoring (ADDM) Network to monitor the prevalence of autism spectrum disorder among children at age eight from 11 different states. Since the ADDM inception in 2000, the Centers for Disease Control and Prevention, has published reports that indicated an increase in the reported cases of autism spectrum disorder among this group. Baio (2012) reported that between 2000 and 2002 the estimated cases were one in 150 children and in 2004 that number increased to one in 125 cases. Over the

next four years, the reported cases continued to increase. In 2006 the estimated number was one in 110 and data from 2008 indicated that the prevalence of autism spectrum disorder reached one in 88 (Baio, 2012). Recent data from the U.S. Centers for Disease Control and Prevention (CDC) estimated that one in 68 individuals has autism spectrum disorder (Baio, 2014). In this same report, the CDC reported that one in 42 males and one-in-189 females are diagnosed with autism spectrum (Baio, 2014). The American Psychiatric Association (2013) indicated that 1% of the world's population has a diagnosis of autism spectrum disorder. These numbers depict the prevalence of autism spectrum, and it illustrates how males are more likely to have the diagnosis. It also promotes the importance of completing additional research that addresses individuals with autism spectrum disorder.

College Enrollment of Students with Autism Spectrum Disorder

Postsecondary students diagnosed with autism spectrum disorder represent a significantly increasing portion of students with disabilities attending higher education institutions (Wenzel & Rowley, 2010). Moore (2006) indicated that a disproportionate number of students with autism spectrum disorder are enrolling in two-year colleges as compared to four-year colleges and universities. Among the 4,170 institutions that participated in the NCES (2011) study, 56% indicated that they enrolled students with a disability on the autism spectrum (which included autism spectrum disorder). Seventy percent of public two-year and 78% of public four-year institutions that participated in the study indicated having a population of students with autism spectrum disorder (Raue & Lewis, 2011). Thirty-eight percent of institutions with a student body population of less than 3,000 reported enrolling students on the autism spectrum. Eighty-two percent of

institutions with populations between 3,000 and 9,999 students reported enrolling students with a disability on the autism spectrum. Eighty-four percent of institutions with populations of 10,000 or more students indicated enrolling students diagnosed with a disability on the autism spectrum. Overall, approximately 141,400 of registered postsecondary students with disabilities disclosed an autism spectrum disorder (Raue & Lewis, 2011). The numbers depicted in this section illustrate how the postsecondary enrollment of students with autism spectrum varies in terms of type and size of institutions. Furthermore, it shows that students with autism spectrum disorder are electing to enroll in both two- and four-year higher education institutions at almost an equal rate. Finally, this data demonstrates that students with autism spectrum disorder are enrolling in smaller and less populated institutions as well as institutions that are large and more densely populated.

Federal Legislation

The increased number of students with disabilities entering higher education may be due in part to the passage and reauthorization of federal laws that protect the rights of individuals with disabilities. These laws safeguard students at each educational level, offer protection against blatant discrimination, and provide an impetus for the increased number of students who access postsecondary institutions (Sweener, Kundert, May, & Quinn, 2002). “Federal legislation like the Individuals with Disabilities Education Act (IDEA) (formerly known as the Education for All Handicapped Children Act) guaranteed an appropriate education for students with disabilities and provided special programs for students attending primary and secondary schools” (Sweener et al., 2002, p. 12). Once students enter postsecondary institutions, the Americans with Disabilities Act

Amendments Act (ADAAA) of 2008 (formerly known as the Americans with Disabilities Act of 1990) and Section 504 of the Vocational Rehabilitation Act of 1973 protect the civil rights of individuals with disabilities and provide protection from discriminatory practices. The ADAAA (2008) and Section 504 ensure equal access to and participation in programs that receive federal funds.

Minimal Research

Although the number of students entering higher education with autism spectrum disorder is increasing, very little information is available concerning the needs of these students (VanBergeijk et al., 2008). To date, little literature exists that draws on the voices of postsecondary students with autism spectrum disorder. Moreover, much of the literature that does exist focuses on the academic experiences of students in primary and secondary education, as opposed to the experiences of postsecondary students. It is thus critical for scholars to gain a better understanding of the postsecondary experiences of students with autism spectrum disorder. The possible long-term benefits of such studies are immeasurable, as the potential findings provide empirical evidence to aid both the postsecondary sector and future college students with autism spectrum disorder. The results may enhance programmatic offerings at the postsecondary level and provide students with autism spectrum disorder with vital information to enhance their college experience and support their efforts to attain college degrees.

Research Purpose

As more students diagnosed on the autism spectrum access higher education, it has become increasingly important to identify the academic and social needs of these students in the postsecondary setting. This qualitative research project investigated the

essence of the lived experiences of college students with autism spectrum disorder. The study also explored how the triad of deficits (communication, social interaction, and repetitive and restricted activities) may influence matriculation, academic performance, communication with faculty and staff, engagement in extracurricular activities and the establishment of peer-to-peer social relationships.

This study provided a view into the experiences of a select number of postsecondary students with autism spectrum disorder. It was the intent of the researcher to discover information to assist both college administrators and disability services providers (DSPs) with providing an optimal and inclusive academic environment for students with autism spectrum disorder. Kuh, Kinzie, Schuh, Whitt, and Associates (2005) postulated that college success depends largely on each student's ability to engage in the college environment academically and through participation in organized learning opportunities and activities. Pascarella and Terenzini (2005) observed, "The impact of college is largely determined by individual effort and involvement in the academic, interpersonal and extracurricular offerings on a campus" (p. 602). The intent of this study was to enlighten the postsecondary community about autism spectrum disorder in order to encourage institutions to create environments that are free of physical, institutional, and social barriers and to meet the academic, social, and physical needs of students with autism spectrum disorder. Pascarella and Terenzini (2005) stated:

Environmental factors that maximize persistence include a peer culture in which students develop close campus friendships, participate frequently in college-sponsored activities, and perceive their college to be highly concerned about the individual student, as well as a college emphasis on supportive services. (p. 599)

Research Question

The focus of this study is to investigate the postsecondary experiences of college students diagnosed with autism spectrum disorder. Specifically, this study will attempt to answer the following research question:

- How do students with autism spectrum disorder describe their postsecondary experiences?

Additionally, the researcher hopes to glean information concerning how the triad of deficits may influence the study participants' ability to matriculate, perform academically, communicate with faculty and staff, engage in extracurricular activities, and develop peer-to-peer relationships. The triad of deficits, sometime referred to as the triad of impairments, includes characteristics that affect individuals with autism spectrum disorder in the areas of communication, social interaction, and the tendency toward repetitive interests and restricted activities (Bedrossian & Pennamon, 2007).

Delimitations

Delimitations are presupposed influences considered by the researcher to contribute to or detract from the overall investigation. Such factors could have substantially influenced the direction of the investigation if the researcher failed to appropriately manage and/or sustain these elements. Several delimitations could have affected the collection of data for this study. A primary concern was communication, as some individuals with autism spectrum disorder experience problems expressing themselves verbally and prefers not to engage in conversations that involves a rapid exchange of information (Jurecic, 2007). As a result, ineffective communication may prevent participants who are not skilled communicators from conveying in-depth

information. In such incidents, the researcher invited participants to write their responses to interview questions and considered conducting additional interview sessions to capture the depth of information needed to inform the study.

Perseveration is also a potential delimitation that could have affected the outcome of this study. Some individuals with autism spectrum disorder tend to perseverate on specific topics that may or may not be the subject of discussion. As a result, they have a tendency to latch on to certain subject matters and interject unrelated information into the conversation. Aderon and Durocher (2007) stated that some individuals with autism spectrum disorder have a tendency to speak incessantly about a topic without regard for others and may resist attempts by others to change the subject. In such cases, the researcher met this challenge to data collection by allowing the participants to express the unrelated material prior to attempting to restore the original topic of conversation. During this process, the researcher remained patient, but was also directive assisting the participants through the data collection stage.

The researcher understood and acknowledged that comprehending and completing several procedural steps may prove difficult for some individuals with autism spectrum disorder, which may make it complicated for the participants to follow multi-step directions and engage in long discussions (Aderon & Durocher, 2007). As such, the researcher recognized this as a potential delimitation for this study. To manage this specific delimitation, the researcher provided clear and concise verbal and written directions, checked for understanding, and addressed the participants' questions.

A final delimitation related to abstract thinking. The ability to think abstractly is compromised for some individuals with autism spectrum disorder, and these individuals

tend to interpret information literally (Hughes, 2009). To manage literal interpretation the researcher used short and direct phrases, provided written instructions, and sought to understand how participants perceived and interpreted information. To elicit in-depth information to inform the study, the researcher displayed patience and employed a multi-modal approach to assist the participants.

Definition of Terms

Accommodations

Accommodations are modifications provided in an educational setting to lessen the impact of the functional limitations associated with an individual's disability (Wolf, Brown, & Bork, 2009). These modifications are not intended to create an unfair advantage; instead, they aim to create manageable environments without altering the curriculum (Wolf et al., 2009). Extended test time, distraction-reduced test environments, note-takers, and scribes are all examples of accommodations provided in the educational setting.

Americans with Disabilities Act Amendments Act 2008 (ADAAA)

The ADAAA of 2008 (Public Law 110-325) reinstated the purpose of the Americans with Disabilities Act of 1990 and broadened the types of impairments that are covered under the law (U.S. Government Printing Office, 2008). The ADA of 1990 and the subsequent ADAAA of 2008 provide protection from discrimination for individuals with disabilities in the workplace, educational institutions, and other settings. This federal legislation strengthened the civil rights protections for individuals with disabilities in public and private sector employment, transportation, public accommodations, services

provided by state and federal governments, and telecommunications (U. S. Department of Education, Office for Civil Rights, 2006).

Similar to the ADA of 1990, the ADAAA of 2008 defined a person with a disability as any individual who has a physical or mental impairment, who has record of an impairment, or is regarded as having a physical or mental impairment that substantially affects a major life activity (speaking, seeing, hearing, communicating, major bodily functions, etc.) (U.S. Department of Justice, 2009). The ADAAA continues to require institutions of higher education to provide reasonable accommodations for students with documented disabilities (National Center for Learning Disabilities, 2009).

Autism Spectrum Disorder

Autism spectrum disorder is a neurodevelopmental disorder that affects social interaction, influences language and communication, and produces obsessive or restrictive interests (Woodbury-Smith & Volkmar, 2009). Diagnostically, autism spectrum disorder is characterized by a deficit in social communication and interaction across multiple settings, produces behaviors that are considered restricted and repetitive; it interferes with the ability to establish and maintain various types of relationships, and may produce an intense preoccupation with certain subject matters and interests (American Psychiatric Association, 2013).

Disability Services Providers (DSP)

Postsecondary disability services providers are professionals who provide assistance to adult students with disabilities (Association of Higher Education and Disability, 2004). This support includes but is not limited to reviewing documentation, assigning accommodations, and advocating for and on behalf of students with disabilities

by ensuring equal access to all aspects of the learning environment and providing training for members of the campus community (Association of Higher Education and Disability, 2004).

Individuals with Disabilities Education Act (IDEA)

The IDEA protects students with disabilities in primary and secondary educational settings. This law provides protection from discrimination and establishes the parameters for how states and public entities provide early intervention, special education and other related services for children with disabilities (U.S. Department of Education, 2010). This legislation first appeared in 1990 to replace the Education of the Handicapped Act (P. L.-94-142 and P. L. 99-457), which first appeared in 1975. IDEA (1990) expanded the age range of children protected by this law from six through 21 years to three through 21 years and changed the language of the law to be more reflective of the individuals instead of the handicapping condition (Driscoll & Nagel, 2010). Since 1990, the IDEA was amended in 1997 and again in 2004 with each version improving the special educational services available to both students and their parents.

Section 504 of the Vocational Rehabilitation Act of 1973

Section 504 is a civil rights law that protects qualified individuals from discrimination due to a disability. Section 504 mandates that any public or private entity that receives federal assistance cannot deny or prohibit access to a program or activity to any individual with a disability (National Center for Learning Disabilities, 2009). This Act establishes that “No otherwise qualified person with a disability in the United States . . . shall, solely by reason of . . . disability, be denied the benefits of, be excluded from participation in, or be subjected to discrimination under any program or activity receiving

federal financial assistance” (U.S. Department of Education, Office for Civil Rights, 2011, para. 3).

Chapter Summary

This chapter introduced the topic of autism spectrum disorder, its current impact on postsecondary education, and most importantly, the rationale for a research study focusing on the postsecondary experience of students with autism spectrum disorder. Existing data indicates that current college enrollment numbers of students with autism spectrum disorder is predicted to increase (Wolf et al., 2009). Accommodating students with autism spectrum disorder is challenging because their functional limitations affect them beyond the classroom setting (Bedrossian & Pennamon, 2007). Additional research focusing on these students’ postsecondary experiences is imperative as institutions continue to enroll more students with autism spectrum disorder. Studies addressing students with autism spectrum disorder holistically will provide essential information for higher education institutions and for future college students with autism spectrum disorder.

The following chapter will provide a historical context for understanding the historical concept of autism spectrum disorder and by examining the pioneering work of individuals who brought autism spectrum disorder to the forefront of psychological research. The chapter will also provide an overview of the symptoms associated with autism spectrum disorder and explore the existing literature focusing on this disorder.

CHAPTER 2

REVIEW OF THE LITERATURE

The primary focus of this exploratory study is to describe the lived experiences of college students diagnosed with autism spectrum disorder. Autism spectrum disorder is a neuropsychiatric disorder that affects individuals' social interaction and communication by amplifying certain behaviors, activities, and interests (VanBergeijk, Klin, & Volkmar, 2008). As a developmental disability, autism spectrum disorder interferes with the development of social relationships, presents as weaknesses in verbal and non-verbal communication skills, and contributes to the production of repetitive patterns of behavior (Carrington, Papinczak, & Templeton, 2003). Bashe and Kirby (2005) stated that autism spectrum disorder is a neurological disorder characterized by a triad of deficits affecting social interaction, communication, and interest/imagination, accompanied by a narrow, rigid, repetitive pattern of activities.

The cause of autism spectrum disorder remains a mystery, but diagnostically, this comprehensive term is now used to encapsulate the former autistic categories of "infantile autism, childhood autism, Kanner's autism, high-functioning autism, atypical autism, pervasive developmental disorder not otherwise specified, childhood disintegrative disorder, and Asperger's disorder" (American Psychiatric Association, 2013, p. 53). There is no known cure for autism spectrum disorder, but individuals diagnosed with autism spectrum disorder who receive effective treatment or intervention can learn to negotiate their environments effectively and appropriately (Bashe & Kirby, 2005).

Characteristics

Individuals diagnosed with autism spectrum disorder generally exhibit normal intelligence and language development, but display patterns of autistic behavior through deficits in both their expressive and receptive social and communication skills (Jones & Meldal, 2001). Their social impairments tend to involve a weakness with nonverbal activities such as maintaining eye contact and understanding the nuances of facial expressions and gestures (Ozonoff, Garcia, Clark, & Lainhart, 2005). Difficulty in sustaining social interactions and building and maintaining appropriate peer-based relationships are also associated with autism spectrum disorder (Ozonoff et al., 2005).

Individuals with autism spectrum disorder may also prefer sameness, demonstrate routine or ritualistic tendencies, experience difficulty with change, and become obsessively interested in certain subject matters (Jones & Meldal, 2001). Jones and Meldal (2001) observed:

The fundamental problem for people with [autism spectrum disorder] is said to involve their inability to understand the significance of events in a wider perspective, particularly their incapability of understanding social rules and comprehending what other people think. (p. 36)

However, it is important to note that autism spectrum disorder affects individuals differently and that the aforementioned characteristics are variations of symptoms associated with the disorder. The intent is not to imply that these symptoms are applicable to or observable in all individuals with autism spectrum disorder.

Historical Overview

Dr. Hans Asperger, a Viennese pediatrician, was the first psychologist to write about Asperger's syndrome. In 1944, he published his post-graduate thesis entitled *Die 'Autistischen Psychopathen' im Kindesalter (Autistic Psychopathy in Childhood)* (Felder, 2000). Dr. Asperger used the term *autistic psychopathy* to describe the expressive nature of the children he treated in his role as unit director at a children's hospital (Felder, 2000). In his work, he noticed that the young men ages 6 to 11 had intact language and cognitive skills, but displayed problems with social interaction (Klin, Volkmar, & Sparrow, 2000). Additionally, he observed that several of the young men presented with poor motor coordination skills.

Dr. Asperger published several articles on the topic of "autistic psychopathy." Through his research, he discovered the published works of Leo Kanner from 1943, who wrote about "early infantile autism" (Felder, 2000). Dr. Asperger noted that both of the disorders he and Kanner described contained similar "triad of deficit" characteristics, consisting of impaired social skills, self-interest, and communicative impairments (Felder, 2000). Although Asperger and Kanner pursued similar research interests and both used the term autism, the two never corresponded or collaborated.

Lorna Wing, a British psychiatrist, coined the term *Asperger's syndrome*. Wing used the phrase for the first time in 1981 to distinguish the earlier findings of Hans Asperger from those of Leo Kanner (Bedrossian & Pennamon, 2007). In 1981, Wing published findings from her research with children and adults diagnosed with autism. These findings indicated that the participants' profiles did not match the characteristics associated with autism, but more closely resembled the features depicted by Hans

Asperger (Attwood, 2007). Wing's work in this area prompted other psychiatrists to revisit the works of Hans Asperger and provide support for the new diagnostic category.

Although Asperger's syndrome was recognized in the United States in 1981 (Dillon, 2007), it did not gain notoriety until 1991, due to the work of Dr. Uta Frith. Dr. Frith is credited with publishing an English translation of Hans Asperger's 1944 post-doctorate thesis, *Die 'Autistischen Psychopathen' im Kindesalter (Autistic Psychopathy in Childhood)* (Bashe & Kirby, 2005). Interest in Asperger's syndrome continued to gain momentum when it was internationally recognized and included in the tenth edition of the *International Classification of Diseases (ICD)* in 1993 (Klin et al., 2000). The American Psychiatric Association officially recognized Asperger's syndrome and included diagnostic information about Asperger Syndrome in the *Diagnostic and Statistical Manual of Mental Disorders* in 1994 (Klin et. al., 2000).

From 1994 until 2013, the *Diagnostic and Statistical Manual of Mental Disorders* featured the Asperger's disorder diagnostic criteria separately from the Pervasive Developmental Disorder multiple diagnostic category, which encompassed Autistic, Rett's, Childhood Disintegrative, Asperger's disorder and Pervasive Developmental Disorder (NOS) (American Psychiatric Association, 2000). Asperger's disorder was distinguished from Autistic disorder, because it was determined that individual with Asperger's disorder did not have a delay in language development whereas individuals with Autistic disorder symptoms manifested prior to age three (American Psychiatric Association, 2000). This separation remained until 2013, when the American Psychiatric Association released the fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders*. In this edition, all diagnostic categories previously listed under Pervasive

Developmental Disorder were placed under the single diagnostic category of Autism spectrum disorder.

Paucity in the Literature

Jones and Meldal (2001) observed that the voices of individuals with Asperger's disorder have been omitted from the literature. "Despite the fact that there is a burgeoning number of college bound youth with [autism spectrum disorder]; there is relatively little information available about the unique needs of [these] students" (VanBergeijk et al., 2008, p. 1359). Although extensive literature has addressed adolescents with autism spectrum disorder, little research has investigated the experiences and strategies of students with autism spectrum disorder in higher education settings (Camarena & Sarigiani, 2009). Similarly, Smith (2007) indicated that best practices do not exist for working with postsecondary students with autism spectrum disorder. However, specialized support programs are being developed and adopted by several higher education institutions to address the needs of students with autism spectrum disorder. Examples of these programs and the institutions offering these programs are discussed later in this study.

Due to the increased enrollment of students with autism spectrum disorder at postsecondary institutions, it is important to gain insight into the experiences of this group as college students. The results of such studies can inform the higher education community about how students with autism spectrum disorder experience and negotiate their college environments. Such research will also provide insight into programs, strategies, accommodations, and support services that can be developed to address the academic and social needs of college students with autism spectrum disorder.

Development of specific programs that address the deficits associated with autism spectrum disorder may help students gain more complete access to their college environments, increasing degree attainment. Additionally, studies can help identify best practices for support services that facilitate the social development of students with autism spectrum disorder. Moreover, additional studies may help to remove barriers that prevent students with autism spectrum disorder from engaging holistically within the campus environment.

In light of the limited research that exists, additional studies in this area are necessary to discover how students with autism spectrum disorder experience college. This literature review will provide information about adolescents with autism spectrum disorder; the impact of the theory of mind (ToM) concept; the postsecondary enrollment of students with autism spectrum disorder; the development of accommodations, support systems, and specialized programs for this population; the persistence and retention of this group of students postsecondary education; and the influence campus environments have on the social interactions of students with autism spectrum disorder. Additionally, this section will also discuss the affects and prevalence of autism spectrum disorder and examine issues that arise for this population related to academic ability, degree attainment, and environmental or other campus barriers. Finally, the researcher will discuss several philosophical views of disability.

Adolescents with Autism Spectrum Disorder

Despite the limited amount of literature addressing the college experiences of students with autism spectrum disorder, significant research has focused on adolescents with autism spectrum disorder. Carrington, Papinczak, and Templeton (2003) completed

a phenomenological study with five adolescents between 14 and 17 years of age to explore their lived experiences as students with autism spectrum disorder in a secondary educational setting. Participants included one female and four male Caucasian students with autism spectrum disorder attending a large public school in Queensland, Australia. The author used a semi-structured interview protocol to elicit information about the social context of friendship development and social interaction for teenagers in secondary school settings (Carrington et al., 2003).

Difficulty with social interaction is one of the characteristics associated with autism spectrum disorder (Attwood, 2007). The researchers of this study posited that “our professional understanding of [autism spectrum disorder] and the particular social difficulties in secondary school can be enhanced by endeavoring to listen to, accept, and reflect upon the voices of participants” (Carrington et al., 2003, p. 16). The use of a phenomenological method set the stage for the participants to share their experiences from their own perspectives. Moreover, it required researchers to “respect the meanings created by the participants . . . and to see how the world is communicated through the words of the students” (Carrington et al., 2003, p. 16).

Carrington et al. (2003) identified four distinct themes: difficulty and satisfaction with social interactions, hostile encounters with peers, understanding and following rules, and masquerading. Of the four findings, the researchers underscored masquerading as a unique concept. In the study, masquerading was defined as a participant’s ability to disguise social inadequacies and conceal the anxiety and stress produced by social interactions in the school setting (Carrington et al., 2003). It was determined that the participants engaged in masquerading in an attempt to fit in socially. To accomplish this,

the participants imitated the social actions of their peers to mask the social shortcomings exacerbated by autism spectrum disorder. Although the students expressed a need to mask part of their identities, in general they expressed satisfaction with their friendships (Carrington et al., 2003). Development of appropriate social skills and friendships are important during the adolescent period. Attwood (2007) indicated that individuals without friendships are more susceptible to teasing or bullying, which could potentially lead to more extensive emotional problems in adulthood.

Because of the complex nature of social interactions, Carrington et al. (2003) did not perceive masquerading negatively. They recognized this as a strategy to learn the social nuances and behaviors achieved naturally or intuitively by students without autism spectrum disorder. Describing this social learning context as the “hidden curriculum” in the school setting, the authors explained, “Perhaps by observing behaviors and copying their peers, these teenagers are gaining an insight into the hidden curriculum that exists in school” (Carrington et al., 2003, p. 19). The findings of this study indicated that participants understood the difficulty involved with being socially adept, so to compensate, they engaged in masquerading to help improve their social skills. Although masquerading was stressful, it prevented the participants from being ostracized. Additionally, the researchers concluded that the participants were able to develop and maintain mutually satisfactory friendships.

Theory of Mind (ToM)

Individuals with autism spectrum disorder experience what psychiatrists recognize as the “triad of deficits”: challenges with social interaction, communication, and rigid and prescribed interests (Kaland, Callesen, Moller-Nielsen, Mortensen, &

Smith, 2008). Psychiatrists have also postulated that some individuals with autism spectrum disorder exhibit a deficit called theory of mind (ToM). Premack and Woodruff introduced the ToM concept in 1978 (Spek, Scholte, & Van Berckelaer-Onnes, 2010). ToM is multi-faceted and described as the inability of individuals on the autism spectrum “to attribute mental states to oneself and others and to predict the behaviors of others based on their mental states” (Spek et al., 2010, p. 280). ToM deficiency is a trait for some individuals with autism spectrum disorder (Cash 1999; Horn, 2009; Little, 2002; McPartland & Dawson, 2005; Miller, 2005).

Heavey, Phillips, Baron-Cohen, and Rutter (2000) indicated that deficits in ToM contribute to behavioral, social, and communicative impairments that are identical to the diagnostic impairments that affect individuals with autism spectrum disorder. Dillon (2007) noted that a deficit in ToM contributes to socially unacceptable actions and the use of odd words and phrases by individuals with autism spectrum disorder, and that such individuals frequently only recognize their own viewpoints and experience difficulty understanding thoughts expressed by others. These same individuals are limited in their ability to perceive others’ viewpoints, which contributes to their social difficulties (Horn, 2009).

Deficit in ToM has a social impact on high-functioning adults with autism spectrum disorder. Spek et al. (2010) found that individuals with autism spectrum disorder showed ToM impairment on the “Faux-Pas” and “Strange Stories” tests as well as on the Empathy Quotient Questionnaire. The “Faux-Pas” test is an assessment used to determine the degree in which an individual is able to detect awkward statements or content from written stories that are read aloud. This test is composed of twenty stories

with ten having a faux-pas and ten without (Spek et al., 2010). The “Strange Stories” test consisted of twenty-four vignettes featuring comments not meant literally. After listening to the vignettes, the participants discern the intentions of the subjects in each story. The Empathy Quotient Questionnaire (EQ) is an instrument developed to measure the tendency of adults with normal intelligence to recognize the mental states of others and display the appropriate emotional reaction based on the mental states expressed by others (Baron-Cohen & Wheelwright, 2004). The instrument used to measure EQ consists of 60 questions, 20 items are fillers and the remaining 40 items measure the ability of the participant to empathize (Spek et al., 2010).

In their study, Spek et al. (2010) selected 61 participants with autism spectrum disorder from a mental health institution’s outpatient group. Selected participants were of normal intelligence and verbal acuity, as determined by a score of at least 85 on the Wechsler Adult Intelligence Scale, Third Edition (WAIS-III). The neurotypical (without a diagnosis of autism spectrum disorder) control group consisted of 32 participants, ranging in age from 18 to 60 years, with either a diagnosed psychiatric disorder or a family history of autism. The average full scale IQ for the neurotypical control group was 115.9, while the autism spectrum group ranged from 110.2 to 114.5.

ToM assessments are conceptually formatted into stages termed “orders” and can be used at various developmental stages, along with age appropriate assessments, to determine the ToM deficit level at all stages. The assessment results provide information concerning the individual’s perception of certain non-verbal characteristics in reference to specific social contextual events. The first two orders of this concept determine ToM deficits in the early stages of development (between the ages of 4 and 6). At the first ToM

order, assessments measure the ability of individuals to understand their own thinking. Second-order assessments are used to determine the interpretive prowess of delineating the thoughts of others (Baron-Cohen, Jolliffe, Mortimore, & Robinson, 1997). Weaknesses in these first two orders of ToM are significant for individuals in their early developmental stages (4-6 years). However, adults with autism spectrum disorder are usually successful with lower-order ToM assessments. They tend not to exhibit deficits at this level, because the assessments used to measure ToM at the first and second orders are not sufficient to determine the effects of ToM for adults with autism spectrum disorder.

Realizing that adults diagnosed with autism spectrum disorder have the competency to successfully complete lower-level ToM assessments, Rutherford, Baron-Cohen, and Wheelwright (2002) conducted a study using higher-level ToM assessments to acquire more compelling evidence of the social deficits associated with these disabilities. The researchers used an experimental quantitative design consisting of 19 adults in the experimental group. Members of the experimental group had a median age of 23 years, scored above 32 on the Autism Spectrum Quotient, had a WAIS verbal IQ of 101 and had no other psychological diagnosis (Rutherford, Baron-Cohen, & Wheelwright, 2002). The first control group consisted of 78 college students from the University of Cambridge, and the second control group was non-college participants consisted of 20 adults without a neurological diagnosis.

Participants in the study were administered the Reading the Mind in the Eyes and Reading the Mind in the Voice assessments. The “Eye” test required participants to review photos of the human eye region and select between two responses associated with

the photographs; whereas, the “Voice” test required participants to listen to and discern mood and emotions from audio conversations based on vocalization. Aligned with previous works on this topic, the results suggest that individuals with autism spectrum disorder may have a specific deficit in making social inferences based on the visual data presented for the “Eye” test and the various types of vocalization scenarios used for the “Voice” test (Rutherford et al., 2002). Compared to their neurotypical peers the participants in this study

Accommodating Students with Autism Spectrum Disorder

As the number of students with autism spectrum disorder seeking access to higher education continues to grow, it is essential for institutions to develop and implement support services that extend beyond traditional accommodations. With the increased enrollment of students with autism spectrum disorder in colleges and universities, postsecondary institutions will face challenges in providing appropriate accommodations for this student population. MacLeod and Green (2009) noted that higher education would have to adopt innovative methods to accommodate this group of students and address the functional limitations associated with autism spectrum disorder. Concepts such as universal design, coaching, and other social training programs are viable tools to consider for students diagnosed with autism spectrum disorder.

Autism spectrum disorder generally interferes with the non-academic or social nature of the college environment, which plays an essential role in how students perform academically, persist toward degree completion, communicate with faculty and staff, and interact with peers. Students with autism spectrum disorder usually enter college with the intellectual acuity to perform well academically, but without the skills to negotiate the

social aspects of college (Camarena & Sarigiani, 2009). Wenzel and Rowley (2010) indicated that the challenges are most often associated with the residual effects of autism spectrum disorder, which influence the individual's capacity to adapt to the social aspects of postsecondary life and develop academic strategies. Autism spectrum disorder manifests itself differently in each individual, but social skill development and problems with communication reciprocity are commonly associated with individuals with the disorder. The social traits associated with this disability may result in students withdrawing both socially and academically from the college community, further diminishing the student's ability to obtain a college degree.

Generally, students with disabilities in the higher education setting receive academic and testing accommodations such as extra time, note-taker assistance, a private testing room, or other accommodations that address the particular functional limitations associated with their disabilities. However, due to the complexities of autism spectrum disorder, such measures usually do not adequately address the primary functional limitations associated with this disability. Glennon (2001) indicated that non-academic concerns associated with autism spectrum disorder could potentially interfere with college success. Furthermore, she stated, "to comprehend the extent and types of supports needed, the intricacies between the person with [autism spectrum disorder] and the college experience must be explored" (Glennon, 2001, p. 183).

Colleges and universities primarily want to educate their constituency, but they also recognize that the college years are a time of significant personal development for students, involving practicing skills for adulthood, establishing friendships, making career decisions, and taking part in extracurricular activities (Glennon, 2001, p. 185).

Students with autism spectrum disorder may find it difficult to access these fundamental features of the college experience due to the limiting nature of their disability. Therefore, college administrators must implement innovative techniques that go beyond typical accommodations to provide effective services for students with autism spectrum disorder (MacLeod & Green, 2009).

Glennon (2001) provided recommendations designed to help students with autism spectrum disorder acclimate to the college campus by developing a support system that helps alleviate the academic and social stressors associated with the college environment. The author identified the following stress-producing experiences for students with autism spectrum disorder: participation in activities and developing social relations, transitioning from secondary to postsecondary institutions, increasing academic rigor, and additional responsibility. Most college students experience these typical stressors, but for students with autism spectrum disorder, these stressors are exacerbated and therefore more damaging to their college experiences. Fallon (2009) found that students with autism spectrum disorder frequently suffer from non-academic deficits that significantly impair their academic performance. The author noted that students with autism spectrum disorder “often have unique and very individual challenges” in the college setting (Fallon, 2009, p. 3).

Smith (2007) completed a mixed-methods exploratory study to answer two questions: (1) What are the needs of students with autism spectrum disorder? and (2) What are the services and accommodations available to these students at the postsecondary level? The author selected a random sample from among the 1,706 member institutions of the Association of Higher Education and Disability (AHEAD),

yielding 102 institutions for possible participation. To collect the data, a survey instrument distributed electronically and by fax to professional staff members in the Disability Services offices.

The researcher for this study found that accommodations were available to students with autism spectrum disorder, but many of these accommodations mirrored those typically provided to students with cognitive functioning disorders. In some cases, these accommodations are helpful to students with autism spectrum disorder, “but with a unique syndrome come the need for unique accommodations” (Smith, 2007, p. 526). This study also emphasized the importance of educating faculty about students with autism spectrum disorder, to better equip them for working with such students in the classroom and helping students meet their academic goals. Lastly, Smith (2007) underlined the importance of accommodating the individual and not the disability.

Expanding on Smith’s (2007) research, Barnhill (2014) completed an exploratory study to investigate the availability of support services for students with autism spectrum disorder at various postsecondary institutions. The primary focus of this study was to “determine the current support practices offered on college and university campuses for students with [autism spectrum disorder]” (Barnhill, 2014, p. 1). In addition, the investigator sought to determine how best to serve this group of students both academically and socially in the postsecondary environment (Barnhill, 2014).

Barnhill (2014) conducted an Internet search to identify colleges and universities that advertise specialized support programs for students with autism spectrum disorder. The author found 45 colleges and universities that met the research criteria. After making initial contact with each institution, the researcher determined that only 31 of the 45

higher education institutions actually had existing programs designed to address the needs of postsecondary students with autism spectrum disorder; of these only 30 institutions consented to participate in the research study. Nineteen public and 11 private postsecondary institutions participated in the study.

To collect the data, Barnhill (2014) distributed a 20-question survey comprised of four distinct sections. Collectively, the four sections of the evaluation tool provided the researcher with demographic information pertaining to each institution, types of specialized support services offered, outcome information concerning graduation rates and degree completion, and the level of parental involvement, as well as suggestions to assist other higher education institutions in developing similar programs (Barnhill, 2014). To verify the survey data, the investigator completed a 45- to 50-minute telephone interview with each institution.

The study found that just over 56% of the participating institutions reported that students self-selected into their support programs, whereas approximately 43% of institutions indicated that they used a selection process to determine which students were appropriate for their programs (Barnhill, 2014). At all but one institution, admission to the institution was a prerequisite for individuals with autism spectrum disorder to have access to the support program. According to Barnhill (2014), a little more than 63% of the institutions reported serving between 1 and 30 participants in their support programs and 30% of the institutions reported serving 30 or more students with autism spectrum disorder. The history of providing support programs varied among the reporting institutions, with 47% of the respondents indicating that they have provided support

programs for students with autism spectrum disorder for more than five years. The remaining institutions reported providing support programs from one to four years.

The participating institutions reported considerable variations in terms of how many students with autism spectrum disorder actually accessed the services offered by the support program. Similarly, they reported wide variations in reference to fees assessed for support programs above the cost of tuition. Eleven of the 30 participating institutions indicated that there were no fees for their programs, while the remaining institutions charged fees ranging from \$1,050 to \$17,400 per year. Institutions that charged fees reported that a higher number of students accessed their support programs than institutions that did not assess a fee. Barnhill (2014) stated, “institutions reported that less than half of the students accessed specific services that did not charge a fee for these services” (Barnhill, 2014, p. 6).

The types of assistance provided by these special support programs varied from institution to institution, but the investigator identified the top 13 commonly offered accommodations and supports: advisors, extra testing time, alternate testing sites, tutoring, note takers, technology supports, employment preparation, reduced course loads, copies of professors’ notes, life skills development, social skills instructions, peer mentors, and priority registration (Barnhill, 2014). Additionally, the investigator identified several additional types of supports, including summer transition programs, social skills development seminars, and peer mentors, used to assist this group of students in the academic setting.

As a follow up to Smith’s (2007) study, Barnhill’s (2014) research adds another layer of support for the ongoing development of programs to aid students with autism

spectrum disorder in postsecondary settings. However, this study did not investigate the efficacy of these support programs, which continues to be a key area in which very little data exist. Barnhill (2014) stated that even though the unidentified institutions involved in this study recognized the need to collect data pertaining to student retention, graduation rates, and other pertinent outcomes, only three institutions were able to report outcome data.

Specialized Programs

To address the social inadequacies displayed by students with autism spectrum disorder, several institutions are starting to provide social skills training and coaching programs. Several examples are found in the literature of programs that address the limited social skills of students with autism spectrum disorder. The University of Connecticut collaborated with Boston University and the University of Minnesota to offer a program entitled “Strategic Education for Students with Asperger’s Disorder (SEAD)” (Disability Compliance for Higher Education, 2007). Developed in response to the increased enrollment of students with Asperger’s disorder, SEAS used paid graduate assistants to provide coaching for students with Asperger’s disorder. The coaches worked individually with students to identify their needs and provide assistance to help them to overcome obstacles (Disability Compliance for Higher Education, 2007). The premise of the coach/student association was to identify executive function deficits and provide students with tools to help them overcome those deficits; establishing an interpersonal relationship was not paramount or expected (Disability Compliance for Higher Education, 2007).

Similar to the SEAD program, Mercyhurst College, located in Erie, Pennsylvania, developed the Asperger Initiative at Mercyhurst (AIM) in 2008. AIM used graduate students to assist students diagnosed with autism spectrum disorder with their daily life activities. In addition, the program developed an advisory board comprised of students with autism spectrum disorder, allies, faculty, staff, and non-disabled students (Disability Compliance for Higher Education, 2010). The advisory board provided opportunities for students with autism spectrum disorder to gain acceptance, discuss issues most salient to their disability, and receive informal social skills training from board members (Disability Compliance for Higher Education, 2010). This program worked with all facets of the college to educate the campus community about the needs of students with autism spectrum disorder.

Conceptually similar to the SEAD and the AIM programs, the Center for Students with Disabilities (CSD) at the University of Connecticut also developed a first-year experience course in 2009 specifically for students with autism spectrum disorder. Wenzel and Rowley (2010) described the course as a mechanism to integrate the specific nuances of college for first-year students with social skills training, and to assist with the transition to college. The course was conducted for 14 weeks and taught by members of the CSD office, and was open only to students diagnosed with autism spectrum disorder. By limiting registration to this group, participants were able to “interact with other classmates who have similar challenges and were provided with the essential skills and strategies to make their transition to the college community more seamless” (Wenzel & Rowley, 2010, p. 44).

These programs have a common thread of addressing the social deficits exhibited by students with autism spectrum disorder. Additional institutions like Keene State College, Marshall University, and the University of West Virginia also operate some type of mentoring support program to assist students with autism spectrum disorder. All of these programs use graduate students to provide academic and social support for students with autism spectrum disorder (Moore, 2006). When considering the effects of autism spectrum disorder and their implications for the social milieu of higher education, programs that focus on developing social skills show promise and may prove to be a key factor in promoting success for these students.

In response to the increased enrollment of students with autism spectrum disorder in higher education and the unique challenges institutions face in transitioning this group of students into their campus communities, more institutions are pioneering efforts to assist students with autism spectrum disorder. In addition to the University of Connecticut and Marshall University, other institutions of higher education offering fee-based support programs include Western Kentucky University, the University of Alabama, Nova Southeastern University, Rutgers University, Adelphi University, Eastern Michigan University, the University of Arkansas, Farleigh Dickenson University, the Community College of Baltimore County-Essex Campus, and St. Joseph's University (Programs for Students with Asperger Syndrome, para. 2, 2014). The average fee for these kinds of support programs is around \$4000. The type of support offered by these programs varies, but they focus primarily on helping students with autism spectrum disorder with transition to postsecondary settings by fostering independent living skills and providing behavioral support, academic and social skills development, career and

vocational training, and mentorship (Programs for Students with Asperger Syndrome, para. 2).

Persistence and Retention

Although postsecondary enrollment continues to rise for students with disabilities, comparable increases have not occurred in the number of students with disabilities who persist to degree completion. Using data generated in 2000 from the National Center on Educational Statistics and the National Council on Disability, Getzel (2008) reported that enrollment rates for students with disabilities stand between 9.3% and 17% for institutions offering two- and four-year degrees. The rate of completion for college course work by students with disabilities decreased from 30% in 1986 to 26% in 2001 (Getzel, 2008; Whelley, Hart, & Zaft, 2002).

To address issues of persistence and retention, Getzel completed a study highlighting particular mechanisms that, used either alone or in conjunction with each other, might increase the persistence and retention rates of postsecondary students with disabilities. In this work, the author postulated that support services designed to help students develop self-determination skills, enhance self-management skills, and offer opportunities to explore and use technology or obtain career-related experiences might increase the likelihood that students with disabilities would matriculate in and complete college programs (Getzel, 2008).

Additionally, the author stressed in this article the need for institutions to go beyond standard accommodations to undertake an “expansion of services to assist students with disabilities in partnership with the Disability Support Services office” (Getzel, 2008, p. 214). In this portion of the study, the author discussed several support

programs at various postsecondary institutions designed to assist students in their college experience. Specifically, she described a supported education model implemented at Virginia Commonwealth University (VCU) to assist students with disabilities. VCU instituted its program in 2000 “to assist students [with] their capacity to direct and manage their education and ultimately their careers” (Getzel, 2008, p. 214).

The program provides individualized supportive services and draws on resources from both the university and the community to help student learners accomplish short- and long-term goals (Cooper, 1993; Egnew, 1993; Getzel, 2008; Unger, 1998). VCU’s supported education program uses direct coaching, consultation, and monitoring as the overarching principles for facilitating increased autonomy (Brinkerhoff, McGuire, & Shaw, 2002; Getzel, 2008). Each phase of its three-step program has embedded components to help students develop the skills needed to adjust to life as a college student.

Due to the low retention and persistence rates for postsecondary students with disabilities, the author urges higher education institutions that are concerned with retention to explore options beyond typical accommodations to enhance the educational experience of its students (Getzel, 2008). This recommendation is specifically applicable for students with autism spectrum disorder. The non-academic elements of higher education often affect students with this disability in a particular manner, and typical accommodations do not adequately address these concerns. Thus, it is essential for institutions to consider and implement accommodations outside of the usual framework to address the needs of students with autism spectrum disorder.

Social Interaction

Madriaga (2010) completed a grounded theory study investigating the higher education experience of eight students with autism spectrum disorder in their first year of college. The researcher used informal interviews to address the hypersensitivities of students with autism spectrum disorder as they experienced certain university spaces to determine the impact of these environments on their ability to function socially and the barriers that these areas imposed. Specifically, the study investigated how participants experienced Fresher's Fair Week (club fair), campus pubs, libraries, and living space. The study found that some participants responded negatively to these experiences, while others expressed positive reactions. This discrepancy affirms that autism spectrum disorder affects individuals differently and that higher education institutions must therefore accommodate the individual rather than the diagnosis.

Although some students with autism spectrum disorder find traditional means of engaging socially to be difficult, they also recognize the importance of social interaction. Therefore, these students may seek alternative venues to connect with others socially, such as the use of Internet chat rooms, blogs, and other forms of social media. To address the use of alternative venues for social connection such as Internet chat rooms, Jones and Meldal (2001) completed a grounded theory research study by looking at the personal web pages of individuals with autism spectrum disorder. Initially, the researchers identified 25 sites that closely met the parameters of their study. After careful examination, they determined that only five of the sites met the criterion of being entirely "written by the [individual] with [autism spectrum disorder]" (Jones & Meldal, 2001, p. 37).

Analysis of the five sites revealed some common themes, including “an awareness of the difficulties in communication and comprehension, descriptions of attempts to ‘fit in’ by trying to role play at being non-autistic, the awareness of other people with autism spectrum disorder as a supportive community, and an awareness of the benefits of the Internet as a means to develop and maintain social relationships” (Jones & Meldal, 2001, p. 38). Beyond these themes, the researchers found that individuals with autism spectrum disorder had an interest in forming and maintaining social relationships; however, they recognized the difficulty of attempting to do so and used the Internet as an essential medium for communication.

Effects of Autism Spectrum Disorder

Possibly due to impairment in the frontal lobe region of the brain that manages social reasoning, individuals with autism spectrum disorder may exhibit deficits in the ability to reason socially and communicate effectively and may display repetitive behavior (Horn, 2009). They often experience problems with appropriate verbal exchanges and may exhibit socially awkward behaviors, activities, and interests. Individuals with autism spectrum disorder may have difficulty understanding “the semantics and pragmatics of speech” (VanBergeijk et al., 2008, p. 1360). Individuals with autism spectrum disorder may experience problems that affect their development of social and communication skills, so it is important to understand that with autism spectrum disorder an individual’s deficits in “social and communication skills are less severe than individuals with classic autism and their verbal IQ is usually higher” (Ozbayrak, 2011, para.1).

Prevalence

Males are much more likely than females to have a diagnosis of autism spectrum disorder (American Psychiatric Association, 2000). In 2005, Bash and Kirby stated that four out of five individuals diagnosed with autism spectrum disorder were male. Graetz and Spampinato (2008) indicated that males make up 75 to 80 percent of all diagnosed cases of autism spectrum disorder. The Centers for Disease Control and Prevention recently reported that one in 68 individuals is diagnosed with autism spectrum disorder, with one in 42 males and one in 189 females receiving this diagnosis (Baio, 2014).

Although females exhibit symptoms similar to those of their male counterparts, they are less likely to receive a diagnosis of autism spectrum disorder. Females seem to have the ability to compensate for their impairment, due in part to their socialization (Attwood, Grandin, Bolick, Faherty, Hand, & Myers, 2006). Females specifically show deficits in the area of social interaction and theory of mind, but instead of receiving a diagnosis of autism spectrum disorder, females commonly receive a diagnosis of nonverbal learning disability, despite exhibiting similar symptoms to their male counterparts (Bashe & Kirby, 2005).

Attwood (2007) indicated that many females and some males possess the competence to mask their social skill deficiencies by imitating social prowess, which they have perceived to be appropriate in others. In larger groups, females tend to position themselves on the periphery as a way to observe social interactions and learn appropriate social skills. Females tend to observe and imitate appropriate behavior exhibited by others (Attwood, 2007, p. 46). Because females have the ability to mask many of the factors associated with Asperger's disorder, they are more likely to develop friendships

and acquire appropriate social skills, perhaps contributing to the reduction in the number of females diagnosed with Asperger's disorder.

Academic Ability

Similar to individuals diagnosed with learning disabilities, many individuals with autism spectrum disorder have the intellectual ability to compete academically and complete college programs. However, these individuals are likely to experience non-academic problems that may impede their academic and social engagement in college (Dillon, 2007). MacLeod and Green (2009) noted that individuals with autism spectrum disorder are not cognitively impaired, but the effects of the condition can predispose individuals to struggle with the sustained focus required for academic study (p. 633). The degree of intellect among individuals with autism spectrum disorder varies. Students with autism spectrum disorder tend to exhibit academic strengths with subject matter that involves math and factual types of information and weaknesses in areas that require abstract thinking (Horn, 2009). However, postsecondary students with autism spectrum disorder may also find social interaction difficult in conjunction with the other non-academic areas of college, which is a primary characteristic of autism spectrum disorder (Horn, 2009).

Accommodations Defined and Legal Mandates

Accommodations are modifications provided in an educational setting to lessen the impact of the functional limitations associated with an individual's disability (Wolf, Brown, & Bork, 2009). Accommodations essentially make the "academic environment manageable without fundamentally altering the curriculum" (Wolf et al., 2009, p.79). Assigned accommodations must be reasonable and attributable to the functional

limitations of the individual. VanBergeijk, Klin, and Volkmar (2008) indicated that autism spectrum disorders are a social disability that requires some form of accommodation and institutions that fail to provide appropriate accommodations impede students with autism spectrum disorders from attaining their goals.

To accommodate students with disabilities, it is essential that the totality of the disabling condition is taken into account. Accommodations should address the nature of the disability, removing the barriers created by the interaction between the student's disability and the environment (Cawthon, Ho, Patel, Potvin, & Trundt, 2009; Fuchs, Fuchs, & Capizzi, 2005). "While considering all aspects of a student's needs, it is vital to remember that the emphasis should not be only on the deficits; the student has many strengths that should be recognized and nurtured" (Horn, 2009, p. 169).

Colleges and universities must provide accommodations for students with disabilities as mandated by federal law. Specifically, the ADA of 2008 and Section 504 of the Vocational Rehabilitation Act protect the rights of individuals with disabilities who enroll in institutions of higher education. The ADA establishes the parameters for providing accommodations at the postsecondary level to help equalize and provide access to the academic environment for students with disabilities (VanBergeijk et al., 2008), while Section 504 protects students from discriminatory practices.

Broader Accommodations

Traditional accommodations available to students with intellectual disabilities are unlikely to sufficiently address the concerns of students with autism spectrum disorder (Dillon, 2007). Institutions must therefore think creatively to provide support programs and intervention strategies designed to address the non-academic limitations of students

with autism spectrum disorder, which can negatively influence their academic performance (MacLeod & Green, 2009). Autism spectrum disorder invariably affects individuals differently, so it is important to link decisions about the type of appropriate accommodations to the functional limitation(s) of the individual, rather than the diagnosis.

Many students with autism spectrum disorder have trouble with executive functions, which can affect time management, lead to procrastination, and hinder the development of study skills including test taking, note taking and writing (McGuire, Hall, & Litt, 1991; Zwart, Kallemeyn, & College, 2001). Such executive function weaknesses can hamper a student's ability to adjust to the academic rigor of college, so it is vital to consider how these difficulties interfere with the educational attainment of students with autism spectrum disorder. Practitioners in higher education institutions should provide opportunities for these students to acquire learning strategies to help address areas of weakness. Programming focused on learning strategies and self-advocacy can facilitate student independence and foster academic success (McGuire et al., 1991; Brinckerhoff et al., 1992; Zwart et al. 2001).

Graduation Rates

Students with disabilities have a disproportionately low graduation rate in comparison to students without disabilities (Getzel, 2008). In 2001, the National Organization on Disability reported a decline in the degree completion rate between 1986 and 2001 for students with disabilities (Getzel, 2008). The National Organization on Disability (NOD) attributed this decline to the failure of students with disabilities to adapt to new challenges involved with managing their academic programs (Getzel, 2008).

Based on a report generated by NOD, Dowrick, Anderson, Heyer, and Acosta (2005) stated that the 2000 graduation rate for students with a disabilities lingered around 12%; whereas, their non-disabled counterparts were graduating at a rate of 23% based on 1,149 individuals (535 with a disability and 614 without a disability) surveyed for the report. Based on a sample size of 1,789 survey participants with (1,001) and without a disability (788), in 2010 the NOD published updated data from 2004 that indicated the college completion rate for students with disabilities rose to 14% and without a disability rose to 25% (National Organization on Disability, 2010). These findings indicated that students with disabilities might have a difficult time obtaining a college degree. “The most effective education is one which most fully involves the student in the learning process and the opportunities for enriching experienced in the college setting” (Strange & Banning, 2001, pp. 137-138). Therefore, it is important to determine the obstacles that impeded the persistence and completion rate of all students with disabilities in the higher education setting.

Barriers for Students with Autism Spectrum Disorder

Students with autism spectrum disorder must be able to negotiate the college environment socially and academically, despite facing numerous challenges introduced by the triad of deficits. Accommodations are essential to mediate these difficulties and enable students to fully engage in the college campus, because “students learn from becoming involved” (Astin, 1985, p. 133). It is essential for institutions to eliminate physical and social barriers to involvement and to create environments that are inclusive for all students. Students with autism spectrum disorder may find it challenging to become involved, due in part to the functional limitations associated with their disability.

Such challenges only increase the need for institutions to construct campus environments that are welcoming and supportive for all students.

Models of Disability

The medical and social models are the two primary recognized disability models (Kettle, 2005). These two models offer contrasting perspectives of how society views and responds to individuals with disabilities. A discussion of the philosophies endorsed by each model provides an understanding of how adoption of these models may affect service delivery in postsecondary settings and provide a strong indication of how that campus views individuals with disabilities.

Medical Model

The medical model views an individual's disability and associated limitations as areas in need of remediation (Kettle, 2005). The medical model tends to discount the strengths of individuals with disabilities and at times seems to blame the individual for the disabling condition (Farrar, 2008). Additionally, the medical model tends to see the disability rather than the individual and to view the person as deficient or abnormal (Kras, 2010). Those in the medical community are the primary endorsers of this model, as medical professionals often view their role as that of "fixing" people in order to increase their ability to engage more fully in society (Kettle, 2005).

It is difficult for supporters of the medical model to understand that individuals with disabilities could be happy with their current state. When the principles of the medical model are applied to persons with autism spectrum disorder, the deficits associated with this disability are highlighted and attempts are made to remedy or lessen their effects. At the same time, the individual's other innate abilities—such as cognitive

strengths, diverse ways of thinking, and other talents are rarely recognized (Robertson, 2010). Kras (2010) stated, “the medical model can create a distorted view of what life with a disability is like, and it can promote further prejudice against the very people the medical establishment is trying to help” (p. 26).

Social Model

In contrast to the medical model, the social model of disability contends that it is society, not the person with a disability that needs to be fixed (Kettle, 2005). Kras (2010) indicated that the idea of a disability is manufactured by society and perpetuated through prejudicial practices, attitudes, and barriers that limit the participation of individuals with disabilities. The social model emphasizes the need to recognize the person, not the disability, as the primary focus (Kettle, 2005). Smart and Smart (2006) observed, “The disability is not the single most defining characteristic of the individual; rather the disability is one of several important parts of the individual’s self-identity” (p. 29).

Proponents of the social model believe that society creates conditions that hamper individuals with disabilities; in response, advocates of the social model support the creation of encompassing environments that advance inclusivity (Kettle, 2005).

Advocates seek to transform environments to meet the needs of individuals with disabilities, just as they currently meet the needs of individuals without disabilities. Principles of the social model stress the importance of recognizing the person as an individual and creating environmental conditions conducive to individuals with disabilities.

With regard to postsecondary students with autism spectrum disorder, colleges and universities must first recognize the deficits that may be associated with autism

spectrum disorder, and then seek opportunities to alter the campus environment in ways that embrace neurological differences and human diversity. The social model of disability values diversity and seeks to construct barrier-free environments that provide optimal opportunities for individuals with disabilities to engage in and be recognized as full members of the campus community.

Neurodiversity

Harvey Blume, a journalist, coined the term *neurodiversity* in 1998 (Robertson & Ne'eman, 2008). Blume used the term to describe the neurological differences of individuals with autism spectrum disorders and other disabilities (Robertson & Ne'eman, 2008). Neurodiversity is a concept that embraces the ideology of human diversity and rejects the deficit pathologies advanced by the medical model of disability (Kapp, Gillespie-Lynch, Sherman, & Hutman, 2012). Philosophically, the objective of neurodiversity is for society to value the neurological differences of individuals with certain types of disabilities and for people to embrace and accept neurodiverse individuals in a similar fashion as they do other diverse groups. The concept of neurodiversity is similar to the social model of disability in that it emphasizes the need to view the functional limitations of persons as part of their genetic composition. Supporters of neurodiversity believe that individuals with neurological differences should not be defined by the functional limitations associated with their disability, but instead should be viewed as people who, like all individuals, possess many qualities to be embraced and celebrated (Robertson & Ne'eman, 2008).

Neurodiversity is more than just a concept; it is also a movement that seeks to dispel the focus on deficits applied to individuals with autism spectrum disorder. Harmon

(2004) stressed that neurodiversity represents a new type of disability movement aimed at achieving acceptance for individuals with neurological and behavioral differences.

Through this campaign, individuals with autism spectrum disorders challenge the belief that they are in some way flawed and dispute the medical model classification that characterizes their traits as deficits (Tincani, Travers, & Boutot, 2009). Neurodiverse individuals view their condition as a natural part of their existence and their aim is to be understood and recognized as individuals who have no desire to be fixed or changed (Kras, 2010). Instead of viewing their functional limitations as deficits, proponents of the neurodiversity movement campaign for society to accept their functional limitations as a natural part of the characteristics that make them who they are.

Ableism

Ableism is a term used to describe discriminatory and prejudicial practices committed against individuals with physical and mental disabilities, which hamper their full participation in society (Castaneda & Peters, 2000). Although the number of students with disabilities entering higher education is increasing, such students may still encounter prejudicial attitudes, discriminatory practices and other obstacles that hinder their ability to earn a college degree. Fine and Asch (1988) indicated that students with disabilities endure environmental, prejudicial and interpersonal barriers that interfere with the social context of college and contribute to a state of non-acceptance.

Chapter Summary

This literature review has presented research investigating various aspects of autism spectrum disorder. The literature confirms that students with autism spectrum disorders are accessing higher education at increasing rates (Wenzel & Rowley, 2010).

Graetz and Spampinato (2008) noted, “Today more high school students with autism spectrum disorder expect college to be in their future” (Graetz & Spampinato, 2008, p. 20). As more students with autism spectrum disorder access higher education, it becomes increasingly important to investigate the postsecondary experiences of this student population.

This literature review summarizes the research applicable to students with autism spectrum disorder and highlights the impact of the disorder on student success in a college environment. Exploring literature from various sources helps to facilitate a better understanding of autism spectrum disorder and its affect on college students. In addition, this chapter discussed the association of ToM with autism spectrum disorder and reviewed the two predominant models of disability, including the concept of neurodiversity. Finally, the researcher sought to emphasize the need for nontraditional programming and support services to assist postsecondary students with autism spectrum disorder in higher education, and the importance of recognizing students with autism spectrum disorder as individuals, each with a unique set of characteristics delineated by the individual’s strengths instead of weaknesses.

CHAPTER 3

METHODOLOGY

The purpose of this study was to gain an understanding of the experiences of college students with autism spectrum disorder through the completion of a qualitative study using a phenomenological approach. The researcher sought to discover how postsecondary students with autism spectrum disorder described their lived experiences. The researcher explored how the triad of deficits associated with autism spectrum disorder influenced matriculation, academic performance, communication with faculty and staff, engagement in extracurricular activities, and the development of peer-to-peer relationships. The study addressed the following research question: How do students with autism spectrum disorder describe their postsecondary experiences? This chapter provides information about the methodology used to complete this study. Specifically, the chapter describes the participants, research methodology, and data analysis process.

Research Paradigm

For this qualitative study, a phenomenological approach was best suited to address the research question. This approach elicits the meaning of the lived experience of one or more individuals (Creswell, 2007) by “reducing the individual experiences with a phenomenon to a description of the universal essence (a grasp of the very nature of the thing)” (Creswell, 2007, p. 58). Johnson and Christensen (2008) stated, “The purpose of phenomenological research is to obtain a view into your participants’ life-worlds and to understand their personal meanings constructed from their lived experiences” (p. 395).

The primary purpose of this study was to discover the essence of the college experience for students with autism spectrum disorder. Through this exploration, the researcher sought to discover whether and how the triad of deficits might influence each participant's academic performance, capacity to matriculate, communication with faculty and staff, engagement in co-curricular activities, and establishment of peer-to-peer social relationships. To derive an understanding of these experiences, the researcher reviewed and analyzed the participants' responses to the interview questions and their narrations from the picture elicitation exercise to uncover similar themes to make meaning of the participants' lived experiences.

Transcendental Phenomenology

Creswell (2007) identified two phenomenological approaches that may be used in conducting this type of study: hermeneutic phenomenology and transcendental phenomenology. This study adopted the tenets associated with the transcendental approach. This approach requires the examiner to take a pure, unbiased examination of the phenomenon in an effort to make meaning of and describe the experiences of the participants (Creswell, 2007). Creswell (2007) described this approach as "bracketing," which requires the "[suspension of] any preconception or learned feelings that a [researcher] has about a phenomenon" (Johnson & Christensen, 2008, p. 396). Bracketing helped the researcher view items as if they were occurring for the first time. Essentially, bracketing assisted the researcher in investigating the phenomenon from an unbiased viewpoint, unencumbered by preconceived notions or ideologies.

The research tenets embedded in the transcendental approach aligned well with the researcher's approach to ascertaining, analyzing, and reporting the findings that

emerged from the data collection process. Creswell (2007) and Moustakas (1994) indicated that the researcher should analyze the data and compartmentalize the information into similar thematic groups to distinguish what the participants experienced (textural description) and how they experienced the phenomenon (structural description). The researcher utilized a semi-structured interview protocol and photo elicitation for data collection to ascertain the textural and structural experiences of postsecondary students with autism spectrum disorder. By following the process prescribed in this approach, the researcher discovered the essence of the participants' lived experiences (textural and structural). Additionally, the findings produced information to promote systemic and institutional changes for postsecondary students with autism spectrum disorder.

Theoretical Framework

Given the importance of students adjusting socially and academically to college, the first vector of *developing competence* in Chickering and Reisser's (1993) theory of psychosocial development provided an appropriate backdrop for this study. Developing competence includes three subcategories: intellectual competence, physical and manual competence, and interpersonal competence (Chickering & Reisser, 1993). Chickering and Reisser (1993) posited that a sense of competence is an indicator that one has the ability to manage various situations and successfully attain goals.

Worldview

Grounded in an advocacy/participatory worldview, the intent of this study was to focus on the lived experiences of college students with autism spectrum disorder in relation to retention, academic performance, communication with faculty and staff, engagement in extracurricular activities, and the development of peer-to-peer social

relationships. The researcher sought to capture the essence of these experiences using interviews and photo elicitation. Creswell (2009) explained that the advocacy/participatory worldview promotes some form of action intended to improve the lives of the participants. Furthermore, this research paradigm “focuses on the needs of groups and individuals in our society that may be marginalized or disenfranchised” (Creswell, 2009, p. 9). Following this philosophy, the researcher will use the results of this study to promote the creation of supportive campus environments that are responsive to the needs of postsecondary students with autism spectrum disorder, and to encourage institutions to accommodate the individual and not the diagnosis.

Development of Interview Questions

The three subcategories of vector 1 (developing competence) in Chickering and Reisser’s (1993) theory of psychosocial development were instrumental in the development of the semi-structured interview questions. Additionally, a portion of the semi-structured interview questions were formulated in response to the information found in the literature on campus engagement.

Questions 1, 2, and 7 were formulated to address intellectual competence. In her commentary entitled *Revisiting the Seven Vectors*, Reisser (1995) indicated that intellectual competence involved college students acquiring skills and knowledge in relation to academic programs, expanding their overall intellectual growth and interest in various subject areas, and developing critical thinking skills in conjunction with the ability to communicate ideas and opinions effectively.

The researcher developed questions 5 and 5a to address physical and interpersonal competence. The development of physical and manual competence correlates to a

student's exposure to competitive athletic and recreational activities such as intramural sports and other campus-based co-curricular activities (Chickering & Reisser, 1993). Development in this subcategory is linked to creative and artistic activities, which demonstrate a student's ability to manipulate certain raw materials and the development of the individual's artistic abilities (Reisser, 1995). The development of these two questions is also influenced by interpersonal competence as discussed in the following section.

Questions 3, 4, 5, 5a, 6, and 6a were informed by interpersonal competence. Interpersonal competence examines the ability to interact with others in a group or with other individuals (Reisser, 1995). Specifically, it involves skill development in the areas of working cooperatively, listening, effective communication, and the complexities involved with growing relationships (Chickering & Reisser, 1993). Reisser (1995) explained, "Interpersonal literacy increases as students learn when and how to communicate what to whom in order to achieve specified goals" (p. 507).

Questions 8, 9, and 9a were developed in reference to the importance placed on campus engagement. The interplay between the campus environment and college experiences is a valuable commodity that contributes to student development. The college years are recognized as a time of social, academic and identity development for students, fostered by both in-class and out-of-class experiences. Chickering and Reisser (1993) stated that the educational environment plays a pivotal role in student development. Astin (1999) theorized, "Student involvement refers to the amount of physical and psychological energy that the student devotes to the academic experience" (p. 518). Pascarella and Terenzini (2005) further explained, "The impact of college is largely

determined by individual effort and involvement in the academic, interpersonal, and extracurricular offerings on a campus” (p. 602).

Strange and Banning (2001) indicated that a student’s attraction to the campus environments plays an integral role in his or her decision to take part in that environment. When students feel a sense of support and inclusion on a campus, they tend to matriculate at that institution. Evans, Forney, Guido, Patton, & Renn (2010) indicated that significant opportunities also contribute extensively to the development of students. Exposure to the college experience serves as a catalyst for students to experience growth and change in their areas of interest, aspirations, values, emotions, attitudes, and intellectual ability (Chickering, 1969). Chickering and Reisser (1993) also emphasized how the environment of institutions in their role as academic resources influences student development. If first-time college students are to be successful, they must adjust to the academic and social context of the college environment (Hadley, 2006).

Trustworthiness

In qualitative research, *validity* describes the degree to which a study is “plausible, credible, trustworthy, and therefore defensible” (Johnson & Christensen, 2008, p. 275). It is crucial in qualitative research, as in other research methodologies, for the researcher to ensure that the findings are trustworthy by employing measures to confirm the study’s validity. To increase the trustworthiness of this study, the researcher assumed complete responsibility for the direction of the study (role of the researcher), disclosed biases (researcher bias), utilized a research team to assist with analyzing data and developing codes, implemented data triangulation and used member checking and reflexivity.

Role of the Researcher

The researcher assumed responsibility for collecting and analyzing the data elicited from the study participants. Lincoln and Guba (1985) stated, “The human interviewer can be a marvelously smart, adaptable, flexible instrument who can respond to situations with skills, tact, and understanding” (p. 107). As the primary instrument, the researcher was responsible for the overall direction of the study. For this study, the researcher refrained from attaching his own meanings to the data, but instead made meaning of the information based on the participants’ views of their experiences. The researcher bracketed all biases and took precautions to ensure that his personal biases and assumptions did not inadvertently contaminate the study. According to Moustakas (1994), bracketing is an acceptable practice in qualitative research; it allows researchers to set aside their assumptions, biases, and knowledge to capture an understanding based on the accounts of the individuals who experienced the phenomena.

Researcher Bias

As the researcher for this project, it was essential that I set aside my biases and bracket any preconceived notions regarding this topic. In qualitative research, the primary research instrument is the researcher; therefore, it was important for the trustworthiness of the project that the investigator bracketed his biases prior to beginning the investigation. Setting aside biases helped to establish the trustworthiness and credibility of the conclusions drawn from the data collected in this study. Credibility is achieved “through prolonged engagement with participants; persistent observation in the field; the use of peer de-briefers or peer researchers; negative case analysis; research reflexivity” (Morrow, 2005, p. 252). Stating and bracketing the researcher’s biases related to students

with autism spectrum disorder allowed the investigator to report the participants' postsecondary experiences unencumbered by preconceived notions or ideologies.

Researcher Bias Statement

For nearly two decades, I have worked exclusively with students who have disabilities. My career has afforded me employment opportunities at public and private institutions that grant both associates and baccalaureate degrees. At each of these types of institutions, I was privileged to serve in many capacities, but each role possessed the common theme of working with students with disabilities. Currently, I am employed as a Coordinator of Disability Services at a public two-year institution. In this position, I am responsible for determining students' eligibility for services; arranging appropriate accommodations (in relation to the functional limitations of their disabilities); advocating with, for and on behalf of students with disabilities; and providing disability-related counseling services. Because of my professional experiences (past and present), I have developed a strong affinity for students with disabilities; I believe strongly in advocating for their equal access to education. Additionally, I believe that students with disabilities possess incredible talents and that they have the cognitive ability to complete college at a rate similar to students without disabilities.

Unfortunately, students with disabilities are often stigmatized and marginalized on college campuses; they frequently encounter barriers that may affect their ability to engage in campus activities, and often these students are neglected (Nichols & Quayle, 2009). Because of these practices, I believe students with disabilities need campus allies to advocate for them against forces that may inhibit their access to the complete educational environment. I am especially convinced that some of these students would

benefit greatly from someone who can understand and appreciate their specific differences and who can campaign for college environments that are both physically and academically supportive. Moreover, in light of the barriers that students with autism spectrum disorder may encounter in postsecondary settings, I am even more convinced that the executive function limitations associated with autism spectrum disorder may dictate the need for someone to advocate for equal access.

My bias with this topic stems from my experience working with students with autism spectrum disorder in the college setting. As the researcher, I have witnessed first-hand how some students with autism spectrum disorder struggle with transitioning to a postsecondary setting in terms of academic performance and with adjusting to and navigating the social environment of a college campus. I have also witnessed to members of this group of students adjusting seamlessly to college, both academically and socially. Due to my experience and first-hand knowledge of students with autism spectrum disorder, as the researcher for this study it is essential that my biases are acknowledged. When an individual possess strong beliefs or affinities for a particular group, a likelihood does exist that if not controlled and acknowledge, that the biases may unintentionally influence the study results in favor of how the researcher perceives the experience of the group being studied.

Reflexivity

Recognized as an important tool in qualitative research, the use of a reflexive journal to record thoughts, ideas, and pertinent information pertaining to the process of the study provided the researcher with an opportunity to chronicle critical information for future access. Ortlipp (2008) notes:

Keeping and using reflective research journals can make the messiness of the research process visible to the researcher, who can then make it visible for those who read the research and thus avoid producing, reproducing, and circulating the discourse of research as a neat and linear process. (p. 704)

Journaling or memoing “is an important tool to use during a research project to record insights gained from reflecting on data. Because qualitative data analysis is an interpretative process, it is important that [the researcher] keep track of your ideas” (Johnson & Christensen, 2008, p. 532). Throughout the study, the researcher maintained a reflexive journal as a vehicle to record the process of the study, as well as to note the researcher’s feelings, reactions, biases, and other information pertaining to the study. Morrow (2005) indicated that the use of a self-reflective journal is one of the most valuable assets to maintain throughout the entire term of a research study. Reflexivity enables researchers to “become more self-aware [as] they monitor and attempt to control their biases” (Johnson & Christensen, 2008, p. 275). The consistent use of a reflexive journal provided opportunities for the investigator to self-check and bracket any preconceived notions, biases, or assumptions, contributing to the trustworthiness of the study.

The entries in the researcher’s journal included personal reflections, comments pertaining to the interviews, frustrations and ideas; most importantly, it assisted the researcher in bracketing biases. Journaling also assisted the researcher with permitting the organic information provided by the participants to be the vehicle that drove the study. As a reflexive tool, the journal served as a key resource that allowed the researcher to

consciously discuss and set aside any predispositions toward the topic in an effort to maintain the study's authenticity.

In reviewing the information in the journal, the researcher consistently noted the importance of taking an unbiased position and allowing the participants' recounting of their college experiences to inform the study. An example of this type of notation is as follows:

I had to remind myself that this experience is not about my anticipation, but instead it is about what the students are saying about their own experiences. Completing this practice interview really [caused] me to self-reflect and to re-direct my thoughts to the importance of listening to the stories of the students and not to feel disappointed that I am not hearing what I wanted to hear. I must continue to bracket my thoughts and come at this from an angle without any preconceived notions or ideologies.

Additional notations in the journal addressed the participants' body language, ability to maintain eye contact, and other behaviors exhibited during the interview phase of the study. One notable behavior centered on the participants' propensity to exhibit signs of nervousness and fidgetiness when discussing the subject of friendship development and social interactions. A comment attesting to this observation stated, "When the interview centered on friendships and social interactions, Steven's demeanor changed and he became very intense when speaking about friends, and his eyes widened, and his facial expressions were more animated."

Also notable were the memos concerning the process of the study and the investigator coming to terms with the need to change the study's title. The title change was required

due to the exclusion of the term Asperger's from the *Diagnostic and Statistical Manual of Mental Disorders (5th edition)*. The researcher stated in the journal that, "I will need to make some changes to my first three chapters to reflect the changes and diagnostic category used in the *DSM-V*." The reflexive journal proved to be an invaluable tool for the researcher, as it allowed the researcher to discuss the study and provided a tool to bracket the researcher's predisposition toward the topic, to make note of the observable behaviors displayed by the participants, and to record thoughts concerning the need to adjust the study

Research Team

The research team for this study consisted of two graduates of the 2012 Ph.D. Counseling and Student Personnel Services cohort housed at a major Southeastern university. The use of a research team promoted the principle of validity, which is considered "the outcome goal of research and is based on trustworthiness and external reviews" (Creswell, 2007, p. 271). The research team for this study was comprised of one African-American female and one African-American male. Both research team members had completed course work in qualitative research and have experience with coding and identifying themes. Both are professional school counselors in a public high school setting. These individuals were selected as members of the research team due to their familiarity with completing a qualitative study and their ability to analyze data for determining salient statements and themes that depicted the experiences of college students with autism spectrum disorder. The female member of the research team has over 12 years of experience as an educator and counselor. The male member of the research team has over nine years of experience as school counselor and three years of

experience as a counselor in higher education. Neither team member works with students with disabilities on a daily basis, although both occasionally provide assistance for students with disabilities. However, their inexperience with this student population is not seen as a detriment to this study. On the contrary, this may have improved their ability to take an unbiased approach to interpreting the data and to hear the voices of postsecondary students with autism spectrum disorder as they describe their experiences as college students. The use of a research team proved valuable for this study. The research team's ability to identify themes and codes not considered by the researcher and confirmed findings discovered by the investigator assisted with discovering the salient themes that emerged for this study.

Research Team Role

The research team reviewed transcribed data and other information collected for the study. Additionally, the research team reviewed themes and codes identified by the researcher and made recommendations based on their assessment of the data sets. The researcher and the research team met to discuss the findings, but after careful deliberation, the researcher ultimately decided on the final and most salient themes and codes for the study. The research team also assisted in keeping the researcher's biases from contaminating the study through their review of the data sets and discussion of the findings presented by the researcher.

Data Triangulation

Data triangulation is a method often used in educational research to strengthen the evidence attained in a study. Johnson and Christensen (2008) described data triangulation as a tool used to correlate information retrieved from multiple data sources, with the

express purpose of gaining an understanding of a singular phenomenon. This study used two data collection methods to assist with making meaning of the postsecondary experiences of students with autism spectrum disorder. Johnson and Christensen (2008) posited that when conducting educational research, it is important to obtain multiple forms of evidence. Specifically, the researcher for this study utilized a semi-structured interview protocol and photo elicitation (visual data) to discern the experiences of college students with autism spectrum disorder. The researcher used semi-structured interviews as means to derive content pertaining to the subject matter of the investigation from the perspective of the participants. Photo elicitation was incorporated to provide a visual representation of the experiences expressed by the respondents. Visual data helped to make more concrete the information expressed by the respondents (Johnson & Christensen, 2008). Johnson and Christensen (2008) indicated that “educational research is about providing solid evidence for your conclusion, and evidence is greater when you employ a logical mixing strategy” (p. 201). The use of multiple data collection methods strengthened the evidence, fortified the findings, and increased the trustworthiness and confidence of the overall study by ruling out alternative explanation related to the findings. The integration of multiple data collection methods increased the credibility of the study and established a sense of confidence in the results as an accurate depiction of the respondents’ postsecondary experiences.

Member Checking

To increase the trustworthiness of the study, the researcher employed the practice of member checking. This process reinforces interpretive validity, which refers to accurately reporting the meaning of the viewpoints expressed by the study participants

(Johnston & Christensen, 2008). This form of validity provides opportunities for the researcher to interpret and accurately report the experiences from the participants' point of view (Johnson & Christensen, 2008). In addition, member checking or participant feedback allowed the participants to review the collected data for accuracy and verify any interpretations/translations made by the researcher (Johnson & Christensen, 2008). Each study participant reviewed and validated the primary investigator's interpretations for accuracy; prior to the completion of the study, interpretations were edited that did not represent the participants' intended meaning.

Institutional Review Board

Prior to collecting any data for this study, the researcher applied to the University's Institutional Review Board (IRB) to garner permission to complete this study. The application provided the IRB with insight into the purpose, participants, and procedure for the study. As with all studies, gaining IRB approval is both mandatory and essential, because it legitimizes the study and provides an opportunity for the IRB to ensure that no harm will come to the study participants.

Sampling Method

The researcher used a purposive sampling method to recruit study participants. Purposive sampling is a technique in which the researcher defines the parameters for the study and looks for participants who meet the established criteria (Johnson & Christensen, 2008). This non-random method allowed the researcher to select participants and locations for the study, because these entities can inform an understanding of the research problem and the fundamental nature of the study (Creswell, 2007).

Participants

Eight participants were recruited to take part in this research project. The selected participants all had a diagnosis of autism spectrum disorder. Additionally, each participant had completed at least two academic semesters in a postsecondary setting. Both traditional and non-traditional students were eligible to participate. The researcher attempted to acquire a diverse group of participants in terms of race, ethnic background, sexual orientation, and gender. The participants' diversity adds richness to the study, so it is important to recognize the value diversity brings to a research study. However, this study was not attempting to discover the differences between types of students in terms of diversity; instead, the intent of this research was to determine the essence of the lived experiences of college students diagnosed with autism spectrum disorder. As such, diversity was not a major consideration in selecting participants for this study, although the researcher attempted to include a diverse group of students with autism spectrum disorder.

Participants in this study all attended a two-year community college in the Southeast. A two-year community college was selected based on information in the literature indicating that many students with autism spectrum disorder usually begin their postsecondary experience at two-year colleges. College-bound students with autism spectrum disorder tend to enroll in two-year or community colleges prior to attempting four-year institutions (Morrison, Sansosti, & Hadley, 2009). Wolf, Brown, and Bork (2009) also identified a similar trend and indicated that for some college students with autism spectrum disorder the smaller size of a community college is ideal because they could find it more challenging to navigate larger institutions; in addition, it affords the

student an opportunity to remain at home with their families as they become acclimated to the rigor of college (Aderon & Durocher, 2007).

Incentive

Participants in this research study received a gift card from iTunes, GameStop, Starbucks, or Target. The participants received \$5.00 for participating in each session (interview, photo elicitation, and information verification meeting) of the study. The total value of the gift cards did not exceed \$15.00. At the conclusion of each individual member checking appointment, the researcher distributed the selected gift card and verbally acknowledged each participant for participating in the study.

Procedure

Gatekeepers Contacted

The researcher contacted the gatekeepers of the selected institution by phone and through a follow-up email (Appendix A) to request assistance in identifying and recruiting eligible participants for the study. In the initial conversation with the gatekeepers, the researcher explained the nature, eligibility criteria, and data collection methods for the study. After obtaining their support, the researcher followed up the conversation with an email, which included a recruitment flyer (Appendix B) for the gatekeepers to disseminate to eligible participants.

In this study, the term *gatekeeper* referred to the disability services providers at the selected institution. The term is mostly associated with conducting ethnographies. In this type of study, the gatekeeper is an individual who gives permission for the researcher to have access to the group to be studied; the gatekeeper may also be a member of the group to be studied, and serves as the point of contact for the researcher (Creswell, 2007).

Although gate keeping is mostly associated with ethnographies, for this study, the disability service providers served in a similar capacity. These individuals were the primary contacts and played a significant role in recruiting participants, made initial contact with the participants, and provided space to conduct private meetings with the participants.

Initial Participant Contact (Gatekeepers)

The disability service providers at the participants' institution made initial contact with potential participants for the study. Using a verbal script (Appendix C), each disability service provider verbally explained the study to each eligible participant and provided each participant with a recruitment announcement containing the criteria for the study, researcher contact information, and incentive information. The gatekeepers instructed the participants who agreed to participate to contact the researcher.

Participants Contact Researcher

During an initial phone call or face-to-face meeting, the researcher acknowledged the participant for agreeing to participate in the study. The researcher explained the purpose of the study, detailed the anticipated commitment entailed in participating in the study, established the process for the study, explained the data collection methods (interview(s), photo elicitation, and information verification meeting), and described the incentive for participation in the study. Afterwards, the researcher informed the participants of their right to continue to participate in the study or elect to withdraw without penalty if they changed their minds. Lastly, the researcher asked for a time to meet to conduct the interview.

Informed Consent

During the initial meeting with each participant, the researcher discussed the purpose of the study to ensure that participants understood each aspect of the study. After the explanation was completed, each participant read and signed an informed consent form prior to the start of any data collection activities. Based upon Creswell (2007), the informed consent included statements that addressed the following:

- The right of the participant to voluntarily withdraw from the study at any time
- The central purpose of the study and procedures to be used in data collection
- Comments about protecting the confidentiality of the respondents
- A statement about known risks associated with participation in the study
- The expected benefits that accrue to the participants in the study
- The signature of the participant as well as the researcher. (p. 123)

In addition to the above information, the researcher also included the type of incentive each participant was eligible to receive and the contact information for the chair of the study, Dr. Diane L. Cooper who provided oversight over the project (Johnson & Christensen, 2008).

Semi-Structured Interviews

The primary data collection method used in this study was semi-structured interviews conducted in person. Interviewing in a phenomenological study allows the researcher to reduce the collected data into statements that exemplify or describe the essence of the phenomenon for the research participants (Johnson & Christensen, 2008). The ultimate goal of the interview is to discover how the participants make meaning of

their experiences (Seidman, 2006). The interview protocol for this study consisted of open-ended questions and included in Appendix D.

Interview Procedure

The researcher discussed and obtained informed consent (Appendix E) prior to start of the interview. After informed consent was established, the researcher asked the participant to complete a four-question Demographic Profile and Incentive Information form (Appendix F). The researcher conducted the interviews in a designated area of campus to preserve participant confidentiality. The audio recorded, semi-structured interview protocol lasted no longer than 90 minutes. If circumstances warranted, the researcher could elect to conduct the interview in two sessions to allow participants an optimal opportunity to provide in-depth responses and to accommodate any stress or anxiety experienced by the participant. During any subsequent sessions, the researcher asked only items not covered in the initial interview session. During the interviews, the researcher made note of the body language exhibited by the participants and any other gestures, sounds, or noticeable habits. Additionally, the researcher allowed participants to write down their responses if the participants were more comfortable with this method.

To conclude the interview, the researcher asked follow-up questions to clarify information shared by the participants, and the researcher shared his interest in the topic with each participant. Additionally, the researcher explained the next data collection method and scheduled the next appointment with the participant.

Photo Elicitation

The researcher asked all participants to take pictures of places on campus that represented locations they frequented and locations they visit infrequently, and to

compose a descriptive narrative detailing what each location represents to them. All participants received a set of writing prompts (Appendix G) to assist in developing their individual narratives. Participants used their own digital devices or one provided by the researcher. The researcher instructed the participants not to photograph images of faces or identifiable images. To preserve anonymity, the researcher obscured pictures composed of identifiable images prior to incorporating the picture into the final product. The researcher met with each participant for a 30- to 60-minute meeting to retrieve the narratives and pictures, discuss each photo, and ask any follow-up questions. After each meeting, the researcher filed and secured this information with previously collected data.

Coding of Data

The researcher used a multi-step process to code the data generated for this study. The researcher contracted with a professional transcription service to transcribe the audio-recorded interviews. The researcher first reviewed the transcription to acquire a preliminary understanding of what the respondents reported in terms of their postsecondary experiences. After the initial review of the information, the researcher engaged in a process described in qualitative research as coding. “Coding is the process of organizing the material into chunks or segments of text before bringing meaning to information” (Creswell, 2009, p.186). After analyzing and coding the transcriptions, the investigator reviewed information from photo elicitation data in search of significant statements and images that also reflected the respondents’ postsecondary experiences. The investigator extrapolated the significant statements from the data sets, then converted the statements into themes or *meaning units* (Creswell, 2007, p.159). To reduce the themes to a manageable number, the researcher clustered similar themes into single non-

repetitive categories that are reflective of the respondents' postsecondary experiences.

The investigator shared the discovered themes along with transcriptions, visual data, and narratives with the research team for review and analysis. The research team members evaluated the data and the researcher's findings and made recommendations concerning codes and themes from the collected data.

Research Team Meetings

The researcher conducted three meetings with members of the research team to discuss the themes identified by the researcher and any additional themes discovered by the research team members. During the final meeting with members of the research team a comprehensive review of all codes and themes from each data collection method were conducted. The researcher and research team deliberated over the salient statements, themes, and codes derived from each data set to determine the significant themes, which depicted the essences of the participants' postsecondary experiences. The research team for this study played a pivotal role in reviewing data and discussing the common perspectives of participants in this study. However, although the research team's dedication to this study was commendable and valued, the researcher made the final decisions concerning the most salient themes that emerged from the study.

Member Checking

Prior to composing the findings, the researcher met with each participant to allow the participant an opportunity to evaluate his or her individual statements for transcription accuracy and intended meaning. Before completing the study, the researcher corrected any statements deemed incorrect by the participants. If no changes were required, the original statements remained and the researcher moved forward in reporting the findings

of the study. At the conclusion of the member-checking meeting, each participant received his or her gift card of choice and a verbal statement of appreciation from the researcher.

Data Analysis

Creswell (2007) indicated that the role of the qualitative researcher is to seek understanding and knowledge based on time spent with participants, time in the field, and the use of probing to obtain detailed information. Multiple data sources helped to achieve this goal and increased the validity of the study's findings. The use of multiple data sources aided in identifying similar strains of information provided by participants.

The researcher employed a four-step process to analyze the data collected. This approach to data analysis is similar to the process adopted by Creswell (2007), who adjusted the method discovered by Stevick-Colaizzi-Keen. As the researcher, I assumed responsibility for:

- Compiling and organizing all information pertaining to the study while simultaneously collecting and analyzing information throughout the data collection stage of the study.
- Stating any biases and experiences with the phenomenon. (Creswell, 2007)
- Horizontalization of the data. Horizontalization is the process of reviewing all data sources from each participant in search of similar statements that exemplify how the participants experienced the phenomenon. (Creswell, 2007)
- Meeting with the research team to discuss and determine significant statements based on the information expressed by the study participants

(Creswell, 2007). Ultimately, the researcher affirms the most salient themes addressing the phenomenon. (Johnson & Christensen, 2008)

- Determining the significant statements, converting statements into themes or meaning units and sharing these with the study participants during member checking. (Johnson & Christensen, 2008)

By following the prescribed procedures, the researcher discovered the essence of the postsecondary experience of students with autism spectrum disorder who participated in this study. By identifying the commonalities shared by the participants, the researcher composed the textural and structural descriptions of the lived experiences of the college students with autism spectrum disorder who participated in this study.

Confidentiality and Data Management

To protect the participants' identities, each participant selected an alias and the researcher omitted the name of the institution from all reports. The researcher observed and maintained all levels of confidentiality throughout the study. Additionally, the researcher secured and maintained all collected data in a locked file container in his home throughout the period of the research project. All electronic files were password protected using a Cruzer USB Flash Drive. After degree completion, the researcher will shred all paper data sources, erase all digital recordings, and delete all electronic files.

Discomforts or Stresses

Conversational style (mutual exchange of information) is a skill that some individuals with autism spectrum disorder have difficulty mastering. Participants who struggled with this form of communication may have found it difficult to engage in the type of verbal exchange required to complete portions of this study. Therefore, these

individuals may have experienced some stress and anxiety that may have interfered with their ability to comprehensively address the interview questions verbally with the researcher during the face-to-face interviews. To address this, the researcher was prepared to use probing techniques to assist the participants in providing answers to the interview questions. Additionally, the researcher allowed participants to respond to the interview questions in writing. If the aforementioned methods proved ineffective to reduce the participants' stress or anxiety, the researcher concluded the interview and rescheduled any participants who were not able to complete the interview.

Risks and Direct Benefits

As the researcher for this project, I determined that no immediate risks to participants were anticipated for participating in this research study. The only direct benefit to the participants associated with this study, was a \$15.00 gift card. However, the researcher recognizes that the information gleaned from this study provides colleges and universities insight into the experiences of college students with autism spectrum disorder and that this information is useful in formulating accommodations and developing programs to assist future students with autism spectrum disorder in the college environment. Additionally, the researcher expects that the information discovered will lead to an increased understanding of autism spectrum disorder and its influence on academic success at the college level.

The results of this study can potentially increase the types of support available for college students with autism spectrum disorder and facilitate the development of specialized programs designed to assist these students in the college setting. Students with autism spectrum disorder have functional limitations that affect them beyond the

academic setting (Bedrossian & Pennamon, 2007). The challenges they face are primarily associated with the social aspects of the college environment, so the types of support required for students with autism spectrum disorder are likely to differ from the accommodation needs of students with cognitive or physical disabilities. This research project illuminated the need for specialized supportive programs, as well as the importance of providing training for faculty and staff as mechanisms to assist present and future college students with autism spectrum disorder. Additionally, the findings from this study offer a blueprint for the higher education community to improve the current level of social, academic, and environmental support provided to students with autism spectrum disorder.

Chapter Summary

This chapter described the methodology and procedure used to complete this study. The purpose of this study was to capture the postsecondary experiences of students with autism spectrum disorder. To obtain the perspective of the respondents, the researcher used semi-structured interviews and photo elicitation data to ascertain how the participants described their postsecondary experiences. The study adopted the tenets associate with phenomenological approach to conducting qualitative research and used Chickering and Reisser's (1993) theory of psychosocial development to frame the study. Specifically, the investigator sought to see how the respondents postsecondary experiences may have influenced their development in vector one (developing competence) of this theory. Furthermore, this chapter discussed the importance of trustworthiness in qualitative research and the necessary steps employed by the investigator to assure that the finished product was trustworthy. This chapter also

highlighted the type of participants, site location of the study, and the actual procedure followed to complete the study. To capture the participants' perspective the researcher used semi-structured interviews and photo elicitation to attain information to inform this research study.

CHAPTER 4

RESULTS OF THE STUDY

The number of individuals with autism spectrum disorder accessing higher education is continuing to increase. Yet despite this growth, very little research exists focusing on this group of college students. Therefore, the purpose of this qualitative study was to determine how college students with autism spectrum disorder describe their postsecondary experiences. To gain insight into the participants' experiences the investigator used two data collection methods, interviews and photo elicitation, to ascertain how the respondents described their lived experiences. This qualitative research project also attempted to discover the overall influence of the triad of deficits (communication, social interaction, and repetitive and restricted behaviors) on matriculation, academic performance, communication with faculty and staff, engagement in co-curricular activities, and the establishment of peer-to-peer social relationships. Additionally, using Chickering and Reisser's (1993) theory of psychosocial development, this study examined the development of the respondents in reference to the three subcategories (intellectual, physical and manual, and interpersonal competences) of the first vector of developing competence.

Participants

To conduct this study, eight participants from a two-year community college in the Southeast volunteered to share their experiences with the investigator. Each participant in the study had a diagnosis of autism spectrum disorder and met the criteria

of completing at least two academic semesters in a postsecondary setting. The gatekeepers (disability service providers) referred eligible study participants to the investigator from their specific caseloads. To preserve the confidentiality of the participants, each participant selected a pseudonym for this study. The participants in this study included seven males and one female. The following is a description of each participant in this study.

Clay Brown

This participant self-identified as a 20-year-old Caucasian male. During his participation in the study, he was completing his third semester in the postsecondary setting and his selected major was biology. Clay attended a public high school and earned a general education diploma. This participant wrote with his left hand and was very easy to engage. Clay did not display as much nervous energy as the other participants although he played with the ink pen only intermittently throughout the interview. Similarly to several of the other participants in the study, Clay's nervousness tended to increase during the discussion of friendship development. Clay also was one of the two participants who held a part-time job. Clay is also a member of Boy Scouts America where he was able to achieve the rank of Eagle Scout. At the time of his participation in this study, he was not affiliated with a local troop.

Byron S. Cramer

This participant self-identified as a 23-year-old Caucasian male. During his participation in this study, he was completing his eighth semester in the postsecondary setting and his selected major was computer science. Byron attended a public high school and earned a college preparatory diploma. This participant was in his second attempt at

college after a brief departure from the institution due to poor academic performance. Byron, the most talkative of all the participants, tended to speak louder than the other respondents, and he maintained socially appropriate eye contact throughout the entire interview. Similar to several other participants in the study, he displayed nervous energy throughout most of the interview. His nervousness was evident by his continuous play with the ink pen and subsequent breakage of the ink pen clip.

Jane Doe

This participant self-identified as a 21-year-old Caucasian female. During her participation in this study, she was completing her fifth semester in the postsecondary setting and her selected major was history. Jane attended a public high school and earned a college preparatory diploma. During the interview phase, this participant presented with a very flat affect, spoke in low tones, and used short phrases, which caused the researcher to use more probing questions. Interestingly, she maintained socially appropriate eye contact throughout most of the interview, and she indicated confidently that she was ready to transition to a four-year institution to continue her education .

Uncle Fester

This participant self-identified as a 22-year-old Caucasian male. During his participation in the study, he was completing his seventh semester in the postsecondary setting and his selected major was mathematics. Uncle Fester attended a private high school and earned a college preparatory diploma. He demonstrated a small degree of nervousness, but maintained socially appropriate eye contact throughout the entire interview. He exhibited a pleasant demeanor with open body language, so conversation was extremely easy with this respondent, and he was punctual for each our meetings.

John Fitzgerald

This participant self-identified as a 19-year-old Caucasian male. During his participation in the study, he was completing his fourth semester in the postsecondary setting and his selected major was film. John attended a public high school and earned a general education diploma. This participant tended to close his eyes during portions of the interview, but established and maintained eye contact in other parts of the interview. Similar to Byron, John played with an ink pen during the entire interview until he eventually broke the clip of the pen. Interestingly, John was the only participant to express any experience with dating or an interest in dating. Also, John was verbally expressive and he provided concise and succinct responses that required very little probing. This participant also works part-time.

Steven Simpson

This participant self-identified as a 20-year-old Caucasian male. During his participation in the study, he was completing his fourth semester in the postsecondary setting and his selected major was history. Steven attended a private high school and earned a college preparatory diploma. Steven was the first participant interviewed for this study. During the interview, the conversation with this respondent was uncomplicated, but the participant displayed signs of nervousness. The participant's anxiety level intensified when the subject of friendships was discussed. During the discussion of friendship development, Steven grasped the ink pen tightly, his eyes widened, and his gestures became more physically animated. Steven was consistently punctual for each schedule meeting, and he kept each appointment even if he had not completed the assignment scheduled to be discussed.

Pete Stinton

This participant self-identified as a 21-year-old Multiracial male. During his participation in the study, he was completing his third semester in the postsecondary setting and his selected major was journalism. Pete attended a public high school and earned a general education diploma. Pete arrived at the interview neatly groomed and took his time to read thoroughly the entire informed consent form. Conversation with Pete was slightly complicated due to the participant's propensity to interject unrelated questions into portions of the interview. It was easy to engage with this student, he maintained eye contact throughout the interview, and he was very eager to participate. Pete was the only participant to express that attending college was not his first option after high school. He expressed that he wanted to enroll in a program that focused on teaching independent living skills as opposed to attending a postsecondary institution. His primary goal after high school was to gain more independence so that he could live on his own.

Red Zero

This participant self-identified as a 20-year-old Hispanic male. During his participation in the study, he was completing his third semester in the postsecondary setting and his selected major was engineering. Red attended a public high school and earned a general education diploma. The participant exhibited some signs of anxiousness but he did not play with the ink pen like some of the other respondents involved in the study. Red was not able to maintain eye contact and he frequently closed his eyes during the interview. Red was prompt for his appointment and appeared neatly groomed for the interview. Conversation with Red was somewhat challenging due to his limited command

of the English language and a tendency to give responses that required the researcher to ask probing questions.

Table 1: *Summary of Participants' Demographic Information*

Name	Age	Ethnicity	Gender	Semesters in College
Clay Brown	20	Caucasian	Male	3
Byron S. Cramer	23	Caucasian	Male	8
Jane Doe	21	Caucasian	Female	5
Uncle Fester	22	Caucasian	Male	7
John Fitzgerald	19	Caucasian	Male	4
Steven Simpson	20	Caucasian	Male	4
Pete Stinton	21	Multiracial	Male	3
Red Zero	20	Hispanic	Male	3

Themes

Typically in phenomenological research, themes are words or phrases constructed to make meaning of the lived experiences of the individuals who experienced a common phenomenon. The researcher converts significant statements provided by the research participants into themes, which capture what Creswell (2007) described as the “nature of [the] lived experience” (p. 59). The themes derived from this study are a direct reflection of the combined salient statements expressed by the respondents and mirror how each participant described his or her college experiences as a student with autism spectrum disorder.

After careful review of the data and consultation with the research team members, six distinct themes were formalized that express the shared experiences of the college students with autism spectrum disorder who participated in the study. These themes are: 1) importance of the academic environment, 2) favorable college experiences, 3) relationship formation and social interaction, 4) co-curricular activities, 5) communication with faculty and staff, and 6) college attendance and institution selection,

and additional findings identified as faculty and staff training, specialized programs, and literal thinking.

Discussion of Themes

Importance of the Academic Environment

In the respondents' accounts of their college experiences, most participants indicated a strong attraction to the locations that make up the institution's academic environment. The participants acknowledge that they utilized the resources of the campus academic environment almost exclusively as a means to achieve academic success. Use of the academic environment supported the participants' mission to achieve academic success at the postsecondary level. The participants emphasized the importance of the academic environment over the social framework of the college setting. Steven Simpson stated:

Let me just say that, with the exception of math and stuff like that, getting good grades in courses have been way easier for me than my social life, for the most part. My biggest challenge has been social rather than academics.

Similarly, Uncle Fester stated, "I would say that developing friendships are important, but that's not goal one for me; goal one is school."

The importance of academics was also showcased in some of the photographs submitted for the photo elicitation. Clay Brown submitted a picture of the tutoring center, representing a place he frequently visited.



Figure 4.1: Tutoring Center

Clay stated:

This area of campus is where [I go] to work on math and get help from tutors. The environment is welcoming and it is also calm; everyone in there is peaceful and this allows me to get my work done without being disturbed. When I visit, I either have questions about a math problem or need to work on homework.

Uncle Fester contributed the following photo of the library as an example of a campus location he frequently visited, and which served as a resource to assist him in completing academic assignments.



Figure 4.2: Library

Uncle Fester stated:

I go because I always need to do stuff there. That is where the computer lab is and it is generally the best place on campus to get work done . . . I do homework there, occasionally read a book. I return because it is the only place on campus that has a computer lab.

Most of the participants of this study self-reported that they performed well academically and they attributed their academic success to their use of accommodations, the availability of various campus resources such as the library and tutoring center (as depicted in photographs 1 and 2), and behaviors such as maintaining a routine and adjusting to the rigor of college. Byron Cramer stated, “They [disability services] helped. I’ve used the testing accommodations and that really helped.” Uncle Fester stated that he took advantage of the library and computer lab. John Fitzgerald stated, “It is a matter of keeping a routine.” Jane Doe noted that adjusting to the rigor of college made an impact on her ability to perform well academically. Jane explained, “I’ve learned that you

actually have put in the effort. Just learning that you . . . can't slack off, that college is actually really serious and it's not what they tell you in high school.”

The campus academic environment contributed to the respondents' ability to perform well academically and each viewed the academic environment as important. In describing their college experiences, most respondents indicated that they tended to prioritize academic achievement over all other aspects of the college setting. The respondents collectively indicated that achieving academic success was paramount, superseding their desire to interact socially or to engage in the social climate of the institution. Jane Doe stated, “Yeah, I have always placed more focus on academics than [on co-curricular activities].” This particular theme not only demonstrates the respondents' attachment to the academic environment, but also how the use of campus spaces, such as the library and computer labs, and adjusting to the academic rigor of college contributed to the participants ability to perform well academically. In addition, it demonstrates the development of intellectual competence in terms of how the respondents used the academic environment and its resources to acquire information related to their academic courses

Favorable College Experiences

When asked about their overall experiences at this college, a majority of the participants expressed favorable comments. Clay Brown replied, “I would say yes. Yes, I feel content mostly with what I have.” Red Zero stated, “I thought it would be like high school, but this is much better than what I thought it would be.” Furthermore, he professed:

Yes, everything is what I like to see right now. I learned [from] my own college experience, even though my parents [attempted] to [tell] me . . . I learned new things, I made tons of friends. I respect and learn from my teachers and everyone on the campus seems nice.

Similar statements illuminated the experiences of most of the participants. Byron Cramer stated, “It’s been mostly a positive experience and now that I’ve got another opportunity to go at it, I can finally move through and see what else there is to do with my life.” Jane Doe reported, “I’ve gotten to know new people, and I’ve gotten a great deal of my classes out of the way, and it’s been a good experience, and I’m just ready to move on to a four-year college.”

Many participants indicated a satisfactory overall college experience due specifically to their ability to perform well academically. Uncle Fester stated, “Academically, yes . . . I wanted to come to a college, learn something that would be useful in a career later, learn whatever. I’ve come to college and that’s happened.” A number of the participants reported experiencing greater difficulty socially than academically in college. Steven Simpson stated, “My biggest challenges have been social rather than academic.” John Fitzgerald stated, “I thought it would be a little bit easier to, you know, branch out socially.” It is important to note that because of the participants’ focus on performing well academically and the social challenges they faced, they may have missed or dismissed opportunities to interact socially.

A photograph submitted by Pete Stinton illustrates this notion.



Figure 4.3: Break Room

Pete submitted this picture to represent a location he frequents. In describing the significance of this location, Pete stated:

I never quite understood why, but I've always been kind of [an] isolated person who prefers to mind his own business and stick to an isolated place . . . It's just I personally feel that I'm better off not meddling too much into the affairs of others, although I will admit my extreme shyness also plays a role in this. I see this as my private corner where I usually complete homework, read magazines, browse the Internet, and sometimes interact with others.

Fauzan (2010) characterized this style of social interaction as “social indifference.” Socially indifferent individuals customarily do not pursue opportunities for social interaction, but neither do they systematically avoid opportunities to interact when presented with a chance to engage (Fauzan, 2010). This is consistent with the behavior exemplified by Pete and several other participants in this study. These respondents identified highly visible, densely populated and popular campus locations as areas they frequented. In these areas, opportunities to engage socially are likely to transpire without

any impetus from the respondents. Simultaneously, these locations provide a sense of solace and isolation, alleviating the pressure to initiate engagement.

The photograph of the library submitted by Byron Cramer further illustrates this point. Byron made the following statement regarding this picture:

The quiet nature of the library is perfect for me, but there are usually enough people that I [do not] have to be alone. I can moderate my contact with people; however, I like slipping away into the shelves if I want solitude, pulling up a chair if I want to be social.



Figure 4.4: Individual Study Station in Library

Overall, the participants expressed favorable college experiences. Most of the participants indicated definitively that they enjoyed their college experiences more than their time spent in high school. Byron Cramer stated that college has “been what I wanted it to be . . . I haven’t had to put up with as much crap as I did back in high school and that’s definitely one [area] in which it has been what I wanted it to be.”

The respondents were specifically happy with their academic experiences in college and with the knowledge that by attending college they were taking steps towards reaching their educational goals. Although the respondents generally indicated favorable college experiences from an academic perspective, their sentiments differed with regard to how they experienced college socially. The respondents expressed difficulty in adapting to the social structure inherent in the college environment; it was this portion of college experience they were unable to master. This struggle with the social climate of the institution illustrates how the triad deficit in terms of social interaction interfered with most of the participants' ability to negotiate the social environment of the higher education setting, which in turn influences their development in the area of interpersonal competence. Although most of the participants expressed that the social aspects of college was difficult, the ability to adapt to the postsecondary academic environment demonstrated that most of the participants were able to achieve intellectual competence.

Byron Cramer made a profound statement concerning this difficulty, stating:

It's hard in some ways because on a fundamental level I don't quite get people.

The one thing that caused me more problems than anything else is that I have a hard time judging people's sincerity and their motives. From my perspective, normal people seem like they almost have some magic power, they can just talk to each other then have some glimpse into each other's inner lives and I can't really do that.

Relationship Formation and Social Interaction

Forming relationships and interacting socially are natural occurrences for most students on college campuses. For some individuals, however, forming these connections

may prove challenging. When asked specifically about their friendship development and social interactions, most respondents indicated that they had a desire to socially connect and engage. However, they also stated that they found forming relationships and interacting socially difficult. Steven Simpson submitted the following photograph to illustrate his willingness to seek social interaction.



Figure 4.5: Student Center/Cafeteria

Steven indicated, “I visited this cafeteria very often for one reason: There are always people there . . . When I am on campus, I want to be able to talk to other people and possibly make friends.”

The nature of friendship development and the degree of social engagement varied among the participants. A majority of the respondents indicated that they established some level of friendships at the college. Jane Doe stated, “I made many friends at this college. [The] people I met are very nice and understanding of the differences I have.” Byron Cramer confessed,

Well, I [do not] really have any friends this time around yet. [I am] sure [I will] make some. It will happen at some point. The first time I came here, I did make some quite good friends . . . But [I have] had more luck making friends [in college] than I ever did in primary school, definitely.

Red Zero stated, “My friendships developed well, rapidly and I had lots of them.”

Overall, most of the participants indicated some friendship formation, but these connections were often linked more to the academic requirements than social engagements. Clay Brown noted:

The friendships that I have developed at this college are mostly by semester. I'll make friends or acquaintances with someone in a class if we have to work in close proximity with each other. [However,] once that's done, we rarely stay in contact I'm afraid.

Although the participants recognized that friendship formation and social engagement were important, most described making friends as difficult and admitted that their diagnosis of autism spectrum disorder interfered with their ability to form friendships and to engage socially. Uncle Fester expressed:

I'm something of an antisocial person. Unless I am put into a situation with social contact I won't go out of my way to find it. Which I would like to change, but I'm not always sure how . . . It is important. I want to do it. Like I said, a lot of it is . . . I just don't know how to go about it. Where to start?

Byron Cramer stated, "I'm not even sure what it would be like to interact with people the way that other people interact with people. I literally cannot imagine what life would be like in those circumstances." John Fitzgerald expressed, "This is not true of everyone but this is especially true of me. I really have an especially hard time getting through that meeting someone gap. I cannot do small talk."

To avoid the feelings of discomfort and awkwardness associated with initiating interaction and engaging socially, some individuals with autism spectrum disorder may elect to avoid these opportunities altogether. A photograph taken by Jane Doe illustrates

this point. Jane Doe submitted this photograph to represent a campus location she seldom visited. Jane indicated that this area is too large and noisy, with too much activity taking place. Furthermore, she stated, “I feel a little overstimulated, [so] I just go there only to get food . . . I just am not in there for very long, I just get in [and] get out.” When asked to describe the activities she witnessed other students engaged in, Jane replied, “Some people are engaged in conversation. Some people are studying. Some might be on their laptops or eating.”



Figure 4.6: Student Center/Cafeteria

Clay Brown provided the following photo representing a campus location he seldom visited. Clay described this campus location as “warm, sunny, [with] raised walls that serve as sitting places,” where he witnessed students “smoking cigarettes, talking about school and other stuff.” Clay noted that he avoids this particular space because he does not want to be “exposed to secondhand smoke.”



Figure 4.7: Student Communal Area

The participants' responses exemplify the struggles they faced concerning friendship formation and social interaction and how the triad of deficits in terms of social interaction and repetitive and restricted behaviors interfered with some of the participant's ability to connect socially. Additionally, this particular theme also highlights how several of the participants were not able to achieve interpersonal competence. The respondents reported that the difficulties involved in forging these types of relationships created barriers that hindered their ability to initiate or engage in social activities. As a result, some participants elected to avoid campus spaces and environments with a high volume of activity, in which intact social skills are important to navigate the area. Although some participants reported forming some friendships, they also mentioned that managing these friendships was difficult. Jane Doe stated, "We're busy, some of us have to work, some of us are busy studying, so it's hard to arrange things." Moreover, the foundation for some of these social connections was academically based, and once the academic commitment was dissolved, so was the association. Some participants expressed that their campus social life was much better than in high school, but autism

spectrum disorder nevertheless interferes with their capacity to engage socially and to form reciprocal friendships.

Co-curricular Activities

Based on the information attained from the respondents of this study, the participants indicated that their interests determined the types of co-curricular activities they chose. Red Zero expressed that he was interested in learning more about the modern history and culture of Japan, so he joined the Japan Club. Jane Doe also reported that she was a member of the Japan Club. When asked what prompted her to join this club, she responded, “I have several friends that are in there, and I like the culture and the style of the country and I would like to learn more about it.”

Other participants also reported that their interests influenced their club memberships. Uncle Fester and Byron Cramer both acknowledged joining the History and Politics Club due to their interest in the subject matter. Uncle Fester stated that he had a strong affinity for history and politics and enjoyed discussing current events. Furthermore, he stated, “I like talking about stuff like that. I actually find it engaging.” Byron Cramer previously served as the organization’s secretary for a year. Describing his affiliation with the History and Politics Club during his initial college enrollment, Byron stated,

Well, last time around I was heavily involved in the History and Politics Club. I was actually the secretary for about a year and I enjoyed that a lot . . . I will say that my involvement in it was probably to the detriment of my academic activities, because I think, at least at that time, I focused on it more than I focused on the things I was actually here to do. In some ways, I think I was excited that I

had friends. You know, I had such a hard time in high school but here, there are people who do in fact share my interests . . . I never really had a social group like that before of people that I shared [common] interests with and with who[m] I could interact.

John Fitzgerald indicated that he joined the Film Club because of his interest in making movies and videos. He was elected to the position of treasurer and he described his participation with the Film Club as positive. A photograph John Fitzgerald submitted further illustrates his love for film. He described this location as a place he frequents and indicated that the environment emanates warmth. In describing this location, John stated, “my classes at [this campus] have all been film related . . . and held in this classroom . . . due to my time spent here . . . the environment has a certain feel when the projector comes on for film clips.



Figure 4.8: Film Course Classroom

John Fitzgerald added that he had fleeting interests in other clubs like the Writing and Triangle Club, but never became a member due to his work obligations and scheduling conflicts.

Several respondents reported that they participated in college sponsored co-curricular activities, though they described their involvement as restricted due to the emphasis they placed on academic achievement. Jane Doe indicated that her class schedule interfered with her ability to attend club meetings and said too many co-curricular activities would interfere with her ability to manage her academic workload. Red Zero also indicated that his participation was limited. He stated, “I am very busy with responsibilities and my classes.”

Some respondents used their association with college-sponsored groups as a vehicle to connect socially. Discussing social interaction and connectivity, John Fitzgerald indicated,

It is a good thing socially . . . Greeting people and everything like that is a bit of a struggle. [However], the good thing with the club is that it gives an excuse to have that happen to begin with. It feels like you kind of fit that little bit of a niche that sometimes is a little bit harder than just trying to talk to people in class.

Similarly, Steven Simpson stated:

I joined a couple of them because I like the people in it and not necessarily the topic of the club. I felt like I actually had someone to talk to, that would say something back. I made friends . . . and that meant a lot to me, because for most of high school I had no friends whatsoever and now I do.

Byron Cramer reported:

You know, I like being able to go and have people I can talk with and I would like to be able to do it. I do not think I am constitutionally capable of staying away from that sort of thing. Because it is good to have people who share my interests. [I have a] desire for social interaction with other people. Asperger's kids love to interact with people, we are just not any good at it. You know most of us are far from shy so the spirit is willing but the neurology is weak.

The participants indicated that their interests dictated their involvement in college sponsored co-curricular activities. Although many of the participants indicated that they took part in these activities, they remarked that their participation was mostly limited because of the importance they placed on achieving academically. In addition, the respondents explained that their participation provided a way to interact socially and to connect with other students who share similar interests. Furthermore, this theme highlights how the restricted behaviors and limited interests of some of the participants contributed to several of the respondents' involvement in co-curricular activities. Also, the ability of some of the participants to connect and engage with other members of the club provides some evidence of developing interpersonal competence and how the triad of deficit in terms of social interaction was not as much of a consequence for some of the participants involved in this study.

Communication with Faculty and Staff

In this study, the investigator was interested in learning about the respondents' experiences in communicating with faculty and staff. Prior to addressing the question with each research participant, the investigator provided a brief explanation to distinguish

faculty from staff. The explanation was provided to ensure that the participants' responses were reflective of their experiences with the appropriate college personnel.

In describing their experiences communicating with faculty, participants reported an overall positive experience. Steven Simpson stated, "Well, it's easier for me to communicate with [faculty] than with students, for some reason." Pete Stinton described his experience as positive and stated, "Communicating with faculty has definitely been a lot better than communicating with my teachers back in high school." In describing his experience, Byron Cramer provided the following characterization concerning interactions with faculty:

Here they have generally been quite positive. I have had a number of teachers, very good teachers, and everyone so far, as far as I can tell have been supportive of my accommodations and me. It has gone pretty well.

Red Zero described his experience in communicating with faculty as "very good . . . In fact very, very fantastic I think." He indicated that the faculty provided him with opportunities to ask questions, which translated into a better understanding of the course material.

The respondents also described their experiences communicating with staff as positive. John Fitzgerald stated, "The moment that I get to someone, it's great. The people I have talked with, for the most part, especially in disability [services], have been friendly. I would say mostly positive." Byron Cramer summarized, "I have had some good experiences here. The other staff members have never been anything but courteous to me. Whenever I see them, things always seem to be good." Jane Doe stated, "It's been fine. I haven't had much experience with it, but my experience has been positive for the

most part.” Clay Brown likewise indicated, “The staff I get along with very well. I [do not] know too much of the staff [here], though I’m courteous with everyone I come across.”

Although they reported positive experiences with the staff, the participants also indicated that sometimes it is difficult to know which staff to contact to resolve issues. Steven Simpson explained, “It’s not so much the communication as it is the paperwork and remembering who to go to for what, that confuses me.” Furthermore, Steven submitted a photograph of the Enrollment and Registration Services office to depict a campus location he infrequently visits. In his discussion of this campus location, he stated:

I have no idea why it took Enrollment and Registration Services so long to answer all of us. When I finally [was] called to the front desk, I learned that a hold had been placed on my account so I could not register for classes. Enrollment and Registration Services could not remove the hold. I had no idea why I had a hold, because my GPA was good and I had already passed all of my learning support classes. Once I got the hold removed, I returned to Enrollment and Registration Services.



Figure 4.9: Enrollment and Registration Services Office

Overall, the respondents reported that they did not face any negative complications in communicating with faculty and staff. Surprisingly, when the investigator inquired about the method the respondents tended to use to communicate with faculty and staff, several preferred to do so face-to-face instead of by phone or email. Uncle Fester stated, "I prefer to do it in person, though. I've never been good at doing it over email or over the phone." Clay Brown explained, "Though I sometimes will contact them via email or through phone . . . I find face-to-face often works." John Fitzgerald indicated that he uses both email and face-to-face communication to interact with faculty, but due to his propensity to procrastinate he generally waits until he arrives on campus to talk to them.

The pattern of positive communication they experience with faculty and staff has led the participants to feel empowered to advocate for themselves and ask for assistance without feeling uncomfortable or embarrassed. Jane Doe stated, "They're very helpful and if I express any need for help they are more than willing to accommodate my needs." Uncle Fester noted:

I [just] talk to them. When I have a question, I ask. I generally debate the answers on quizzes and tests regardless of how high I score; if I get partial credit for an answer or something I generally want to know why. If I disagree with why, I will argue my point, which has gotten me an increased grade from certain [faculty].

Byron Cramer stated, "I've had some good experiences [here]. The staff has never been anything but courteous to me . . . whenever I see them, things always seem to be good." Importantly, when students feel comfortable communicating their needs to faculty and staff, they are more likely to matriculate in and complete college programs.

Deficit in communication is considered one of the triad of deficits that usually affects some individuals with the autism spectrum disorder. This particular deficit did not hold true for most of the participants in this study as it relates to their ability to communicate with faculty and staff. The respondents unequivocally described their communication with faculty and staff at this institution as affirmative and uncomplicated. In fact, the participants felt that faculty and staff members welcomed opportunities to converse with them and were genuinely interested in them as students and individuals. Although information in the literature indicates that individuals with autism spectrum disorder tend to experience difficulty with conversational-style communication, the respondents reported that they preferred to communicate face-to-face with faculty and staff instead of through more indirect means of communication such as email. Overall, the respondents experienced positive communication interactions with faculty and staff, and found that determining the appropriate staff member or campus office to contact to address specific concerns was more problematic than actually discussing their issue once they located the correct personnel or campus department.

College Attendance and Institution Selection

When asked what factor or factors motivated them to enroll in a higher education institution, participants identified a combination of reasons, including parental influence, career aspirations, and intrinsic motivation. The respondents overwhelmingly pointed to parents as a major influence on their decision to attend college. Clay Brown stated simply, "My parents wanted me to go to college." Red Zero professed that he was influenced by the fact that his parents attended college, observing, "I thought that I could

do the same thing.” Similarly, Jane Doe indicated, “Both of my parents are college educated and I have seen the benefits that it has for them.” Steven Simpson reported:

Mostly [it was] my parents. Yes. But also, you have to keep in mind I am far more independent now than I was even a year ago. I was not really making all of those decisions myself at that time. I certainly do not regret the decision, but I was not fully aware of what I was getting into at the time.

Pete Stinton echoed this perspective:

It was not exactly a decision on my part. It was more of a decision on my mom’s part, to be fair, because she always had this plan for me to attend college, years before I actually finished high school. . . . I do not want to say it was [forced upon me], but it was not exactly my plan to attend college right away.

While many of the participants indicated that their parents played a part in their decision to attend college, they also viewed college as a vehicle to help them achieve their career goals. Steven Simpson noted, “[After] learning the possible jobs that would be available to me if [I] did not [go to college], which was not a lot, [I] realized that college attendance would be part of [my] future plans.” John Fitzgerald stated:

I knew I was going to college . . . I knew I needed to take that sort of step because I specifically wanted to do filmmaking, videos, and stuff like that, so [by attending college] it is a good way to build a portfolio.

Clay Brown also saw college as a conduit to achieving his career goals, explaining:

I mainly knew that I had to go on to college because it would be the next step in my life that I would have to complete. Mostly, [I recognized college as] the middle step between high school and what I would do for a career in life.

Similarly, Jane Doe also indicated that she viewed college as a stepping-stone to achieving her career goal. She declared, “Yeah, certainly. I felt like college would be a good step . . . I am a history major, so I’m probably going to be a researcher.”

Many of the participants also identified intrinsic motivation as a factor that influenced their college attendance. Some participants indicated that college attendance for them was never a question. Byron Cramer stated,

I just always assumed that I would go to college . . . Probably ever since I knew that college was a thing . . . It’s just been a part of the narrative for my life that you go school and then you go to college and then you get your degree.

[Therefore], it is not even a decision I made, more of just an assumption that I always had. I do not think there was ever any doubt that I was going to go to college.

Uncle Fester also recognized college as the next step after high school in what he termed a “natural occurrence.” He stated, “Honestly, I always wanted to attend college . . . so it never was a situation where I wasn’t going to go.” John Fitzgerald echoed, “I knew I was going to college. I [performed] well in high school; I had AP (advanced placement) courses, so I knew I needed to take that sort of step.”

The participants identified three specific factors that influenced them to enroll in a postsecondary institution: parental influence, career aspirations, and intrinsic motivation. However, the decision to attend college is just one side of this coin; the other side involves determining the factor or factors that led the respondents to select their particular college. The respondents identified proximity and cost as key components in their institutional selection.

Several participants emphasized the importance of convenience and easy access to the institution in their college selection. Pete Stinton acknowledged, “It was only a matter of convenience, really, that I attended this college in particular, because it is close to my house.” Uncle Fester also commented on the convenient location of the institution, stating, “I was not about to go to a college out of state, where I really had to move at all. I didn’t have to get a dorm room, and I could get [to campus] by [public transportation].” Clay Brown declared, “For me it was easy access. I don’t live too far from [campus] . . . I realized it would be a good place to start.” John Fitzgerald stated simply, “I live right next to the campus, only ten minutes away.”

In addition, by attending this institution, the participants were able to live at home with their families, and they recognized the value of this opportunity. Byron Cramer stated, “I didn’t have to move out because I’m really not ready to do that, frankly.” He added:

It is close to home . . . there is no way that now—much less the first time I went here—that I would have been able to deal with being on my own. It had to be something close by, so that was definitely a big factor in the choice.

Proximity was not the only factor respondents considered when they chose this particular college; cost also played a significant role in their decision making process. Jane Doe specifically indicated, “A community college would be better since it was smaller, it would be less overwhelming than a big campus, and it would cost less.” Jon Fitzgerald stated, “I wanted to make sure that I could save a lot of money by coming here.” Byron Cramer expressed:

It seemed like the best idea. You get the same basic classes here that you would get at a four-year school . . . but it is cheaper and closer to home. I think it is a better deal than going to a four-year school.

Similarly, Clay Brown stated, “I realize it would be a good place to start because the cost was inexpensive.”

The decision to pursue higher education is an important one and the respondents identified parental influence, career aspirations, and intrinsic motivation as the primary influences on their decision to attend college. Some respondents indicated that their parents played a major role in their decision, whereas others viewed their parents’ influence as more subtle. These participants recognized how their parents benefited from attending college and expected similar outcomes from their own decision to attend college. Career aspirations and intrinsic motivation were the two other factors influencing this decision. From the respondents’ perspective, postsecondary education was the clear pathway to achieving their career goals and increasing their employment opportunities. Lastly, several respondents indicated there was never a question of whether they would attend college. These participants viewed college attendance as the natural next step once they completed high school.

Just as important as deciding to attend college is institution selection. The participants identified proximity and cost as the most influential factors in selecting their higher education institution. They indicated that easy access to the campus and the ability to live at home with familial support played a significant role in this decision. Along with proximity, respondents considered the cost of attendance to be a factor in institution

selection and referenced the economic value of attending a two-year college prior to moving to a four-year institution.

Additional Findings

Faculty and Staff Training, Specialized Programs, and Literal Thinking

In addition to the six themes discovered in this study, three additional findings unrelated to these themes also emerged. The additional findings of faculty and staff training and specialized programs emerged from responses to the following probing question, which was asked of each participant during the interview stage of data collection: “As a student with autism spectrum disorder, what do you think or feel the college could do to enhance your college experience?”

Most respondents indicated that providing faculty/staff professional development concerning students with autism spectrum disorder and creating specialized support programs would enhance their postsecondary experiences as students with autism spectrum disorder. The participants viewed these as important initiatives that colleges and universities could sponsor to help improve the postsecondary experiences of students with autism spectrum disorder. They believed such efforts could play a pivotal role in removing the barriers that prevent this group of students from experiencing the college environment in its entirety. Clay Brown stated:

Well, I believe that if faculty, teachers and personnel were more aware . . . then they could better accommodate students, not just with physical disabilities but with mental ones as well. [If] they go through training, they [will] understand more about students with autism or Asperger’s or any other mental disability.

Byron Cramer also indicated that educating faculty about students with autism spectrum disorder would improve the college experience of this group of students. He believed college faculty should be informed about the academic capabilities of students with autism spectrum disorder, stating:

I think that it is important that the teachers know not just what [academic areas] Asperger's student are weak [in], but also the areas in which we are capable. That we are in fact capable of doing college work.

Providing specialized programs was also mentioned as a mechanism that would enhance the college experiences of students with autism spectrum disorder. John Fitzgerald indicated that postsecondary institutions should consider developing “a program to help integrate or something like that to help integrate students with Asperger's.” Pete Stinton would like to have someone he could go to for help with some of the executive functions issues he struggles with as a college student and for assistance in keeping up with and completing assignments. He stated, “I wonder if there could be some other person . . . some sort of advisor who would be pushing me to do my work; when that happens I can actually get my work done.”

The third finding of literal thinking resulted from the completion of the photo elicitation data collection method. This method required the participants to submit photographs of campus locations they frequented and seldom frequented and write a short narrative describing these two locations. Hutten (2011) described literal thinking as the inability of individuals to assign different meanings to words or phrases and the propensity to preserve their initial understanding without attempting to incorporate an alternative meaning. This particular trait is exhibited by some individuals with autism

spectrum disorder and it usually influences their ability to manage social situations interactions and their ability to process vague information.

Participants in this study were asked to take pictures of places on campus they frequented and campus location they seldom frequented and composed small narratives for each photo submitted based on a set of writing prompts. As a result, several of the respondents interpreted the directions literally and represented their understanding of the direction with photographs of campus locations they never venture instead of campus spaces they seldom or infrequently visited due their comfort level or understanding of the campus locations. Uncle Fester and John Fitzgerald submitted pictures of campus buildings as a location they never visited. In discussing his picture, Uncle Fester, stated, “I have never had a reason to go there and it is completely out of my way. It is a one story building somewhere on campus. I have never seen anyone there.”



Figure 4.10: Campus Building 1

Similar to Uncle Fester, John explained, “It is far out of the way for me walking wise when compared to the areas I am used to trudging...” John further stated:

It almost feels like a different campus...Once I step into that area of campus I feel I have left away from where I would usually consider familiar territory, so habitually I usually stay within said familiar territory.



Figure 4.11: Campus Building 2

Byron Cramer submitted a picture of the bathroom and described it as a place that he avoids instead of as a campus location that he frequents or seldom frequents. In discussing this location, Byron explained, “I try to seek out bathrooms that I know will not have other people in them, but this can be a struggle in the busiest parts of the day. He also stated:

If social matters are hard for me, then those that involve bodily functions are more so. The etiquette of public restrooms has an urgency to it that makes it hard for me to do my business, and I never know how to respond to people acting how I do not expect them to.



Figure 4.12: Male Restroom

The respondents indicated clearly that educating faculty and staff about this population and developing specialized programs would enhance the college experience of students with autism spectrum disorder. The respondents believed that training faculty and staff would aid them in understanding students with disabilities, improve accommodations, and dispel stereotypes concerning their academic abilities. The respondents also recognized the advent of specialized programs designed to support the transition to the postsecondary environment as a key element in enhancing the college academic and social experiences of students with autism spectrum disorder. Furthermore, the photo elicitation data collection method demonstrated how some individuals with autism spectrum disorder are literal thinkers and the importance of providing directions that are clear and concise instead of directions that are abstract that may lead to misinterpretation or provide probing to allow the respondents to gain a clearer or more complex understanding.

Chapter Summary

The goal of this study was to elicit the perspectives of students with autism spectrum disorder in describing their overall postsecondary experiences and to determine the participants' shared experience with a specific phenomenon. The findings of the study illustrate how this group of college students viewed their postsecondary experiences. The researcher was keenly interested in learning how the participants perceived autism spectrum disorder affect them in the college environment, specifically in terms of matriculation and retention, communication, engagement in co-curricular activities, peer-to-peer social relationships, and academic performance.

Six themes emerged described the participants' shared college experiences both academically and socially. Most salient among the themes was the importance respondents placed on the academic environment and their belief that utilizing its resources contributed to their academic success. In addition to the six themes, three additional findings also emerged. As actions institutions could take to assist students with autism spectrum disorder, the participants identified training for faculty and staff, creating specialized programs and the tendency for some individuals with autism spectrum disorder to think literally.

Although the additional findings of faculty and staff training and specialized programs may appear generic, the influence of such initiatives on the lives of college students with autism spectrum disorder can be profound. The availability of faculty and staff training and specialized programs to assist students with autism spectrum disorder may enable these students to overcome obstacles that previously hindered their ability to have a holistic academic and social college experience. In terms of thinking literally, it is important for college personnel to understand how this trait may influence how some students with autism spectrum disorder receive and interpret information and how their perception may produce results that are contradictory to what was initially intended. Although this trait has the propensity to yield negative outcomes the opposite is also a possibility. For some students with autism spectrum the construct of literal thinking assures that they will follow the rules once they understand them, which may lead to better academic outcomes.

CHAPTER 5

DISCUSSION OF RESULTS AND STUDY IMPLICATIONS

This phenomenological study was conducted to answer the following research question: How do students with autism spectrum disorder describe their postsecondary experiences? The investigator sought to ascertain the essence of the respondents' postsecondary experiences through their individual lenses, using two data collection methods to elicit their reflections. The themes that emerged from the study, which captured the ways in which these students experienced college academically and socially, emerged from the shared experiences described by this group of postsecondary respondents with autism spectrum disorder.

Summary of the Findings

The six salient themes reflective of the postsecondary experiences of college students with autism spectrum disorder that emerged were 1) importance of the academic environment, 2) favorable college experience, 3) relationship formation and social interaction, 4) co-curricular activities, 5) communication with faculty and staff, and 6) college attendance and institution selection. In addition to the six salient themes, the importance of faculty and staff training, the development of specialized programs, and literal thinking were additional findings that resulted from this inquiry.

Importance of the Academic Environment

The respondents in this study related very positively to the resources and campus locations that are part of their institution's academic environment. Participants indicated that they frequented these various locations to receive assistance with academic preparation. The respondents also acknowledged that the use of academic resources such

as the tutoring center and library played an essential role in their academic success. Not only did the environment support the respondents' academic achievement, but the respondents also viewed the academic environment as nonthreatening and even inviting.

Moreover, the use of academic spaces was not contingent on the participants' social skills; instead, these environments highlighted the participants' academic ability, an area in which they are typically more comfortable and adept. The continued utilization of the academic environment demonstrated not only the importance the respondents placed on academic achievement, but also their comfort level with the academic environment. Several of the participants involved in this study indicated that the use of the academic environment contributed to their ability to complete assignments and to receive the academic support needed to acquire a better understanding of course materials. Red Zero specifically stated, "The computer lab is a very peaceful and calming environment. The staff members or teachers are very kind ... The [use of the tutoring lab] helps me to focus on studying for classes." In several writings focusing on postsecondary students with autism spectrum disorder, researchers have indicated that students with autism spectrum disorder possess not only the academic competence to perform well academically, but also a propensity to focus exclusively on the academic environment of the postsecondary setting. Academics are a central part of the college experience along with the social context of the college environment. The attainment of a college degree depends largely on the ability of the individual to perform well academically. As students with autism spectrum disorder continue to gain access to postsecondary settings, they must be able to meet the academic requirements of their institution. Gobbo and Shmulsky (2012) stated that some individuals with autism spectrum disorder are academically

talented. In general, individuals diagnosed with autism spectrum disorder with normal intelligence and academic competence are likely to achieve college degrees as their neurotypical peers (Johnson & Myers, 2007).

Aligned with the literature, the information in this study concerning participants' academic prowess demonstrated that the respondents heavily favored the academic environment and indicated that the use of these academic spaces facilitated their academic success. Given the emphasis on the academic environment reported by the participants, what can colleges and universities do to provide academic spaces that are conducive to supporting students with autism spectrum disorder? Primarily, the data indicate the importance of having dedicated academic environments staffed by trained personnel who are familiar with working with diverse students and empathetic to how the students' disabilities influence their college experience.

It is important for institutions to offer students with autism spectrum disorder opportunities to demonstrate their academic abilities by providing a range of learning activities that highlight their strengths. In addition, it is vital to eliminate barriers that might prevent students with autism spectrum disorder, or other students with disabilities, from accessing or fully utilizing academic resources and spaces. The academic environment should be a place where students feel supported and valued, and a place that supports each student's quest to succeed academically.

Favorable College Experience

Overall, most of the respondents reported a favorable college experience. The participants reported that their postsecondary experiences have been better than those in high school. Not surprisingly, the respondents tended to express a stronger affinity for the

academic than the social environment of their institution, identifying the social landscape as the most troublesome area of their college experience. This finding reflects information found in the research literature concerning college students with autism spectrum disorder.

Several researchers have indicated that the social context of the college environment negatively influences the college experience of students with autism spectrum disorder. White, Ollendick, and Bray (2011) stated, “College students with [autism spectrum disorder] are likely to be quite socially isolated and may experience considerable loneliness (p. 684). Underdeveloped social skills are a common characteristic of students with autism spectrum that may influence their ability to establish and maintain relationships (Dillon, 2007). Individuals with autism spectrum disorder frequently encounter challenges with social interaction (Smith, 2007); they often do not interact well with their peers and face challenges understanding social nuances (Morrison, Sansosti, & Hadley, 2009).

Interestingly, the students with autism spectrum disorder in this study reported a favorable college experience. However, their delight with their college experience related mostly to their attachment to the academic environment, with little reference to the social environment. Uncle Fester indicated a favorable college experience academically, but he did not rate his social experience favorably. He stated, “I’ve always had problems socially interacting and I was hoping that at college it might be different. I did not exactly expect it to be different, but I could still hope it would be different.”

To address the issue of social isolation that some students with autism spectrum disorder experience in the college setting, it is important for higher education institutions

to provide accommodations to address the underdeveloped social skills of these students. Essentially, colleges and universities should establish peer-mentoring programs designed to help students with autism spectrum disorder navigate the social landscape of the college environment. Many individuals with autism spectrum disorder could also benefit from having a peer to introduce them to various social outlets of the campus and help them initiate new social contacts, as well as mediating social interactions with other students. Colleges and universities that fail to provide students with autism spectrum disorder support engaging in the social realm of the college environment at the students' comfort levels, risk that this group of students may endure a sense of isolation and loneliness. Several of the respondents in this study indicated a desire to connect socially, but expressed that they did not possess the social skills to initiate engagement. Jane Doe and several other respondents indicated that their diagnosis influenced social ability. Jane expressed, "Yeah, if I did not have this disorder probably [it] would have been a lot easier socialization wise." Uncle Fester stated, "I want to do it. Like I said, a lot of it is, I just don't know how. I [do not] know how to go about it, where to start."

Relationship Formation and Social Interaction

The desire to form relationships and engage socially was secondary to the participants' connection to the academic environment. However, this does not indicate that the participants did not value forming social relationships or wish to engage socially. On the contrary, the participants indicated a desire to form well-meaning and reciprocal relationships, but expressed that they found these difficult to develop and cultivate. Some of the participants indicated that they joined clubs and engaged in co-curricular activities to meet and connect socially with their peers with which they shared a common interest.

Several of the respondents also indicated their college experiences were much better than their experiences in the secondary education sector.

Several of the findings from this study regarding relationship formation and social interaction in the college setting support the literature concerning the difficulties experienced by many individuals with autism spectrum disorder. These findings build on previous data indicating that individuals with autism spectrum disorder may have underdeveloped social skills, which may impede their ability to establish and maintain social relationships (Dillon, 2007).

Researchers in the area of autism spectrum disorder have indicated that relationship formation and social interaction can be difficult. Aderon and Durocher (2007) indicated that some individuals with autism spectrum disorder find it complicated to develop and maintain friendships. Students with autism spectrum disorder may want to establish friendships, but they often encounter problems with recognizing social cues (Morrison & Blackburn, 2008). Orsmond, Krauss, and Seltzer (2004) reported that only a small fraction of the 235 participants with autism spectrum disorder in their study had established friendships that featured mutual social interactions with same-aged peers. The desire to form relationships and seek out opportunities for social interaction varies widely among students with autism spectrum disorder. Aderon and Durocher (2007) stated that some individuals with autism spectrum disorder might not seek out opportunities to connect socially, whereas others may seek to develop friendships and romantic relationships.

The postsecondary setting offers a wide range of opportunities for students to experience growth both intellectually and socially. The potential gains that result from

engaging and interacting socially may thus be thwarted as a result of the respondents' lack of age-appropriate social skills and inexperience with forming and maintaining mutually reciprocal friendships. The findings from this study indicated that respondents tended to struggle more with the social climate of the college environment. The findings from this study also illustrated that several of the respondents indicated that they were able to connect socially and form some friendships. In describing these experiences, several of the participants divulged that managing and sustaining these relationships were difficult and oftentimes circumstantial in nature. Steven Simpson stated that, "making friends and keeping them has pretty much been the challenge of my life."

Student affairs practitioners must create avenues to assist students whose social skills limit their participation in the social landscape of the college environment. Programs should be designed to provide opportunities to develop or improve social skills in a nonthreatening and supportive climate, and activities should be offered that give students with autism spectrum disorder an array of opportunities to practice and demonstrate appropriate social skills. A similar program is offered at the University of Connecticut through its Center for Students with Disabilities (Disability Compliance for Higher Education, 2007). This institution developed a special first-year experience course especially for students with autism spectrum disorder. The design of this course provides this group of students assistance with transitioning to postsecondary environment by focusing on social skill training. Similar programs could be replicated at other institutions to improve the social skills of students with autism spectrum disorder. These opportunities and experiences could prove invaluable to students with autism spectrum disorder who find it difficult to initiate social interactions or form friendships.

As student affairs professionals it is incumbent upon us to lead the charge to create social environments that are inclusive of all students regardless of their perceived limitations. Students with autism spectrum disorder need opportunities to improve their social skills and increase their ability to socially engage and interact. Unless such opportunities are made available to students with autism spectrum disorder, this group of students will continue to have limited and potentially detrimental college experiences.

Co-curricular Activities

On most college campuses, students have numerous opportunities to become actively involved with various types of clubs and organizations. Although some respondents in this study indicated that they participated in co-curricular activities, they also stated that their involvement was restricted due to their focus on academic preparation. Additionally, the participants stated that their limited interests significantly influenced their level of engagement in college-sponsored co-curricular activities. This finding was not surprising. Individuals with autism spectrum disorder generally present with narrow interests and are hesitant to venture outside those comfort areas. Individuals with autism spectrum disorder may resist new opportunities in favor of continuing with an established set of activities, interests, and behaviors (Aderon & Durocher, 2007). Furthermore, these students' ability to connect and participate in college sponsored co-curricular activities may be hampered by deficits in social skills, which may limit their potential to actively engage.

Participation in college-sponsored co-curricular activities is voluntary and students normally get involved with organizations and activities in which they have interest. Limited or prescribed interests and activities is a symptom that affects some

individuals with autism spectrum disorder. Aderon and Durocher (2007) stated that individuals with autism spectrum disorder have a tendency to vehemently pursue their circumscribed interest to the exclusion of any other activity or interest. This specific symptomology of autism spectrum disorder influenced the respondents' participation in college-sponsored co-curricular options. For many students with autism spectrum disorder, their limited social skills and narrow or intense commitment to a particular interest may narrow or prohibit their participation in college-sponsored activities and organizations (Moloney, 2010).

Generally, students with autism spectrum disorder do not experience much difficulty with academics in the postsecondary education setting. Often what transpires are difficulties with understanding how to maneuver and engage in the social tier of the college campus. Therefore, students with this particular challenge require some assistance to become engaged in college life and make postsecondary experiences more accessible (Jones, 2012). The use of peer mentors is one solution colleges and universities could use to assist students with autism spectrum disorder in becoming acclimated socially to the postsecondary environment and to help facilitate social engagement with other students.

Additionally, college personnel could use peer mentors to help expose students with autism spectrum disorder to various college sponsored co-curricular activities and encourage them to participate. Although it is important to expose this group of students to new experiences, it is equally important not to discount their existing interests. When possible, colleges and universities should support the interests of these students and attempt to connect them with other students, faculty, and staff who share their interests. Peer mentors could assist students with autism spectrum disorder in identifying campus

organizations and activities that align with their particular interests, then help connect students with these organizations and activities.

Communication with Faculty and Staff

Communication, one of the triad of deficits, is an area in which individuals with autism spectrum disorder may encounter difficulty. However, the respondents in this study reported a different experience in their college environment. The participants described their communication with faculty and staff as positive and indicated that they were comfortable speaking to both faculty and staff. Additionally, the participants stated that they found the faculty and staff at their institution to be helpful and supportive. When addressing the mode of communication they preferred, the respondents indicated that they typically communicated verbally face-to-face with faculty and staff, as opposed to sending emails, to address any concerns. Several actually stated that face-to-face interactions with faculty and staff were preferred. This form of communication was specific to faculty and staff and did not necessarily apply to their college peers.

According to the American Psychiatric Association (2013), individuals with autism spectrum disorder typically have trouble with communication reciprocity even if their language skills are proficiently developed. In much of the literature surrounding communication, individuals with autism spectrum disorder are reported to have underdeveloped communication skills that cause them to struggle in this area. Individuals with this disorder often display both verbal and nonverbal communication problems (Hughes, 2009).

Ozonoff, Garcia, Clark, and Lainhart (2005) stated that a deficit in communication might yield problems with conversational reciprocity. Delays in

communication, social awkwardness, and atypical behavior might interfere with students' success at the postsecondary level, if proper support is not provided (Roberts, 2010).

However, this group of respondents described a different experience. The participants did not shy away from encounters with faculty and staff in which the exchange of information required conversational reciprocity. Moreover, the participants primarily preferred to conduct meetings in person with faculty and staff, although it must be noted that these positive reactions were with faculty and staff only and did not hold true for peer-to-peer interactions.

Although respondents recounted positive experiences in communicating with faculty and staff, they did not indicate an identical experience with their peers. The participants in this study reported that the social landscape was the most problematic and difficult aspect of the postsecondary environment to navigate. Most respondents reported difficulty in forming age-appropriate peer relationships and engaging in social interactions with peers. Several factors may have contributed to these difficulties, including the inability to communicate effectively. Difficulties in communication as reflected in the literature. For example, Ozonoff et al. (2005) stated that individuals with autism spectrum disorder may experience communication deficits in the area of conversational reciprocity. In some cases, individuals with autism spectrum disorder encounter difficulties in "initiating and sustaining conversations" (Graetz & Spampinato, 2008 p. 21). Pete Stinton observed, "The difficulty is in starting a conversation . . . actually approaching people." It may be that when students in this study approached faculty and staff, they had a goal or specific purpose for the interaction that made initiating conversation easier. When students approached their peers, however, they may

not have had a specific purpose or goal, leading to difficulty initiating and sustaining conversations with peers.

The information gleaned from the respondents accentuates the importance of treating students with disabilities as individuals instead of assigning limitations to them based on “typical” characteristics of their disability. “Typically, the disability is not the single defining characteristic of the individual; rather the disability is one of several important parts of the individual’s self-identity” (Smart & Smart, 2006, p. 29). The emphasis on individuality is supported by Steven Simpson, who stated, “I don’t want to let [autism spectrum disorder] define me, because it doesn’t or it shouldn’t . . . obviously it has its effects on me, but it’s certainly not the only thing that explains my personality.” All too often students with disabilities are categorized by their disability, while their individual identities and strengths are dismissed. Institutions must learn to recognize and appreciate the unique qualities of students with autism spectrum disorder (Robertson & Ne’eman, 2008). Higher education professionals must continue to advocate for neurodiversity and seek to create college environments that support and assist all students with continued personal growth.

College Attendance and Institution Selection

Roberts (2010) observed that, “For many individuals with an autism spectrum disorder, attending and completing postsecondary education is a viable option” (p. 158). The opportunity to transition from a secondary educational setting to a postsecondary educational environment is becoming a reality for numerous individuals with autism spectrum disorder, as evidenced by the increasing rate at which they are entering postsecondary institutions (Zager & Alpern, 2010). Additionally, Gobbo and Shmulsky

(2012) indicated that the number of students with autism spectrum disorder completing secondary education is on the rise and many of these students will look to further their education by enrolling in a postsecondary institution. Although some students with autism spectrum disorder have the desire to attend college and the intellectual capacity to compete academically, they will assuredly encounter obstacles and challenges related to their disability, unlike their non-disabled counterparts (White, Ollendick, & Bray, 2011).

As the number of college students with autism spectrum disorder increases, it becomes important to determine what motivates this group of students to transition to the postsecondary setting. The research participants indicated that their decisions to attend college resulted from a combination of parental influence, career aspirations, and intrinsic motivation. Most of the respondents identified all of these factors as instrumental in their decision. Although recent literature indicates that postsecondary education is a viable option for students with autism spectrum disorder, very little information has been available on the influences that direct students with autism spectrum disorder to transition to higher education institutions.

In conducting this study, the researcher questioned the participants about their desire to attend a postsecondary educational institution. The respondents indicated parental influence, achieving career goals, and intrinsic motivation as the three factors that contributed to their decision. Wolf, Brown, and Bork (2009) argued that the college setting should provide opportunities for students with autism spectrum disorder to develop workplace and job readiness skills. Camarena and Sarigiani (2009) found that students with autism spectrum disorder and their parents rated college attendance as an important aspiration. Additionally, respondents in the same study indicated that the desire

for career preparation was influential in their decision to attend a postsecondary institution (Camarena & Sarigiani, 2009). Similarly, respondents in the present study also viewed attending a postsecondary institution as a means to achieving their career goals and viewed the postsecondary environment as a place where they could obtain the training and education needed to enter their selected careers.

Much of the current literature indicates that college is a viable option for some students with autism spectrum disorder and that these students are entering higher education in greater numbers. However, little research has explored the motivations of students with autism spectrum disorder who enroll in college. Sprinkled throughout the available literature are statements that indicate parental influence and career preparation as factors that motivate students with autism spectrum disorder to enroll in higher education. The participants in this study also indicated that these factors contributed to their decision to attend college. John Fitzgerald stated, “Well essentially, I [knew] postsecondary education was something my parents did . . . So essentially, I knew I was going to college.” Byron Cramer expressed, “My interests always ran into technical fields: science, engineering, computers and for that sort of thing you’ve got to go to college.” As more students with autism spectrum disorder prepare to transition to higher education institutions, it becomes increasingly more important for postsecondary institutions to understand why this group of students chose to attend college. Institutions that identify the influences that attract students with autism spectrum disorder to the postsecondary setting will be better able to serve this population of students and provide services to help them advance toward their self-selected goals.

The participants in this study indicated that they based their institution selection on two factors: proximity and cost of attendance. Regarding proximity, the respondents indicated that they preferred to remain home while attending college because they did not feel ready to leave their familial support. Cost of attendance was the second factor that attracted respondents to their selected institution, as participants recognized the two-year college as an excellent value in terms of both cost and education. The respondents recognized that the two-year college provided similar courses found at the four-year institutions at a reduced cost. The available literature on institution selection is not vast, but existing literature supports the importance of proximity as an influence on students' college decisions.

Selecting a college or university to attend is a decision that should not be made haphazardly. Students with and without autism spectrum disorder should take a systematic approach when making this important decision. "One of the first most important aspects of the transition to higher education is the fit of the student to the institution (VanBergeijk, Klin, & Volkmar, 2008, p. 1363). Aderon and Durocher (2007) stated that specific considerations concerning the type and size of the institution and its distance from home should play into the college selection decision. For some students with autism spectrum disorder, staying home with familial support for the first year of college allows them to become accustomed to the academic and organizational demands of the college setting (Perner, 2003). Most of the respondents in the current study indicated that their college selection was based on the proximity of the campus to their home, but they also indicated that the cost of attendance entered significantly into their decision.

Very little has been written specifically about the institution selection process of students with autism spectrum disorder. More information is needed concerning the types of college environments that are typically recognized as a best fit for, and therefore should be considered by students with autism spectrum disorder. In some commentaries, writers have suggested that small college settings tend to be ideal because students can receive more attention (Perner, 2003) and that larger more densely populated institutions may make it more difficult for some students with autism spectrum disorder to navigate (Moreno, 2005). Although smaller college offers more opportunity for students with autism spectrum disorder to receive more individualized attention, Perner (2003) indicated that small college environments also increases the attention paid to students with autism spectrum disorder, whereas larger universities offer more diverse opportunities for this group of students to meet others who may share a common interests and they become less of a central focal point.

Despite these divergent opinions concerning institution selection, the idea of “best fit” is of central importance. Similar to other students, students with autism spectrum disorder should select institutions that are a best fit for them individually, taking into account their unique abilities, personalities, struggles, and needs. To accomplish this, students need to be keenly aware of their individual strengths and weaknesses. Traditional-aged students and their parents should visit each campus under consideration and meet with college personnel to discuss the types of support available for students with autism spectrum disorder. This will allow them to determine how well an institution is able to meet the needs, expectations, and interests of such students.

Faculty and Staff Training, Specialized Programs, and Literal Thinking

This investigation yielded several additional findings or factors that influence the experience of students with autism spectrum disorder in the postsecondary educational environment. The participants in this study suggested that higher education institutions should provide training for faculty and staff concerning autism spectrum disorder. This group of participants overwhelmingly indicated an overall positive experience with how they were able to communicate with faculty and staff and further stated that they preferred to communicate in-person with college personnel. The expressed need for an additional training for faculty and staff may relate to a more global than an individual perspective in terms of addressing the transitional needs of students with autism spectrum disorder to the postsecondary setting. The respondents involved in this study may have viewed positively having their individual needs addressed by faculty and staff, but recognized an overall disconnect existed in terms of addressing the global needs of students with autism spectrum disorder. From a more global perspective, these training opportunities should address how to accommodate students with autism spectrum disorder, the typical behaviors associated with this disability, and most importantly, the dispelling of stereotypes and emphasize the need to accommodate the individual and not the diagnosis.

Several researchers endorse this finding and recommend educating college personnel as a way to improve the college experiences of students with autism spectrum disorder. Hughes (2009) stated that the opportunity for students with autism spectrum disorder to succeed in college increases when campus personnel are educated about this disability. Morrison, Sansosti, and Hadley (2009) also endorse the need for higher

education institutions to offer professional development opportunities for faculty that focus on different content concerning students with autism spectrum disorder. “Faculty education is extremely important in helping the faculty to understand how students with autism spectrum disorder will best succeed in the classroom” (Smith, 2007, p. 525).

Several of the respondents involved in this study, expressed similar sentiments concerning providing professional development training for faculty and staff, and they recognized that the use of these development opportunities could enhance the college experiences of students on the spectrum. Additionally, counselors need training to improve their ability to work with students diagnosed with autism spectrum disorder and their parents (Fauzan, 2010).

Due to the complexities involved in supporting students with autism spectrum disorder in college settings, it is vital for higher education institutions to provide faculty and staff development opportunities on this topic. As two- and four-year institutions experience an increase in the number of students with autism spectrum disorder on their campuses, college personnel will need training on how to work effectively with students with autism spectrum disorder. Personnel will also need to understand that autism spectrum disorder manifests differently in each student, requiring them to adjust their strategies as they interact with various students with the disorder. Through staff development and training opportunities, college personnel can learn to be empathetic towards students with autism spectrum disorder and create campus communities that welcome and appreciate the neurodiversity of students.

The respondents in this study also recommended that postsecondary institutions provide specialized programs designed to support students with autism spectrum

disorder. These programs should include mechanisms that help students on the autism spectrum become acclimated to postsecondary environments. Specifically, such programs should assist students with autism spectrum disorder in managing the daily life of college, navigating the campus social environment, and enhancing time management and organizational skills.

The creation of specialized programs is identified throughout the literature as an accommodation that can improve the lives of students with autism spectrum disorder on college campuses. Colleges and universities should expand their support services to include counseling, job readiness training and life coaching (VanBergeijk et al., 2008). Dillon (2007) indicated that students with autism spectrum disorder who receive additional support are more likely to experience success at the postsecondary level. Camarena and Sarigiani (2009) found that a majority of participants in their study of autism spectrum disorder supported the inclusion of special programs to assist this population of students in the postsecondary environment.

Based on information reported by participants in this study and on the available literature, developing and implementing support programs for college students with autism spectrum disorder seems to be the appropriate next step for higher education institutions to take with their energy and resources. Within the last decade, specialized programs have been developed at a number of colleges and universities to address the challenges some students with autism spectrum disorder experience in transitioning to the postsecondary setting. Although very little empirical data exist thus far concerning the effectiveness of these programs, unless or until some other school of thought emerges, the development of specialized programs will be a key initiative on college campus to

address the needs of students with autism spectrum disorder. Financing the development and preservation of these programs will also require some consideration. Some institutions that currently offer these programs charge participants a fee above the cost of tuition to participate in the program. This is certainly one option for financing the programs, but institutions should also consider competing for grants and other opportunities to fund or offset the cost of these types of programs.

Thinking literally is another finding generated from this study. Aderon and Durocher (2007) stated that some students with autism spectrum disorder “tend to interpret language in an overly literal way” (p. 272). The tendency to perceive information in a highly literal manner came to the forefront during the photo elicitation completed by the participants. The respondents in the study were asked to take pictures of campus location they frequented and campus spaces they seldom frequented and complete a short narrative using writing prompts provided by the researcher to guide the description of each location. This data collection method involved multi-steps and it allowed the participants the freedom to self-select campus locations that met the criteria for this data collection. The information produced by photo elicitation data collection method was intended to triangulate the information gleaned from the interviews with the respondents in this study. Although the participants received the direction for this data collection exercise verbally and in writing, some participant’s ability to think overly literal influenced the information submitted from the photo elicitation data. For example, some of the respondents in this study submitted pictures of campus location they never accessed. These submissions are examples of how that participant’s literal thinking influenced his or her interpretation of the project and emphasized to the researcher how

important it is to provide some students with autism spectrum disorder with unambiguous directions.

As a result of completing this portion of the study, several of the respondent's trait to think literally became evident as well as the need to provide unambiguous directions. Some individuals with autism spectrum disorder may experience challenges with multi-step directions, which may lead to misunderstand or misinterpretation because of their literal thinking (Hughes, 2009). Additionally, some members of this group struggle with the abstract and often perceive things literally (Bedrossian & Pennamon, 2007).

Theoretical Framework

Grounded in the first vector of developing competence, this study used Chickering and Reisser's (1993) theory of psychosocial development as a lens to determine how the college experiences of students with autism spectrum disorder influence their development within vector one. The theorists, Chickering and Reisser (1993) proposed seven *vectors of development* that they predicted contributed to identity development (Evans, Forney, Guido, Patton, & Renn, 2010). This particular theory involves seven vectors described as "developing competency, managing emotions, developing autonomy, establishing identity, freeing interpersonal relationships, developing purpose, and developing integrity" (Reisser, 1995, p. 506). Movement within the vectors is not presumed to transpire in neatly arranged steps, but instead Chickering and Reisser indicated that a student's transition through the *vectors of development* can be best described as a process of recycling (Evans & et. al., 2010). Meaning, as students have experiences in the postsecondary setting, they may encounter issues in several

vectors simultaneously and that they may encounter and reencounter similar issues within each vector at various times and magnitudes. The *vectors of development* are not sequential, but instead they are developmental in nature and they tend to build on each vector (Chickering & Reisser, 1993).

This study examined the postsecondary experiences of college students with autism disorder to determine if and how their postsecondary experiences contributed to developing competence within the three subcategories of vector one. Vector one is described as developing competence in three subcategories of intellectual, physical and manual, and interpersonal competences (Reisser, 1995). Intellectual competence involves the acquisition of knowledge and skills from specific subject matter and the development of intellectual, cultural, and aesthetic sophistication (Chickering & Reisser, 1993). Several of the respondents in this study illustrated development in the area of intellectual competence. In the theme, *importance of the academic environment*, the participants decisively expressed that the academic environment played an essential role in their college experience. The respondents recognized that the academic environment was a key element in their academic preparation; it assisted them with acquiring new knowledge, and with meeting the academic demands of the postsecondary setting. Developing intellectual competence is also associated with the theme *favorable college experience*. The respondents indicated that their favorable college experiences related directly to their acquisition of knowledge and the use of academic resources.

Another area that demonstrates intellectual competence stems from the additional finding of specialized programs. Based on the postsecondary experiences of several of the respondents in this study, they viewed the inception of specialized programs as a key

element that would enhance or improve their experiences as postsecondary students with autism spectrum disorder. It was very astute of this group of participants to determine what postsecondary institutions could provide in terms of support within the postsecondary educational setting that would possibly increase opportunities for students with autism spectrum disorder to have more well-rounded and inclusive experiences socially and academically. This recognition epitomizes growth along the intellectual competence vector for this group of students with autism spectrum disorder. It indicates that this group of students understands areas in which they require more assistance, the area of the institutions in which this assistance can stem, and that their postsecondary experiences extend beyond what they are able to achieve academically. Furthermore, it demonstrates that the respondents understood the importance learning how to navigate the highly social aspects that are a natural part of the postsecondary community.

The second subcategory within the developing competence vector is physical and manual competence. Reisser (1995) indicated that physical and manual competence is achieved through exposure to athletic and recreational activities and through manipulation of tangible materials. Not enough evidence is available based on the information derived from this study to indicate how much growth was stimulated in this area. Several of the respondents in this study reported involvement with several college sponsored co-curricular activities. However, the nature of their involvement may not have risen to the level to suggest development in the area of physical and manual competency. Based on the information shared by the participants, it is difficult for the researcher to assess or evaluate if the respondents experienced any developmental milestones in this subcategory. However it is important to recall that development within

the *vectors of development* may occur at different intervals and development within each vector is related to the individual's experiences.

The final subcategory of vector one is interpersonal competence. Interpersonal competence centers on the ability of the individual to communicate effectively, establish leadership skills, and work well with others (Chickering & Reisser, 1993). A number of respondents in this study realized movement or competence in this vector. Two of themes, *relationship formation and social interaction* and *co-curricular activities* exemplify how some of the participants' experiences indicated some development with interpersonal competence. In terms of relationship formation and social interaction, several of the respondents indicated that their postsecondary experiences involved the establishment of some friendships, but they also mentioned that these relationships were oftentimes difficult to maintain. Additionally, some of the respondents indicated that friendship formation was in some cases tied to academic requirements and only lasted for one semester. Although these relationships were temporary in nature, it does however indicate that the respondents were able to collaborate with others to achieve a common goal; the ability to work well with others is an identified marker used to determine development in the area of interpersonal competence.

The participants' involvement in co-curricular activities also illustrated development in the area interpersonal competence. Several of the respondents indicated they became involved with college-sponsored clubs as a way to meet other students with similar interests. The respondents also indicated that their memberships with certain co-curricular activities were tied to their prescribed interest in the topic. Generally, this is common for some students with autism spectrum disorder considering the invariable

influence related to the triad of deficits. Although, the degree of participation varied among the respondents in the study, some of the participants indicated holding elected offices within their perspective organizations, which demonstrates some level of leadership skill development.

Communication was another theme that emerged from this study and it is one of the measures for developing intellectual competence. Based on the experiences reported by the participants in this study, it is evident that this group of students achieved competence in the area of effective communication. This was especially evident in how they described their engagement with faculty and staff. The participants in this study described their communication with faculty and staff as uncomplicated and comfortable. However, the respondents did not report similar circumstances when describing their communication with their peers. Some of the participants reported that they found it difficult to initiate and sustain conversations with their peers, which affected their ability to socially interact and form and maintain social relationships.

Limitations of the Study

Due to the limited number of participants in this study, the study's findings are not generalizable to the larger population of students with autism spectrum disorder. "Given the usually small sample sizes and absences of statistical analyses, qualitative data cannot be said to be generalizable in the conventional sense" (Morrow, 2005, p. 252). Therefore, it is important to note that the perspectives expressed by the participants in this study are relevant only to this research group. Nevertheless, although only eight participants were involved in the study, the account of their college experiences is

invaluable and their perspectives provide a window into their lived experiences as students with autism spectrum disorder on a college campus.

This study featured the perspective of eight participants with autism spectrum disorder who were willing to participate in this research study about their college experiences. Although, the eight respondents were able to provide information about their college experiences, it does not account for the other students with autism spectrum disorder who would not engage in this type of exercise, which is considered a limitation of this study. Potentially, these other students could possibly bring a new dimension and provide a different perspective of their postsecondary experiences. Without hearing from this subgroup of students with autism spectrum disorder, it will be impossible to acquire an understand of their perspectives and how different or similar their experiences may be in comparison to students with autism spectrum disorder who are more willing to share their higher education experiences.

The inclusion of students from only one postsecondary institution is another limitation of this study, as the experiences described by the participants are reflective of their enrollment at a single institution. By concentrating the study at a single institution, the findings illuminate how students with autism spectrum disorder experienced college only in that particular higher education setting. This singular college approach provides a snapshot into the college experiences of students with autism spectrum disorder, but it omits the experiences of similar students enrolled in various postsecondary learning environments. Students involved in this study attended a two-year institution, which may be very different from four-year institutions. However, some of these findings are likely to be important at four-year institutions as well, because communication difficulties and

the expressed need for institutional specialized supports for students are likely to be a common thread regardless of institutional size or status.

The goal of this study was to capture the lived experiences of students with autism spectrum disorder attending a two-year college in the Southeast. To accomplish this goal, five Caucasian males, one Caucasian female, and one Hispanic male, and one Multiracial male participated in this study. The institution selected for the study reports an enrollment of over 20,000 students comprised of “11.2% Asians, 41.2% African-Americans, 9.3% Hispanics, 3.3% Multiracial, 0.3% Native Americans, 0.1% Native Hawaiian/Pacific, and 32.6% Caucasian” (the website is redacted to preserve confidentiality of the participants; retrieved February 3, 2014). Although diversity was not a key consideration for this study, it was also not the intent of the investigator to exclude or recruit favorably any one ethnic group over another. As the investigator for this study, I recognize the importance of eliciting the perspectives of a diverse group of students concerning this topic. Additionally, I firmly adhere to the notion of valuing each individual contributor and his or her experience.

Implications for Student Affairs

The results of this study underscore the importance of providing an inclusive campus environment for students with autism spectrum disorder. Some students with autism spectrum disorder will require accommodations beyond those usually provided to students with invisible disabilities. Due to the unique accommodations that students with autism spectrum disorder are likely to require and the social and academic challenges they are likely to face as college students, higher education institutions must prepare to meet the unique needs of students with autism spectrum disorder on their campuses.

Students with autism spectrum disorder need structured supports in the college setting if they are to achieve college success (Morrison, Sansosti, & Hadley, 2009). Specialized programs, peer mentorship, and academic coaching are examples of support services that could be implemented to facilitate the transition of students with autism spectrum disorder to a higher education institution.

Providing faculty and staff training is vital if students with autism spectrum disorder are to have favorable college experiences. Several of the respondents in this study indicated the importance of being recognized as individuals with unique needs that often may be unlike other students with or without disabilities and that having autism spectrum disorder is just part of their makeup and does not constitute who they are in totality. Professional development opportunities are one type of mechanism colleges and universities can use to educate their faculty and staff concerning students with autism spectrum disorder. These professional development opportunities should concentrate on defusing any misinterpretation of the disability, identify any stereotypes concerning students with autism spectrum disorder, and provide training on how to work effectively with students with autism spectrum disorder in the postsecondary setting.

The college environment consists of both social and academic outlets and it is the combination of these two spheres that provide an opportunity for students to have a complete college experience. Although students with autism spectrum disorder typically have intact academic skills, they may experience difficulties with the social environment of the college. Hughes (2009) indicated that individuals with autism spectrum disorder usually have underdeveloped social skills but have exceptional academic skills.

Some individuals with autism spectrum disorder may struggle in certain academic content areas but excel academically in others.

To overcome the challenges this group of students may face in the social environment, it is essential that colleges and universities assist students diagnosed on the spectrum with opportunities to improve their social skills. Postsecondary institutions should take an active and facilitative role in introducing this group of students to what is socially available at their institutions and facilitate their involvement at a level in which the students are comfortable with experiencing. It is important both philosophically and in practice to view all students as individuals and to allow the student to decide the level in which he or she would like to participate. Institutions that fail to recognize the importance of providing such opportunities systematically create barriers for students with autism spectrum disorder and perpetuate conditions that may lead to social isolation. Several colleges and universities have developed and implemented programs to support students with autism spectrum disorder on their campuses. The existing programs can serve as resources or models for the development of similar programs on other campuses to support students with autism spectrum disorder (Programs for Students with Asperger Syndrome, para. 2).

Suggestions for Future Research

The current study investigated how college students with autism spectrum disorder described their college experiences. For a future study, it would be intriguing to interview students diagnosed with autism spectrum disorder who completed college to determine the types of college support services, academic and/or social and compensatory strategies that this group of students employed to assist them with attaining their college

degrees. Information in the literature indicates that students with autism spectrum disorder may require unique forms of support to offset the challenges imposed by their disability. Aderon and Durocher (2007) stated that students with autism spectrum disorder could benefit from accommodations normally provided to students with learning disabilities, but additional accommodations typically not provided by colleges and universities may be helpful for these students as well. This recommendation for future research could build upon existing studies or pioneer an analysis of the kinds of services college campuses have orchestrated to facilitate inclusive campus communities and provide support for students with autism spectrum disorder. By identifying and replicating the support services identified by this group of students as contributors to their success, we may improve retention and increase degree completion for college students diagnosed with autism spectrum disorder.

According to the literature, several types of specialized programs are currently available on some college campuses to assist students with autism spectrum disorder in their transition to the postsecondary educational environment. Select institutions of higher educational have developed programs that provide mentorship, coaching, academic and social skill development, and several other supports for students with autism spectrum disorder. Many of the support programs offered at these institutions charge a fee above the cost of attendance to access the services. Institutions that offer these types of programs include Western Kentucky University; the Universities of Alabama, Connecticut, Minnesota, and Boston; and Mercyhurst College (a list of additional programs is included in Appendix, H. (Programs for Students with Asperger Syndrome, para. 2).

Although these types of programs exist, seemingly no empirical evidence is available to document their effectiveness. This lack of evidence makes it difficult for institutions to anticipate which programs and services will yield the best outcomes for their students. Additionally, prospective students, school counselors, parents and others have little information to evaluate or compare the various programs. Therefore, additional research studies should be conducted, using quantitative methods with an experimental design concept, to assess the efficacy of these specialized programs. The results of such a study could provide strong evidence for the legitimacy, continuation, and development of additional support programs for college students with autism spectrum disorder.

Conclusion

Due to the paucity of research on college students with autism spectrum disorder and the influx of greater numbers of these students into higher education institutions, the need for additional research is paramount. The aim of this study was to discover how students with autism spectrum disorder described their college experiences and to convert common experiences into themes reflecting the perspectives of the research participants. In addition, this study examined the influence of the triad of deficits (communication, social interaction, and repetitive and restricted behavior) on postsecondary students with autism spectrum disorder.

This study examined the research question (“How do students with autism spectrum disorder describe their postsecondary experiences?”) and provided the participants a platform to discuss their lived experiences as college students with autism spectrum disorder. How did the participants of this study describe their college experiences? Based on the information gathered from this study, six dynamic themes

were identified, along with three additional findings, that illustrated the respondents' postsecondary experiences: 1) importance of the academic environment, 2) favorable college experiences, 3) relationship formation and social interaction, 4) co-curricular activities, 5) communication with faculty and staff, and 6) college attendance and institution selection, accompanied by the additional findings of faculty and staff training, the development of specialized programs, and literal thinking.

The participants in this study focused the majority of their energy on performing well academically, rather than engaging in the social context of the college environment. Consistently, the study participants viewed performing well academically as paramount. The respondents indicated a stronger attachment to the academic environment than to the social environment of the institution. The visual data presented by the respondents further illustrated their attachment to the academic environment. Campus location such as the library, computer lab, and tutoring center were described as locations in which several of the participants reported that they frequented. The respondents added that the institution's academic environment was a primary factor that contributed to describing their college experience as favorable. The respondents unanimously described their communication with faculty and staff as positive and affirming. The participants stated that their ability to communicate effectively with faculty and staff contributed to their favorable college experience.

The participants did not report a similar experience in the social context of peer relationships. The respondents reported that the college's social environment posed the biggest challenge, and some participants indicated that they would often avoid opportunities to interact socially. In terms of relationship formation and social

interaction, the participants recognized the importance of forming friendships and engaging in social interaction, but some of the respondents found this difficult to execute. The respondents also decisively indicated that their diagnosis of autism spectrum disorder increased the difficulty of engaging socially.

The respondents' shared experiences demonstrated that they were successful in developing some reciprocal friendships through their participation in college-sponsored activities and various other endeavors that placed them in a position to meet other students with similar interests. In reference to friendship development, Steven Simpson stated:

Well, what I want to get across is that making friends and keeping them has pretty much been the challenge of my life, so I wanted to say that actually having friends and being able to see them often and getting to know them, that is a big deal for me. I just want to get across that this is one of the things that, if not the main thing, that makes me want to continue to be here.

The respondents also explained that they became involved with college sponsored co-curricular activities that mirrored their prescribed interests, but their participation was limited due to their need to concentrate on academics. Glennon (2001) notes that "In order to comprehend the extent and types of supports needed, the intricacies between the person with [autism spectrum disorder] and the college experience must be explored" (p. 183). Therefore, some students with autism spectrum disorder would benefit from having an academic and social support system designed to help alleviate the stresses of connecting socially, identify non-academic issues that may interfere with connecting to the social environment, and assist with the educational demands of college. Academic

coaching and social mentoring are two constructs institutions could adopt to address the academic and social concerns of students with autism spectrum disorder.

Although the participants reported that they were satisfied with their college experiences, they also observed that the social component of the postsecondary environment was much more difficult to manage than the academic environment. The prevalence of this viewpoint emphasizes the need for higher education institutions to invest resources in programs and services that address the social disconnect experienced by students with autism spectrum disorder. If this disconnect is not adequately addressed, college students with autism spectrum disorder may experience feelings of social isolation, loneliness, and victimization due to their inadequate social skills (White, Ollendick, & Bray, 2011). Higher education is not a perfect enterprise; however, it possesses the potential to provide valuable educational experiences and various other opportunities designed to broaden the academic and social landscape of all students. These experiences may stimulate immeasurable growth that remains with students beyond the campus borders and extends into their adult and professional lives.

College plays a significant role in the development of students; in addition, the campus environment influences how students experience institutions from an academic and social context. Some students with autism spectrum disorder are especially susceptible to missing a valuable postsecondary experience due to the effects of their disability. In particular, the triad of deficits associated with autism spectrum disorder may influence these students' campus engagement and limit their ability to adjust socially and academically to the college environment, which may interfere with their individual development and degree completion. Due to the susceptibility of this group of students to

encountering social and academic barriers, it is apparent that these students need specialized and targeted support. Barnhill (2014) stated that colleges and universities are increasingly becoming aware of the need to establish programs to support students with autism spectrum disorder.

Additionally, this social disconnect may interfere with the ability of students with autism spectrum disorder to have holistic college experiences. The respondents indicated that they devoted a great deal of effort to being successful academically, and therefore they often chose academics over developing connections. If institutions were to develop programs that provided the necessary academic supports to assist students with organization and other areas of executive functioning challenges, students might have more time to engage in the social aspects of college. It is likely that both academic and social mentoring supports would be beneficial.

In terms of college attendance, the participants shared that their decision to attend college stemmed from parental influence, the desire to achieve their career goals, and intrinsic motivation. In reference to the participants involved in this study, several of their parents recognized the attainment of a college degree as the key that opens the door to improved vocational and career options. Therefore, this group of parents advocated for and in some instances facilitated the college enrollment process of their students. When the respondents described their college selection process, they indicated that the proximity of the campus to their homes and the reasonable cost of attendance weighed heavily in their college selection decisions.

The participants also recommended that postsecondary institutions should implement professional development training for faculty and staff to enhance the college

experiences of students with autism spectrum disorder. Primarily, the respondents indicated that training for faculty and staff concerning their specific disability would enhance their college experience and improve the types of accommodations and support services available to students with autism spectrum disorder. Although the respondents in this study indicated positive experiences with communicating with faculty and staff, they also believed that additional professional development opportunities concerning students with autism spectrum disorder to further educate would further improve their postsecondary experiences.

Finally, the participants recommended the development of specialized programs designed to assist students with autism spectrum disorder in integrating into the campus and the use of an academic coach or assigned college personnel to assist with the limitations they experience socially and in the area of executive functioning. The results of this study indicate the importance of developing specialized, nontraditional programs and services for students with autism spectrum disorder. As colleges and universities enroll greater numbers of students with autism spectrum disorder, these institutions will face increased challenges in supporting these students in the academic setting. The needs of students with autism spectrum disorder will usually surpass the common testing and other academic accommodations assigned to students with other disabilities. Thus, the faculty and staff of colleges need to be prepared to assist this group of students by providing academic, executive functioning, and social engagement supports.

The results of this study underscore the need to institute changes in how students with autism spectrum disorder are supported on their campuses. Students with autism spectrum disorder enter postsecondary settings with traits that often interfere with how

they navigate the campus community socially. As the investigator of this study, I caution colleges and universities to see students with autism spectrum disorders as individuals and to avoid the position that all students with autism spectrum disorder will require the same types of support. “Just as each student is an individual, with his or her own combination of strengths and weaknesses, each individual with autism spectrum disorder also has his or her own unique difficulties” (Glennon, 2001, p. 189). Students with autism spectrum disorder should be treated as individuals; the supports provided should aid all students in experiencing college free of systemic or environmental barriers that promote or sustain unfair attitudes and conditions.

Supporting students with autism spectrum disorder may seem challenging. However, if higher education personnel continue to invest energy in learning more about students with autism spectrum disorder, it is likely to increase the retention and graduation rates of these students. Well-planned academic and social supports are also likely to assist students with autism spectrum disorders in navigating the college experience, resulting in increased academic success and social engagement. The researcher hopes that by listening to the voices of students with autism spectrum disorder, colleges and universities will gain a better understanding of the unique perspectives and needs of this group of students. Additionally, professionals at higher education institutions are urged to advocate for the removal of barriers and the implementation of systems designed to foster support and acceptance of students with autism spectrum disorder.

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APPENDIX A

EMAIL TO GATEKEEPERS

Dear Gatekeeper,

Thank you for agreeing to assist with recruiting participants for this research study. As I discussed with you previously, I am looking for participants who have a diagnosis of autism spectrum disorder and who have completed at least two academic semesters in a postsecondary setting. Eligible participants will receive a \$5.00 gift card from iTunes, GameStop, Starbucks, or Target for each session (interview, photo elicitation, and information verification meeting) of the study in which they participated. The total value of the gift card will not exceed \$15.00.

Attached to this email is a recruitment flyer to distribute to each eligible student and you may also display the flyer in your office. This flyer provides some information about the study and it includes my contact information. Please direct all inquiries concerning this research study to Michael Anderson or to Dr. Diane L. Cooper with the University of Georgia at 706.542.1812 or via email at dlcooper@uga.edu.

Again, thank you for agreeing to assist with recruiting participants for this research study.

Thanks,

Michael Anderson
Doctoral Student
The University of Georgia
mikeand@uga.edu
770-274-5235 (office)

APPENDIX B

RECRUITMENT FLYER

Do you have a diagnosis of autism spectrum disorder?
Have you completed at least 2 semesters in a postsecondary setting?

Then you are invited to participate
in a dynamic research project!

Purpose:

This research project will describe the lived experiences of college students diagnosed with autism spectrum disorder who attend a two-year college.

You will be asked to complete 3 sessions:

1. Participate in one 90-minute interview
2. Complete a photographic assignment and write two short narratives
3. Participate in an information verification meeting (30 minutes)
Expected durations: 3 to 4 hours

Incentive:

Participants will select a gift card from iTunes, GameStop, Starbucks or Target. The value of the gift card will be pro-rated at \$5.00 for each session you participate in (interview, photo elicitation, and information verification meeting). The total value of the gift card will not exceed \$15.00.

For more information contact:

Michael Anderson
Doctoral Student
University of Georgia
mikeand@uga.edu
770.274.5235

Dr. Diane Cooper
University of Georgia
dlcooper@uga.edu
706.542.1812

APPENDIX C

VERBAL SCRIPT

Verbal Script for the Gatekeepers
(Initial contact with participants by the gatekeepers)

- Hello, participant's name.
- This is Gatekeeper's name.
- Thanks for taking the time to speak with me.
- Michael Anderson is conducting a research study about the lived experiences of college students with autism spectrum disorder who attend a two-year college and have completed at least two academic semesters. As a registered student with disability services, our records indicate that you meet the established criteria for this research study.
- If you would like to participate in this research study you may either contact Michael Anderson at 770.274.5235 (office) or 352.255.2971 (cell) or with your permission, I can provide him with your contact information (name and phone number) and he will contact you concerning this study. If you have additional questions, you may contact Mr. Anderson (mikeand@uga.edu) or Dr. Diane L. Cooper with the University of Georgia at 706.542.1812 or via email at dlcooper@uga.edu.
- Meanwhile, here is a recruitment flyer that gives you more information about the study.

Thank you for your time.

APPENDIX D

SEMI-STRUCTURED INTERVIEW PROTOCOL

Semi-Structured Interview Protocol**Matriculation/Retention**

1. How did you make the decision to attend college?
2. How did you decide to attend this college?

Communication with Faculty and Staff

3. Tell me about your experiences communicating with faculty.
4. Tell me about your experiences communicating with staff.

Engagement in Co-curricular activities

5. Describe for me your participation in college-sponsored activities, clubs, or organizations.
 - 5a. What was it like for you?

Peer-to-Peer Social Relationships

6. Please tell me about the friendships you developed at this college.
 - 6a. How have your friendships been at this college?

Academic Performance

7. When you think about your current level of academic performance, what has contributed to your performance?

Encompassing

8. Describe how you think/feel autism spectrum disorder has impacted and/or influenced your experience at this college.

9. Has your college experience at this college been what you wanted it to be?
Explain or describe that to me.
 - 9a. If not, if your college experience could be exactly how you pictured it to be, what would it look like?

APPENDIX E
INFORMED CONSENT

Informed Consent

Postsecondary Students on the Spectrum: A Qualitative Inquiry into Their College Experiences

I, _____, agree to participate in a research study entitled Postsecondary Students on the Spectrum: A Qualitative Inquiry into their College Experiences, conducted by James Michael Anderson, who is a doctoral candidate in the Department of Counseling and Human Development Services at the University of Georgia, under the direction of faculty advisor Dr. Diane L. Cooper in the Department of Counseling and Human Development Services at the University of Georgia.

Participation in this research study is voluntary. I can refuse to participate or stop taking part at any time without giving any reason, and without penalty or loss of benefits to which I am otherwise entitled. If I decide to withdraw from the study, the information that can be identified as mine will be kept as part of the study and may continue to be analyzed.

A research team comprised of two recent doctoral graduates of the Department of Counseling and Human Development Services at the University of Georgia will review and discuss information gathered for this study. The research team will not have access to the participants or be aware of the participants' identity.

Item #1: REASON/PURPOSE

The aim of this study is to identify the shared experiences of college students with a diagnosis of autism spectrum disorder who attend a two-year college. As more students with autism spectrum disorder enter college, it is becoming increasingly important to conduct additional research to discover the needs (academic and social) that these students encounter in the postsecondary setting. This study will provide a lens into the college experiences of students with autism spectrum disorder and discover information that will assist both college administrators and disability services providers with providing an optimal and inclusive academic environment for this student population.

Item #2: BENEFITS

I will not benefit directly from this research. However, the information derived from this study will inform colleges and universities concerning the college experiences of students

with autism spectrum disorder; help with the formulation of accommodations and the development of programs to assist future students with autism spectrum disorder; and lead to an increased understanding of autism spectrum disorder and its effects on academic success at the college level.

Item #3: PROCEDURES

If I volunteer to take part in this study, I will be asked to do the following:

- Complete the four-question *Demographic Profile and Incentive Information* form. (portion of the 90 minutes for the interview)
- Participate in an audio-recorded interview. As a study participant, I will have the option to type my responses to interview questions. (90 minutes)
- Take pictures of specific campus locations and write a description for each photograph. Owning a camera is not a requirement for participation in the study. Participants without cameras will be provided with a camera. Participants are asked not to photograph images of faces. (90 minutes)
- Participate in a meeting to verify and correct individual statements. (30 minutes)

Item #4: DISCOMFORTS OR STRESSES

Participation in this research study is voluntary. I can refuse to participate or stop taking part at any time without giving any reason, and without penalty or loss of benefits to which I am otherwise entitled.

The discomfort or stress that I may face during this research is related to communication. Some individuals with autism spectrum disorder may find it difficult to participate in conversational dialogue. To alleviate any discomfort or stress, as a participant in this study I reserve the right to provide my responses in writing, that the researcher may ask follow-up questions, and the researcher or I may choose to conclude and reschedule the interview.

This research project will specifically target college students with a diagnosis of autism spectrum disorder. By participating in this study, it will indicate that each participant has a diagnosis of autism spectrum disorder. Due to the sensitive nature of this information, a primary risk of this study is the breach of the participant's confidentiality. To minimize any potential for risks or discomforts, only information indigenous to the study, void of any identifiable information, will be collected from the participants in the study. Furthermore, pseudonyms will be used throughout the study and the name of the participant's institution will not be mentioned in the report.

Additionally, during the duration of the study all materials collected for the study will be secured in a locked container, any electronic information will be password protected on a Cruzer USB Flash Drive throughout the duration of the study, and all meetings with participants will be face-to-face or via the telephone. *If a breach of confidentiality were to occur, this exposure may cause the participants to face embarrassment and/or social distress. However, to adjust for this, I will select a pseudonym to protect my identity.*

Item #5: RISKS

No more than the minimum risks/discomforts are anticipated for this study, but the prospective benefits of this study outweigh the risks. The minimum anticipated risks/discomforts include participants' difficulty with conversational dialogue, disclosure of the participants' diagnosis, and a possible breach of the participants' confidentiality. To minimize any risks/discomforts associated with the study, the participants may elect to provide their responses in writing, will select a pseudonym, and all materials collected for the study will be secured in a locked container and any electronic information will be password protected using a Cruzer USB Flash Drive throughout the duration of the study.

Item #6: INCENTIVES

As a participant in this study, I will select a gift card from iTunes, GameStop, Starbucks, or Target. The value of the gift card will be pro-rated at \$5.00 for each session (interview, photo elicitation, and information verification meeting) of the study in which I participate. The total value of the gift card will not exceed \$15.00.

Item #7: CONFIDENTIALITY

To protect my confidentiality, I will select a pseudonym that will be used to conceal my identity and no identifying information, including the name of my institution, will be mentioned in the report. The student researcher will maintain all data collected for the study and will be the only person who will know my identity. All data will be secured in a locked container, and any electronic data will be stored and password protected on a Cruzer USB Flash Drive. At the conclusion of the study, all data will be stripped of identifiers and shredded and the audio recordings will be transcribed/analyzed and then destroyed upon completion.

No individual identifiable information about me, or provided by me during the research, will be shared with others, except if necessary to protect my rights or welfare (for example, if I am injured and need emergency care) or if required by law. As a study participant, I will have an opportunity to review final transcripts and individual statements.

Item #8: FURTHER QUESTIONS

The researcher will answer any further questions about the research, now and during the course of the project, and can be reached by telephone at: 770.274.5235 (office) or 352.255.2971(cell) or by email at mikeand@uga.edu. Also, participants may contact Dr. Diane L. Cooper with the University of Georgia at 706.542.1812 or via email at dlcooper@uga.edu.

Item #9: FINAL AGREEMENT

My signature below indicates that the researcher has answered all of my questions to my satisfaction and that I consent to volunteer for this study. I have been given a copy of this form.

Item #10: CONSENT FORM SIGNATURE LINES FORMAT

James Michael Anderson

Name of Researcher

Signature

Date

Name of Participant

Signature

Date

Item #11 IRB OVERSIGHT PARAGRAPH

The Georgia Perimeter College Institutional Review Board also approved this study.

Additional questions or problems regarding your rights as a research participant should be addressed to The Chairperson, Institutional Review Board, University of Georgia, 629 Boyd Graduate Studies Research Center, Athens, Georgia 30602; Telephone (706) 542-3199; email address IRB@uga.edu

Sincerely,

James Michael Anderson, Ph.D. Candidate

352.255.2971 (cell) or 770.274.5235 (office)

E-mail: mikeand@uga.edu

Department of Counseling and Human Development Services

The University of Georgia

APPENDIX F

DEMOGRAPHIC PROFILE AND INCENTIVE INFORMATION

Demographic Profile and Incentive InformationSection I

Name (pseudonym):

Age:

Ethnicity:

Sex/Gender:

Section IIIncentive Information

I understand that if I participate in this study, I will receive a \$5.00 gift card from iTunes, GameStop, Starbucks, or Target for each session (interview, photo elicitation, and information verification meeting) of the study in which I participate. The total value of the gift card will not exceed \$15.00.

Which gift card would you prefer (circle one)?

1. iTunes
2. GameStop
3. Starbucks
4. Target

APPENDIX G

WRITING PROMPTS FOR PHOTO ELICITATION DATA

Writing Prompts for Photo Elicitation Data

Directions: Take a picture of a location you often visit on campus. Write a short explanation about the location using the following prompts to guide you:

- Explain why you go to this area of campus.
- Describe what the environment is like for you.
- Describe the activity or activities you engage in when visiting this space.
- What is it about this space that influences you to return?

Directions: Take a picture of a location you visit infrequently on campus. Write a short explanation about the location using the following prompts to guide you.

- Explain why you chose not to visit this area of campus.
- Describe what the environment is like for you.
- Describe the activity or activities you see others engage in when visiting this space.
- What is it about this space that influences you not to return?

APPENDIX H

POSTSECONDARY SUPPORT PROGRAMS

- University of Alabama Autism Spectrum Disorders College Transition and Support Program (UA-ACTS)
- University of Arkansas Autism Support Program
- Transition to Independent Living Program at Taft College-California
- University of Connecticut SEAD Program (Strategic Education for students with ASD)
- Nova Southeastern University
- University of West Florida
- The University of Iowa (UI REACH Program)
- Western Kentucky University
- Community College of Baltimore County-Essex Campus
- Supported Education Services (part of ODS)-Boston University
- Western New England University
- Autism Collaborative Center (Eastern Michigan University)
- University of Minnesota
- Farleigh Dickinson University-COMPASS Program
- Rutgers University
- Bridges to Adelphi Program (Adelphi University)
- Rochester Institute of Technology
- Defiance College
- Wright State University-Office of Disability Services
- Eastern University-The College Success Program for Students Living with Autism Spectrum Disorder
- Mercyhurst
- St. Joseph's University
- University of Tennessee Chattanooga
- George Mason University
- Bellevue College-Autism Spectrum Navigators program (Washington State)
- College Program for Students with Asperger's Syndrome at Marshall University-West VA Autism Training Center