

**Students with Autism Spectrum Disorder: The Transition from High School to College
and Factors that Influence Freshman Year Adjustment**

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Abstract

The concept of social and emotional limitations in individuals was first introduced by Kanner in 1943 (Kanner, 1992), when he coined the term “early infantile autism” (p. 1). This early diagnosis evolved into what is currently referred to as autism spectrum disorder (ASD) (Zeldovich, 2018, p. 2). More individuals are living with ASD than in years past. According to the Centers for Disease Control and Prevention (2019a), as many as 1 in 59 children were diagnosed with ASD in 2019, compared with previous estimates of four to five per 10,000. According to Shattuck et al. (2012), approximately one-half of students with ASD transition into post-secondary institutions. VanBergeijk, Klin, and Volkmar (2008) indicated that while prepared academically, individuals with ASD are often unprepared socially for the college environment. The purpose of the current study was to examine the perceptions of individuals with ASD who had completed the freshman year of college about services from an Office of Adult Learning and Vocational Rehabilitation (OAL) and a university Disability Services Department (DSD) that contributed to their successful transition from high school into a post-secondary institution. In addition, respondents also shared perceptions about social engagement challenges during the freshman year that impacted independent living, supports from the OAL and DSD that contributed to successful social engagement and independent living, challenges that impacted academic performance, and supports provided by the OAL and DSD during the freshman year of college that contributed to successful academic performance. Ten students living with ASD who had completed the freshman year of college participated in semi-structured interviews. Data obtained from the interviews were analyzed to identify themes. Seven themes emerged from this study:

(1) The OAL impact on the transition from high school to college; (2) the DSD impact on the transition from high school to college; (3) social challenges during the freshman year; (4) impact of the OAL on social engagement; (5) impact of the DSD on social engagement; (6) academic challenges during the freshman year; and (7) DSD accommodations that aided academic success. Theme seven included six subthemes: note-takers, tutors, extended testing time, testing in a room with limited distractions, student support groups, and a mentor. The findings of this study may be useful for individuals with ASD who are considering or currently attending college, parents or guardians, vocational rehabilitation counselors, university DSD personnel, university academic advisors, and other professionals who work with individuals with ASD in a higher education setting.

Dedication

This dissertation is dedicated to the women (my mother, grandmother, sister, and nieces) in my life. They are the most giving people one could have in their life. They have always been giving of their time, wisdom, laughter, and encouragement. A simple interaction has provided many days of light. My mother and grandmother provided me with the foundation that allows me to dream big and achieve some of the most impossible goals. Because of them, I am able to accomplish a lifelong goal of obtaining a doctorate.

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Chapter 1

Introduction

According to Evans (2013), Eugen Bleuler coined the term autism in 1911 to refer to individuals living with schizophrenia who were severely withdrawn (p. 4). Evans (2013) stated it was Kanner who first described characteristics of individuals using the term autism in 1943 (p. 10). This early diagnosis evolved into what is currently referred to as autism spectrum disorder (ASD) (Zeldovich, 2018). According to Zeldovich, “The DSM-IV (1994) was the first edition to categorize autism as a spectrum” (p. 3). “People with (ASD) represent a consistently growing population” (National Academies of Sciences, Engineering, and Medicine, 2015, p. 241). The rehabilitation community continues to gain an understanding of the needs of this population and how to provide support in a traditional postsecondary educational environment. According to VanBergeijk, Klin, and Volkmar (2008),

Currently, there are no precise statistics on college enrollment of students with ASD, but it is estimated that ASD students comprise anywhere from 0.7 percent to 1.9 percent of the college population with an 80% incompleteness rate. These numbers will most likely increase in coming years and will make the need for understanding individuals with ASD even more imperative. (p. 38)

According to the U.S. Autism and Asperger Association (2013), students living with ASD demonstrate the academic aptitude and the cognitive reasoning to achieve academic success in college. However, the transition into college can prove to be difficult for individuals living with ASD. Often gaining admission without identifying themselves as individuals with ASD, these students go unnoticed by their professors until

their sensory, social, learning styles, and organizational challenges exacerbated by fatigue, cause them to fail (U.S. Autism and Asperger Association, 2013).

Background

According to the Centers for Disease Control and Prevention (CDC, 2019a), as many as 1 in 69 children were diagnosed with ASD in 2012, compared with previous estimates of four to five per 10,000. According to Firestone, Cole, and Buissink (2008), ASD diagnoses were more common than pediatric cancer, diabetes, and AIDS combined. The Missouri Autism and Developmental Disabilities Monitoring Network (2020), a group funded by the CDC (2019a), estimated that 1 in 74 children in the St. Louis area had a diagnosis of ASD in 2016. Nationally, the CDC (2019b) estimated that 1 in 59 children were diagnosed with ASD in 2019 based on counts from key cities. ASD is not identified at the same rate for various locations or various racial/ethnic groups. According to Durkin et al. (2010), the disparities in identification can be quite large based on the cities' access to diagnosticians and the diagnostic bias of a clinician.

Research on ASD is still in its infancy, and knowledge about the brain disorder is growing by leaps and bounds. Forty-four percent of the children diagnosed with ASD have an IQ score in the average to above average range (Baio et al., 2018, p. 2). This means their IQ score falls between 85 and 115. According to Shattuck et al. (2012), 34.7% of individuals with ASD attempt college within six years of leaving high school. While students with ASD may come to college academically prepared, they are often underprepared socially (VanDerBeek et al., 2008). Many factors lead to an individual's successful transition from high school to college, but having a transition plan may be a key indicator of success. Pinder-Amaker and Bell (2012) stated,

A transition plan should be developed for those young people with ASD who plan to attend college. One idea is to establish a campus support system for the student, much like the parent-teacher-therapist teams, that support students with ASD throughout the college experience. Another idea is for campuses to create a summer transition program for ASD students that teaches skills and strategies for navigating different parts of campus life. (p. 525)

Establishing a transition plan and defining success assists vocational rehabilitation counselors and the university to identify the needs of students with ASD.

As part of a transition plan, the student should work closely with the higher education institution's disability services program. Working with the university's disability services program requires the student to disclose ASD and provide documentation of the disability and accommodation needs. For individuals living with ASD, self-disclosure can be challenging and often they prefer to avoid these situations. (Foden & Anderson, 2011). The stigma associated with disclosure is one of the most persistent problems facing individuals with ASD. "The disclosing could lead to subtle or obvious forms of prejudice" (Sarris, 2018). For many, disclosure makes them different from the rest of the student body. However, if disability services personnel are armed with reasonable accommodation information, learning supports could potentially assist the student to be successful. Milton (2016) indicated that it is still a matter for debate whether disclosing autism leads to better outcomes for the person with autism, although medical policy and charity information emphasize the importance and value of diagnosis for improved outcomes.

ASD is an acronym that is pervasive in our zeitgeist, but it is not always entirely understood. Barahona-Correa and Filipe (2016) provided a historical description of how ASD evolved. According to Barahona-Correa and Filipe, in 1944, Hans Asperger, a Viennese pediatrician, first described ASD as a neurological disorder. Chown and Hughes (2016) indicated that at the same time, Leo Kanner, an Australian physician living in the United States, began to describe children he saw with similar characteristics. Both physicians called the disorder they described 'autism.' However, it was Dr. Kanner's form of autism that became the subject of extensive research for the next 40 years. Kanner's (1943) theory was characterized by significant cognitive and communicative deficiencies, including delayed or absent language development. According to Barahona-Correa and Filipe (2016), in 1944, Asperger described children with social-communication impairment, eccentric manners, unusual interests, and cognitive domains of hyper-functioning. Attwood (2007) indicated that Lorna Wing, a British psychiatrist, realized that many of the patients she was seeing did not meet the criteria for autism as described by Kanner. According to Attwood (2007), Wing described some of her clients as being more similar to the individuals Asperger had written about and she used the term Asperger's Syndrome to provide new diagnostic criteria within ASD. However, according to the American Psychiatric Association (APA, 2013), within the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), Asperger Syndrome is now absorbed under ASD and rated on a severity scale.

There are two prominent characteristics of individuals living with autism: communication and social challenges, and an abnormal focus on a specific topic or

interest (Gobbo & Shmulsky, 2012). Autism is referred to as a spectrum disorder due to the wide range of ability levels. Some individuals with ASD are non-verbal and engage in stereotypic, repetitive behaviors while others are very high functioning, contributing members of the community (Attwood, 2007). Professors will most likely encounter higher functioning individuals within the spectrum in their university courses (White, Ollendick, & Bray, 2011).

Individuals with high functioning autism (HFA) bring many positive attributes to the college campus. According to Attwood (2007), they have a unique perspective that will enrich group activities, and tend to be honest and loyal. They also tend to be persistent in their efforts and can focus on one thing for extended periods of time. In general, those with HFA are conscientious, logical, attentive to detail, and thrive on routine and clear expectations (Attwood, 2007).

Literature describing the concerns faced by college students with ASD is growing. The majority of postsecondary ASD literature addresses the social side of student life, including residence life, roommate relations, independent living, self-care, and dating. These areas are critical because they are the foundation for adjustment in college and they can be impaired by ASD (Freedman, 2010; Wolf, Brown, & Bork, 2009). Limited literature focuses on how ASD symptoms manifest in college and university classrooms.

Adreon and Durocher (2007) described a review of the literature regarding the transition between high school and college. These authors indicated that institutions reported difficulty in serving students with autism. Institutional challenges included inconsistent identification and service delivery to students on the spectrum, a negative effect of large class sizes, and limited contact between tutors and students (Adreon &

Durocher, 2007). At the time of the current study, according to White et al. (2017), services offered to postsecondary students with ASD were sparse but growing, as postsecondary institutions were taking steps toward serving this subset of students.

Statement of the Problem

The concept of social and emotional limitations in individuals was first introduced by Kanner in 1943 (Kanner, 1992), when he coined the term “early infantile autism” (p. 1). Research regarding ASD and the transition to independence is bountiful, but there is limited literature that describes the specific characteristics of the successful transition and persistence of students living with ASD from high school to an institution of higher learning. Janiga and Costenbader (2002) indicated the specific challenges faced by students with ASD include difficulty with academic content, organization, time management, and study skills. According to Janiga and Costenbader (2002), these difficulties are exacerbated by several issues, including proper identification of students in need of services by the university, the hidden nature of the disability, students’ reluctance to disclose their disability, large class sizes, and more limited teacher–student contact in college settings.

The Missouri Department of Elementary and Secondary Education (2020) identified the Office of Adult Learning & Vocational Rehabilitation (OAL) with the vocational rehabilitation counselor (VRC) facilitating process as the responsible entity for providing vocational rehabilitation services to individuals with disabilities in order to promote their education, employment, or reemployment. The OAL evaluates students’ interests, qualifications, and limitations to develop appropriate education or employment objectives for the individual living with a disability. These services are managed by

vocational rehabilitation counselors who may have limited knowledge of how to best support clients living with ASD. One of the OAL primary goals for the past 10 years has been to improve transitional services for individuals with ASD (Missouri State Rehabilitation Council, 2013). “The transition services process is generally initiated by the special educators who work closely with vocational rehabilitation counselors to ensure that eligible students receive the services they need to successfully transition to life after K–12 education.” (Fish & Smith-Augustine, 2015, p. 3). The transition process starts when the student enters high school or reaches the age of 14. Needed services must be identified in the student’s IEP by the age of 16 (Fish & Smith-Augustine, 2015, p. 2).

OAL (2015) defined transition-age consumers as individuals with disabilities between the ages of 16 and 24. OAL assists these consumers either in or outside of the secondary school setting to successfully prepare them to move into postsecondary education, integrated employment (including supported employment), or vocational training. In striving to improve and expand the quality of services for transition-age consumers with significant disabilities in high school, OAL provides support and technical assistance to local school districts. In addition, the transition team, which is composed of personnel from OAL, the school districts, and other state/community agencies, provides support for transition-related activities and services for youth with ASD (OAL, 2015).

Roux et al. (2013) estimated that 50,000 Americans with ASD turn 18 each year as part of "a surge of children" (p. 931) completing high school. According to VanBergeijk et al. (2008), the initial individuals with ASD, as defined in 2020, were diagnosed in the 1990s. OAL implemented transition protocols to meet the needs of these individuals

when they entered high school. However, there may be gaps in services affecting the preparation of students for success in postsecondary education.

Personnel in institutions of higher education have gained an understanding of the needs of individuals with learning disabilities and the characteristics of an effective integration into higher education settings (National Joint Committee on Learning Disabilities, 1999). However, although additional university programs are being created, there is limited research documenting successful university programs for students with ASD (West, 2019). There is also limited information on the factors that increase the probability a student living with ASD will successfully matriculate into a higher education setting. Additional research is needed.

Purpose of the Study

Eight purposes guided the current study. The first purpose of the current study was to investigate what individuals with ASD who had completed the freshmen year of college perceived were services provided by the OAL that supported a successful transition from high school into a higher education setting. The second purpose was to examine perceptions of individuals with ASD who had completed the freshmen year of college about services provided by a college or university's Disability Services Department (DSD) that supported a successful transition from high school into a higher education setting. A third purpose was to study perceptions of individuals with ASD who had completed the freshmen year of college about social engagement challenges during the freshman year that impacted independent living. The fourth purpose was to ascertain perceptions of individuals with ASD who had completed the freshman year of college about supports from OAL that contributed to social engagement and independent living

during the freshman year. The fifth purpose was to determine perceptions of individuals with ASD who had completed the freshman year of college about supports from the DSD that contributed to social engagement and independent living during the freshman year. The sixth purpose was to investigate perceptions of individuals with ASD who had completed the freshman year of college about challenges during the freshman year that impacted academic performance. The seventh purpose was to research perceptions of individuals with ASD who had completed the freshman year of college about supports from the OAL that contributed to academic success during the freshman year. The eighth purpose was to explore perceptions individuals with ASD who had completed the freshmen year of college about supports from the DSD that contributed to academic success during the freshman year.

Significance of the Study

The results of this study may be of interest to vocational rehabilitation counselors, high school educators, staff associated with certified rehabilitation programs, individuals with ASD and their families, and institutions of higher education that provide support to individuals living with ASD. Determinations about the path a young person with ASD should follow that yields the greatest success will determine the individual's ability to live independently when supports are reduced. The interventions used to further success could have a direct impact on local economies, allocations of federal and state dollars, and the effectiveness of the P-16 education system.

Delimitations

Lunenburg and Irby (2008) described delimitations as boundaries identified by the researcher that define the purpose of the study. The researcher narrowed the focus of the study with the following delimitations:

1. The study was conducted in a 60-mile radius of a large Midwestern urban city.
2. The study was limited to students who received educational support services from an OAL and the DSD of a postsecondary institution when transitioning from high school to college in the fall of 2019.
3. To be considered for participation in the current study, the respondents were required to have completed one academic year of college or the freshman year of college. Participants were not required to be currently enrolled.

Assumptions

Lunenburg and Irby (2008) described assumptions as “postulates, premises, and propositions that are accepted as operational for purposes of the research” (p. 135). This study was conducted under the following assumptions:

1. All participants received an accurate diagnosis of ASD.
2. Participants understood the interview questions and were honest in providing responses.

Research Questions

This study examined the perceptions of individuals with ASD who had completed the freshman year of college about the impact the OAL and the university DSD had on transition from high school to college, social engagement and independent living, and

academic performance during the freshman year. Eight research questions guided this study:

RQ1. What do college individuals with ASD who have completed the freshmen year of college perceive are services provided by the OAL that supported a successful transition from high school into a higher education setting?

RQ2. What do individuals with ASD who have completed the freshman year of college perceive are services provided by the university DSD that supported a successful transition from high school into a higher education setting?

RQ3. What do individuals with ASD who have completed the freshman year of college perceive were social engagement challenges during the freshmen year that impacted independent living?

RQ4. What do individuals with ASD who have completed the freshman year of college perceive were supports from the OAL that contributed to successful social engagement and independent living during the freshman year?

RQ5. What do individuals with ASD who have completed the freshman year of college perceive were supports provided by the university DSD that contributed to successful social engagement and independent living during the freshman year?

RQ6. What do individuals with ASD who have completed the freshman year of college perceive were challenges during the freshman year that impacted academic performance?

RQ7. What do individuals with ASD who have completed the freshman year of college perceive were supports from the OAL that contributed to successful academic performance during the freshman year?

RQ8. What do individuals with ASD who have completed the freshman year of college perceive are supports provided by the university DSD that contributed to successful academic performance during the freshman year?

Definition of Terms

This section provides terms and definitions used throughout the study to enable the reader clarity and understanding.

Autism Spectrum Disorder (ASD). According to the APA (2013),

People with ASD tend to have communication deficits, such as responding inappropriately in conversations, misreading nonverbal interactions, or having difficulty building friendships appropriate to their age. In addition, people with ASD may be overly dependent on routines, highly sensitive to changes in their environment, or intensely focused on inappropriate items. The symptoms of people with ASD will fall on a continuum, with some individuals showing mild symptoms and others having much more severe symptoms. This spectrum allows clinicians to account for the variations in symptoms and behaviors from person to person. (p. 1)

Disability Services Department (DSD). According to Cory (2011), universities have developed disability service departments (DSD) to fulfill both legal and ethical obligations of supporting students with disabilities through offering protection from discrimination and providing accommodations as part of compliance with related laws. The primary purpose of university disability services departments is to act as a resource in identifying reasonable accommodations and support services for students with

disabilities. In addition, the DSD role is to equip students with disabilities with the knowledge to be self-advocates for needed accommodations (Cory, 2011).

Office of Adult Learning and Vocational Rehabilitation (OAL). According to the OAL (2019),

Adult Learning Services include Adult Education and Literacy, High School Equivalency Testing, and Veterans' Education and Training. Adult Education and Literacy provides adult basic education including preparation for High School Equivalency (HSE) testing and English as a Second Language services.

Rehabilitation Services has three core programs: Vocational Rehabilitation (VR), Disability Determination Services (DDS), and Independent Living (IL). VR provides individual counseling, training and other services to help individuals with disabilities obtain and maintain employment. Operating under Social Security regulations, DDS determines medical eligibility for individuals seeking federal disability benefits. The IL programs offer peer counseling, advocacy, personal care, and training in independent living skills for individuals with disabilities. (p. 1)

Organization of the Study

Five chapters are included in this study. The first chapter provided an introduction, statement of the problem, purpose of the study, significance of the study, delimitations, assumptions, research questions, and definitions of common terms used throughout the study. Chapter 2 includes the literature review. In this chapter, an historical overview of ASD, description of treatments and interventions, history of disability services in higher education, review of the high school to college transition

process, and research related to college faculty and staff knowledge about ASD are addressed. Chapter 3 provides a description of the methods used in the study. This chapter includes the research design, setting, sampling procedures, instrument, data collection procedures, data analysis and synthesis, reliability and trustworthiness, researcher's role, and limitations. Chapter 4 presents the study results. Chapter 5 includes a summary of the study, major findings related to the literature, and conclusions that include implications for action, recommendations for future research, and concluding remarks.

Chapter 2

Review of the Literature

This chapter summarizes literature on Autism Spectrum Disorders (ASD) and the impact on a student transitioning to postsecondary education. First, the historical background of ASD is summarized. Second, treatments and interventions for students with ASD are described. Third, an overview of the history of disability services in higher education is presented. Next, the high school to college transition process is delineated. The final section presents a summary of studies that describe college faculty and staff knowledge about ASD.

Historical Background

Autism Spectrum Disorder (ASD) is a neurodevelopmental syndrome that is defined by deficits in social reciprocity and communication, and by unusual restricted, repetitive behaviors (APA, 2013). ASD is a heterogeneous condition with no two individuals displaying the exact same behaviors. However, these behaviors can be categorized in measurable domains and are usually consistent over time. Dr. Hans Asperger was the first to write a thesis regarding his findings about a set of related behaviors and symptoms for a small group of boys he was treating. Wing (1981) was the first to translate and publish Asperger's work. According to Wing, Asperger identified a unique thread of common behavior and personality traits in several of his patients. He was treating young boys who shared commonality in barriers in social relationships, verbal and non-verbal communication, and restricted repetitive patterns of interest in activities or hobbies. Asperger's work was buried within the context of World War II until Wing published on the subject in 1981. In 1994, the diagnostic criteria for ASD was

added to the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-4) (APA, 1994).

ASD is a group of neurologically based development disorders affecting a person's thinking, perception, attention, social skills, and behavior (APA, 2013).

Although ASD has seen a growth of acceptance in society, it is still a relatively new term.

It was not until 2013 that the APA classified the term in the DSM-V. The DSM-V provided the diagnostician with a clear set of diagnosis criteria. The APA (2013) in the DSM-V stated that the following must be present for identification of ASD:

- a. Persistent deficits in social communication and social interaction across multiple contexts, as manifested by the following, currently or by history.
- b. Restricted, repetitive patterns of behavior, interests, or activities, as manifested by at least two of the following, currently or by history.
- c. Symptoms must be present in the early developmental period (but may not become fully manifest until social demands exceed limited capacities or may be masked by learned strategies in later life).
- d. Symptoms cause clinically significant impairment in social, occupational, or other important areas of current functioning.
- e. These disturbances are not better explained by intellectual disability (intellectual developmental disorder) or global developmental delay.

Intellectual disability and autism spectrum disorder frequently co-occur; to make comorbid diagnoses of autism spectrum disorder and intellectual disability, social communication should be below that expected for general developmental level. (p. 50)

In addition, the APA (2013) in the DSM-V classified the prior well-established DSM-IV diagnosis of autistic disorder, Asperger's disorder, or pervasive developmental disorder not otherwise specified within the diagnosis of autism spectrum disorder. The individuals living with ASD will have characteristics present for life. However, the disorder is not degenerative, and it is possible for the individual to see improvement. These changes may be a result of the individual aging or a behavioral intervention designed to address the characteristics of ASD. While social-communication deficits and repetitive behaviors tend to improve over time (Howlin & Moss, 2012), they nevertheless continue into adulthood (Seltzer, Shattuck, Abbeduto & Greenber, 2004), and few adults with ASD, including those with good language and cognitive abilities, have good employment or educational outcomes (Farley et al., 2009; Magiati, Tay & Howlin, 2014; Seltzer et al., 2004).

According to Van Bergeijk et al. (2008) even when individuals living with ASD enroll in an institution of higher education, they may not reach their full academic potential. Additionally, Wei, Yu, Shattuck, McCracken and Blackorby (2013) indicated that young adults living with ASD in the United States had one of the lowest rates of college enrollment, with over 50 % being in neither education nor employment initially following secondary school. ASD students not enrolled at an institution or employed may elect to pursue other community-based programs. The programs may not yield a certificate or mastery of a skill, but allow the individual to gain additional knowledge related to a specific interest leading toward future employment.

“In the 1970s, it was estimated that ASD affected only about 1 in 10,000 children in the United States. However, by 2003 it was estimated that five out of every 1,000

children would be diagnosed with ASD” (Myler, Fantacone, & Merritt, 2003, p. 76). According to Baxter et al. (2015), “An estimated 1–2% of children worldwide lie on the autism spectrum, with approximately 52 million autistic individuals across the globe. This was equal to approximately 1.5 million children living with ASD” (p. 601). By the year 2017, most of these individuals had reached or were approaching the age of entering post-secondary education. It is estimated that 3.3% of Americans were enrolled in an institution of higher education in 2018 equaling 16.6 million new students entering higher education (National Center for Education Statistics, 2019, p. 1). “Based on these numbers, it is estimated that “54,000 of these students were living with ASD” (Wilkinson-Flicker, 2019, p. 1) in 2018.

Several factors have contributed to the increased identification of individuals with ASD. In part, the growth in the identification of ASD is related to childhood health and development indicators including “socioeconomic status (SES) which includes household wealth or income, and parental education and occupation” (Susser, Watson, & Hopper, 1985, p. 603). Evidence is mixed for an association between ASD and SES. In the earliest clinical descriptions of children with autism, Kanner (1943) noted a preponderance of highly intelligent parents as a link to ASD. Lotter (1967) found there was a positive association between SES and ASD prevalence likely due either in part or entirely to “ascertainment bias” (p. 164). The correlation was supported in a subsequent study by Maenner, Arneson, and Durkin (2009). These authors indicated that the “prevalence increased with increasing SES” (p. 37). According to Tsai, Stewart, Faust, and Shook (1982), “there is a positive correlation between the social economic status and

a guardian or parent having access to information and the financial means to support specialized services” (p. 212).

Treatments and Interventions

The etiology of ASD has yet to be determined. Therefore, no cure has been developed to address possible causation. However, several treatments and interventions are used with individuals with ASD to improve quality of life and manage some symptoms of ASD. Joshi et al. (2013) found while there is no established pharmacological treatment for ASD per se, there are well-known evidence-based pharmacotherapies for many of the psychiatric disorders afflicting adults with ASD. Subjects with ASD are generally excluded from drug trials for the treatment of major psychiatric disorders due to evidence that their psychopharmacological responses may be atypical (Handen, Johnson & Lubetsky, 2000; McCracken et al. 2002; Posey et al. 2006; Research Units on Pediatric Psychopharmacology Autism Network 2005). Research that delineates between ASD and other psychiatric conditions may lead to the development of ASD specific therapeutic interventions.

Dawson et al. (2012) indicated that in addition to psychopharmacology strategies there have been a number of additional interventions established to be used with individuals under the age of 18 who have ASD. These interventions center on reducing symptoms, improving cognitive ability, acquiring skills to live independently, and increasing the capacity of the young person to function in their respective community. “The additional types of interventions include occupational therapy, applied behavior analysis (ABA), social skills training, physical therapy, sensory integration therapy, and the use of assistive technology” (Dawson et al., 2012, p. 1151).

Welch and Polatajko (2016) indicated that “Occupational therapy is one of the most common services received by people with autism spectrum disorder” (p. 1). Occupational therapists contribute to the diagnostic process and support and educate families in a variety of settings, using their expertise to enable engagement in occupations such as play, self-care, school activities, and employment (American Occupational Therapy Association, 2015; Rodger & Polatajko, 2014). Occupational therapists commonly include ABA principles when they are providing an intervention. Services based on ABA principles are also among the treatment options most frequently sought by people with autism (Matson et al., 2012). According to Linstead et al. (2017), “Among the numerous treatments available for helping to educate people with autism, ABA is the one of the most widely used and empirically evaluated interventions” (p.1). Jensen and Sinclair (2002) stated,

ABA refers to a variety of psychosocial interventions that use behavioral principles to shape an individual’s behavior. Examples include Lovaas therapy, Discrete Trial Training, Early Intensive Behavior Intervention, Pivotal Response Training, and Responsive Education and Prelinguistic Milieu Therapy. These services are commonly provided to children with Autism Spectrum Disorder.

(p. 42)

Applied behavior analysis has demonstrated improvements for young children with autism. This includes the development of an effective skills repertoire, the control of challenging behavior, successful integration into mainstream schools and for some, it is claimed, apparently normal levels of functioning (Anderson, Avery, DiPietro, Edwards, & Christian 1987; Lovaas 1987; McEachin, Smith, & Lovaas 1993; Smith 1999).

Another intervention is Social Skills Training (SST) that consists of early-intervention behavioral treatments designed to foster correct behavior development. The key premise of this intervention is to introduce a reward system to teach children with ASD about the recognition and application of normal social skills. According to Chung et al. (2007), pairing SST with “video feedback and behavior management was an effective mode of intervention for children with ASD” (p. 423). Researchers have demonstrated that rewards, in particular, promote cue-evoked reward-seeking behaviors (Sesack & Grace, 2009).

Pairing assistive technology with the previous discussed interventions makes them more accessible or attractive to children who have integrated technology in their daily routine.

Virtual reality technology may be an ideal tool for allowing participants to practice behaviors in role-play situations, whilst also providing a safe environment for rule learning and repetition of tasks. Role-play within virtual environments could promote the mental simulation of social events, potentially allowing a greater insight into minds. Practice of behaviors, both within and across contexts, could also encourage a more flexible approach to social problem solving. Virtual environments offer a new and exciting perspective on social skills training for people with autistic spectrum disorders. (Parsons & Mitchell, 2002, p. 430)

Using physical therapy as an intervention promotes improvement in functional movement and balance, and reduces barriers that prevent moving through the environment successfully. No two children on the spectrum are the same. Therefore, this

intervention may not be appropriate for all. However, some children living with ASD may experience low muscle tone, poor balance, lack of coordination, or a combination of the above. “Results indicate that children with ASD demonstrate motor skills at a lower performance level than those of their typically developing peers” (Ennis, 2011, p. 4). A physical therapist can address these areas. The improvement of these functions can be achieved in a number of ways. One intervention that has shown promise is combining physical therapy and aquatics programs. This model provides a method aiding the development of physical, social, and communication skills (Ennis, 2011).

Sensory processing disorder (SPD) is quite common among children with ASD. Reports of SPD in the literature range from 42% to 88% (Baranek, 2002). Children with evidence of SPD, such as those with ASD, often have difficulty regulating responses to sensations and specific stimuli and may use self-stimulation to compensate for limited sensory input or to avoid overstimulation (Roberts, King-Thomas, & Boccia, 2007). Pfeiffer, Koenig, Kinnealey, Sheppard, and Henderson, (2011) found that children with ASD who participated in a 6-week occupational therapy program using sensory integration made significantly greater gains in their individualized goal attainment scale scores in comparison to those who received a fine motor intervention (Pfeiffer et al., 2011).

These interventions can be offered throughout a young person’s K-12 experience due to a number of federal laws that require schools to provide these services. One of those laws is the Individuals with Disabilities Education Improvement Act (IDEIA, 2004). This law provided students living with ASD the right to obtain educational services that meet their specific educational needs. Additionally, Section 504 of the

Rehabilitation Act of 1973 prohibited discrimination toward students living with any disability in a program or institution that receives federal funding. The act stated:

No otherwise qualified handicapped individual in the United States shall, solely by reason of his handicap, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. (Rehabilitation Act of 1973 Section 504)

However, the diagnosis of ASD alone will not guarantee a student will qualify to receive services under IDEIA. A student deemed high functioning will not qualify to receive special services under the IDEIA umbrella, but accommodations may still be provided through Section 504.

Conversely, when reviewing the 2004 IDEIA and Section 504 of the Rehabilitation Act of 1973 there are some distinct variances between IDEIA and a Section 504 plan. IDEIA specifies that school districts, not universities and colleges, must provide a free and appropriate public education (FAPE) to each qualified person with a disability, regardless of the nature or severity of the disability. Section 504 is a civil rights law intended to prevent discrimination by institutions receiving public funds. Institutions, including universities and colleges, are required to comply with Section 504 because they receive federal funding in the form of grants or other government subsidies. Section 504 uses broad terms to define disability. The law includes a wide group of students with physical or mental disabilities that substantially limit a major life function. Human immunodeficiency viruses (HIV), Tourette's syndrome, attention deficit disorder, heart conditions, and tuberculosis are just a few examples of conditions that could be potentially disabling according to Section 504. In contrast, the IDEIA regulations

defined disability as one of 13 specific diagnoses: autism, hearing impairments, deafness, deaf-blindness, mental retardation, students with multiple disabilities, orthopedic impairments, serious emotional disturbance, specific learning disabilities, speech or language impairments, traumatic brain injuries, visual impairment, or other health impairment disabilities. In some cases, IDEIA detailed the exact assessment criteria for inclusion in a category. In other cases, states can specify their own criteria, but the U.S. Department of Education must also approve these criteria.

As a student with a disability transitions into a college or university, there is no federal law requiring the institution of higher education to offer the same level of interventions provided in the P-12 school setting. However, the Americans with Disabilities Act (ADA) of 1990, Section 504 of the Rehabilitation Act of 1973, and the Higher Education Act (HEA) of 1965 outlined the rights the student has in an institution of higher education setting. Students with disabilities are able to get support through the institution DSD department if they are willing to provide documentation that verifies their disability. It is common for the student with a disability to provide an Individualized Education Program developed during the K-12 experience to the DSD.

The DSD's goal is to create an inclusive and accessible university community where students with disabilities have an equal opportunity to participate in all aspects of the educational environment fully. This is achieved in partnerships with students, faculty, and staff to promote students' independence and to ensure recognition of their abilities. The available intervention may vary based on the student's disability. Stephen F. Austin University (2021) provided a comprehensive summary of the role of the DSD:

- Facilitate and coordinate the provision of special accommodations for students with disabilities.
 - Develop policies and procedures to guide the provision of support services and institutional compliance with legislative mandates regarding persons with disabilities.
 - Communicate departmental procedures to students, faculty, and staff.
 - Facilitate assessment of documentation and applications for academic and housing accommodations.
 - Communicate to student applicant results of assessment, including requests for additional documentation, recommendations for transitional support services and/or accommodations.
 - Maintain pool of service providers and coordinate provider assignments.
 - Maintain confidential records, including documentation.
 - Provide guidance and resource referrals for students, faculty and staff who receive and/or provide access to facilities, programs, activities, and services for persons with disabilities.
 - Contact faculty and staff on behalf of student/clients when appropriate to facilitate the provision of accommodations and/or access to services.
- (para. 1)

The institution is only required to provide a reasonable accommodation.

(Americans with Disabilities Act of 1990). A reasonable accommodation is a modification or adjustment to a course, program, service, job, activity, assessment, test, or facility that enables a qualified individual with a disability to have an equal

opportunity to attain the same level of performance or to enjoy the same benefits and privileges that are available to an individual without a disability (Americans with Disabilities Act of 1990). Accommodations adjust for the effects the disability may have on the student's academic performance. They are not intended to reduce academic requirements (APA, 2012). Accommodations may include but are not limited to note-takers, tape recording class sessions, longer time to take tests, a reader for textbooks and written materials, and a transcriber for test questions.

When varying categories of disabilities are stratified, there is no universal intervention for a person living with ASD. "The current literature-base describing the experiences of and programs for individuals with ASD in college is fragmented and indicates that much research is necessary to understand how to serve this population best and to improve their outcomes" (Gelbar, Smith, & Reichow, 2014, p. 2599). The literature indicates that students living with ASD benefit from interventions provided to the broader disability population. Gelbar et al. (2014) reported that 67 % of respondents benefited from extra time on exams, 56 % when receiving lecture notes from instructors, 33% from use of a separate testing location, 22% from extended deadlines on assignments, 22% from lecture notes from peers, 11% from oral exams, and 11% from professor facilitation of group projects. Numerous researchers have described course curricula modifications as an individualized accommodation (Langford-Von Glahn, Zakrajsek, & Pletcher-Rood, 2008; Taylor 2005; Taylor, Baskett, Duffy, & Wren 2008).

History of Disability Services Departments (DSD) in Higher Education

The history of disability services in higher education started with a law establishing a college division of the Columbia Institution for the Deaf and Dumb by

President Lincoln in 1864 (Madaus, 2011). According to Gallaudet, Fisher and Lorenzo (1983) the name of the college was changed to Gallaudet College due to growing concerns of the words of deaf-mute being present in the name. The presence of individuals living with disabilities attending an institution of higher education was rare and mostly isolated to Gallaudet College (Madaus, 2011). With passing of the Smith-Sears Veterans' Rehabilitation Act of 1918, there was an increase of disabled soldiers entering colleges (Chatterjee & Mitra, 1998). The program at Ohio Mechanics Institute in Cincinnati provided over 400 veterans with educational assistance (Madaus, 2011). In 1944, with the passing of the GI Bill of Rights, higher education institutions experienced a surge in the request from veterans seeking entry into postsecondary institutions. Strom (1950) noted that in 1946, 1,080,396 disabled veterans out of total of 2,078,095 students enrolled in colleges. According to Strom (1950) this was "the first time in the history of American higher education that student bodies were composed of a sizable number of students living with a disability" (p. 38).

The early development of disability services centered on veterans living with a disability (Madaus, Miller, & Vance 2009, p.11). According to Madaus et al., the "civil rights movement and legislation and the education legislation at the K-12 level, served as a catalyst for an era of greatly expanded services" (p. 9). One way the K-12 system assisted in this process was by adopting the term learning disability in 1968 (Kavale, 2001). According to Kavale, this led the U. S. Office of Education to create a category of hidden disabilities, which was designated as specific learning disabilities. From 1977 to 1999, more than half of students living with a disability, estimated to be 2.8 million, met the criterion for this designation (Hallahan & Mercer, 2001). With the adoption of this

new category and the passing the Rehabilitation Act of 1973, the access to postsecondary education increased for students living with disabilities. This was due to “Section E of Section 504 specifically related to postsecondary education, and required institutions, both public and private, to consider the applications of qualified students with disabilities and to implement necessary accommodations and auxiliary aids for students with disabilities” (Madaus, 2011, p. 9).

With the increasing number of students entering postsecondary education, DSDs were created and played a critical role in assisting students living with a disability to have appropriate access and accommodations. McGuire (1998) asserted that DSD professionals must determine a student's eligibility for protection under the ADA/Section504, analyze documentation to ensure that it reasonably supports the claim of disability, decide the nature of reasonable accommodations on a case-by-case basis, and develop institutional policies and procedures. The role of DSD professionals may vary by institution. For this reason, Gamble (2000) conducted an analysis of DSD services that would allow administrators to gain a clear understanding of DSDs and legal requirements. Kim (2021) indicated that successful DSD professionals have knowledge and skills in a variety of areas including administration, direct services, consultation, collaboration, and institutional awareness. DSD professionals have the obligation to ensure the process of supporting students with disabilities has integrity while maintaining and honoring the rights of the student. It is best practice for this collaboration to start before a student attends classes for the first time (White et al., 2017). In addition, DSD personnel must ensure the institution is meeting all legal requirements relating to students receiving equal access (Shaw & Dukes, 2005).

Transition from High School to College

Traditionally, high school counselors have taken the lead helping all students with career development (McCarthy, Kerne, Calfa, Lambert, & Guzman, 2010). Jesse B. Davis is credited with developing the first guidance program in the United States in 1889 (Coy, 1999). The development of his guidance curriculum was in response to the 20th century industrialization and urbanization that was occurring (Aubrey, 1982). Poppen and Thompson (1974) stated that school guidance programs were adopted widely in large cities throughout the U.S. between 1914 and 1918. Originally, these programs were developed as a tool or technique to help students adjust to the changing landscape, but it was altered to include educational and academic guidance (Aubrey, 1982).

According to Aubrey (1982), in 1949, Mathewson proposed that teachers were not able to provide all the necessary requirements to optimize a student's development. It was his belief that guidance programs would be a component enhancing the student's ability to transition (Aubrey, 1982). The importance of these theories was solidified in 1954 with the creation of the first journal dedicated exclusively to the school counseling profession.

The work of these visionaries led to the development of programs that provided the framework of future programs. A program that has a history of success aiding in the transition process is the Stepped Transition in Education Program for Students (STEPS) with ASD. The program conceptually centers on the concepts of self-regulation and self-determination. Field and Hoffman (1994) defined self-regulation as the ability to identify and achieve one's own set goals. Self-determination was found to predict post-secondary school outcomes for neurotypical students living with a disability (Chambers et al.,

2007). Knowledge about one's disability, as well as its associated strengths and difficulties, is critical to self-determination (Hitchings et al. 2001; Webster 2004).

Long before starting a program such as STEPS, a conversation initiated by the high school guidance counselor or secondary teacher should occur with the student, family, and other identified supports to address needs related to adjusting to college. Hendricks and Wehman (2009) and Auger (2013) suggested that these conversations should occur in a small group meeting with the focus being on providing information on the college admission process. Additionally, a site visit to the prospective college should occur. This will allow the student to experience the college and will lead to a better transition. This site visit should be conducted in collaboration with the DSD, secondary school teacher, and identified support personnel. This collaboration can further assist in the transition between high school and college.

The first step in starting the high school to college transition process is to understand the student's goals. "Frequently, there are differences between the vision, hopes, and worries of the individual's family and what a young person with an ASD envisions for themselves" (Geller & Greenberg, 2009, p. 92). These differences often require considerable discussion and planning, often with trained personnel guiding the conversation.

When students are determined to be eligible for special education under IDEIA, they may receive services under various IDEIA eligibility categories, such as gifted, other health impaired (OHI), specific learning disabilities (SLD), ASD, or emotionally disturbed (Klin & Volkmar, 1995; Maag & Katsiyannis, 2000). When eligibility for services under a disability category occurs, challenges will often develop when creating a

transition plan that will address the unique needs that are present for these students.

Adreon and Durocher (2007) stated,

College DSD offices should review the student's Individual Education Program (IEP) to determine the specific supports provided for the individual in their high school environment. In general, goals and accommodations for students with ASDs focus on addressing social skills, communication, and sensory and organizational needs. (p. 274)

Adreon and Durocher (2007) explained that IDEIA provided benefits and services to children with disabilities in public schools and requires school districts to make services and benefits available to children with disabilities enrolled by their parents in nonpublic (private) schools. Therefore, once students are no longer in a public-school system, they no longer receive an accommodation under IDEIA. At some higher education institutions, the same or similar accommodation may be provided, but there is no guarantee that a specific accommodation will be honored by the institution. A discussion must occur between the DSD and the student to establish which accommodations will be provided.

The student will still be able to receive reasonable accommodations while in college. These accommodations will likely be different from what they received prior to entering college. One accommodation that is likely to continue is extended time to complete testing and projects. Additionally, a student may be permitted to have periodic breaks during exams. However, post-secondary institutions are obligated to maintain and enforce their conduct codes by maintaining academic standards, integrity, and freedom,

and to determine fundamental requirements of courses and programs (Wolf et al., 2009). Therefore, no accommodations can be in conflict with these standards.

The use of electronic organizers, smart phones, and tablets are now in frequent use to assist individuals with disabilities to manage their time and tasks and become more independent (Hart, Grigal & Weir, 2010). Most students will have access to a smart device. These devices provide a time management solution for many students living with ASD. Hart et al. (2010) noted that an added benefit to using commercially available devices is they do not make the student stand out or look different because practically every college student appears to be using them in the current academic culture.

College Faculty and Staff Knowledge about ASD

Wenzel and Rowley (2010) stressed the importance of engaging college faculty and staff to understand their impression of students with ASD. Zeedyk, Bolourian, and Blacher (2018) reported that “Little is known about college professor’s perceptions about this particular growing population of college-goers” (p. 2). The success of the ASD population has a positive correlation to the relationships established with faculty and staff, who may lack the knowledge and experience to provide the individualized intervention needed by the student to be successful (Dona & Edminster, 2001). A survey was conducted by Tipton and Blacher (2013) on a four-year university campus that included students, faculty, and staff. The survey focused on the common knowledge of the participants about ASD. The results indicated that most (70%) of the participants had knowledge of the prevalence of ASD. However, they attributed the prevalence to an unfounded theory that ASD is caused by vaccinations. The authors concluded that the

university community, which includes faculty and staff, had limited knowledge about ASD.

Two research studies by Zeedyk et al. (2018) expanded the Tipton and Blacher (2013) study by focusing on faculty teaching practices and how these practices impacted students with disabilities, their understanding of ASD, and how they interacted with students living with ASD. The first study focused on faculty teaching practices. Four themes emerged from the study. The first theme was that faculty considered ASD an invisible disability. For this reason, ASD often went undetected and the faculty never addressed the needs of the students. The second theme the researchers noted was the participants indicated that most of the supports provided by DSD were related to physical disabilities. The strategies to address the needs of students with ASD were limited and few alternative approaches were provided. The only intervention offered was providing extra time to complete an exam. The third theme reported by the researchers was the faculty and staff felt they did not have access to the information that would help them create a better experience for a student with ASD. Additionally, they did not know the legal boundaries of what questions they could ask a student. The fourth theme identified by the researchers was that participants were willing to participate in the study because they had some direct experience with ASD or they had a direct interest in gaining more knowledge about how to provide a better educational experience to people living with ASD.

In a second study, Zeedyk et al. (2018) focused on working with college staff to determine their understanding of ASD and their interactions with students with ASD. According to the authors,

11% of participants answered “yes” when asked if they had ever been diagnosed as having ASD, and 25% indicated that someone in their family had been diagnosed with ASD (of those, 35% had a diagnosed child, 6% a sibling, 59% an extended family member, and 6% did not want to disclose). When asked about having students with ASD in their classes, 44% indicated that they had had a self-disclosed student, and 79% had suspected that they had had a student with ASD”.

(p. 6)

Summary

This chapter provided a literature review of topics related to ASD. An historical background of ASD was summarized. Treatment interventions were described. A history of university Disability Services Departments was provided. An overview of the transition from high school to college was summarized. Studies that examined faculty and staff knowledge about ASD were summarized. Chapter 3 explains the methodology used in the current study, including the research design, setting, sampling procedures, instrument, data collection procedures, data analysis and synthesis, researcher's role, and limitations.

Chapter 3

Methods

Eight purposes guided the current study. The first purpose was to investigate what individuals with ASD who had completed the freshman year of college perceived as services provided by the OAL that supported a successful transition from high school into a higher education setting. The second purpose was to examine perceptions of individuals with ASD who had completed the freshman year of college about services provided by a college or university Disability Services Department (DSD) that supported a successful transition from high school into a higher education setting. A third purpose was to study perceptions individuals with ASD who had completed the freshmen year of college about social engagement challenges during the freshman year that impacted independent living. The fourth purpose was to ascertain perceptions of individuals with ASD who had completed the freshmen year of college about supports from the OAL that contributed to social engagement and independent living during the freshman year. The fifth purpose was to determine perceptions of individuals with ASD who had completed the freshman year of college about supports from the DSD that contributed to social engagement and independent living during the freshman year. The sixth purpose was to investigate perceptions of individuals with ASD who had completed the freshman year of college about challenges during the freshman year that impacted academic performance. The seventh purpose was to research perceptions of individuals with ASD who had completed the freshman year of college about supports from the OAL that contributed to academic success during the freshman year. The eighth purpose was to explore perceptions of individuals with ASD who had completed the freshman year of college

about supports from the DSD that contributed to academic success during the freshman year. This chapter describes the methods used in the current study including the research design, setting, sampling procedures, instrument, data collection procedures, data analysis and synthesis, reliability and trustworthiness, researcher's role, and limitations of the current study.

Research Design

A qualitative phenomenological research design was used to examine the experiences of students with ASD regarding their transition from high school to college and factors that posed challenges or impacted success during the freshman year of college. The current study was exploratory in nature, and therefore was not intended to test hypotheses (Bloomberg, & Volpe, 2012). Patterns in the participants' shared lived experiences were examined using principles of a qualitative phenomenological research design. This method was selected due to it being "suited to promoting a deep understanding of a social setting or activity as viewed from the perspective of the research participants" (Bloomberg, & Volpe, 2012, p. 27). According to Teherani, Martimianakis, Stenfors-Hayes, Wadhwa, and Varpio (2015), "The goal of phenomenology is to describe the meaning of an experience, both in terms of what was experienced and how it was experienced" (p. 4). The phenomena examined in the current study were the experiences of individuals with ASD who had completed the freshman year of college and their perceptions about the transition from high school to college, challenges experienced in social engagement that may have impacted independent living, academic challenges and successes during the freshman year, and supports provided by

the OAL and university DSD that contributed to successes in social engagement and independent living and academic performance during the freshman year.

Setting

Participants were drawn from two higher education institutions in the Midwest. One of the institutions was a large urban public higher education institution. The other was a regional public institution. Both institutions were located within 60 miles of a large Midwestern urban city. The sites were selected due to the existence of established DSD programs for students living with ASD.

Sampling Procedures

The population for the current study included all entering college students with a formal diagnosis of ASD who had transitioned from high school to a college or university in the fall of 2019, received transitional services from an OAL and a DSD at a post-secondary institution, and completed the freshman year of college during the 2019 – 2020 academic year. The researcher used purposive sampling as the method to define the research sample. The sample for the current study consisted of 10 individuals formally diagnosed with ASD who received transitional services from an urban Midwestern OAL and a post-secondary DSD. The participants attended one of 2 institutions of higher education within a 60-mile radius of a large Midwestern urban metropolitan area. All participants had received transition support to successfully complete the freshman year of college from the OAL and DSD during the 2019 – 2020 academic year.

Instrument

The instrument used in the current study was a semi-structured interview protocol that included descriptive and demographic questions and interview questions aligned with

each research question. Participants were asked the following descriptive and demographic questions:

IQ1. What is your current age?

IQ2. Did you have an IEP in high school?

IQ3. At what age did you complete your first college level course?

IQ4. What college or university are you currently attending?

IQ5. What were your specific reasons for choosing the university you are currently attending?

IQ6. What is your major if you have declared one or what is your intended area of study if you have not selected a major?

The following interview questions which were aligned with the research questions, guided this study:

RQ1. What do individuals with ASD who have completed the freshman year of college perceive are services provided by the OAL that supported a successful transition from high school into a higher education setting?

IQ7. Please describe how you learned about services provided by the OAL.

IQ8. Please tell me about services you received from the OAL that supported your transition from high school to college.

RQ2. What do individuals with ASD who have completed the freshman year of college perceive are services provided by the university DSD that supported a successful transition from high school into a higher education setting?

IQ9. Please describe how you learned about services provided by the office of DSD at university X for students with ASD that supported your transition from high school to college.

IQ10. Please describe the process for applying for these services.

IQ11. Please describe any services provided by the DSD at university X that provided support as you transitioned from high school to college.

RQ3. What do individuals with ASD who have completed the freshman year of college perceive are social engagement challenges during the freshman year that impacted independent living?

IQ12. Please describe any social challenges that you encountered during your freshman year that impacted independent living.

RQ4. What do individuals with ASD who have completed the freshman year of college perceive are supports from the OAL that contributed to successful social engagement and independent living during the freshman year?

IQ13. What supports did the OAL provide that helped you with social engagement and independent living during the freshman year?

RQ5. What do individuals with ASD who have completed the freshman year of college perceive are supports provided by the university DSD that contributed to successful social engagement and independent living during the freshman year?

IQ14. What supports did the DSD at university X provide that helped you with social engagement and independent living during the freshman year?

RQ6. What do individuals with ASD who have completed the freshman year of college perceive are challenges during the freshman year that impacted academic performance?

IQ15. Please describe any academic challenges that you encountered during your freshman year of college.

RQ7. What do individuals with ASD who have completed the freshman year of college perceive are supports from the OAL that contributed to successful academic performance during the freshman year?

IQ16. What supports did OAL provide that helped you be successful in classes during your freshman year?

RQ8. What do individuals with ASD who have completed the freshman year of college perceive are supports provided by the university DSD that contributed to successful academic performance during the freshman year?

IQ17. What supports did the DSD at university X provide that helped you be successful in classes during your freshman year?

Data Collection Procedures

The researcher submitted a proposal to the Institutional Review Board (IRB) at Baker University on March 17, 2021 prior to data collection. Approval to conduct the study was received from the Baker IRB on March 19, 2021 (see Appendix A). Once permission was received from Baker University, the OAL was contacted on March 19, 2021 to obtain email addresses for individuals with ASD who had received support from the OAL to attend a post-secondary institution, transitioned to a higher education institution the fall of 2019, and completed the freshman year during the 2019-2020

academic year. After discussion with the OAL Central Office it was determined the best course of action would be for the VRC to email any appropriate clients requesting their participation and have the potential participants then email the researcher. On April 8, 2021 the VRC sent an email from the researcher to clients who met the criteria (i.e., living with ASD, transitioned to college the fall of 2019, and completed the freshman year of post-secondary education during the 2019-2020 academic year) introducing the study and seeking participation (see Appendix B). This communication included the following information: the purpose of the study, participant's role, statement that there were no anticipated risks or discomforts associated with the study, an explanation of how confidentiality and anonymity would be ensured, indication that participation was voluntary, a description of the right to withdraw from the study and how to withdraw, a statement that no participants would receive compensation, and an indication that interviews would be audio/video recorded.

Individuals who met the criteria and indicated an interest in participating in the study were contacted by the researcher to determine that they had also received support from the DSD during the freshman year of college. For those who indicated an interest in participating in the study who met all criteria a mutually agreed upon time to conduct the interview was established. Participants were asked to select an interview setting that would be private and have minimal distraction stimuli for the Zoom interviews. Zoom was used for participant interviews due to the geographic location of institutions within 60 miles of the Midwestern urban city, as well as social distancing guidelines in place at the time of the study due to COVID-19. Prior to each interview, participants read and signed a consent form (see Appendix C). The consent form included similar information

to that included in the invitation to participate (see Appendix B) including permission to audio/video record the interview.

To ensure the interview protocol was valid, the researcher asked two rehabilitation counselors who specialize in ASD to review the interview questions for alignment with the research questions prior to interviews with study participants. Protocol validity was verified by the external reviewers. Two pilot interviews were conducted. The pilot interview participants had a verified diagnosis of ASD, were older than 18 years of age, and had the legal right to make decisions related to personal affairs. Pilot interview participants were asked to provide feedback about the clarity of the interview questions, the interview process, and interactions with the interviewer. No changes were made in the interview protocol as a result of feedback from the pilot interviewer participants. The researcher recorded the pilot interviews to ensure consistency between interviews and to allow review by the researcher in preparation for the study interviews.

Once the interview began, questions from the established interview protocol presented in the instrument section were asked. When needed, clarifying questions, follow-up-questions, and prompts were used to help the researcher gain a better understanding of the perceptions of participants with ASD about supports provided by the OAL and the DSD during the transition from high school to a college setting, social and independent living, and academic challenges and success during the freshman year of college.

Using the recording function of Zoom and back up secondary recording device allowed the researcher to focus on the responses, body language, tone of voice, and

engagement of participants throughout the duration of the interview. The interviewees' identities were protected by assigning each participant a non-identifying code (e.g. Participant 1, Participant 2, etc.). The identification code was used on all transcripts and audio/visual-recordings of interviews as well as results reporting related to the study.

Data Analysis and Synthesis

Creswell and Creswell's (2014) five step data analysis process was used to analyze the data. According to Creswell and Creswell (2014), this method provides a systematic approach for examining the phenomenon presented and identifying themes that describe the experiences of the participants. The experiences can then be placed in a textural description that identifies specific supports or interventions that aided a student's successful experience. The combination of textural and structural description allowed the experience of each participant to be viewed in totality.

To complete the first step in the data analysis, organizing and preparing the data, the researcher prepared transcripts of each interview by using the closed caption function in Zoom. The transcripts were verified by listening to the interview, and writing down what each participant had said verbatim. Once interviews were transcribed, the process of member checking (Bloomberg & Volpe, 2012) was used to ensure that researcher's biases were not part of the study summary or conclusions. Each participant was emailed the transcription of the interview and asked to review for accuracy, additions, and omissions. No recommendations for updating transcripts were received from participants. Once all the interviews were transcribed, notes taken during the interviews about body language and non-verbal responses like hesitations, sighs, or elevated voice were added to the margin of the transcript.

The researcher completed Creswell and Creswell's (2014) second step of the data analysis process by reading each transcript multiple times to gain an understanding about the participant's lived experiences. Words, phrases, or concepts that were similar across transcripts were highlighted using a common color. Unique statements that were important, but which did not occur in multiple transcripts, were highlighted in a different color.

Creswell and Creswell's (2014) third step involves coding the data through grouping the words, phrases, or concepts according to conceptual categories that reflect commonalities among transcripts. Strauss and Corbin (1998) referred to this as axial coding, reflecting the idea of clustering the open codes around specific axes or points of intersection. These properties were identified through the interpretive lens of the researcher that allowed the meaning of the data to be abstracted. The researcher considered the various code clusters in a selective fashion and decided how they related to each other and what similarities in responses were presented. Strauss and Corbin (1998) suggested that this process could be used to identify a set of relational statements that could be used to explain, in a general sense, what is going on (p. 125). According to Erlingsson and Brysiewicz (2017),

Categorizing code clusters leads to identification of themes to form a framework of possible avenues of analysis and to lift the analysis to higher levels of abstraction; from meaning units to condensed meaning units, to codes, to categories and then to the highest level of abstraction in content analysis, themes. (p. 97).

Once the coding was completed Creswell and Creswell's (2014) fourth step was applied. Themes were determined by identifying the common words and phrases identified during the coding stage. Once themes were identified, the transcripts and data analysis were submitted to two peer reviewers for examination of the coding and theme identification based upon the transcripts (Erlingsson & Brysiewicz, 2017). Peer reviewer #1 was a Vocational Rehabilitation Specialist and Assistant Director responsible for overseeing the vocational program. The reviewer had more than 20 years of experience in vocational services and was employed by Truman Medical Center. Peer reviewer #2 was a Licensed Clinical Social Worker specializing in child trauma, family relationships, and ASD. The reviewers concurred that the interpretation of data and identification of themes were accurate. Creswell and Creswell's (2014) final data analysis step, develop a narrative to convey the findings of the analysis, was accomplished by writing the narrative provided in Chapter 4.

Reliability and Trustworthiness

Bloomberg and Volpe (2012) suggested that qualitative researchers often object to the use of traditional terms such as validity and reliability, preferring instead credibility and dependability. As recommended by Bloomberg and Volpe (2012), a number of strategies were used to ensure that the research process was credible. "Credibility refers to whether the participants' perceptions match up with the researcher's portrayal of them" (Bloomberg & Volpe, p. 321). Dependability refers to "whether one can track the processes and procedures used to collect and interpret the data" (Bloomberg & Volpe, p. 3249). Once approval to conduct the study was received, pilot interviews were conducted to ensure the dependability of the interview process and questions. The pilot

interviews provided a format to test the questions with individuals independent of the study. Furthermore, the pilot interviews allowed the researcher to see how the actual interview may occur and identify flaws within the questions and process. The second strategy used to ensure dependability in the study involved reviewing the accuracy of the transcripts through listening to each audio recording and comparing and revising the actual transcription. Member checking was the third strategy used to insure reliability and trustworthiness. This was followed by peer debriefing, in which two peer reviewers examined the field notes and transcripts of the interviews and the themes identified as a result of the data analysis. As recommended by Bloomberg and Volpe (2012), the peer reviewers also asked questions that helped to examine the assumptions and provide alternative methods to examine the findings. These actions reinforced the reliability and trustworthiness of the current study.

Researcher's Role

The researcher plays a major role in a qualitative study. Therefore, it is important that a researcher's bias does not influence the perspectives of the interviewee, the data analysis, or interpretation of the data analysis (Bloomberg & Volpe, 2012). Additionally, it is vital to the study that a researcher's prejudices and biases are disclosed to maintain the integrity of the research (Bloomberg & Volpe, 2012). I acknowledge the inherent biases brought to the study due to my position as director of a rehabilitation program and 18 years of experiences working for a community rehabilitation organization that specializes in providing support to people living with ASD. My experiences with family members with ASD may also have influenced my views about ASD. In order to promote the credibility and dependability of the study the researcher used reflective strategy, and

social perspective taking (Finefter-Rosenbluh, 2017) to consider the other possible viewpoints held by the participants.

Limitations

“Limitations are factors out of the control of the researcher” (Lunenburg & Irby, 2008, p. 133). This study was reliant upon participant honesty during interviews thus causing a limitation. The questions presented to the participants may have caused them to be uncomfortable. This may have resulted in participants not answering interview questions truthfully. ASD still carries a stigma. For this reason, some participants may still be struggling with the acceptance of the diagnosis. Additionally, higher education DSD support for individuals with ASD varies significantly. This variability may have influenced participant responses to interview questions.

Summary

This qualitative phenomenological research study investigated perceptions of individuals with ASD who had completed the freshman year of college about services provided by the OAL and the university’s DSD that supported the transition from high school to college and factors that impacted freshman year adjustment. Data were collected using a qualitative phenomenological research design. This chapter explained the methodology of the study including the research design, sampling procedures, instrument, data collection procedures, data analysis and synthesis, reliability and trustworthiness, researcher’s role, and limitations of the study. The results of the qualitative data analysis are presented in Chapter 4.

Chapter 4

Results

The purpose of this qualitative study was to understand the perceptions of individuals living with ASD who had completed the freshman year of college about supports received from the OAL and the university DSD that supported a successful transition from high school to college. Additionally, the study will explore the challenges that impacted social engagement, independent living, and academic performance during the freshman year. Finally, it will explore what supports provided by the OAL and DSD that contributed to social engagement and independent living and academic success during the freshman year. Chapter 4 includes a summary of participant descriptive statistics and an explanation of themes and subthemes that emerged from the interviews.

Ten individuals with ASD who had completed the freshman year of college between fall 2019 and fall 2020 participated in interviews for the current study.

Descriptive and demographic characteristics of the participants included the following:

1. Eight participants were male and two were female.
2. Participants' ages ranged from 19 to 26 years of age.
3. Eight participants had an IEP when in high school, one participant did not have an IEP, and one participant was not sure if an IEP had been developed. Four participants completed high school at the age of 18, two at the age of 19, three at the age of 20, and one at the age 21.
4. Three participants chose the higher education institution they were attending because of proximity to their home. Four selected the institution because it had a program designed for individuals living with ASD. A high school teacher or

counselor had recommended the institution attended by two participants. One selected the institution attended because no entrance exam was required.

5. Six out of the 10 participants had declared a major.
6. All 10 participants were living independently for the majority of the 2019-2020 academic year. Four participants returned to the family due to the COVID 19 pandemic in late March 2020. Four participants were living in residence halls on their college campus. Two participants were living independently in an apartment shared with other students off campus but in the town in which the university was located.

Qualitative data from the participants' responses to interview questions were analyzed to gain a deeper understanding of the perceptions of students with ASD about eight research questions that focused on the perceptions of individuals with ASD who had completed the freshman year of college about their transition from high school to college and challenges and supports during the freshman year related to social engagement and independent living and academic performance. Seven themes were identified from the interviews:

1. The OAL impact on the transition from high school to college.
2. DSD impact on the transition from high school to college.
3. Social challenges during the freshman year.
4. Impact of the OAL on social engagement.
5. Impact of the DSD on social engagement.
6. Academic challenges during the freshman year.
7. DSD accommodations that aided academic success.

Theme 7 included six subthemes: note-takers, tutors, extended testing time, testing in a room with limited distractions, student support groups, and a mentor. The following

sections provide a summary of the seven major themes and subthemes identified from the data analysis.

The OAL Impact on the Transition from High School to College

Each of the 10 participants were asked to describe the impact the OAL had on a successful transition from high school to college. None of the participants were able to identify any transitional services provided by the OAL. Three participants indicated they received financial support from the OAL to pay for their tuition. Six participants indicated they had not received any services and did not believe they had received any services because they had never heard of the OAL. Participant 1 stated, "I may have received services from them [OAL], but that is not something I played an active role in. My mom always helped me with that type of thing. You would have to ask her."

Participant 10 stated,

I was not eligible to receive services from them [OAL]. I believe it is because I did not have a major or career goal established. They [OAL] indicated that they could help me once I graduate college with finding employment, possibly some clothing, I think, and job coaching.

Participant 4 indicated that he had received financial support from OAL and stated, "I have a meeting with them [OAL] next week to determine how they can help me financially." The researcher explained the possible services the OAL may have offered to the participants who were not sure they received OAL services. This description did not aid in the ability of participants to determine if they received services from the OAL.

The DSD Impact on the Transition from High School to College

Nine out of 10 interviewees participated in a weeklong college or university sponsored orientation before starting classes. In addition, each of these participants was assigned a mentor to connect with throughout the academic year. Participant 5 stated, "I am glad I had one of my peers [mentor] helping me. They had recent experience starting at a new school. She helped beyond the orientation." Participant 6 was the only one who indicated he did not have a mentor. However, he stated, "My aunt worked for the institution and I was able to get her support when I needed it."

Social Challenges During the Freshman Year

Nine participants indicated they did not have any social challenges during the freshman year of college. When the participants were prompted to expand on why they think they did not have any social challenges, five indicated that it was because of the built-in study groups. Participant 5 stated,

I have a study group for a theater class which ultimately turned into practice. This gives me a chance to be around people who enjoy the same things that I enjoy. It never seemed hard. I was not different than anyone else in the group. We were all the same, just theater nerds.

Participant 9 stated, "Members of the [study] group provided me with encouragement to not give up." Participant 4 stated, "One of my instructors suggested that I join a study group. I know finding friends was not the main purpose of the group, but it happened naturally."

Five participants attributed the lack of social challenges to having a mentor. Participant 7 stated,

I lived in the dorms with my best friend before the pandemic. When the pandemic happened, everything changed. I had to go back home to live with my parents. I feel like I have been living in a bubble for over a year. My mentor felt like a social lifeline to get me through this time. He helps me socially and academically. The school did a great job when they hired him. I do not feel like he is only talking to me because it is his job. I feel like we have established a real friendship.

Participant 10 stated, "I did not have any [social] challenges. I am not social on campus, but I was provided with a mentor if I wanted to be social. I was not social outside of classes." Participant 1 stated, "I was given a student mentor. He showed me around." Participant 6 stated that he could not identify any social challenges during his freshman year of college. When asked to expand on why he did not have any challenges, he was not able to. He stated, "I am not sure, maybe my aunt. I really do not know."

Impact of the OAL on Social Engagement

None of the participants perceived that the OAL impacted how they successfully navigated the social climate of a new environment. Only one participant expanded on this question when prompted and the response was not directly related to the question.

Participant 8 stated, "They [OAL] have only been willing to help me with finding a job."

Impact of the DSD on Social Engagement

All study participants were able to participate in an orientation to their campus. It was a weeklong orientation for nine out of 10 participants and the other participant had a day of orientation. Each participant was provided with a campus tour of the recreational center, athletic fields, dorms, cafeterias, and the library. Seven out of the 10 participants

were also introduced to their mentor, academic advisor, and some of their professors during the orientation process. Participant 9 stated, "I had a lot of anxiety about starting a new school. The orientation helped me identify people I could reach out to when I was struggling and some quiet places if I need a moment to myself." Participant 10 stated, "I am not sure how the orientation helped me, but I know that I enjoyed it." Participant 4 stated, "I found it really helpful. I hope everyone gets to do it when they enter college."

Academic Challenges During the Freshman Year of College

None of the participants could identify any significant academic challenges during their freshman year. Six out of the 10 participants indicated that they had struggled with not having structure similar to what they had experienced in high school, especially time management and study habits, built into the college process. Participant 4 stated, "It was hard for me to turn in papers on time. I no longer had anyone asking me about my progress. I'll reach out to the writing center to help me improve my writing and time management." Participant 6 stated,

When I was in high school, I felt like there was more structure. I assumed that it would also be like that in college, but that was a flawed assumption. In college, I had more freedom than I was used to in the past. This freedom and lack of accountability led me to not go to classes. Also, I misunderstood what extended time on a test meant. I thought it meant that I could take a test whenever I wanted. My chemistry professor quickly helped me understand that that was not the case. This was not a mistake that I made more than once.

Participant 10 stated, "I was having trouble with focusing, but my mentor gave me some excellent tips. She helped me learn a new coping skill – time management." Participant

8 stated, "I decided not to question any accommodations. So, I had to learn time management skills to be successful."

DSD Accommodations that Aided Academic Success

The seventh and most prominent theme was that the accommodations provided by the DSD were perceived to contribute significantly to the participants' academic success. Six subthemes emerged within this theme: note takers, tutors, extended testing time, testing in a room with limited distractions, student support groups, and a mentor.

Note takers. Seven of the 10 participants indicated they had used a note taker in class. Participant 6 stated, "I had a class that I think everybody was struggling in. It was calculus. I do not think I would have made it through the class without my notetaker. Participant 1 stated, "I was homeschooled and did not participate in many lecture-type classroom settings. So, I struggled with taking quality notes. Having the help of a note taker helped to make sure I captured all the right information." Participant 6 stated, "The tests were harder in my classes compared to my high school classes. Before, I did not have to take notes, I could remember all of the information. The note taker came in handy as I learned how to take notes."

Tutors. Six of the 10 participants indicated they used a tutor. Participant 1 stated, "Astronomy was probably one of my hardest classes. So, I needed a tutor to make sure that I would pass the class. I was never able to figure out how to use it [astronomy] after the class. This made it hard to retain the information." Participant 4 stated, "My mentor suggested that I get a tutor. I never thought about this accommodation before she told me about it. I found it to be pretty helpful." Participant 3 stated, "I used a notetaker for most of my classes, but I needed a tutor for one of them because it was more difficult."

Participant 1 stated, "My professors were pretty nice. One offered to provide me with extra support during his office hours and asked a graduate assistant to help tutor me."

Participant 7 stated, "My poor organizational skills are the cause of most of my struggles. I had a tutor to help me get organized and teach me how to study."

Extended testing time. Six of the 10 participants indicated they had used extended testing time. Participant 5 stated, "I have trouble focusing and staying on task sometimes. Because of this bad habit, I need more time to complete an exam."

Participant 1 stated, "Additional testing time is something I always requested. I do not always need it, but I wanted it just in case." Participant 2 stated, "It [extended testing time] helped me when I was having trouble with focusing."

Testing room with limited distractions. Six of the 10 participants indicated needing a room with limited distraction when taking tests. Participant 1 stated, "I hate getting distracted. So, I requested that I be in a space with minimal distractions. This helps me to keep my focus." Participant 1 stated, "I do not know how it helps me. I know it is one of my accommodations." The remainder of the participants could not provide any additional feedback about why they need this accommodation. However, they listed it as one of their accommodations.

Student support/study groups. Six of the 10 participants indicated using a student support/study group. Participant 7 stated, "I had a study group that none of us were in the same class, but we all found ways to support each other." Participant 9 used the word 'support' and study group interchangeably during the interview. When the researcher asked the respondent to provide additional details about the content covered in one of the groups, Participant 9 stated, "It is when we get together to discuss a lecture that

happened in a previous class." Participant 9 also stated, "Some of the courses force you to work in groups. It took me some time to see the benefit, but I did find that it made the course easier." Participant 4 stated, "I would prefer not to be around people, but it helped me to get used to working in groups."

Mentor. Nine participants identified mentorship as a critical accommodation for the successful completion of their freshman year. Participant 9 stated, "My mentor provided me with continuous encouragement. Without this encouragement, I am not sure I would have made it past my first year." Participant 3 stated, "I did not need many things, but it was always nice to know that my mentor would be there if I needed him." Participant 8 stated, "My mentor was living with ADHD and struggled with focusing just like I do. She helped me develop some tricks to make sure I was able to get everything done."

Summary

Ten participants from two Midwestern universities were interviewed to determine their perceptions about supports received from the OAL and university DSD that supported successful transition from high school to college, social challenges that impacted independent living during the freshman year of college, supports provided by the OAL and university DSD that contributed to successful social interactions and independent living during the freshman year of college, and challenges that impacted academic performance, and supports provided by the OAL and DSD that contributed to successful academic performance during the freshman year of college. The results of the analysis of data collected through interviews were presented in Chapter 4. Chapter 5 includes the interpretation and recommendations for the study. This final chapter

provides a study summary, including an overview of the problem, purpose statement and research questions, a review of the methodology, and major findings. Findings related to relevant literature are also provided in Chapter 5. The final section, conclusions, includes implications for action, recommendations for future research, and concluding remarks.

Chapter 5

Interpretation and Recommendations

The purpose of this qualitative study was to understand the perceptions of individuals living with ASD who had completed the freshman year of college about supports received from the OAL and the university DSD that supported a successful transition from high school to college. Additionally, the study explored the challenges that impacted social engagement, independent living, and academic performance during the freshman year. Finally, the study examined what supports provided by the OAL and DSD contributed to social engagement and independent living and academic success during the freshman year. Chapter 4 includes a summary of participant descriptive statistics and an explanation of themes and subthemes that emerged from the interviews.

Study Summary

Eight research questions guided the current study. Included in this section is an overview of the research problem and a review of the purpose statement and research questions. The methodology used to conduct the study is explained. Results of this qualitative study are included in the major findings.

Overview of the problem. A number of studies have examined ASD and the transition to independence (Freedman, 2010; Shattuck et al., 2012; VanBergeijk, 2008; Wolf et al., 2009) but there is limited literature that describes the specific characteristics of the successful transition and persistence of students living with ASD from high school to an institution of higher learning. Janiga and Costenbader (2002) indicated that challenges faced by students living with ASD include difficulty with academic content, organization, time management, and study skills. According to Janiga and Costenbader

(2002) some of the reasons for the limited research include proper identification of students in need of services by the university, the hidden nature of the disability, students' reluctance to disclose their disability, large class sizes, and more limited teacher–student contact in college settings. White et al. (2017) indicated that post-secondary institutions were taking steps to serve students with ASD. West (2019), however, stated that there was limited research documenting successful university programs for students with ASD. At the time of the current study, no research was found that examined the supports provided by an OAL or DSD that contributed to successful high school to college transition or freshman year social and independent living or academic success for individuals with ASD.

Purpose statement and research questions. This study examined the perceptions of individuals with ASD who had completed the freshman year of college about the impact the OAL and the university DSD had on transition from high school to college. In addition, the current study explored the perceptions of individuals with ASD about challenges related to social engagement and independent living as well as academic success during the freshman year of college. Supports provided by the OAL and DSD related to social engagement and independent living, and academic performance provided during the freshman year were also investigated. Eight research questions guided the study.

Review of the methodology. A qualitative phenomenological research design was used in the current study. Potential participants were initially contacted by OAL via email and provided with an overview of the study. Individuals interested in participating in the study were asked to contact the researcher. Once the researcher confirmed a

potential participant met the criteria of the study, semi-structured interviews were scheduled via Zoom with 10 individuals. All interviews were recorded, transcribed, and returned to participants for member checking. Creswell and Creswell's (2014) five steps of qualitative data analysis were applied to the data. A peer review team examined the transcripts and themes identified as a result of the data analysis and concurred with the findings. The data analysis resulted in the identification of seven themes and six subthemes. The themes and subthemes are explained in the next section.

Major findings. The first theme was the OAL impact on the transition from high school to college. Six of the respondents indicated they had no familiarity with the OAL. Three respondents indicated they had received financial tuition support from the OAL. No respondents could provide an example of how the OAL had contributed to their transition from high school to college. Nine out of 10 respondents cited the university orientation provided by the university DSD as a specific support that contributed to a successful transition from high school to college. Nine out of 10 respondents indicated they had not experienced any social challenges during the freshman year of college. Five respondents cited the importance of study groups and having an assigned mentor as supports that mitigated social challenges during the freshman year. The fourth theme was the impact of the OAL on social engagement. None of the respondents indicated the OAL had had any impact on social engagement and independent living during the freshman year. The fifth theme was the impact of the DSD on social engagement. All 10 participants cited the importance of the orientation program and how it facilitated their knowledge about and familiarity with the campus. Seven out of 10 respondents indicated that the orientation provided an opportunity to meet their peer mentor, academic advisor,

and some of their faculty. Theme six focused on academic challenges during the freshman year. None of the respondents reported academic challenges. Six of the 10 respondents indicated that the college environment was not as structured as high school. Study habits and time management were mentioned as skills they had to emphasize and reinforce during the freshman year to be successful. The final theme was DSD accommodations that aided academic success. Six subthemes were identified within the last theme: note takers, tutors, extended test time, test room with limited distractions, student support/study groups, and mentors. Seven out of 10 respondents described the importance of note takers. Six of 10 respondents explained how tutors, extended test taking time, a testing room that had limited distractions, and student support and study groups contributed to positive academic performance. Nine of the 10 respondents indicated that having a peer mentor contributed to their freshman year academic success.

Findings Related to the Literature. Dawson et al. (2012) and Joshi et al. (2013) described pharmacological treatments used to improve the quality of life and management of some symptoms of ASD. None of the respondents in the current study reported the use of pharmacological treatments as supports that contributed to successful social interactions or academic success during the first year of college. Chung et al. (2007) reported that social skills training (SST) fostered the development of social skills in individuals with ASD. In the current study, no participants reported involvement in SST either as they transitioned from high school to college or during the freshman year of college. The ADA (1990), Section 504 of the Rehabilitation Act of 1973, and HEA (1965) verified that students with disabilities are able to receive support through a university DSD department if they provide documentation of a disability. According to

the ADA (1990), universities are required to provide reasonable accommodations. All of the participants in the current study reported the use of accommodations. Six of 10 participants used note takers in classes, tutoring, extended testing time, and completed tests in a room with limited distractions. Wolf et al. (2009) recommended extended time to complete tests as an accommodation that supported college students with ASD. A separate testing location and extended time on exams were also mentioned by Gelbar et al. (2014) as accommodations that benefitted college students with ASD.

VanBergeijk et al. (2008) indicated that while approximately one-half of individuals with ASD attend college, while they are academically prepared, they are often unprepared socially. In the current study, nine out of the 10 participants indicated they had not experienced social challenges during the first year of college. White et al. (2017) indicated that post-secondary institutions were taking steps to serve students with ASD. However, West (2019) reported there was limited research documenting successful university programs for students with ASD. In the current study, participants indicated their higher education institution was providing reasonable accommodations as well as engaging them in study groups and mentoring. In addition, all respondents reported participation in an orientation program prior to the beginning of their freshman year that familiarized them with the campus, faculty advisors, faculty members, and their mentor.

Conclusions

This study examined the perceptions of 10 students living with ASD who had completed the freshman year of college about supports the OAL and DSD provided as they transitioned from high school to college. Respondents also shared perceptions about social engagement challenges and supports from OAL and DSD that impacted

independent living during the freshman year. Finally, interviewees described academic challenges and supports provided by the OAL and DSD that impacted academic success during the freshman year. This section includes implications for action, recommendations for research, and closing remarks.

Implications for action. The findings of this study may be useful for students, parents/guardians, vocational rehabilitation counselors, college advisors, and DSD professionals who focus on ASD in higher education settings. Five actions are recommended based upon the results of the current study:

1. Respondents in the current study were not able to articulate supports the OAL had provided either during the high school to college transition process or during the freshman year of college. These results should be shared with the OAL and the organization should be encouraged to review how the OAL personnel interact with students with ASD and their families.
2. Engage OAL and DSD personnel in conversations related to how both entities can strengthen collaborative actions as they assist students with ASD to transition from high school to college. Collaborative teaming may result in increased support for students and their families during the transition process.
3. Although both OAL and DSD focus on teaching students to be self-advocates, these entities could initiate conversations with faculty and student affairs staff to seek suggestions that might promote greater support for students with autism spectrum disorder as they transition to and participate in the college experience.
4. Universities should measure the understanding of their faculty and staff on creating an educational setting for individuals who may have

neurodevelopment delays such as ASD. The results of these assessments could aid universities in developing training that would increase the working knowledge of the faculty, staff, administration, and students. These educational sessions should be designed around providing students with neutral supports.

5. Universities would also benefit from developing or expanding peer mentoring programs. Participants in the current study acknowledged that peer support was one of the most useful tools to help them transition into post-secondary education. The participants suggested that peer mentoring aided in both their academic and social adjustment during the freshman year of college.

Recommendations for future research. The current study was conducted at two Midwest universities. Future research could be expanded to include individuals attending community colleges, private colleges, and additional public higher education institutions. The current study was conducted in the Midwest. Future studies should include higher education institutions from other geographic locations throughout the U.S. The purpose of the current study was to investigate what individuals with ASD who had completed the freshman year of college perceived were supports provided by the OAL and DSD that supported a successful transition from high school into a higher education setting. Future research could examine the perceptions of individuals with ASD about challenges and supports received from the OAL and DSD once they have obtained their four-year degree. While this study focused on students living with ASD, the focus of a future research study could be expanded to individuals living with other disabilities or those who may struggle transitioning to or adapting to the college setting. For individuals

living with ASD, self-disclosure can be challenging and often they prefer to avoid these situations (Foden & Anderson, 2011). Future research could focus on how all students could benefit from the interventions developed by DSDs and how these interventions could be provided to any student who is struggling academically or socially. How the DSD empowers and facilitates a myriad of the institution's accommodations for students with disabilities could be studied in future research. An analysis of interactions university DSD personnel have with faculty and staff may yield insights into how DSDs can be even stronger advocates for students with disabilities on college campuses.

There are other factors (e.g., social economic status, ethnic background, social supports or access to healthcare) that may play a role in the successful transition from high school into post-secondary education. Many individuals go undiagnosed due to one or more of aforementioned factors. According to Durkin et al. (2010), the disparities in identification can be quite large based on the cities' access to diagnosticians and the diagnostic bias of a clinician. Therefore, conducting qualitative research with students who have been impacted by one or more of these factors during their junior or senior year of high school could be helpful in identifying needs of those populations.

The current study used a qualitative research design. Future studies that use a quantitative or mixed-methods research design could be used to obtain a broader perspective of responses from undergraduate students about supports they have received from an OAL or DSD as they have transitioned from high school to college or during their attendance at a post-secondary institution. The current study focused on perceptions of students with ASD. Future research could investigate college professors' perceptions about students with ASD, supports provided to students with ASD to help them be

successful in college, and teaching strategies that assisted college students with ASD to be successful academically.

There are established programs that have the central mission of helping students living with ASD transition from high school to post-secondary education. For most of these programs, there is an additional financial obligation that must be burdened by the student or their family. These programs could be benchmarked and similar programs could be developed by universities or through collaborative efforts undertaken by school districts, OALs, and DSDs. The implementation and results could be studied for effectiveness related to both the transition process, and academic and social success during the college years.

Concluding remarks. This study explored perceptions of individuals with ASD who had completed the freshman year of college about supports provided by an OAL or DSD during the transition from high school to college or during the freshman year of college. The participants shared their personal experiences and indicated that the university orientation program aided in their successful transition. Several specific accommodations including note takers, tutors, extended testing time, and test rooms with limited distractions were mentioned by the majority of participants as contributing to social and academic success during the freshman year of college. Involvement in student support and study groups encouraged by the institution DSD and assignment of a mentor were also reported as contributing to freshman year success. The participants also contributed their success to a number of supports that were not provided by either OAL or the DSD (e.g. helpful faculty, tutors, etc.). These supports should be explored by DSD and OAL personnel as possible future interventions that could be offered.

ASD is a heterogeneous condition with no two individuals displaying the exact same behaviors or needing the exact same interventions to be successful. All of the participants understood the role of support and how it was designed to address their particular individualized set of needs. The results of this study demonstrated that students who are living with ASD can be successful when supports are put in place to address the individualized needs. Faculty, staff, and students should be provided with ongoing professional development that would provide them with the skills to continuously change as the student body changes.

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Appendices

Appendix A: Baker University IRB Approval



Baker University Institutional Review Board

|
March 19th, 2021

Dear Gino Taylor and Tes Mehring,

The Baker University IRB has reviewed your project application and approved this project under Expedited Status Review. As described, the project complies with all the requirements and policies established by the University for protection of human subjects in research. Unless renewed, approval lapses one year after approval date.

Please be aware of the following:

1. Any significant change in the research protocol as described should be reviewed by this Committee prior to altering the project.
2. Notify the IRB about any new investigators not named in original application.
3. When signed consent documents are required, the primary investigator must retain the signed consent documents of the research activity.
4. If this is a funded project, keep a copy of this approval letter with your proposal/grant file.
5. If the results of the research are used to prepare papers for publication or oral presentation at professional conferences, manuscripts or abstracts are requested for IRB as part of the project record.
6. If this project is not completed within a year, you must renew IRB approval.

If you have any questions, please contact me at npoell@bakeru.edu or 785.594.4582.

Sincerely,

Nathan Poell, MLS
Chair, Baker University IRB

Baker University IRB Committee
Sara Crump, PhD
Nick Harris, MS
Christa Manton, PhD
Susan Rogers, PhD

Appendix B: Invitation to Participate in the Study

Invitation to Participate in the Study

Greetings XXXX,

My name is Gino Taylor and I am a doctoral candidate in the Graduate School of Education at Baker University in Overland Park, Kansas. I would like to invite you to participate in my study for my doctoral dissertation. My study is titled *Students with Autism Spectrum Disorder: The Transition from High School to College and Factors that Influence Freshman Year Adjustment*. Participation in the study will involve a one-on-one interview, which should last approximately 45 minutes.

Here are a few details that may assist in your decision to participate

- This study is a qualitative study that will involve a one-on-one interview conducted using Zoom.
- Identifiable information will be removed from the research findings to insure confidentiality. Your name will not be associated in any way with the research findings. If you chose to participate, you may indicate a preference for not providing a response to any of the questions and may withdraw from participation at any time.
- Participation in the study is voluntary, there are no risks, personal discomfort, or compensation associated with participation.
- The interview will begin with descriptive and demographic questions that include: your age, what support you have received in high school, your age when you completed your first college course, the college or university you attend, major and the number credit hours you have completed. The semi-structured interview questions will focus on supports you received from OAL of the DSD at the university you attended during the freshman year that assisted you in the transition from high school to college. In addition, interview questions will ask about social engagement challenges and supports from OAL and DSD that impacted independent living during your freshman year of college. Finally, you will be asked about academic challenges you experienced during your freshman year and supports provided to you by OAL and the Disability Services Department at your university.

If you are interested in participating, please contact me at GinoVTaylor@stu.bakeru.edu by X date. Once I receive your reply, we will schedule a time to meet virtually or via a phone call. Also, if you have any questions about the study, do not hesitate to contact me or my major advisor.

Thank you,

Sincerely,

Gino Taylor
GinoVTaylor@stu.bakeru.edu
Baker Doctoral Student

Tes Mehring Ph.D.
tmehring@bakeru.edu
Major Advisor

Appendix C: Informed Consent Form

Consent Form

Purpose of the Study: The current study will investigate the following:

1. What college freshmen with autism spectrum disorder (ASD) perceived are services provided by the OAL that supported a successful transition from high school into a higher education setting.
2. To examine perceptions of college freshmen with ASD about services provided by a college or university Disability Services Department (DSD) that supported a successful transition from high school into a higher education setting.
3. To study perceptions of college freshmen with ASD about social engagement challenges during the freshman year that impacted independent living.
4. To ascertain perceptions of college freshmen with ASD about supports from OAL that contributed to social engagement and independent living during the freshman year.
5. To determine perceptions of college freshmen with ASD about supports from the DSD that contributed to social engagement and independent living during the freshman year.
6. To investigate perceptions of college freshmen with ASD about challenges during the freshman year that impacted academic performance.
7. To research perceptions of college freshmen with ASD about supports from the OAL that contributed to academic success during the freshman year.
8. To explore perceptions of college freshmen with ASD about supports from the OAL and DSD that contributed to academic success during the freshman year.

Participant Requirements: As the interviewee, you will respond to descriptive and demographic questions followed by semi-structured interview questions related to perceptions about experiences during the high school to college transition process. Questions will also focus on social engagement challenges you may have experienced during the freshman year of college that impacted independent living. You will also be asked questions that focus on challenges during the freshman year that impacted academic performance as well as supports provided by the OAL and DSD that contributed to your academic success. The interview will last no more than 45 minutes. Interviews will be conducted via Zoom or face-to-face, transcribed, and uploaded to a secure database. Once your interview has been transcribed, I will share your transcription with you via email and you will have the opportunity to review your response in written format. Additionally, after I have compiled all themes and findings, I will share the overall findings.

Potential Risks/Discomforts: There are no known anticipated risks or discomforts associated with this study.

Benefits: There are no direct benefits to you as a participant in this study. However, the results of this study may be of interest to the OAL, DSD, and future students. This study may aid the university, students, and their supports system to understand the experiences of a students living with ASD. These findings may be used by vocation rehabilitation counselors and staff that work in disability services, college and university leaders to assist in improving services for students.

Confidentiality: The responses you provide to interview questions will be handled confidentially. Your data will be anonymous which means that your name will not be linked to the data. Your name will be coded to ensure your anonymity.

Voluntary Participation: Participation in this study is completely voluntary.

Right to Withdraw from the Study: You have the right to withdraw from the study without penalty. At any point during the interview you may opt out of responding to any question and you may terminate the interview at any time. Should you decide to withdraw from the study, your audio recording will be destroyed.

How to Withdraw from the Study: If the interview is in progress and you wish to withdraw, tell the researcher to stop the interview. If you would like to withdraw before the interview or after completion of your interview, please contact me at GinoVTaylor@stu.bakeru.edu. If there is any question asked during the interview you wish not to answer, tell me you wish to skip the question. There is no penalty for withdrawing from the study or not answering any of the interview questions.

Compensation: There is no compensation associated with participation in the interview.

Consent Form Signature: Your signature below indicates that you have agreed to participate in this research study and to audio taping of the interview.

If you have questions regarding this study contact:

Principle Investigator:
Gino Taylor
GinoVTaylor@stu.bakeru.edu
913-385-2032

Academic Advisor:
Tes Mehring Ph.D.
Graduate School of Education, Baker University
tmehring@bakeru.edu

Agreement: I agree to participate in the study described above and to the audiotaping of the interview.

Name (Printed): _____

Signature: _____ **Date:** _____

Email Address: _____

You will receive a copy of this form for your records.