BEST PRACTICES FOR SERVING AUTISTIC STUDENTS IN COMMUNITY COLLEGE

SETTINGS: A QUALITATIVE EXAMINATION.

by

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ABSTRACT

This qualitative research study examines best practices noted by community college practitioners and described by autistic college students' experiences. This study aims to identify the unique needs and experiences of students with Autism Spectrum Disorder, ascertain the resources available to them at selected technical and community colleges, and make recommendations about practices and operations related to students with Autism spectrum disorder. In a qualitative examination, practitioners and students were interviewed focusing on five areas of their community college experience including social development skills, academic support, executive functioning support -college functioning skills, employment/career services support, and safe housing.

DEDICATION

This dissertation is dedicated to my grandson, Tommy Andrada Vallin Jr. who came into this world to change our family in so many positive ways. On this month of March, he turns six years old. Even though he is an autistic non-verbal boy, his personality shines bright. While he may never know the many things that he has taught me in his short lifetime, he has made an impact on me. He is the reason for this dissertation topic. Tommy has taught me about innocence, acceptance, patience, and love in its purest form. Most importantly, he has taught me to face life fiercely and with no hesitation. I am committed to be his advocate for the rest of my lifetime. Tommy has blessed our lives with just being the person God designed him to be. Through this work, I hope he will someday know the great love I have for him. Finally, I truly believe that every person on the autism spectrum deserves a bright future.

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CHAPTER 1: INTRODUCTION TO THE STUDY

Introduction

Community colleges in America are committed to serving their surrounding communities. The American Association of Community Colleges (1998) defines the role and scope of the community college as a network of the community with a common goal. Furthermore, while more elitist institutions may define excellence as exclusion, community colleges have sought excellence in service to all (Shannon, Smith, Townsend, Dougherty, 2006). Additionally, researchers note that open-door policies have made community colleges accessible to anyone with a high school diploma (Purdy, 2020). America's community colleges' unique mission is to provide open access and affordable education to all who desire to learn (Purdy, 2020).

Open access institutions of higher education are synonymous with community colleges. Open access institutions are defined as being open to anyone with no rigorous application necessary for admission (Ross, 2014). George B. Vaughan (2006) asserts in *The Community College Story*, that community colleges serve all segments of society through their open-access policies that offer equal and fair treatment of all students, provide all-inclusive educational programming while serving its surrounding community, and fostering lifelong learning (cited in Leeder, 2013). While students of all academic ability levels enroll in community colleges, so do neurodiverse students and students with special needs or intellectual disabilities.

Autistic adults are one category of newer college student populations. In particular, Neurodiverse students, those on the Autism spectrum, are a continuously growing population

entering higher education in increasing numbers. In fact, the Centers for Disease Control (CDC) in 2021 reported that approximately 1 in 44 children in the U.S. is diagnosed with an autism spectrum disorder (ASD), in accordance with 2018 data. More than in past years, researchers estimate that slightly more than 16,000 young adults with autism enter college each year (Buechler, 2017). Because of open access policies, it is likely that many of these young people attend two-year colleges, where resources for them are few and far between. The 2017 National Autism Indicators Report noted that "fewer than 20% of college students with autism had graduated or were even on track to graduate five years after high school" (cited in Buechler, 2017). These statistics suggest that colleges are not providing appropriate support to help these students succeed. While some research has been conducted on resources and strategies at four-year colleges, not as much work has been done related to two-year colleges. Community colleges across the nation are seeking ways to improve student success for all students including neurodivergent students.

Background on Autism

Autism Spectrum Disorder (ASD) and *Autism* are both general terms for a group of complex disorders of brain development. ASD is a neurological disability whereby people with ASD may communicate, interact, behave, and learn in ways that are different from most other people. Data collected in 2016 by the Autism and Developmental Disabilities Monitoring (ADDM) Network, reported that one out of every fifty-four 8-year-old children were identified with ASD (Center of Disease Control, 2020; Maenner, Shaw, Baio, et al, 2016). Furthermore, researchers note that ASD is four times more common among boys than among girls (Center for Disease Control, 2020; Maenner, Shaw, Baio, et al, 2016). Additionally, the ADDM Network reported that among the children identified with ASD who had a reported intelligence quotient

(IQ), approximately one-third were also found to have an intellectual disability (Center for Disease Control, 2020; Shaw, Maenner, Baio, et al, 2016). The first time that the spectrum was identified under the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) manual, where persons diagnosed on the autism spectrum fell under four categories: (1) autistic disorder, (2) Asperger's disorder, (3) childhood disintegrative disorder, and the catch-all diagnosis of (4) pervasive developmental disorder not otherwise specified with developmental disabilities presenting themselves in early childhood. After 2013, two new disorders were added to the DSM-V manual to improve diagnosis for children with an accurate diagnosis.

Classic Autistic Disorder

The classic autistic disorder was first defined by Dr. Leo Kanner, a child psychologist at John Hopkins Hospital in a white paper published in 1943 entitled, *Autistic Disturbances of Affective Contact* (Caruso, 2010). Olmsted (2016) notes Kanner's first mention of autism in a 1938 letter he wrote to Asperger when describing a patient in his case study. Kanner described his patient as having, "inborn disturbances of affective contact" (Kanner, 1943; Olmsted, 2016). Dr. Kanner's students were deeply affected by noise, bright lights, and people who carried limited emotional connection with anyone. He described his patients as having an inability to relate to people, had no speech ability, or had an abnormal use of language with atypical responses to objects and events, having rote memory, and being obsessed with patterns, repetition, and sameness (Caruso, 2010). His work is the first of categorical approaches that began to describe the complexities of an individual with autism.

Asperger's Disorder

   The term Asperger's disorder was named after Hans Asperger. Asperger gave an alternate description to Kanner's description of autism in a paper he wrote in 1944. Asperger had a residential school in Vienna in the 1930s; he viewed autism as a diverse continuum that spans from giftedness to disability (Silberman, 2015). Silberman (2015) notes that Asperger described autism as, "a lifelong polygenetic disability that requires compassionate support and accommodations" (8:27). Some autistic individuals are extremely gifted in areas of art, math, and music—making those on the Asperger's Disorder as higher functioning on the spectrum disorder.

Rett's Disorder

   Rett's disorder falls under the Autism Spectrum Disorder (ASD) an *intellectual disability* diagnosis is a genetic mutation that occurs more commonly in girls than in boys. The National Institute of Child Health and Human Development (2013) defines Rett syndrome as a less common disorder where infants develop normally, then regress or lose skills as they progress into childhood. Rett's syndrome can be broken down into four phases. In the early phase, the child's development subtly slows down or stops (Rett syndrome, 2006; Hagberg, Hanefiled, Percy, & Skjeldal, 2002). In the second phase, the rapid destructive phase begins when the child regresses or loses speech and motor skills (*Rett syndrome*, 2006; Hagberg, Hanefiled, Percy, & Skjeldal, 2002). The third, plateau phase begins when the regression slows down and other issues arise such as seizures (*Rett syndrome*, 2006; Hagberg, Hanefiled, Percy, & Skjeldal, 2002). In the late motor deterioration phase, individuals become immobile due to stiff or loose muscles (*Rett syndrome*, 2006; Hagberg, Hanefiled, Percy, & Skjeldal, 2002). Because of the deteriorating

effects, many individuals with Rett's disorder cannot walk and communicate with their eyes or facial expressions.

Evolution of the Autism Spectrum

Over the years, Autism diagnoses have changed with different labels falling under the ASD umbrella. Under the DSM-IV manual, the category listed as a pervasive developmental disorder—not otherwise specified (PDD-NOS)—was a diagnosis for those who did not necessarily meet all the criteria for a full autism diagnosis but needed similar support as those on the autism spectrum (Volkmar, 2012). Autism and its variations are noted in Volkman's (2012) work, where he asserts that "the way DSM-IV is formulated means there are over 2,000 combinations of the 12 criteria that at the minimum threshold of six yields an autism diagnosis" (par. 3). With changes to the fifth edition, the DSM-V collapses the autism criteria, Asperger's and PDD-NOS into a single "autism spectrum" category, combining and reducing criteria, thereby cutting the number of combinations that can lead to an autism diagnosis (Wing, Gould & Gillberg, 2011; Volkman, 2012). The DSM-V lists three main criteria: (1) impairment of social interaction, (2) communication, and (3) social imagination. Furthermore, the DSM-V diagnostic manual developed three levels to diagnose people on the Autism spectrum: Level 1, requiring support; Level 2 requiring substantial support; and Level 3 requiring very substantial support (2013). The Autism Spectrum category allows for a more accurate medical and scientific diagnosis of autism-related disorders.

In an effort to better diagnose those with Autism and widen the spectrum-the varying degrees of severity for those that have the same symptoms within the disorder, under the DSM-V manual (2013), two new diagnoses were added under the autism spectrum. Social Communication Disorder (SCD) is identified by a persistent difficulty with verbal and nonverbal

communication that cannot be explained by low cognitive ability. The child's ability to gain use of spoken and written language is difficult, and responses in conversation are often difficult too (DSM-5 and Diagnoses for Children, 2013). Disruptive Mood Dysregulation Disorder (DMDD) is characterized by acute and recurrent temper outbursts that magnify the situation in intensity or duration (DSM-V and Diagnoses for Children, 2013). Essentially the four independent diagnoses — autistic disorder, Asperger syndrome, pervasive developmental disorder-not otherwise specified (PDD-NOS), and childhood disintegrative disorder was placed into a single label of autism spectrum disorder. Moreover, the Autism Spectrum spans from intellectually disabled individuals to extremely gifted individuals (Silberman, 2015). Some are non-verbal and others speak too much. The new diagnoses are necessary to ensure that children affected by these disorders get pertinent clinical support.

Other Definitions

Since there are varying degrees to the autism spectrum, "new" related terms have risen. For example, the term n*eurotypical*, which means that an individual has a typical capacity for processing language and social settings and behaves in what is considered to be "normal" by the general population (Indiana Disability Resource Finder Glossary, 2020). Neurotypical people are those individuals who do not have a diagnosis of autism or any other intellectual or developmental difference (Bruise, 2017). A newer term, *neurodiversity,* which stands for neurological diversity, was coined by autism activist, Judy Singer (McBain, 2015). Neurodiversity is used to describe the differences of individuals with learning differences such as attention deficit disorder (ADD), Autism Spectrum, Pervasive Developmental Disorder-Not Otherwise Specified (PDD-NOS), Asperger's Disorder, and Asperger's to name a few. Further, neurodevelopmental disorders include autism spectrum disorders, intellectual developmental

disorders, attention-deficit/ hyperactivity disorder, and tic disorders, such as Tourette's Disorder (DSM-V fact sheet, 2013). Intellectual disability or mental retardation are terms used to describe a person who has limitations in mental functioning an inability to communicate and self-care and limited social skills (Rett's syndrome, 2006).

Legislation Related to Access to Education

Awareness of the Autism spectrum and its effect on learning and educational attainment is still a work in progress. In the early years of ASD diagnosis, those with ASD were not likely to attend college. However, the major laws in place that made way for students with disabilities to attain free and appropriate public education were the Individuals with Disabilities Education Act (IDEA), section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act (ADA) (McCarthy, Eckes, & Decker, 2019). The expectations for educational institutions to serve individuals with disabilities have been raised since the passing of these laws, thereby providing opportunities for students with ASD to access post-secondary education (see Table 1). With students on the AS enrolling in community colleges, more schools are recognizing a need to provide programming that will enable students with ASD to live independently among their peers and have access to higher education opportunities (Berkell, 2013). Once individuals with Autism have gained college admission, colleges must find a way to lead them toward completion. This means they must provide specialized support and programming for college success and completion while striving to serve those with ASD. Recent internet searches indicate that community college programs that support the needs of HFA/AS students are few. In the most recent publication on 30 Best Colleges for students with Autism, not one community college was noted (*30 Best Colleges for Students on the Autism Spectrum,* 2020).

Table 1: Differences between High School and College for Students with an IEP

HIGH SCHOOL	COLLEGE
Identification	
The school district is responsible for identifying the student's disability.	Students must self-identify by requesting accommodations and providing documentation of their disability.
Special Education Services	
The IEP team develops the IEP to define educational goals, supports, and services that will be provided.	No IEP is written for college students. Special Education services are not provided in college.
Accommodations and Modifications	
Accommodations or modifications to the curriculum are made to ensure the completion of the general education requirements of the school district.	Accommodations are provided to ensure equal access to education. Reasonable accommodations based on the student's documented disability are allowed. Modifications to the curriculum are not available at the college level.
Teachers provide reminders of homework due and when tests will be taken. Extended time for completion may be granted.	Students are expected to read the syllabus provided in each course and complete assignments independently and on time.
Behavior Supports	
Educators are responsible to put supports in place for inappropriate behavior that may be caused by a student's disability.	Students are responsible for their own behavior at all times and are held to the same standards of behavior as all college students.
Parental Involvement	
Parents are actively involved in their student's educational planning and decisions.	Students are responsible for making decisions related to their education and are expected to advocate for themselves.
Parents can discuss their student's progress with teachers.	A student must sign a 'release of information' for parents to speak with college personnel.
Parents sign documents for their student who is under the age of 18.	Students sign documents for themselves.
Other Differences	
Schools have a system set up for providing transportation to and from school (ex. buses).	Students are responsible for finding their own way to and from campus for classes.
Daily attendance is monitored and recorded by the high school. High school staff can contact parents if a student is not in attendance.	College does not contact the student or parent if the student misses' class. Students should attend all college classes. Some professors take daily attendance, others do not.

Source: Kirkwood Community College (2020)

Student Accommodations

Traditionally, in colleges the Disabilities Office or the Student Accommodations Office is the area responsible for providing students with free and appropriate accommodations while complying with Section 504 of the Rehabilitation Act (Berkell, 2013). Students with disabilities are entitled to educational accommodations to enable them to learn and reach college completion (Berkell, 2013). Many of the accommodations HFA/AS students obtain include a change in test environment, time allocation for test-taking, note-taking assistance, readers and scribes, and the use of assistive technology such as smart pens and computers. In order to meet the guidelines established by the ADA, colleges must go beyond the disabilities' office or student accommodations office to provide students with the success tools necessary to reach credential attainment and career/job placement.

Providing support for students on the Autism spectrum has proven to be challenging and the necessity for addressing the need has become all too clear for educators. In 2017, the parents of an autistic fifth-grade boy who was not making significant progress sued the school district after they had to enroll their son in a private school for children with autism (McCarthy, Eckes, & Decker, 2019). The U.S. Supreme Court case clarified in the Endrew vs. Douglas County School District that schools must offer an Individualized Educational Plan (IEP) responsibly calculated to enable a child to make progress appropriate in light of the child's abilities (McCarthy, Eckes, & Decker, 2019). The Endrew family changed the way school districts approach IEPs in that a collaborative process between the school and parents must come together to evaluate the child. Based on this landmark legislative decision, all levels of education, including community colleges, are recognizing the importance of meeting the needs of neurodiverse students.

Learning Styles Among Autistic Students

Not all students on the Autism spectrum are the same. In fact, most practitioners note that to know a person with Autism is to know one person with Autism. Those with Autism Spectrum Disorder (ASD) range from low functioning or cognitively disabled to high functioning, otherwise known as Asperger's. And a few others on the Autism Spectrum have savant skills of prodigious talent. Thus, their learning styles need to be addressed on a case-by-case basis. However, common practices can be used in the classroom to support student success. For example, HFA/AS individuals' learning styles and sensory preferences are categorized into three thinking styles, or ways of processing information. Temple Grandin's book, *Thinking in Pictures,* asserts that those on the Autism spectrum (AS) and high functioning autism (HFA) are visual thinkers, musical/mathematical thinkers, and verbal/logical thinkers (2016). However, most students with HFA/AS are predominantly visual thinkers. In order to help these students, succeed and make educational progress, educational institutions need staff who understand these students' variety of needs.

ABA Therapy

In 1970, psychologists Ivar Lovaas and Robert Koegel of UCLA developed Applied Behavior Analysis (ABA) therapy, becoming the originators of most of the current research on autism's effect on an individual's ability to learn. ABA therapy, along with a diagnosis, offers an array of services from occupational therapy, speech therapy, specialized treatment plans, and social development skills that provide effective methodologies for teaching autistic children. Current practices based on ABA therapy encourage children to improve specific behaviors such as social skills; communication skills; and academic skills, such as reading, adaptive learning skills; fine motor dexterity; domestic capabilities, including hygiene and grooming; and

employment competence, such as time management and punctuality. Recognizing the need for parent intervention, Ivar Lovaas, Bernard Rimland, Ruth Sullivan, and a small group of parents of children with ASD, were co-founders of the Autism Society of America. Before the creation of such a society, parents had not organized in any way to advocate for their children (Koegel, 2011). Lovaas collaborated with two parents of children with autism, Bernard Rimland and Ruth Sullivan. Both would later become renowned experts on Autism. Current support for students on the Autism spectrum in community colleges focuses on similar interventions. The common areas community colleges provide support mirror the continuation of ABA therapies including academic support, social development, functioning skills, and employment support.

Program Categories

College programs vary in the support services offered to students with Autism Spectrum Disorder. These can be divided into several categories. The programs available focus on the student experience varying in several categories such as social development skills, academic support, functioning/student services support, employment, and safe housing (see Table 2).

Table 2: College Programs that Address HFA/AS Student Needs

COLLEGE (WEBSITE)	PROGRAM NAME	2- OR 4-YEAR	PROGRAM DESCRIPTION
Austin Peay State University Clarksville, TN https://www.tbr.edu/news/on-campus/apsu-launch-pilot-program-focused-improving-experience-autistic-college-students	Full Spectrum Learning (FSL)	4-Year	A curriculum special to the needs of students with autism. Students receive tutoring, peer mentoring, life coaching, and support from staff in dealing with college life. Students consult weekly with staff on academic and social needs.
Bellevue College Bellevue, WA https://www.bellevuecollege	Neuro-diversity Navigators	2-year & 4-year programs	A program that offers educational opportunities, individualized advocacy, and access services for Neurodivergent Bellevue College

COLLEGE (WEBSITE)	PROGRAM NAME	2- OR 4-YEAR	PROGRAM DESCRIPTION
.edu/autismspectrumnavigators/			students.
Eastern Illinois University Charleston, IL https://www.eiu.edu/step/	Students with Autism Transitional Education Program (STEP)	4-Year	The STEP program focuses on providing support in three main skill set areas: academic, social, and daily living. Students with Autism get support with challenges associated in transitioning to college life (*EIU STEP*, 2020).
Harper College Palatine, IL https://www.harpercollege.edu/services/ads/tap.php	Transition Autism Program	2-Year	A program designed to meet the specific needs of students on the Autism Spectrum as they transition from high school to college. Provides peer mentoring, specialized academic support, social activities, a parent support component, and Job Readiness Workshops that include resume writing, interview skills, and job search strategies (Transition Autism Program, 2020).
Kirkwood College Cedar Rapids, IA https://www.kirkwood.edu/catalog/current/ask-program.htm	ASK Program (Autism Spectrum at Kirkwood)	2-Year	Autism Spectrum at Kirkwood (ASK) is a program that supports students on the Autism Spectrum by creating an individualized plan that builds academic and social skills for college success. The program includes weekly meetings with educational coaches and structured social events. Kirkwood integrates campus resources, community partnerships, and research-based interventions and curriculums (Kirkwood, 2020).
Landmark College Putney, VT https://www.landmark.edu/center-for-neurodiversity	Center for Neuro-diversity	4-Year	The program aims to advance an understanding of the benefits of a neurodiverse society by Hosting community events Sharing work and opinions from neurodivergent individuals Offering internships to neurodivergent students at LC

COLLEGE (WEBSITE)	PROGRAM NAME	2- OR 4- YEAR	PROGRAM DESCRIPTION
			Supporting student advocacy Speaking about neurodiversity at schools, workplaces, conferences, and community organizations Promoting neurodiversity-friendly hiring and employment practices Writing about neurodiversity for publication in external sources
Lone Star College Tomball, TX https://www.lonestar.edu/lifepath.htm	lifePATH@	2 & 4-Year	Lone Star College lifePATH® is a four-year post-secondary educational program for students who have disabilities that affect executive functioning. lifePATH focuses on academic readiness, social expectations, and career exploration. Upon admission, students become part of a cohort. The first two years, students take classes together on the foundation path. After two years, students can exit the cohort and pursue other certificate or degree programs offered at Lone Star College (Lone Star College, 2022).
Loras College Debuque, IA https://www.loras.edu/academics/academic-support/lynch-learning-center/	Lynch Learning Center, Autism Specific Program (ARCH)	4- year	ARCH program is designed to help students on the Autism Spectrum Disorder prosper emotionally, academically, and socially. Students work with Lynch Learning Center staff who are Certified Autism Specialists. A fee is charged for the ARCH program. Students meet weekly with their coach and attend weekly study sessions and bi-monthly mentoring meetings, working on skills ranging from self-advocacy, stress management, and socialization. Career preparation includes résumé writing, cover letter counseling, interview preparation, job shadowing, and internship opportunities. ARCH students move in two days prior to first-year orientation.

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COLLEGE (WEBSITE)	PROGRAM NAME	2- OR 4-YEAR	PROGRAM DESCRIPTION
			Students participate in a five-day summer program to aid in transition (*Lynch Learning Center at Loras College,* 2020).
Marquette University Milwaukee, WI https://www.marquette.edu/disability-services/on-your-marq/	On Your MARQ	4-Year	A college success program designed to assist students on the Autism Spectrum in navigating the college landscape. Utilizing an interdisciplinary approach, Marquette staff work together to build the support team that students need to succeed at Marquette. Formal and informal supports available to aid students in the development of academic, social, and independent living skills include weekly seminars one-on-one coaching peer mentors OYM- specific tutoring (On Your Marq, 2020).
Palo Alto Community College San Antonio, TX https://www.alamo.edu/pac/admissions-aid/disability-support-services/	Project Access	*2-Year	A program for students with mild to moderate intellectual disabilities to take college-level courses to earn their 16-credit General Office Level 1 Certificate and acquire necessary skills for gainful employment and a successful future (*Project Access students succeed; program grows* 2018).
St. Norbert College De Pere, WI https://www.snc.edu/counseling/autism.html	ASD Support Program	4-Year	A program tailored to support individual students' needs including assistance with transition from home and high school to college. The focus is to enhance academic success while addressing social/interpersonal skills, self-advocacy, and emotional regulation.

Although few four-year colleges address the needs of students on the Autism spectrum,

even fewer community colleges offer programming specifically for Autistic students. Among

those colleges that publicize their programming for Autistic students on their college websites, most indicate that their programming offers student support from the Student Services area. In addition, a popular online college ranking system that ranks college programs for ASD students indicates that available programs focus on the student experience in categories including social development skills, academic support, functioning/student services support, employment, and safe housing (*20 Best Value Colleges for Students with Autism - Best Value Schools,* 2020).

Social Development Skills

The social development category covers a college's ability to offer neurodiverse students support in social skills development that will aid them in navigating college life. For example, social development skills include peer mentoring, developing and using social scripts, group activities, and support groups on campus. In particular, the program at St. Norbert College in De Pere, Wisconsin, is tailored to provide social development skills for the individual students in the program. It assists neurodiverse students in their transition from home to high school to college, enhancing academic success while addressing social/interpersonal skills, self-advocacy, and emotional regulation (SNC ASD Support Program, 2020).

Academic Support

The academic support category is defined by a college's ability to offer neurodiverse students support in navigating academic requirements for course completion. For example, the college provides course tutoring, one-on-one tutoring, study hall time for assignment completion, or supplemental instruction. In particular, Austin Peay State University, located in Clarksville, Tennessee, offers a pilot program Full Spectrum Learning (FSL). It is a pilot program to improve the college experience for students with autism. FSL offers a curriculum tailored to the needs of

students with autism. Enrolled students receive one-on-one tutoring, peer mentoring, life

coaching, and support from FSL staff as they deal with the challenges of college life. A unique

aspect of FSL is that it is a student-centered approach, meaning that students are consulted along

the way to identify the most useful means of serving them while adapting and making the

curriculum to better fit their needs (APSU to launch pilot, 2015). Marquette University located in

Milwaukee, Wisconsin, offers On Your Marq, a college success program designed to assist

students on the autism spectrum. The program uses an interdisciplinary approach to build a

support team for students. Academic skills include weekly seminars, one-on-one coaching, peer

mentoring, and On Your Marq program-specific tutoring (On Your Marq, 2020). Lone Star

College lifePATH® is a four-year post-secondary educational opportunity for students with

disabilities that affect executive functioning. lifePATH focuses on academic readiness, social

expectations, and career exploration. Upon admission, students become part of a cohort. For the

first two years, students take the foundation path curriculum. After two years, students can exit

the cohort and pursue other certificate or degree programs offered at Lone Star College with

wrap-around support by choosing the academic path. Students who remain in the cohort spend

the last two years earning the Occupational and Life Skills Associate degree (OLSA), along with

the Business Operations Certificate (Lone Star College, 2022).

Functioning

The functioning category is defined by a college's ability to offer neurodiverse students

support with daily life functions while navigating college life. Examples of activities under the

functioning category include life counseling, coaching, daily check-ins, help navigating campus,

and advocacy support. In particular, Bellevue College offers the Neurodiversity Navigators

(formerly Autism Spectrum Navigators) program. It provides educational opportunities,

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individualized advocacy, and access services for neurodivergent Bellevue College students. It has strong programming in aiding students in the function category (Neurodiversity navigators, 2020). Loras College in Dubuque, Iowa, offers the Autism Specific Program (ARCH) program designed to help students with Autism Spectrum Disorder prosper emotionally, academically, and socially. Students enrolled in the ARCH program meet weekly with their coach, attend weekly study table sessions, and attend bi-monthly mentoring meetings that help students hone skills ranging in self-advocacy, organization, stress management, and socialization (Lynch learning center of Loras College, 2020). In the functioning category, Kirkwood Community College located in Cedar Rapids, Iowa, supports students on the Autism Spectrum by creating an individualized plan that builds academic and social skills for college success. The program includes weekly meetings with educational coaches and offers structured social events (Kirkwood, 2020).

Employment

The employment category is defined by a college's ability to offer neuro-diverse students employment skills and meaningful college credentialing that will lead to independent living and gainful employment. Services in the employment category include career training, resume writing and interview support, job connections, and stackable credentials certifications.

As an example, Palo Alto Community College in San Antonio, Texas, offers Project Access. The program offers college-level courses adding to the student's ability to earn stackable credentials as they acquire the necessary skills for gainful employment (Project Access students, 2018). Landmark College in Putney, Vermont, offers the Center for Neurodiversity. The Center aims to advance an understanding of the benefits of a neurodiverse society by hosting community events and offering internships to neurodivergent people (Center for Neurodiversity,

2020). Additionally, Harper College in Palatine, Illinois, offers the Transition Autism Program, designed to meet the specific needs of neurodiverse students as they transition from high school to college. This program provides Job Readiness Workshops that include resume writing, interview skills, and job search strategies (Transition Autism Program, 2020).

Residential Life

The residential life category is defined by a college's ability to offer neuro-diverse students support in safe housing environments. Examples of residential life support include providing designated living quarters, single-room options, and ASD-knowledgeable resident assistants. If on-campus housing is not an option, colleges offer neurodiverse students support for living off-campus. As an example, Eastern Illinois University's Students with Autism Transitional Education Program focuses on providing enhanced support in three main skill sets in the areas of academics, social, and daily living (ASD) skill sets. In another example, Eastern Illinois offers single-room options that support the opportunity to decompress and regulate and provides early move-in options that allow for a calmer transition from home life to residence hall life (*EIU STEP*, 2020).

Statement of the Problem

The most damaging barrier for students with ASD is self-disclosure. Pearson & Boskovich (2019) assert in the publication, *Problematizing Disability Disclosure in Higher Education: Shifting Towards a Liberating Humanizing Intersectional*, that post-secondary institutions are dependent on the act of student disclosure since higher education institutions are not mandated to locate students with disabilities (2019). Educators face several issues when striving to meet the needs of ASD students. Pearson and Boskovich (2019) describe that the act

of disclosing a disability for students is "a complex and ongoing process requiring decisions about who should know, why they should know, how to inform, what to disclose, and when to inform" (cited in, Valle, Solis, Volpitta, & Connor, 2004, p. 4). Therefore, the act of disability disclosure is personal and is often dependent on the student's own personal acceptance of self and disability (cited in Pearson & Boskovich, 2019; Kerschbaum, 2014; Kerschbaum, Eisenman, & Jones, 2017; Samuels, 2003; Valle et al., 2004). While institutions depend on student disclosure to serve them, students often refuse or struggle with disclosing information about their disabilities for various reasons. Some fear that they will be misunderstood by their professors. Some students simply want to forget they need the student accommodations as they think of a new school as a new start. It is not until they begin to struggle with the coursework that they often seek help. For students on the autism spectrum, getting support upon enrollment can impact their success and reduce issues of anxiety and social awkwardness.

Few community colleges offer and announce on their website that they offer services to Autistic students in navigating the admission process. The lack of information may simply be that not all community colleges actively recruit ASD students. Since the passing of the Americans with Disabilities Act (ADA), it is estimated that across all U.S. postsecondary institutions, 18% of students enrolled in post-secondary institutions have disabilities (U.S. Department of Education, National Center for Education Statistics. Fast facts: Students with disabilities, 2019). With the increase of neurodiverse students enrolling higher, community colleges must rise to the challenge and find ways to provide appropriate support systems in higher education settings. As reported by the Department of Education (DOE), within the total public-school enrollment that represents children served by federally supported special education programs, the percentage with autism rose from 0.4 to 1.4% between 2016-18 (U.S. Department

of Education, National Center for Education Statistics. Fast facts: students with disabilities, 2019). Because the data indicate that ASD students are enrolled at colleges across the nation, it appears that they are enrolling on their own without a program that directly recruits this population. As evidenced by their website information, community colleges, in general, do not appear to be formally addressing the needs of these students up front. However, because community colleges typically offer extensive student support services, it is likely that colleges are addressing student needs after enrollment into the college and after they have sought support from the student accommodations offices or student disability offices.

Overview of the Study

Community colleges across the nation is seeking ways to improve student success. In particular, neurodiverse students, those on the Autism spectrum are an underserved population entering community colleges. The purpose of this study is to identify the unique needs and experiences of students with Autism Spectrum Disorder, ascertain the resources available to them at selected technical and community colleges, and make recommendations about practices and operations related to students with Autism spectrum disorder.

Theoretical Framework

Student development theories are foundational for developing impactful practices in higher education in student affairs and academics. These practices in community colleges come from models and theories that advance the daily work of college professionals from academic advising, academic success, and career exploration all leading to meaningful educational experiences and programs designed for student success.

There are two particular theorists who have made strong contributions to the models that practitioners follow in higher education today. Arthur Chickering's Seven Vectors proposes seven vectors/stages that students must go through while developing their identity (Chickering 1987, 1993). This development occurs during their college years. Another theory pivotal to student development is Vincent Tinto's theory of student departure known as the theory of "Institutional Departure." This theory explains student retention and the reasons why students depart without earning a degree in higher education. Tinto (1987) asserts the reasons students depart are due to academic issues and failure to integrate socially and intellectually with the culture of the college. Tinto (1987) also describes that students come to higher education with prior experiences, and these experiences shape how students experience our educational institutions. These life experiences are impacted by ethnic and social-economic status. Chickering and Tinto's theoretical concepts are central to understanding college practices in serving students on the Autism spectrum.

Methodology: Qualitative Case Study and Interviews

The case study method is one that allows a specific case to be closely examined for information and themes. As defined by Barbour (2008), a case study relates to study design and sampling, either of individuals or settings, in order to allow the study of specific identified characteristics and their impact on the phenomenon being researched (p. 93). Descriptive case studies attempt to gather information and a detailed description of a case while not developing a theory as the case progresses (Willis, 2007). This research method is appropriate because it allows the researcher to develop an in-depth analysis of the programs/services available to neurodiverse students. Because the researcher wants to understand the best practices available to serve neurodiverse college students, using the Case Study approach provides in-depth knowledge

of the various programs currently available. The benefit of using the case study model is that it allows the researcher to expand on the understanding of the various programs available in higher education environments. The interview process allows the researcher to explore data-gathering techniques whereby the design allows the researcher to gather new information. Furthermore, in Phase 2, the researcher interviewed college students on the Autism Spectrum utilizing the Narrative Inquiry method of research. Thus, the researcher studied the lives and experiences of individuals. The researcher was then able to provide stories and retell the participants' stories in a narrative, chronological order (Willis, 2007).

The Goal of the Research Study

The primary purpose of this research study was to investigate current practices while seeking to improve practices and operations at community colleges that address the needs of students on the Autism spectrum. By examining the programs available at the targeted colleges, the researcher was able to gather information and discover best practices in place to serve neurodiverse students at various colleges. The secondary purpose was to gather information about the Autistic students' perceptions of their college experiences. By understanding these students' experiences in higher education, the study attempted to uncover what works for students, what students still need, and what programming colleges currently offer for student success.

Research Questions

The study, using a qualitative approach, sought to identify best practices currently being used by community colleges to address the needs of ASD students. Specifically, the study sought to answer these research questions:

1. Among two-year colleges, what academic and support resources are available to students with Autism Spectrum Disorder?

2. What are the challenges faced by young adults with Autism Spectrum Disorder who attend college?

3. What are the best practices used to support students with Autism Spectrum Disorder who are enrolled in community colleges?

Study Procedures and Research Process

This study occurred in two phases. For Phase 1 of the study, the researcher conducted a worldwide web search seeking colleges that publicly announce on their college website services to students on the Autism spectrum or neurodiverse students. From the search results, the researcher contacted the program coordinators/administrators/advisors to verify current personnel in order to select the colleges. Based on the information about services, the researcher identified experts at five selected community colleges to identify best practice programming offered to students on the Autism spectrum. These schools were selected for direct observation via on-site visits to discuss programming for neurodiverse students. However, because of COVID restrictions, the researcher was unable to visit schools in person. Instead, interviews with professionals were conducted virtually. Requests to interview professionals were sent to five community colleges. After requests were made, four professionals from four different schools agreed to the interview.

For Phase 2 of the study, the researcher conducted interviews with three college students or graduates who are on the autism spectrum. These students were referred to the researcher by professionals working with Autistic students. The semi-structured interviews were conducted virtually and were digitally recorded. The researcher asked participants to share their experiences and strategies by responding to a series of open-ended interview questions related to creating an understanding of the process for supporting students on the Autism spectrum and the community

college experience. The researcher asked follow-up questions during the interview to encourage elaboration and clarification.

Data Analysis Process

The procedure for the analysis of the interviews was thematic content analysis. The analysis was conducted using results from transcription and coding of interviews teasing out the desired perceptions, behaviors, and institutional best practices based on the categories presented by the research questions and ABA therapies.

Glossary of Additional Technical Terms

In addition to the terms defined in detail previously in this chapter, these specialized terms may be referenced throughout this document and are defined here to minimize confusion.

Autism Spectrum (AS) is a neurological and developmental disorder (American Psychiatric Association, 2013).

Americans with Disabilities Act (ADA) is a law that prohibits discrimination against a person with disabilities (McCarthy, Eckes, & Decker, (2019).

Autism and Developmental Disabilities Monitoring Network (ADDM)

Autism Spectrum Disorder (ASD): A neurological and developmental disorder that begins early in childhood. It is a lifelong disorder affecting the way an individual interacts with others, communicates, and learns (American Psychiatric Association, 2013).

Disintegrative Disorder: Develop normal speech and social development behavior and then regress losing their speech at age 2 (Grandin,

Diagnostic and Statistical Manual of Mental Disorders (DSM-V-TR (2022)/ DSM-IV): Used commonly by clinicians, the manual contains descriptions, symptoms, and other criteria for diagnosing mental disorders. DSM-V (2013) / DSM-IV (1994) and DSM-V-TR (2022). (American Psychiatric Association, 2013).

Executive Function: Refers to a person's ability to plan, focus, remember, juggle multiple tasks, problem solve and make sense of concepts. (Leach & Duffy 2009). For the purposes of this study, the term "college functioning skills" will be used interchangeably with executive function skills.

High-Functioning Autism (HFA): Those with autism spectrum disorder are considered to have high-functioning cognitive abilities (American Psychiatric Association, 2013).

An individualized Educational Plan (IEP) is a written document maintained by the school practitioners. It is developed for each public school child who is eligible for special education support (McCarthy, Eckes, & Decker, (2019).

Neurodiverse: Individuals who are on the Autism spectrum or who have other intellectual or developmental differences (Silberman, 2015).

Neurotypical: Individuals who do not have a diagnosis of autism or any other intellectual or developmental difference (Bruise, 2017).

Open Access: Open access institutions are defined as being open to anyone with no rigorous application necessary for admission (Ross, 2014).

Pervasive Developmental Disorder—Not Otherwise Specified (PDD-NOS)—a diagnosis for those who did not necessarily meet all the criteria for a full autism diagnosis but needed similar support as those on the autism spectrum (Volkmar, 2012).

Savant: Savant syndrome is an extraordinary but rare condition where persons with serious mental disabilities, including autistic disorder, have remarkable abilities in varying degrees. Whatever savant skill the person holds, it is linked to massive memory (Treffert,2009).

Organization of the Dissertation

Chapter 1 provided a background discussion of Autism Spectrum Disorder and its related clinical definitions and terms, in addition to a brief history of legislation related to autism and educational access for those students on the spectrum. Chapter 1 also provided an overview to this study, its focus, and its goals. The rest of this dissertation is organized as follows: Chapter 2 discusses related research; Chapter 3, an overview to the study's methodology; Chapter 4, the results of the study; and Chapter 5, a discussion of the key findings and their implications for community colleges wishing to better serve this growing population of students.

Summary

Students on the Autism Spectrum are a complex group. By the virtue of supportive systems in place at the K-12 school level and parental support, they manage to make it to the next level, higher education. There is no one-size-fits-all system to address the needs of autistic students as they range on the spectrum and in support needs. The research and the findings of this study will serve to provide practitioners with the knowledge necessary to create programming needed in community college environments to best serve this population.

CHAPTER 2: LITERATURE REVIEW

Introduction

In 2022, the Centers for Disease Control and Prevention (CDC) reported that one in 44 eight-year-old children have been identified with Autism Spectrum Disorder (ASD) in the United States. This statistic is based on the data collected from health and special education records of children who are eight years old; by this age, most children with ASD have been identified for support services in the K-12 system (Centers for Disease Control and Prevention, *Autism and developmental disabilities monitoring (ADDM) network* 2022). This number indicates that the number of diagnosed students with ASD in postsecondary education will increase. This literature review focuses on research on autism, the challenges faced by neurodiverse students, and the best practices needed to ensure the success of this particular student population. The review will highlight research practices used to serve Autistic individuals in higher education zoning in on social development skills, academic support, functioning support (college functioning skills), and employment support/career services.

Research on Autism

As discussed in Chapter 1, extensive research on autism and related neurodiverse conditions began in 1943 with the work of Leo Kanner and Hans Asperger work in 1944. In 1943, Leo Kanner published a case study, "Autistic Disturbances of Affective Contact," in the journal *Nervous Child,* where he noted the emotional disorders of eleven children under his care at the John Hopkins clinic between 1935 and 1943. These children presented extreme forms of

autism such as obsessiveness, echolalia, and not being threatened by aloneness (Donovan &

Zucker, 2016, 2017). In 1944, Hans Asperger published, "'Autistic Psychopathy' in Childhood,"

in *Autism and Asperger Syndrome*, and originally published in 1944 as "Die 'Autistischen

Psychopathen' im Kindesalter." Asperger presented case studies where he noted clinical

characteristics and commonalities of four boys. In 1979, Lorna Wing and Judith Gould studied

the prevalence of autism in the general public and broke common beliefs to date about autism.

Their work served to blend the lines of opinions between Leo Kanner and Hans Asperger

regarding autism. Wing and Gould's research found that there are three areas of deficit named as

"triad of impairments," specifically in social interaction. These categories were communication/

imagination and restrictions/repetitions in self-chosen behavior and rigidity of thinking with

difficulties in social imagination. Their research findings further divided autistics into

descriptions such as detached or aloof, passive, and active but odd. In 1988, Wing published a

paper titled, "*The Continuum of Autistic Characteristics,"* where he discussed the epidemiologic

research related to biological, psychological, and clinical research and the nature of childhood

autism. In 1988, three significant events brought autism to the public view: the film, *Rain Man*,

which brought forth the character of an autistic man; the introduction of the first clinical test for

autism diagnosis; and the changes to broaden the criteria for diagnosis in the American

Psychological Association to reflect the diversity of what now is coined as "autism spectrum."

Meanwhile, in her role as a public school teacher in Michigan, Carol Gray made her contribution

to the autism world. Gray is known for the development of *Social Stories*, a respected evidence-

based practice used today to teach autistic students how to navigate social interactions. Since

1993, Carol Gray has written and published several articles in the Morning News / Jenison

Autism journal where she coined the term "Social Stories." In Gray's (1993) publication titled,

Social Stories: Improving Responses of Individuals with Autism with Accurate Social Information, she outlines a basic formula for effectively implementing a social story by using four basic sentence types: descriptive, perspective, affirmative, and directive. Using the ratio of one directive sentence for every 2-5 descriptive, perspective, and/or affirmative sentences, Gray (1998) defines social skills as manners and behaviors used in personal interactions that are accepted by people as "normal" behaviors with those of a similar culture or background. Gray (1998) defines social stories as a picture or a series of pictures that represent social interactions. These pictures serve as a demonstration for instructional purposes. In each social story, one skill is targeted for instruction (Gray, 1993,1998,1999, 2000, 2002, 2004, 2010, 2015). The Social Stories were used as an instructional tool to guide autistic students and their families in dealing with social interactions, and social graces as they go about their daily activities.

Later, in 2013, Kent et al. conducted a study, the first one of its kind to develop and validate a new DSM-5 algorithm from a single standardized diagnostic tool. Moving forward, in 2015, Steve Silberman conducted a TEDTalk where he outlined the perfect alignment and combination of the medical world and the public's views which created an effect on autism awareness that prompted the need for families to seek support services (TEDtalksDirector, 2015).

In a qualitative study conducted on challenges faced by families and health providers as related to the standardization of genetic testing for autism, Barton (2018) suggests that due to the diversity of a multidisciplinary team for autism diagnosis, providers noted that there is no single guideline to follow. Furthermore, practitioners recognize that there is not a single treatment for autism nor is there a single blood test or genetic marker —a reliable diagnostic biomarker— that diagnoses autism. Instead, an autism diagnosis relies on recognizing behavioral symptoms that

can vary from case to case (Shen et al. 2020). In 2023, Frazier et al. conducted a research study where an Autism Spectrum Disorder Questionnaire (ASDQ) was created to identify and measure core autistic characteristics and symptoms with 90% accuracy. This free tool was intended to be used as preliminary evidence of predictive validity consistent with the DSM-5 ASD criteria that may be useful for screening and treatment monitoring which is for those where ASD has not yet been diagnosed or where there is a concern for ASD. This tool promises to provide families and educational institutions with guidance.

A pioneer on the topic of Autism, a unique author, scientist, and autistic person herself, Dr. Temple Grandin has developed a body of work that provided audiences with firsthand insights from an autistic mind. In 1996, Temple Grandin wrote her memoir, *Thinking in Pictures: and Other Reports from My Life with Autism,* where she gives accounts of her visual thinking patterns and visual-spatial skills while indicating that she has weak verbal skills. In 2006, Grandin also described how Autistics develop talents and specialized thinking in different ways: visual thinkers think in photographic images; music and math thinkers think in patterns; and verbal logic thinkers think in word details (Grandin, 1996, 2006). In 2017, Grandin & Panek wrote the book, *The Autistic Brain Thinking Across the Spectrum: Helping Different Kinds of Minds Succeed*, where they provide the historical contexts of autism, introduce neuroimaging advances and genetic research that link brain science to behavior, and argue that people on the spectrum should be defined not only by their weaknesses but also their strengths. In the book, *Visual Thinking: The Hidden Gifts of People Who Think in Pictures, Patterns, and Abstractions,* Grandin and Lerner (2020) dive deeper into the "3 types of autistic brains" as Grandin describes in her earlier books. In addition, Grandin proposes new perspectives to educating, parenting, employing, and collaborating with visual thinkers. Grandin (2020) asserts that in a highly

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competitive world, we need every type of "mind" in the workforce. Another important book, written by a high-functioning Asperger Syndrome-Autistic college student and edited by Dawn Prince-Hughes (2022), was *Aqua Marine Blue: 5 Personal Stories of College Students with Autism,* that describes daily life and personal struggles that being neurodivergent brings including insights on their strengths, resilience, and vulnerabilities. To list a few of the vulnerabilities, the book provides examples of their learning process, the social aspects of being on campus, making friends, and the struggles of eating on campus.

Social Policies and Effects on Autistic Students in Education

      Legislation and social policies have influenced the way institutions serve students with disabilities. There are three foundational federal laws in this area: Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1996, and the Individuals with Disabilities Education Act of 2004. All of these pieces of legislation prohibit institutions from discriminating against students based on their disability. Other bills have been signed into law to support the needs of those on the spectrum. The Autism Omnibus Bill signed in 2014 provides funding for federal government programs, including those that impact people with Autism and other disabilities. Autism CARES act (2019) also known as the Combating Autism Act of 2006, requires federal agencies to track and monitor Autism prevalence and supports the training of medical professionals to detect and diagnose autism (*Autism cares act of 2019*. U.S Department of Health and Human Services). Autism Family Caregivers Act of 2022 establishes a pilot program to provide training for caregivers on improving health and other outcomes for children with autism spectrum disorder and other developmental disabilities or delays (*H.R.6783 - autism family caregivers act, 2022*). In the K-12 system, students with disabilities usually attain support services as it is the school's legal responsibility to provide the services and support

(Individuals with Disabilities Education Act). However, students with autism must adapt to a new legal framework in which the responsibility for accessing disability-related services shifts from the school to the student (Stefania, Petcu, Dalun Zhang, & Yi-Fan, 2021). Attaining suitable accommodations and support services impacts the ASD student's college experience, their ability to persist, and ultimately their success (Van Hees, Moyson, & Roeyers, 2015). According to a 2016 study by Brown & Coomes, institutions provide a "ground floor," standardized level of support for students with ASD by using accommodations. The authors mention several best practices when serving those with ASD such as customizing student accommodation services unique to each student's needs, educating faculty and campus constituents as to what to expect, facilitating the transition from high school to college, building relationships via check-in meetings with advisors and faculty members, create and enforce policies for successful outcomes and address functional limitations.

Programming and Accommodations for Autistic Students in Higher Education

Providing autistic students with programming to make a smooth transition from high school to postsecondary education is critical to student success in higher education postsecondary environments. For example, similar to a study conducted by Esbensen, Seltzer & Krauss in 2008 on students with down-syndrome, Taylor, J & Seltzer (2010) note that high school exit is a "critical turning point" in the lives of individuals with ASD that may alter the trajectory of the autistic individual due to behavioral phenotype over adolescence and early adulthood. The difficulties autistic adults face in transition related to their moving out of their home or experiencing parental death are associated with a worsening of maladaptive behavior. Hart et al. (2010) state that for students with ASD, a successful college experience is measured by grades and increased learning, independence and self-determination, and positive social

experiences. In 2012, a study conducted by Smith, Maenner, and Seltzer highlighted that for individuals with ASD, their daily living skills improved during adolescence and their early 20s but plateaued during their late 20s. The transition to postsecondary education typically occurs during late adolescence and early adulthood, a developmental period of intensified risk for people with ASD. Additionally, transition programming into adulthood can prevent a host of adverse outcomes such as poor quality of life as social and communication impairments along with daily living skills tend to worsen after adolescence and in adulthood. According to Gelbar (2015), the study results indicate the importance of self-advocacy on behalf of students with ASD and the need for institutions of higher education to give comprehensive support for individuals with ASD in the academic, social, and emotional domains as to integrate them into the campus environment effectively.

In 2016, White conducted a mixed methods study where he points out the need for empirically based programming to support the success of students with autism spectrum disorder (ASD) as they transition to college. White found that, across the stakeholder groups, identified areas of difficulty included limited interpersonal competence, managing competing demands in postsecondary education, and poor emotional regulation. White (2017) notes that empirically based, consumer-informed programming for emerging adults with ASD to transition from college is needed to best serve this population. Brown (2017) states that practitioners and scholars must look into future opportunities for accessibility in higher education and that a successful college experience is an accessible college experience. Hoetz et al. (2018) studied the topic of transition programming for autistic college students and developed a process through which more experienced autistic college students act as ambassadors in a leadership role while fostering self-advocacy skills among autistic students who are transitioning into or struggling in

college. These studies support the need for colleges to create a smooth and supportive transition into college and impact student onboarding, retention, and success.

Autistic Students in Higher Education: Challenges & Successes

Several studies have shown that specialized academic and support services can ensure student success and create a culture of inclusion for students with Autism Spectrum Disorder. According to the 2017 study by Shmulsky, Gobbo, and Banerjee, ASD students displayed positive characteristics and had improved self-esteem by being in college. In fact, of the 32 students in the study, 23 students remained enrolled for two semesters suggesting a successful college transition. Although Shmulsky et al. (2017) reported improvement in self-esteem among ASD students, in 2021, Petcu, Zhang, and Li's survey revealed that ASD students lacked confidence during their first year in college. Supporting this research, a 2018 study by Qian et.al. report results on qualitative interviews with 39 students with intellectual disabilities who participated in a five-year study entitled, "*Transition and Postsecondary Programs for Students with Intellectual Disabilities (TPSID).*" The basis of this project came from the Check & Connect mentoring model. The students noted the two most valuable components of the program were the development of a positive student-coach relationship and the "open door" policy in which students could drop in on their coaches without an appointment. The students noted improved academic success and increased academic motivation and engagement. In 2021, Stefania, Petcu, Dalun Zhang, and Yi-Fan conducted a study using data from the 2019 CIRP Freshman Survey and the Your First College Year (YFCY) from the Higher Education Research Institute at UCLA, exploring the differences between first-year students with autism spectrum disorders and those of students with learning disabilities (LD). The findings indicate that the characteristics of these two groups of first-year college students were similar except for gender,

ethnicity, first college generation, and parents' income. Compared with first-year college students with LD, students with ASD were less likely to engage in risk-taking behavior, use health services, and the writing center. The study also highlights that ASD students benefit from peer mentoring to navigate college resources.

The diverse elements in the characteristics of those with ASD including gender and comorbidities such as attention deficit disorder (ADD), learning disabilities, mental health, and executive function are all critical in understanding and providing support for success in postsecondary education (Sturm & Kasari, 2019). According to Sturm & Kasari's (2019) research, college students with ASD perceive themselves as academically competent; however, they lack confidence in other classmates. Female students with ASD comorbidities may be at risk for poorer mental health and poorer tertiary achievement. The information in this study could inform higher education institutions to provide more targeted support services for students with autism. These services range from parent/family engagement, enrollment services, job retention, and other support services directed to the development of students with ASD.

Community College Programming for Autistic Students

A 2010 survey of Association of Higher Education and Disability (AHEAD) members found that disability resource offices at two-year public institutions served an average of 8.8 students with ASD (Kasnitz, 2011), noting that summer programming is essential in helping autistic students transition to college. Most programs are intensive two-week-long programs to help autistic students transition into and succeed in college. Hoetz et al. (2018) address an important gap in the literature regarding transition programming for autistic college students. This research suggests that participation in an intensive summer transition program may help prepare autistic college students to self-advocate and engage with peers in college contexts. For

example, the College of DuPage (COD) offers incoming freshmen an opportunity to connect with Autisamerica a student organization that supports autistic students on campus. The student organization meets in the summer. Additionally, COD offers a program, COACH (Career Opportunity Achievement) which is a two-year cohort program for young adults with mild to moderate intellectual or developmental disabilities. In addition to an academic focus on reading, writing, math, and computer literacy, COACH also promotes social skills, independence, and career exploration (College of DuPage, Autismerica, 2021).

The Harper College Transition Autism Program is also designed to meet the specific needs of students on the Autism Spectrum as they transition from high school to college by using a cohort model. Harper College's Transition Autism Program offers a summer course to prepare their students in their transition to college. The Introduction to College course is offered in the summer and the new cohort transitions to college and students begin other courses in the fall (William Harper College, Transition Autism Program, 2020). Summer programming is intended to aid students in familiarizing themselves with the college campus, college life, and academics.

Academic Support

While most colleges offer students tutoring support and student accommodations, some college students do not always access these services. Most colleges provide tutoring and student accommodations as part of their academic support offerings. The College of Dupage uses a unique approach to getting students to use academic support services via the student organization Autismamerica. This student organization is led by the Tutoring Support Access and Accommodation Specialist and Disabilities Guidance Counselor (College of DuPage, Autismerica, 2021). Bellevue College has a robust program for autistic students. College staff at Bellevue provide training for the entire college community—faculty, counselors, and advisors—

in preparation to work with neurodiverse students, making it a Neurodiversity friendly college. Integrated into their curriculum, faculty use Universal Design for Learning. Placement is determined for students upon enrollment via two tracks, beginning either in college-level courses or in adult basic education courses. Students must place in the English 072 level at a minimum, and ENG 092 and ENG 101 (college-level course) to participate in the academic part program and be part of the cohort. Students who place in Adult Basic education courses gain skills, even if they do not place at ENG 072 level. Bellevue offers a three-year track of classes in the cohort including career prep courses. For example, in Year One, the student focus is on knowing self and individual strengths, executive functioning, self-regulation, self-advocacy, and social interaction. In the Second Year, students focus on their careers; in the Third Year, students seek internships and take formal communication classes. To provide a holistic approach, Bellevue practitioners facilitate workshops for parents on how to live with a college student and how to hand over the reins to the college staff and college students. Staff meet with the parent(s) and the student if the student wishes. However, the parent's only point of contact is the Director; parents are asked not to communicate with the faculty directly (Bellevue College, Neurodiverse Navigators, 2021). All these services provided make Bellevue a neurodiverse-friendly college.

College Functioning Skills/Executive Functions

At Harper College, once enrolled, autistic students attend a Summer Kick-Off event which students and parents attend. Later, students are enrolled in a First Year Seminar to provide them with ongoing support services. Peer mentoring is provided to new and returning students. Parent/ family events are organized to give updates and promote support for each other. They bring guest speakers in to teach and provide support on college life experiences and expectations. Because of privacy laws, if parental involvement is to continue, students must sign a consent

form to communicate with staff. During their time at Harper College, students attend weekly

meetings with their advisor to discuss many topics, including how to study, how to communicate

with professors, how to advocate for themselves, how to seek a job, how to find resources, how

to prepare for job interviewing, how to prepare a resume, and how to use websites such as

Linked In. This unique program provides peer mentoring, specialized academic support, social

activities, and a parent support component (William Harper College, Transition Autism Program,

2020). At Kirkwood College, once enrolled, students receive individual advising. The Advisor

meets with students once or twice a week to support them and work on different skills for college

survival. Since every student is different, goal setting will vary. The advisor helps with

navigating college services and communicating with their instructors. For most students, the first

meetings with the advisor are "get-to-know meetings" so that a rapport is established. Advisors

explain what is needed for "parents to know" and what parents don't need to know once their

children become adults enrolled in college (Kirkwood, ASK program, 2021). At the College of

DuPage, students receive support with executive functions and making the right decisions, time

management, and study skills. Tutors are disabilities specialists who help map out and plan

assignments, explain how grades are calculated, and explain what makes a good student.

Students are offered two courses, a College Success course and a course on Interpersonal

Communication skills, to provide students with strategies to communicate. In addition, topics

discussed in group therapy format include role-playing, how to face challenges, and time

management skills (College of DuPage, Autismerica, 2021). At Bellevue College once enrolled,

students receive guidance on the best way to function in college with peer mentor meetings once

a week for 45 minutes to discuss what is happening in class, access campus resources such as

tutoring, assistance in setting up calendar appointments, and reminders, time management, and

problem- solving skills. All while providing individualized support (Bellevue College, Neurodiverse Navigators, 2021).

Campus Environment

A supportive and welcoming campus environment is essential to make students feel welcome. At Kirkwood, the use of Universal Design for Learning to create lessons accessible for all students includes considering the classroom space, identifying different ways to test a student's knowledge, and effective testing, written assignments, and oral / verbal presentations. Kirkwood encourages faculty to analyze their learning objectives to find different ways to have students demonstrate their knowledge. In addition, Kirkwood has asked faculty to review their online delivery to make it more neurodiverse-friendly, such as asking faculty to ensure students can review video transcripts (Kirkwood, ASK program, 2021). At the College of DuPage, the college has identified quiet places for non-distraction and overstimulation. In addition, college faculty know they can call on the advisor/counselors when students have a meltdown (College of DuPage, Autismerica, 2021). At Bellevue, the Neurodiversity Center is centered around student success including a quiet room space, study spaces, larger rooms, small meeting rooms, and a lounge / study area with laptops. Support staff are housed in the Neurodiversity Center including peer mentors, program managers, directors, faculty, and the front desk clerk (Bellevue College, Neurodiverse Navigators, 2021). The environment at these campuses maximizes opportunities for neurodiverse students' success.

From High School to Employment

Another challenge for autistic students is the transition from one life milestone to another. In 2017, the book, *In a Different Key: The Story of Autism* outlined the story of Donald Tripplett,

the first person diagnosed with autism. Since Donald's parents were wealthy bank owners in Forest, Mississippi, they provided him with many resources within their reach. Donald went to the local schools and later took a job at his father's bank. An embracing community and his ability to hold a job and be integrated into society allowed for his independence and growth (Donovan & Zucher, 2016, 2017). In 2020, 60 Minutes televised an episode, *Companies seeking out potential employees with autism* where they reported that people on the autism spectrum are underemployed or unemployed. For Autistics, unemployment rates near 80% (Donovan & Zucher, 2016, 2017). In 2023, Vanderbilt University opened the Frist Center for Autism and Innovation to address the underemployment and unemployment of its graduates. Vanderbilt University has found a great balance in bringing business scholars and disabilities researchers together with experts in neuroscience and education to understand, maximize, and promote neurodiverse talent with the first of its kind (*The Frist Center for Autism and Innovation,* 2023). The Threshold Program at Lesley University has also been successful by providing on-campus housing, a focus on life functions skills, and offering extensive internship opportunities that can lead to employment. The Transition Year program is intended for Lesly University's graduates. It is a 10-month program where students live off-campus in an apartment and look for paid employment while working on life function skills (*Transition year & bridge year: Threshold program, 2023*). Like Lesley's two-year program, The First Place Transition Academy, a non-profit organization in Pheonix, Arizona, provides a structured program that includes clinical support, independent living skills, and career readiness training with vocational / community college partnership to autistic adults (First Place Academy 2023). In preparing students for the workforce, the College of DuPage offers Job Readiness Workshops that include resume writing, interview skills, and job search strategies to help students transition into employment by

connecting students to the Center for Career Connections (College of DuPage, Autismerica, 2021). Kirkwood College uniquely connects its students to community agencies such as Vocational Rehabilitation services in the area to seek extra resources. They, too, offer Career Services on campus provide career exploration, resume writing, interview skills, and workshops that include topics such as the environment in the workplace (Kirkwood, ASK program, 2021). Bellevue College offers a Neurodiversity hiring program, an internship program and transition to employment outcomes (Bellevue College, Neurodiverse Navigators, 2021).

Conclusion

This literature review has provided a view of the growing literature on the skills and talents represented by the autistic population, as well as the practices and approaches that can increase and enhance their success as they pursue higher education and successful careers. The focus of this study is to build on this literature by identifying best practices used in the community college setting that can increase student success for students on the Autism spectrum. Brown & Coomes (2016) define a best practice as a successful learning experience that respondents gained from difficult situations. Chapter 3 will explain further details of these multiple case studies and the study's methodology.

CHAPTER 3: RESEARCH METHODOLOGY

Introduction

Open access to a community college education for all who desire to learn means that all students who apply for admission are admitted. This means that colleges must provide solid support systems for all students including students with disabilities. The 1975 Individuals with Disabilities Education Act (IDEA) mandates that school-aged children and youth ages 3–21 with disabilities have access to and be provided with a free and appropriate public-school education. Since the passing of the Americans with Disabilities Act (ADA) in 2019, it is estimated that across all U.S. postsecondary institutions, 18% of students enrolled in post-secondary institutions have disabilities (Fast Facts: Students with disabilities, 2019).

Two factors have brought about an increase in neurodiverse college student enrollments. The first factor can be attributed to the community colleges' practice of open-access criteria for admission. The second factor contributing to the increase of neurodiverse students enrolling in higher education is the successful support systems provided by Section 504 and the Americans with Disabilities Act (McCarthy, Eckes & Decker, 2019). The 504 and ADA provide support, modifications, and student accommodations for individuals who have a limiting impairment. In a report by the Department of Education (DOE), of the total public-school enrollment that represents children served by federally supported special education programs, the percentage with autism rose from 0.4 to 1.4% between 2016-18 (Fast Facts: Students with disabilities, 2019). Because students on the autism spectrum are a new population moving into higher

education, community colleges must rise to the challenge and find ways to provide appropriate

support systems to neurodiverse students in higher education settings. The 2017 National Autism

Indicators Report notes that "fewer than 20% of college students with autism had graduated or

were even on track to graduate five years after high school" (cited in Buechler, 2017). These

statistics suggest that colleges are not providing appropriate support to help these students

succeed. For this reason, this study will investigate the best practices of colleges and universities

that are forerunners in providing programming for college students on the Autism spectrum.

The study seeks to answer these research questions:

1. Among two-year colleges, what academic and support resources are available to students with Autism Spectrum Disorder or other developmental disorders?

2. What are some of the challenges faced by young adults with Autism Spectrum Disorder who attend college?

3. What are the best practices used to support students on the Autism Spectrum Disorder who are enrolled in community colleges?

Theoretical Framework

Community college practitioners in student affairs divisions are practical yet highly

grounded in theory. Student development theories are foundational for practices and knowledge

in student affairs. The practices in community colleges come from models and theories that

advance the daily work of college professionals from academic advising, academic success, and

career exploration all leading to meaningful educational experiences and programs designed for

student success.

Arthur Chickering's seven vectors propose college student development as steps students

go through as they develop their identity (Chickering 1987, 1993). Each vector is described as a

stage in student development or a phase in the student's life during their college years.

Chickering's seven vectors consist of student development theory. Chickering and Reisser

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(1993) describe three domains of ***competence*** that develop during college: intellectual competence, physical and manual competence, and interpersonal competence. In this vector, students acquire a wide range of technical skills, academic challenges, diversity, and changes in living environments, all while mastering skills and encountering new skills. In the second vector, ***managing emotions***, students develop the ability to manage emotions (Chickering & Reisser, 1993). They learn the appropriateness of their emotions and reactions to different contexts (Long 2012). In the third vector, ***moving through autonomy,*** an individual develops problem-solving skills and the ability to work independently. This is key to enacting one's purpose. When others may be critical of our purpose, developing autonomy characteristics helps students stay focused on goals. Developing purpose requires knowing that interdependence is also important to enact goals and meet obligations (Evans, 2010). In the fourth vector, students develop ***mature interpersonal relationships***. The establishment of creating lasting relationships, including friendships, romance, partnerships, and mentors, are a distinctive trait of many college students' experiences (Chickering & Reisser, 1993). These relationships are associated with the development of interpersonal competence. In the fifth vector, ***establishing identity***, students construct a sense of identity in regard to physical appearance, gender, race, and sexual orientation. Students become aware that their identity is composed of multiple facets and how they fit in the broader society (Long, 2012). Purpose can be more deeply enacted when one has high self-esteem, confidence in oneself, and a knowledge of one's own capabilities (Evans, 2010). In the sixth vector, ***developing purpose***, students set clear career goals, and personal aspirations, find their vocation, and persist despite obstacles. Chickering describes finding our vocation as a means of identifying what we love to do, energizes us, fulfills us, and challenges us to develop new possibilities for excellence (Chickering & Reisser, 1993). Ideally, vocational

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plans flow from deepening interest to furthering aspirations that have meaning and value (Chickering & Reisser, 1993). Developing purpose requires formulating plans for action and setting priorities that integrate three major elements: vocational plans and aspirations, personal interest, and interpersonal and family commitments. It also involves a "growing ability to unify one's many goals within the larger scope of a larger, more meaningful purpose, and to exercise intentionality on a daily basis" (Chickering & Reisser, 1993, pg. 50). In the final vector, *developing integrity*, students' progress from black or white thinking on complex and moral issues to acknowledging others' perspectives as valid (Long, 2012). Students develop their core set of values that include not only self-interests but those interests of others such as family, friends, and community (Chickering & Reisser, 1993). Students become more committed to their values and purpose and, in turn, follow through to meet objectives (Evans, 2010). According to Chickering, students move from one vector to another vector at different rates and may go back and forth from one vector to another as they re-examine life experiences.

Another theory that is pivotal to student development is Vincent Tinto's theory of student departure. Tinto developed a theory to explain student retention and the reasons why students depart without earning a degree in higher education. Tinto (1987) asserts that the reasons students depart are because of academic issues and failure to integrate socially and intellectually with the culture of the college. Tinto also argued that colleges should be intentional and deliberate in creating opportunities for extracurricular activities, informal student interactions, and faculty/student interactions to retain students (Tinto, 1987). Student affairs professionals monitor students' academic progress, guide them through navigating the college, and make referrals to tutoring support. Student affairs professionals also play a vital role in creating

supportive social and educational environments where students can become part of the college community.

Arthur Chickering and Vincent Tinto's theories set a foundation for the evaluation of best practices as they relate to student success. These theorists carefully set milestones for students and practitioners to reach when achieving goals in attaining higher education completion. It is through Chickering and Tinto's framework that this study began to examine facets of programming for Autistic students that exist in community college settings. In this research, the Phase 1 descriptions of practitioners' practices at the colleges highlight the development of programming designed to support students on the spectrum. The Phase 2 student interviews help us understand the importance of impactful practices in community college settings. Chickering and Tinto's theoretical concepts are central to understanding college practices in serving students on the Autism spectrum.

Overview of the Study

For Phase 1 of the study, the researcher conducted a search of the worldwide web, identifying colleges that publicly announce on their college website services for neurodiverse students. From the search results, the researcher selected five community colleges and contacted program coordinators/administrators/advisors to gain more information about the services offered at the institution. Based on the information about their services, the sample was narrowed to four colleges as the sample was to be from community colleges and two-year programs only. The researcher then selected experts at these four community colleges for interviews to discuss neurodiverse programming. For Phase 2 of the study, to better understand the students' perspective on accessibility to college services, the researcher conducted interviews with three college students or graduates who are self-reported to be on the autism spectrum.

Phase 1: Case Studies

      The purpose of the research was to understand the best practices in programming aimed to reach students on the Autism spectrum at community colleges. The approach used for this qualitative research is a case study. A qualitative case study approach can be used to tell an individual's, institution's, or program's stories. Case studies tell what, when, to whom it happened, and the outcomes (Patton, 2002). The purpose of case studies is to gather information and generate findings that are helpful in identifying effective practices. Therefore, a case study allows the researcher to understand effective practices implemented to address the needs of students on the Autism spectrum in several categories such as social development skills, academic support, functioning/student services support, and employment. Trochim, et. al (2016) provide three categories of case study research: descriptive, relational, and causal. For this research, a multiple descriptive case study was performed. As noted in *Research Methods: The Essential Knowledge Base*, "A descriptive case study documents what is going on and what exists" (Trochim, et. al., 2016, p. 14). The research conducted on programming for neurodiverse students at community colleges provides practitioners with insight on how to better serve students on the Autism spectrum. Furthermore, a case study methodology was selected because it enables the researcher to gain a holistic view of a phenomenon and can provide a full picture since multiple sources are utilized (Noor, 2008). For the case study approach, the researcher used information from multiple sources, including the public information provided on the institution's website and the interviews with the institution's representatives (Creswell, 2009). The qualitative semi-structured interview data provides a deeper insight into the findings (Creswell, 2009).

      Obtaining information from a case study provides valuable information that can be used to enhance and improve community college programming for students on the Autism spectrum.

Another reason that the case study method is used to study a small number of special cases that are successful at something can be a source for learning (Patton, 2002).

In the first phase of the study, the researcher began by investigating colleges that advertise programming specifically for ASD students on their college websites. Expert sampling was used to identify the leadership of these ASD programs, such as directors or student accommodations directors or personnel from the community colleges who work directly with these students.

Phase 1: Participant Pool

The recent COVID-19 pandemic in 2020 impacted college campuses with many closings or limited in-person contact. Because of COVID's social distancing measures, the researcher conducted virtual interviews to collect information about institutional best practices. For Phase 1, the onsite visits were moved to virtual interviews with directors/program practitioners. The researcher interviewed program practitioners from four colleges that offer programs for students on the Autism spectrum. The researcher identified Student Accommodations directors, Autism Programming directors, coaches, or any other staff person who works directly with AS students using expert sampling. Expert sampling is defined as a sample of persons with known or demonstrable experience and expertise in some areas (Trochim, Donnelly, & Arora, 2016).

Phase 1: Data Collection Procedures

Using purposive sampling, the researcher identified experts in the field from the selected community colleges. The sample was chosen based on the following criteria:

1. Must be a two-year community college setting
2. Must provide student programming in at least 3 of the following areas:
    a. Social Development Skills

b. Academic Support

c. Executive Functioning Support -college functioning skills.

d. Employment support/career services.

Once selected, participants were contacted via email and/or phone to arrange a time for the interview. Data were collected using virtual interviews to discuss programming for students on the Autism Spectrum. All interviews took place between June 2021 and March 2022.

Semi-structured interviews were conducted through the online video meeting Google Meet system and were digitally recorded. The researcher asked participants to share their experiences and strategies by responding to a series of open-ended interview questions related to creating an understanding of the process of supporting students on the Autism spectrum and the community college experience.

Interviews were digitally recorded for accuracy, and the researcher had the interviews transcribed using the online meeting software. The transcripts and videos are password protected. After the transcripts were transcribed, they were sent to the participants in a follow-up email to provide the participants the opportunity to review transcripts for accuracy.

Phase 1: Rationale

Semi-structured interview method was chosen to allow the interviewer to ask additional questions for clarification that may arise from the interviews themselves. The interview process allowed for the researcher to explore data-gathering techniques whereby the design allows the researcher to gather new information.

The use of qualitative techniques allows the researcher to gain an understanding of how people interpret their experiences, construct their world, and attribute meaning to their experiences (Merriam, 2009). A multiple-case study using a qualitative approach was used to

explore programming for Autistic students at the selected community colleges. Furthermore, narrative inquiry allowed the researcher to tell the stories of autistic students who have attended community colleges. A qualitative study allows the researcher to focus on the process, meaning, and understanding of the participants. Traditional methods of examining student outcomes focus on quantitative measurements but fail to gain insight into the lived experiences of students.

Phase 1: Data Analysis Procedures

The data analysis applied the framework developed by Applied Behavior Analysis (ABA) Therapy to define areas of development. The areas of development are also reflected by the student identity development theories of Tinto and Chickering. The interview results and analysis apply four categories to identify and define institutional best practices and the areas that the students encountered and/or experienced in their college completion journey. The categories are:

1. Social Development Skills
2. Academic Support
3. Executive Functioning Support -college functioning skills.
4. Employment/career services support.

Phase 2: Student Interviews

The purpose of Phase 2 was to collect data that would answer the following research question: What are the challenges faced by young adults with autism spectrum disorder who attend college?

Phase 2: Participant Pool

For Phase 2, the participant targets were students on the Autism Spectrum who were either self-identified students in a formal Autism program or students utilizing the student

accommodation services at selected institutions. By referral by the Student Accommodation Services director/workers, snowball sampling methods were used to identify three autistic young adults between the ages of 19 and 35, who were currently or recently enrolled in community college. Snowball sampling methods allow the identification of students on the autism spectrum for referral purposes (Trochim, Donnelly, & Arora, 2016), thereby, identifying students on the spectrum while maintaining their right to privacy.

Phase 2: Data Collection Procedures

In Phase 2, the researcher interviewed college students or recent grads on the Autism spectrum utilizing the Narrative Inquiry method of research. This method allows the researcher to study the lives and experiences of individuals, and then provide stories and retell the participants' stories in a narrative, chronological order (Willis, 2007).

Initially, participants were contacted by email to arrange a time and place for the interview. The 45-60-minute interviews were conducted by video chat using Google Meet software. The interview was made up of ten predetermined topics. Only participants who voluntarily agreed to participate in this study were interviewed. Interviews were all done via Google meet and digitally recorded for accuracy. The researcher had interviews transcribed using the transcription process from the Google Meet software; transcripts and videos were password protected. The researcher used Scribie, an audio transcription service.

Phase 2: Rationale

Narrative Inquiry allows for a researcher to tell the subject's story. Narratives are how we share our experiences, and our daily lives and help us gain insight into lived experiences. The key to this type of qualitative research is using stories as data. First-person accounts with a

beginning, middle, and end have become a more popular form of qualitative research (Merriam & Tisdell, 2015). In addition, this study used semi-structured interviews for data collection. Semi-structured interviews were appropriate because they allowed the researcher to ask follow-up questions, making information gathering more efficient (Merriam & Tisdell, 2015). Interviews also allowed the researcher to observe non-verbal cues, making reporting richer. Finally, because of the interactive nature of interviews, some respondents may be more inclined to share information in an interview differently than they would when completing a paper or online survey.

Phase 2: Data Analysis Procedures

The data analysis again applied the framework developed by Applied Behavior Analysis (ABA) Therapy to define areas of development. The areas of development are also reflected by the student identity development theories of Tinto and Chickering. The interview results applied the four categories to identify institutional best practices and the areas that the students encountered and/or experienced in their college completion journey.

Study Delimitations

The study's delimitations included the following institutional characteristics applied in Phase 1 and the student characteristics applied in Phase 2.

Phase 1 Delimitations: The institutions were identified by the fact that they serve autistic students, address at least three of the identified student needs, and describe these services on their public-facing websites. No other factors (such as perceived "success" in meeting these needs) were a factor in their selection.

Phase 2 Delimitations: The students interviewed for Phase 2 self-identified as autistic. The interviews captured their perceptions of the services and support they received while enrolled in a community college. The student's level on the autism spectrum was not a factor in their section. Also, the number of classes they completed and the location of the college they attended were also not factors in their selection.

Study Limitations

The original plan for this study upon commencing the research was for the researcher to visit the various college campus locations to observe programs in session and hold in-person interviews of professionals in the field and autistic students in community colleges. However, in the middle of writing this dissertation, the COVID pandemic impacted our population. This limitation impacted the researcher's ability to conduct in-person observations because of school closings and limited in-person access. Furthermore, Ferris State University and other schools ordered that there was to be no in-person research to be completed. Thus, all interviews from both phases of this study were conducted using the online Google Meets meeting platform.

A second limitation was getting access to the intended number of students. The study design originally planned interviews with 5-7 students. However, the virtual and online access to students affected the number of referrals obtained by the professionals. Although the campus contacts sent multiple emails asking students within their programs to participate, fewer than expected responded.

Reliability and Validity

Through student interviews, data were gathered that allowed for validation through rich descriptions of the meaning and perspectives of the participants. Additionally, Respondent

Validation was used for professionals interviewed. Respondent validation is a common strategy

used to ensure internal validity as it rules out the possibility of misinterpretation of what the

interviewee said (Merriam & Tisdell, 2015) For Phase 1 of the study, interviewees were sent a

copy of their transcripts via email, and they were provided time to review the transcript and reply

to the email with corrections if needed. Finally, they were asked to verify the content of their

interview transcripts. The researcher used a transcript service, Scribie. Once the transcripts were

delivered to the researcher by Scribie, to ensure reliability the researcher sent the participants a

copy of the transcript via email. The researcher asked the participant to review and reply to the

email if they saw errors in the content. The participants replied via email with the approval of

transcripts ensuring the reliability and validity of the content. Because of the potential for

creating confusion with the participants, the students participating in Phase 2 did not receive

transcripts to review.

Conclusion

Autistic students are continuously enrolling in our community colleges across the nation.

It is up to the colleges serving these students to take notice and have the foresight to fulfill

academic needs through a social justice lens to best serve the needs of this student population

equitably. This study provides insight into the experiences of Autistic students and the best

practices colleges uphold when serving this population.

CHAPTER 4: RESULTS AND ANALYSIS

Introduction

The purpose of this study was to examine programming at community colleges that address the needs of students with Autism. This two-phase study examined programming offered at community colleges to support students on the autism spectrum and to explore students' satisfaction with these services. During Phase 1, four colleges were invited to participate in the study. The college criteria included these:

1. The college must be a two-year community college

2. It must provide student programming in at least 3 of the following areas:

    a. Social Development Skills

    b. Academic Support

    c. Functioning Support (college functioning skills/executive functioning skills)

    d. Employment support/career services.

In Phase 2, autistic students currently or previously enrolled in a community college were interviewed to examine their perceptions of the support services offered at their community colleges. During Phase 2, three students who self-identified as being Autistic were referred by a college practitioner for the study.

The first half of this chapter will begin with a discussion of Best Practices in each of the framework areas as presented by practicing professionals in the field. The second half of the study will examine these Best Practices from the viewpoints of three autistic students who attended a community college.

Research Questions

This study was designed in two phases to answer the following research questions:

- Among two-year colleges, what academic and support resources are available to students with Autism Spectrum Disorder or other developmental disorders?

- What are some of the challenges faced by young adults with Autism Spectrum Disorder who attend college?

- What are the best practices used to support students with Autism Spectrum Disorder who are enrolled in community colleges?

Phase 1: Best Practices in Educational Practices for Autistic Students

This section will describe the programs and approaches taken at the institutions related to the three research questions. To begin, the criteria for selecting the institutions and a profile of the institutions included in this study are included.

Phase 1: Institutional Selection Criteria

For this research study, institutions were selected based on their ability to provide continuous support and develop autistic students in both behaviors (social) and integration of developing the whole person, self. Applied Behavior Analysis (ABA) is a type of therapy that teaches skills and proper behavior through reinforcement. The areas of development are also reflected by the student identity development theories of Tinto and Chickering. Based on Tinto's student integration model research and Chickering's student development theory, as well as research focusing specifically on student service programming for autistic students, the researcher selected institutions with recognized programs focusing on the student experience in categories including social development skills, academic support, college functioning skills/ executive functions, employment support, and safe housing.

Institutional Profiles

Table 3: Institutional Case Study Profiles

College / Location	Program Name	Interview Contacts	Program Description
Bellevue College Bellevue, WA (2 & 4yr)	Neurodiversity Navigators	Program Director, Adjunct Faculty Program Manager	The Neurodiversity Navigators (formerly Autism Spectrum Navigators) program offers educational opportunities along with individualized advocacy and access services for Neurodivergent Bellevue College students. Students who have met the College admission requirements must fill out an application form and follow the steps on the Next Steps flyer by the deadlines listed (Bellevue College, Neurodiverse Navigators, 2021).
Kirkwood Community College Cedar Rapids, IA	ASK Program (Autism Spectrum at Kirkwood)	Coordinator, Student Support Learning Services	ASK program is a no-cost voluntary program for Kirkwood Community College students with autism spectrum disorder. ASK works with students to create an individualized plan that builds academic and social skills necessary for college success. The program includes weekly meetings with autism advocates and structured social events. Kirkwood integrates resources, community partnerships, and research-based interventions and curriculums (Kirkwood, ASK program, 2021).
College of DuPage Glen Ellyn, IL	Autismerica	Counselor/Professor Accommodations Specialist	Autismerica is a student organization for students on the autism spectrum to better educate themselves about COD and socialize with one another in a safe and supportive environment. Parents are also provided a separate meeting opportunity (College of DuPage, Autismerica, 2021).

College / Location	Program Name	Interview Contacts	Program Description
William Rainey Harper College Palatine, IL	Transition Autism Program (TAP)	Access Advocate	The Transition Autism Program is designed to meet the specific needs of students on the Autism Spectrum as they transition from high school to college. We bolster success in academics by direct support from professional staff. This unique program provides peer mentoring, specialized academic support, social activities, and a parent support component. In addition, there are Job Readiness Workshops that include resume writing, interview skills, and job search strategies. TAP selects a new cohort each fall semester (William Harper College, Transition Autism Program, 2020).

Harper College

Harper College has a 200-acre campus, approximately 25 miles (40 km) northwest of downtown Chicago, in the suburb of Palatine. Harper College had 22,623 students enrolled in the academic year 2020-21 with seven associate degrees; 100+ transfer partnerships; 40+ career programs; 100+ certificate programs (Harper Fast Facts, 2021). The transition Autism Program is designed to meet the specific needs of students on the Autism Spectrum as they transition from high school to college. The program provides peer mentoring, specialized academic support, social activities, a parent support component, and Job Readiness Workshops that include resume writing, interview skills, and job search strategies (Transition Autism Program, 2020).

Harper's Access Advocate was interviewed about the Transition Autism Program (TAP) located in the office of Access and Disability Services. As of Spring 2021, there were 53 students enrolled in TAP. The college had 189 students registered, enrolled, and tracked via the access disabilities services as being on the Autism Spectrum. They use a cohort model and accept 20

students each fall. However, their academic year begins in the summer with transition (from high school to college) programming where students sign a contract to be admitted to the program. The contract consists of rules, requirements, and agreements to meet with advisors and mentors. Parental involvement is encouraged, and students sign a consent for parents to obtain information as needed and as determined by the student.

Kirkwood College

Kirkwood Community College is a public 2-year institution with 14 locations across Eastern Iowa. Kirkwood has an approximate enrollment of 13,000 students. The school utilizes a semester-based academic year with an average class size of 21 (Fast Facts, 2022). The highest degree offered at Kirkwood Community College is an associate degree. The College offers 130+ programs.

The Autism Spectrum at Kirkwood College (ASK) program is a no-cost voluntary program for Kirkwood Community College students with an autism spectrum disorder. ASK works with students to create an individualized plan that builds academic and social skills necessary for college success. The program includes weekly meetings with autism advocates and structured social events. Kirkwood integrates resources, community partnerships, and research-based interventions and curriculums (*Kirkwood, ASK program, 2021*).

The coordinator's role is to provide academic support and independent and social skill-building opportunities through the Student Support Learning Services Office. The ASK program is supported by three people on the team with two full-time and one part-time person who share other responsibilities, including a senior support specialist and an autism advocate. Kirkwood makes every effort to collaborate with community services, businesses, and agencies to support

students while in college as they transition into adulthood. Collaboration is a strong retention strategy used to get students to the finish line.

College of DuPage

The College of DuPage is a public community college with its main campus sitting on 254 acres in Glen Ellyn, Illinois. The college also owns facilities in Addison, Carol Stream, Naperville, and Westmont, Illinois. The college enrolls more than 21,000 students in 43 areas of study and 177 certificate programs **(***COD at a glance***, 2022).** The team that services the Autismerica students includes a full-time counselor/professor for Disabilities Services and one full-time student accommodation specialist. Autismerica is a student organization designed to better educate COD autistic students about COD and provide opportunities for them to socialize with one another in a safe and supportive environment. Through the participation of the student organization, vital support services are encouraged. Parents are also provided a separate meeting opportunity (*College of DuPage, Autismerica, 2021*).

Bellevue College

Bellevue College is a public college in Bellevue, Washington. It is the largest of the 34 institutions that make up the Washington Community and Technical Colleges system. It is an open-access and community-based institution with over 27,000 students (About Bellevue, 2022). The institution offers transfer associate degree programs, bachelor's degree programs, professional-technical degrees and certificates, a large continuing education program, and pre-college programs.

The Neurodiversity Navigators *(formerly Autism Spectrum Navigators)* program offers educational opportunities along with individualized advocacy and access services for

neurodivergent Bellevue College students *(Bellevue College, Neurodiverse Navigators, 2021).*
The program's team consists of a full-time director and adjunct faculty member, a full-time
program manager, a full-time program research assistant, and a full-time program assistant. The
person interviewed for this case study is the designer and director of Bellevue College's
nationally recognized Neurodiversity Navigators program (NdN), which began in 2010. She has
also led the curriculum design of the program while serving as the adjunct faculty for the
program's seven-course career preparation cohort series.

Section A: Best Practices in Programming Related to Social Development Skills

Results and Best Practices

  Social development skills for neurodiverse Autistic students address the difficulties some
may have in picking up on social cues, following social cues, and connecting with others. These
difficulties can make it difficult for Autistic persons to fit in and form friendships. College
professionals who work with Autistic students understand that those who struggle with social
skills can lead to feelings of isolation or avoid interacting with others. This makes it difficult to
balance work, home life, and school responsibilities. The interviews with practicing
professionals / participants indicated that counselors, advisors, professors, and student
accommodation staff play a key role in cultivating social development skills.

  The professionals interviewed at the colleges indicate that advisors and/or counselors
advise students in one-on-one meetings to address topics on personal relationships, dating,
friendships, independence, such as acquiring a driver's license, self-advocacy, how to
communicate with their peers and professors, and protecting their personal information to avoid
scams and identity theft.

A best practice is to create a curriculum that is embedded via participation in a formal program specifically designed to support Autistic students. For example, Bellevue College provides students with three years of embedded support through formal courses provided in a cohort model. The curriculum in Year One includes knowledge of self and self-strengths, executive functioning, self-regulation, self-advocacy, and social interaction. It is important that social interaction is not to be confused with social skills. Social interaction skills are critical skills for developing self and self-esteem, building relationships, establishing friendships, and positive social relationships.

The College of DuPage provides Autistic students with the opportunity to join the student organization, Autismerica, to educate themselves on COD's resources and socialize with one another in a safe and encouraging environment. Through the participation of the student organization, vital support services are encouraged. The student organization is supported by the student accommodations director, a counselor, and a professor. The director sends an invitation for all students who have self-identified as Autistic. Others are made aware through the parent network of Autistic students in the community. These two colleges use curriculum and a student organization as tools to support autistic students in the development of social skills.

Analysis

According to Arthur Chickering's Seven Vectors, three of the seven vectors have been described as best practices used by practitioners to support Autistic students. The third vector, ***moving through autonomy,*** is described by a person's ability to problem-solve, self-advocate, and work independently (Chickering 1987, 1993). In Chickering's fourth vector, students develop ***mature interpersonal relationships***. A person's ability to create lasting relationships, including friendships, romance, partnerships, and mentoring relationships are distinctive traits of

many college students' experiences (Chickering & Reisser, 1993). The College of DuPage's practice in encouraging autistic students to socialize with one another in a safe and encouraging environment via Autismerica, the student organization, encourages interpersonal relationships and self-advocacy as described in Chickering's third and fourth vectors.

In the fifth vector, *establishing identity*, students construct a sense of identity in regard to physical appearance, gender, race, and sexual orientation. Students become aware of their identity and how they fit in the broader society (Long 2012). Self-purpose can be executed when one has high self-esteem, confidence in oneself, and knowledge of one's own capabilities (Evans, 2010). Bellevue's curriculum addresses the understanding of self via set courses in the program designed to address autistic students' evolution of self-awareness and self-strengths. Arthur Chickering's seven vectors correlate with the college student's development theory. The practices in the results as described by the practitioners at the colleges outline the development of social skills that are critical to an autistic student's ability to evolve.

Section B: Best Practices in Programming Related to Academic Support

Results and Best Practices

Academic support for autistic students in community college settings is critical to student success. Students with autism may have unique needs with learning, social skills, and communication. Therefore, tutors and teachers need strategies to support their learners and address these areas. The professional participants in the study indicated that barriers exist for autistic students to access academic support. One barrier expressed is that some students do not always self-identify as needing access to student accommodations and/or academic support. Another barrier that exists in accessing academic support is the varying academic level at which autistic students are enrolling at the community college setting. Some need moderate to little

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support while others need more academic support services. Some autistic students need non-credit courses before starting credit-bearing courses. The third barrier that exists is the transition from K12 to adulthood. The transition for autistic adults is difficult due to the lack of services available to autistic adults outside the college setting. The transition to adulthood oftentimes impacts the student's ability to access academic support since navigating adulthood for some can be overwhelming.

A best practice expressed by the professional practitioners indicates that accessing academic support is facilitated through one-on-one meetings with an advisor, academic support, student accommodations coordinator, counselor, navigator, or ally at the college who can provide case management for the student. Academic support is provided in various ways. Students receive academic support via one-to-one meetings with advisors or subject matter support with tutoring services by attending a workshop, and/or a formal class. Academic support topics include time management skills, study strategies and skills, how to access tutoring, writing support, developing a study schedule, prioritization (what to work on first, how long will the assignment take to complete, self-advocacy), how to express what they need, subject matter support, and transitioning from K-12 to college. Practitioners realize that parents play a vital role in the lives of autistic college students. Although practitioners must follow FERPA rules, parent meetings are set up to encourage support and networking with each other. Practitioners provide workshops on how to live with a college student who is no longer a child but a young adult and how to hand over the reins to the college staff and college students. Some practitioners will meet with parents and the student if the student wishes. The parents' only point of contact is the director, not any other staff or faculty members. Parents are asked not to communicate with the faculty directly.

College staff, including faculty, are provided professional development that encourages awareness of supporting autistic students. A best practice according to professional practitioners is that it is important to provide training for the entire college, which includes faculty, counselors, advisors, and staff. They believe the service providers are prepared to work with neurodiverse students making the college a neurodiversity-friendly college. For example, the College of DuPage provides autistic students with tutors who are disability specialists. They help map out and plan assignments, explain how grades are calculated, and support them with the subject content.

Another best practice is that faculty are encouraged to use Universal Design for Learning (UDL) as part of the curriculum design as this delivery model works best for autistic students. For example, Bellevue College and Harper College use UDL as part of their delivery mode. Bellevue delivers a three-year curriculum to students who are enrolled in the Neurodiverse Navigators Program. Students enrolled in the Neurodiverse Navigator Program must place in English 072 level at a minimum, and ENG 092 and ENG 101 (college-level courses) to participate in the education part of the program (the cohort courses). Students are placed in Adult Basic Education courses to gain skills if they do not place at ENG 072 college level. For those who are able to get right into their college coursework, there is a three-year curriculum and courses available to the cohort that serve as career preparatory courses. The first year consists of the understanding of self and strengths, executive functioning, self-regulation, self-advocacy, and social interaction (not to be confused with social skills). The second year is career-focused, and the third year focuses on internships, including a formal communication class.

Analysis

The practice of training all student-facing professionals on working with autistic students is critical to student success as professionals need to understand the various ways in which autistic learners think and process information, including verbal, visual, and mathematical logic.

Verbal logic thinkers, for example, think in word details and do well in foreign languages, history, and stock market interpretations. Temple Grandin has described verbal thinkers as those learners who love to make lists and memorize mundane things such as train routes and timetables. Verbal logic thinkers have the ability to register in their memory verbal facts about movie stars, sporting events, and historical events. Their interest in school is often history (Grandin, 2009).

In her book and movie, *Thinking in Pictures*, Temple Grandin describes the different "types of brains." The movie (https://youtu.be/0pCRoactZHk) depicts vividly how visual thinkers operate, including visual thinkers with graphic/photographic memory.

Mathematical—often combined with music—logic thinkers are those who think in patterns, excelling in math, computer programming, and chess, and often have academic strengths in the technological, mathematical, and mechanical fields. The complexity of mathematical reasoning skills is also reflected in the movie *Rain Man* as seen in the classic statistics, Qantas, a scene from the movie (https://youtu.be/8C_5q2IOlL8). Another source (Wagner, Newman, Cameto, Levine, & Marder, 2007) reinforcing this point emphasizes that mathematical logic thinkers are often academically strong in technology, mathematical, and mechanical fields.

Those who interact with neurodivergent students often want to know the best way to approach to teaching at the college level. As noted, the Universal Learning Design model is

another best practice used at many colleges that call for understanding students' strengths and weaknesses, then use this knowledge when designing lessons. Lastly, the best practices described are supported by Vincent Tinto's (1987) theory of student departure which explains the reasons students depart without earning a degree in higher education. Tinto (1987) asserts that the reasons students depart are because of academic issues and failure to integrate socially and intellectually within the college. The Universal Learning Design Model creates intentional and deliberate teaching and learning experiences.

Section C: Best Practices in Programming Related to College Functioning/ Executive Functioning

Results and Best Practices

For the purpose of this study, the term *college life functioning* skills and the term *executive functioning* are used interchangeably. An *executive function* is defined as a mental process, such as planning, focusing, remembering, and processing multiple tasks, as well as problem-solving and understanding abstract concepts (Killiany, Moore, Rehbein, & Moss, 2005). Executive function disorders are associated with three categories of behavioral symptoms of autism: cognitive impairments of reciprocal social interactions, communication, and stereotypic behavior (Kenworthy, Black, Harrison, Rosa, & Wallace, 2009).

Advising is essential in supporting students with executive functions. For example, Kirkwood College practitioners indicated that once the student is enrolled, they assign an advisor who meets with students once or twice a week to support them and work on different skills for college survival. Because every student is different, goal setting for college survival skills, problem-solving skills, and individualized support will vary. Practitioners indicated that part of the college life/executive functioning support provided includes help with navigating college

services, guidance with communicating with their instructors, assistance with setting up a calendar, and time management and help with form completion. Additionally, practitioners explain to autistic students the pros and cons of staff working with parents, FERPA guidelines are explained and followed, and consent forms are provided. The advisor explains what is needed for "parents to know," and what parents "do not need to know." For example, with the College of DuPage, executive functions and making the right decisions are provided in a group therapy format that includes role-playing, time management skills, job interview skills, information about when to disclose or not to disclose autism identity on the job, how to navigate decision-making while facing challenges, and addressing emotional regulation obstacles. Emotional regulation is defined as challenges related to monitoring, identifying, and responding to self-emotions and the emotions of others (Mazefsky, Herrington, Siegel, Scarpa, Maddox, Scahill, & White, 2013).

Analysis

The important skills outlined in teaching autistic students executive functioning skills are best practices as they address autistic students' cognitive needs when reciprocating social interactions, communication, and behavior (Kenworthy, Black, Harrison, Rosa, & Wallace, 2009). Vadnjal and Radoja (2020) explain the "executive dysfunction theory" (Hill, 2004), which states that autistic individuals have problems planning, organizing, and controlling attention, and impulses, and updating information in working memory. This theory explains the repetitive stereotypical behavior and social-communicative difficulties individuals with autism have when interacting with others (White, 2012). For autistic individuals, social interaction, communication, and imagination are modes of interaction, communication, and information processing that do not connect with conventional communication methods (Bogdashina, 2005).

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For these reasons, practitioners must take time to teach autistic students these skills as these all have a strong influence on their learning journey and academic success.

Section D: Best Practices in Programming Related to Employment Support/Career Services

Results and Best Practices

Students with Autism Spectrum Disorder often need coaching and guidance when seeking employment. All of the professionals in the study indicated that their program offers employment support services. All support services are offered via the Career Services Department at the college with most teaching students skills needed by job seekers such as resume writing, interview skills, and employment behavior. As one of the professionals indicated, autistic students, respond well to the word "rules." So, the counselor/advisor often has conversations with students about "rules" in the workplace. These "rules" often cover topics of employee behavior and use social role-playing as a means to discuss ways to approach workplace situations. Additionally, the counselor at the College of DuPage indicated that he engages students in group sessions on the topic of disclosure and whether or not to disclose or not disclose their autism. They discuss when in the hiring process someone can or should disclose: Is it during the interview, once employed, or not at all? How is disability an asset? They discuss the "Elephant in the Room," so the student can control the narrative. Pros and Cons are discussed on disclosure. Do they anticipate their disability becoming an issue in the workplace? Roleplay is an important method to help an autistic student prepare for the interview and obtain employment.

Another best practice at Harper College is to connect students with community agencies that can provide resources and support in seeking gainful employment. The college collaborates

and refers students to Vocational Rehabilitation services in the area. At Bellevue College, they have created a neurodiversity hiring program. This is an internship program with the purpose of transitioning from education to employment outcomes. All these practices prepare autistic students for a positive outlook upon graduation and success leading to employment.

Analysis

Although autism support programs are relatively new in higher education, there has been significant progress regarding the inclusion of neurodiverse learners including those with Autism Spectrum Disorder in the higher education formal education system and the workforce. Depending on the culture of the workplace, people with autism can have fruitful careers and sustainable employment. However, it is important that as a society we begin to be intentional about hiring people with autism spectrum disorder. When the director at Bellevue was asked what tips she would give someone who wants to develop a program for autistic students at their college, she replied, "hire us. Hire someone who is autistic to do the work." Although there is a growing demand for students to enter science, technological, engineering, and mathematics (STEM) fields, employment prospects for those with Autism Spectrum Disorder remain deficient, often because of the individual's general social deficits (Turnbull, Turnbull, Wehmeyer, & Park, 2003). Programs, such as the Bellevue College Neuronavigators and Lone Star College's lifePATH four- and two-year program paths, aid neurodiverse students navigate the employment process upon degree completion. These programs are examples of how two-year colleges can understand the need to support autistic students on their academic journey (*Lone Star College* 2022).

Section E: Best Practices in Programming Related to Safe Housing

Results and Best Practices

Most of the two-year college practitioners interviewed for this study indicated that, since they are a community college, most of their students commute. However, two of the colleges interviewed indicated that while there were no dorms, the college partners within the area apartments in the community to make referrals. Practitioners acknowledge that most students live at home, with 50/50 living at home and living off-campus in an apartment. The student housing coordinator makes referrals to area apartments for students seeking housing resources.

One college indicated that there are private apartments across the street from the campus and those apartments are where most students choose to live. Bellevue College recognizes the need for safe housing for its neurodiverse student population. They offer college housing to autistic students in their program as an option. Bellevue practitioners recognize that autistic students are not often able to decipher people's intentions as they often are not able to read facial expressions and understand emotions and empathy. For this reason, before autistic students are able to live in the campus residence halls, they must take a 5-credit course that addresses the day-to-day functions of living alone. This course is usually offered as a summer course in preparation for fall semester housing on campus. Course topics include getting along with roommates, preparing your own food, grocery shopping, and cleaning.

Analysis

The practice of providing on-campus housing is predominant in the four-year schools that serve autistic students. Of the schools interviewed for this study, however, only one offers both two- and four-year degree options. This particular school offers an on-campus housing option. Whether a school offers on-campus housing or not, it is important that autistic students are taught

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social skills in a formal setting such as a course or workshop. Vadnjal & Radoja (2020) explain the theory of "mind-blindness" (Baron-Cohen, 1997), stating that individuals with Autism Spectrum Disorder often cannot tell what others are thinking, which is a critical factor for appropriate social reasoning and communication. However, autistic persons may learn to interpret mental states and understand emotions, facial expressions, and empathy (Howlin, Baron-Cohen, & Hadwin, 1999). To illustrate: in the film, *Temple Grandin*, there is a scene where Grandin's aunt, played by Catherine O'Hara, takes dozens of pictures of Grandin's face making different expressions, and then she labels each expression. In discussing this scene later, Grandin explained that it effectively portrayed the process she followed to read emotions (Jackson, 2010). In her book, *The Autistic Brain*, Grandin suggests that we teach autistic people how to read expressions (Grandin 2014). Autistic students often struggle to differentiate between people who sincerely want to befriend them, as they do not interpret social cues and facial expressions easily. In the long term, teaching autistic students social reasoning skills is a college survival skill.

Phase 2: Student Experiences

The purpose of Phase 2 was to collect data that would answer the research question: What are the challenges faced by young adults with autism spectrum disorder who attend college? The following section provides summaries of the participant's responses to questions related to the four categories of student needs.

Table 4: Participant Profiles

Student	Current Age	Current Year in College	Major	City, State
Tommy	22	- Currently a junior at a 4-year university (Spring 2022) - Graduated May 2021	- Completed an Associate of Science. - Currently a Kinesiology major with a minor in Disability Human Development	Chicago, IL
Nate	19	- Currently a junior at a 4-year university (Spring 2022) - Graduated May 2022.	- Completed an Associate in Arts degree. - Currently a History Major	Springfield, IL
Alondra	26	- Not currently in school - Currently works for a social agency as a case manager for victims of human trafficking - Graduated May 2017.	Completed an associate degree in Criminal Justice	Kenosha, WI

Participant Description: Tommy

Tommy is a white, self-identified autistic male student who is 22 years of age. Tommy indicated he has an older male sibling. He is a mild-mannered, wholesome-looking person with a sweet smile that radiates kindness. He is a graduate of Harper College with an associate of science degree. Tommy has transferred to the University of Chicago as a third-year student majoring in Kinesiology. While he attended the community college, he lived at home with his parents. During the time of the interview, he was living on campus. Tommy indicated that he is currently employed.

Participant Description: Nate

Nate is a half-white and half-Hispanic self-identified autistic male student who is 19 years old. Nate indicated he is an only child with no siblings. He has a cheerful and outgoing personality. As of May 2022, he was a graduate of Lincoln Land College in Springfield, Illinois, holding an associate of arts degree. During the time of the interview, Nate indicated that he lived at home and lives near the community college campus. His plan is to transfer to a four-year university in the fall to major in History, as this is the subject he truly enjoys. He plans to live on the university's campus. Nate indicated that he is currently employed.

Participant Description: Alondra

Alondra is a Hispanic, self-identified autistic female, who is 26 years old. She is a graduate of Gateway Technical College class of 2017. She is a very talkative and straightforward, direct communicator. At times, she repeats herself in conversations. She completed an associate degree in criminal justice. She is currently employed at a social service agency, UMOS, where she works as a case manager working with victims of human trafficking and domestic violence. Alondra stated that one of her greatest fears was that she would never find a life partner. In the last six months, she has moved out of her home with her mother in Kenosha, Wisconsin, and moved in with her boyfriend in West Allis, Wisconsin. She is the middle child of three siblings, all girls.

Section A: Student Experiences Related to Social Development Skills

Those on the autism spectrum navigate social interactions differently. They have difficulty with social interactions, including maintaining relationships, reciprocating social interaction, initiating conversations, and communicating with others. For these reasons, support and guidance with social interactions are necessary for college settings.

What role did your parents, guardian, or ally have in your transition to college?

When interviewed, two of the three participants indicated that their parents helped them with their transition from high school to college. Nate expressed his parents' impact by pointing out that,

> [My] parents had a major role in the transition. Helped with the application process, helped with assignments, and helped me write emails to my teachers to use proper communication with my teachers.

> In contrast, one of the participants indicated that they did not get support from their

parents as their parents did not understand the process. This particular student got assistance from the school staff. Alondra stated, "the new student orientation staff helped me apply for admission to college." Therefore, for students on the autism spectrum, getting the support they need to begin the transition to college means that they need attentive guidance with the enrollment process.

Once enrolled at the college, how did you make friends in college?

Making friends and initiating conversations is tough for autistic students. Participants noted that they made friends by meeting students in their classes, joining student organizations or clubs, obtaining on-campus employment, and connecting with an "office" such as the multicultural resource center where they met other students who came to the center.

All three students noted that making friends was made possible by taking jobs on campus via work-study opportunities. For example, Alondra noted that she

> made friends by working in the multicultural resource center and with other students who came to the center and in classes.

Nate stated that he:

> made friends working on campus and joined the choir and Bible study group.

Tommy described his experience making friends:

Knowing others from High School helped. Working (on campus), I built a ton of connections with people. Also, being part of the Transition Autism Program and attending their summer program was a good kick-start for the coming year — meeting people, getting comfortable with my surroundings, and getting to know the campus, and being comfortable with the campus helped me a lot.

Tommy explained that not knowing people on campus had an adverse effect on his work productivity. He stated,

There were many days not talking to anyone. [I'm] naturally more introverted. I have a hard time starting conversations. [This] adversely affected my work productivity.

Some of the key best practices in this area that helped the participants adjust include the practice of promoting summer programming to give students a head start on college life, provide campus work-study programs, and promote joining student organizations to assist in making friends.

What strategies did you use to prepare for social settings such as going to a student club, going to lunch with a classmate, and completing group assignments outside of class?

Social development skills are an ongoing learning process for students on the autism spectrum. Participating in meetings with advisors and counselors helps relieve anxiety for autistic students. Tommy described the way he prepares for social settings and completing assignments as

Something that I tend to struggle with until this day and still trying to work on is just being in social situations with people who I am not familiar with is super stressful for me. Thinking about doing that stresses me out. Thinking of working on an assignment with someone [a classmate] I really don't know causes me anxiety. For example, a roommate next door is having a party in the dorm room next door: I don't know a lot of people there; I don't want to go. There's a lot of pressure.

He continued on to explain that one strategy that helps him is to "let my barriers down, be honest, don't get too caught up in my own head." Learning to be open to new social interactions and going over scenarios in his head to prepare helps him overcome anxiety. Tommy described his strategies to prepare for social settings as,

Go into social settings with an open mind. Come up with worse possible scenarios and work through them; tell myself I will be fine. If something bad happens, I am going to be fine. Did not worry about things that are not important. Plan for the day.

In Nate's experience, being active in student life clubs such as choir and Bible study groups made it easy for him to make friends. Thus, allowing him to develop socially. Alondra noted that she, too, "participat[ed] in student life meetings."

Nate noted that he

got a Google calendar to remind him of upcoming due dates. [Made time to] hang out with friends during free time. Try not to take things personally, [for example], a weird encounter with an instructor — I can shake it off.

Planning for the day, or creating a roadmap for the day, helps with anxiety. The strategy in creating a roadmap for the day is a strategy commonly referred to in ABA therapy as "priming," where the autistic person goes over the day's expectations to prepare for an upcoming event or social interaction.

What did you do to take care of yourself?

Self-care is an important component to student success and finding work, school and life balance. When asked about self-care techniques, the participants focused on normal things like getting something to eat and getting ready for the day. Alondra noted that her strategy is to:

Eat well in the morning to help me have energy.

Alondra also noted that she has a routine that helps her practice self-care:

…not worry[ing] about things that are not important. Plan[ning] for the day. And [having] a roadmap for the day, helps with anxiety. Do normal things, like eat something, get ready for the day. Take time to sit down and do my homework right away so I don't worry about it. Not have anxiety.

Tommy said,

[I] take time to sit down and do my homework right away so I don't worry about it. Not having anxiety.

He also carves out time to train and go to the gym. Tommy says he goes to the gym at 6 am:

> [The] morning crew: the gym is not too busy. Too busy is overstimulating. Lots of moving parts that I can't control stresses me out. Plan out breaks. Get a snack and watch TV. I eat meals alone, put my headphones in and watch TV and eat. Take my break.

Nate's approach to self-care is to:

> try not to take things personally, if you have a weird encounter with an instructor, […] shake it off.

All of these strategies provide descriptions of their attempt to balance school and life obligations.

Section B: Student Experiences Related to Academic Support

Once enrolled at the college, were you provided with tutoring and academic support to help you with your studies?

Academic-support programming in community colleges provides students with the resources to utilize support services and access faculty and tutors who are academically successful in assisting students with the support to advance their understanding of subject matter or in their development of academic skills.

Alondra described Math as the most difficult subject of her college career. She had to take one particular math course three times. She stated,

> In the Learning Success Center, I got help tutoring, especially with Math. One-on-one tutoring. Tutor would help me figure out the answers.

Tommy described also reported his experiences with the college support systems:

> The support systems and library resources available-most helpful. … [I] used some of them [academic support resources] but not to a great amount. Academically, I am ok. Not knowing what will happen next is stressful.

For Tommy, being prepared for the day aids with his anxiety the most.

What strategies helped you complete a college assignment that was challenging for you?

The participants indicated a variety of areas that were challenging for them as they

engaged in college assignments. Tommy indicated that,

> Group work is a challenge. Knowing one person in the group helps and being open and being communicative.

Alondra provided this insightful description:

> Pre-Algebra. I took the course three times to pass. Last time I took it I had a good teacher who did not assign too much homework, assigned homework online. I could re-do the assignments until I got the grade I wanted. He dropped one test. Taking the class online was easier; I could look up answers, take my time.

> The math course delivery mode that worked best for her learning style is online. The

online delivery model gave her the flexibility to take breaks and check her answers, retake tests,

and work on at her own pace and time.

> Nate's provided this insightful description on his most difficult subject:

> General Studies English course: the research paper, MLA format, and citations. Citations can be off and count against the grade. I used Purdue OWL, Library Research and broke it down into chunks by working on the Introduction, Body, etc.

> The ability to take a major assignment such as the research paper and chunk it into

smaller segments helped Nate take on the challenge of writing the paper and helped him avoid

feeling so overwhelmed.

Section C: Student Experiences Related to College Functioning/ Executive Functioning

When in high school, what support services did you receive such as an IEP or 504 Plan?

The participants all indicated that they received an IEP and/or 504 plan. Tommy

describes his experience as:

> I had an IEP Plan from freshman through junior year; about ½ way through junior year the IEP plan was revisited and transitioned to 504 Plan for accommodations: 100% extended time from elementary through college.

Alondra stated,

> IEP plan. Received extra time on testing, help with homework, assignments, projects, and tutoring.

And Nate stated,

> A 504 Plan, reader, no distractions testing and extended time.

They all described the extended testing time as a support service used and needed.

Upon applying to the college, were you connected with someone in the student accommodations/ special needs office?

All participants indicated they connected with someone in the student accommodations or

disability services office. Tommy stated:

> The Access Advocate from the Office of Access and Disability Services at Harper was the first person I was in contact with before high school graduation and transition to college.

Alondra added that,

> The Student Accommodations Office allowed me to receive extra time on tests and tutoring.

Nate stated that weekly check-ins with staff helped him connect with others and that

> …the Summer camps helped dealing with being new to the campus, the student success coach, the accessibility services coordinator.

What are some things that surprised you when you first attended college?

The participants responded with insightful details.

Tommy stated,

> Class size smaller campus at Harper College 20-25. This was a nice transition to have the classes be a smaller size as it better suited my needs. [College was] surprisingly easy to build connections. Push myself to build connections. Got a job over the summer at Harper [work study] and this helped me build connections.

Alondra stated,

> [I] didn't expect I would get a lot of homework. Didn't expect that homework had to be turned in and done on time, not a later date or get an F. The first year was difficult but the second year was better —[I] remembered not to do that again (late work).

Nate stated,

> College is a choice; you have full control, not like high school you have to be there. College has more support and comes through more authentic.

Once enrolled at the college, were you provided with daily function support to help you plan and achieve daily goals?

Daily functions can be daunting tasks for students on the autism spectrum as prioritizing

can be overwhelming. Campus support staff played key roles in these students' success. Tommy

indicated that his Access Advocate met with him regularly to help and support him:

> …every 2 weeks or monthly. How to approach things.

Nate credited his

> Student Success Coach for support with classes and scheduling, accessibility for accommodations, and general services.

Did you ever have an issue with self-control? What was the situation? How did it end/resolve?

The participants responded to this question with strong assertions demonstrating their

personal growth and control. Tommy explained:

> Not really. I am a pretty calm, cool, and collected person. During high school, I had issues with anxiety, but I worked through it before coming to college.

Alondra stated that she had difficulties

> …during the second year, battling depression and anxiety related to ending a relationship. [I] used time to completely move on.

Nate said there were,

> …no issues with self-regulation. I have been pretty grounded with family and support of staff.

While in college, what did you need to help you succeed?

The participants shared a variety of experiences that helped them succeed. Some included

support by staff, balancing relationships, and learning test-taking skills and time management.

Tommy shared that

extended time accommodation helped me succeed. Over time, I utilized it less and less. It was nice to have as a safety net 'cause there were a few exams that I would take longer than the time given to me in class. Talking with my Advocate and meeting with them helped me succeed.

Alondra shared that,

keeping up with homework and not worrying about unimportant things. Avoid being distracted by the phone. Worry about being happy. Worry about being happy to find someone, with life, my future, and relationships.

Nate shared,

What helped me succeed was my Student Success Course, geared to support accessibility services to students. It is for first-generation students to help them with study skills strategies, test-taking, and time management skills. Help get services outside services with tutoring centers and career services.

What strategy/strategies did you use to get you through a typical college day?

The participants indicated that the strategies they used to get through a typical college

day were the use of time management skills and note-taking strategies.

Tommy shared,

sports in High School helped my character development. And being active in school clubs [college].

Nate shared that, essential for his success were

note-taking strategies and help from the center of academic success. Using express captions as a tool to understand what the professor is saying.

Section D: Student Experiences Related to Employment Support/Career Services

During your enrollment at the college did you receive support with job placement, such as cover letter writing, resume writing, and interviewing?

All participants responded that they had obtained resume and cover letter writing support from career services. Nate explained he sought,

> Career Services and Career Coach to get support on resume writing and getting a job [interview].

Section E: Student Experiences Related to Safe Housing

Although no direct questions were asked related to their housing situation, all participants shared their housing situation during the interview conversation. Tommy indicated that while attending community college, he lived at home with his parents. However, now that he has transferred to a four-year University, he lives on campus in the dorms. Alondra indicated that during her college years, she lived with her mother and two siblings. But, most recently, has moved in with a boyfriend. Nate indicated that he lives at home with his parents and that they live close to campus. However, his plan is to transfer to a four-year university and live in the campus dorms. All participants indicated that they lived at home during the community college years and those that transferred to a four-year college opted to live on campus.

Section F: Advice for Others

What do you think has helped you the most during your college experience?

The participants shared a variety of experiences from connections made with people to balancing life. All identified lessons they learned to succeed in the professional world. Tommy shared,

> Getting to know friends and build connections with people [was the] number one takeaway in my college experience.

Alondra shared that college

…prepared me for the future, how to save money, be ready for retirement, and how to dress professional[ly].

Nate shared that the

College Success coach helped me most in balancing the classes while I got acclimated into college.

Did you have a memorable teacher and what made this person memorable?

The participants were asked to share information about a memorable teacher and why the teacher was memorable. They all responded quickly with a favorite teacher, and all noted that they had taken more than one class with this particular teacher. Tommy shared,

My First Year Seminar professor was always supportive and helped me through my journey. She helped me become a mentor, too [mentor to other students in the same program].

Alondra shared that her teacher helped her catch up with her courses and guided her with career advice.

Nate shared,

[My] Kinesiology Professor. I took him for 5 classes. He was a fun professor. He taught a topic I am interested in. He is passionate and authentic. He legitimately cares about his students and goes out of his way to dig deeper in what your interests are. His assignments he provided step-by-step processes. Planned activities.

Their experiences shed light on the faculty role as one that not only teaches in their expert subject but also serves as a mentor to their students making an impact on retention and student success.

Was there a time when you felt overstimulated?

For autistic students, overstimulation occurs when one or more senses are overloaded, and the person receives excessive stimuli for his/her brain to process and integrate it effectively. For Tommy, overstimulation comes from too many people [crowds]. He shared that,

Chicago scared me for a while. In my mind, I was thinking, if I am scared of Chicago, all the people and all moving parts, wouldn't it be good to be in that scenario to grow and become a better person in those scenarios? [Growth to] become a better person. Lots of moving parts that I can't control — stresses me out.

Alondra shared her feelings of becoming overwhelmed and filled with self-doubt. She

stated,

Sometimes I feel so overwhelmed, I felt like dropping out [quitting school] due to battling depression and anxiety. [I] felt like: am I ever going to finish? I would question myself: Am I ever going to graduate? I also thought of dropping out due to financial problems. But I didn't.

Nate describes feeling anxious when attending face to face classes. He stated,

I did really well in online classes. Anxious about face-to-face classes. So, [I] went to find where my classes were located to help me understand where my class is [located].

Each of these participant's strategies provides an excellent example of what APA therapy

calls "priming."

What do we need to know to help other students on the Autism Spectrum?

A final question asked the participants to provide advice for other autistic individuals

hoping to complete a college education. Each participant had a unique twist to their advice.

Tommy responded,

In general, I would argue that one of the lead factors that students on the autism spectrum and those with disabilities struggle with is the communication aspect — meet friends and communicate with people. Push them to try to talk to people as it will help them in the long run. Build connections, build friendships, build relationships help significantly in the long run. Having friends and people who you can turn to helps in the long run.

Alondra responded,

Don't be afraid to ask for help on how to enroll. Once in college, don't be afraid to ask for tutoring. Don't think about dropping out of college. My motivation to stay [in college] was not to disappoint my mom. [Lastly,] we like to plan and be punctual.

Nate responded,

> Support is always going to be there. There is no harm in asking questions. Don't be afraid to ask and get help.

Their unique yet simple responses help us understand that we must help autistic students with relationship building, communication, and motivation along their academic journey.

Phase 2: Discussion and Analysis

The student interviews have provided insights that can help practitioners understand the factors that lead to student success. For instance, the autistic student's parents, guardians, or allies play a key role in helping students navigate the college admission process and guide them to make the final selection to attend the college of their choice. Additionally, the student participants expressed the importance of visiting the college as many times as needed in order to familiarize themselves with their college of choice. As described in ABA therapy, planning and going over an event or a next-day activity is called "priming" and opportunities for priming are essential in programming for autistic students. Summer programs and student orientations help students engage in the campus environment and become familiar with the buildings. This practice provides the autistic student with information for an upcoming situation or task by providing relevant information beforehand such as the first day of attending college courses. In addition, these experiences allow autistic students to get to know faculty and staff before they begin classes.

Secondly, the students noted that access to specific student accommodations services to support their learning and meeting with the college Disability Services Office (DSO) or Student Accommodations Office (SAO) staff to talk about documentation and learn about accommodations at the college was critical to their success. All the participants noted that the

student accommodation most beneficial to them was the extended time accommodation offered in most institutions. Additionally, they noted that using services that are available for all students, including academic support (such as tutoring, and writing support) assisted them in executive functioning, time management, and dealing with anxiety.

Participating in meetings with counselors/advisors and working with their professors to identify their own goals and support resources also aids autistic students in relieving anxiety. Anxiety was a common experience expressed by all the autistic students attending college in this study. Moreover, autistic students interviewed noted that they like to be on time for obligations such as work, class, or appointments as being on time relieves anxiety.

Lastly, the students described their favorite professors as those who are passionate about their subject and who are authentic. They appreciate and value those who legitimately care about their students and go out of their way to dig deeper into what their students' interests are while creating assignments that provide a step-by-step process and planned activities. These students noted taking 3-5 courses with the same instructor if they connected with the instructor and were interested in the subject. Taking repeated classes with the same instructor is an important illustration of how repetitive behaviors and restricted interests are two common aspects of autism.

These comments also illustrated that providing opportunities for personal development in college for autistic students is essential. According to Chickering's second vector, students learn to develop the ability to manage emotions in college. The participants noted that during their college experience, their counselors/ advisors helped them understand how to manage their emotions and communicate effectively and were available to provide support through their academic journey. As noted in Chickering's fourth vector, students develop mature interpersonal

relationships in this phase. This phase is where they develop mature interpersonal relationships and establish long-lasting relationships, including friendships, romantic connections, partnerships, and mentors. All these experiences are associated with the development of interpersonal competence. Students interviewed in this study noted on several occasions that college pushed them to be better communicators and build relationships. Students expressed that lessons learned in college were far more than the academic component of degree attainment.

Chapter Summary

Phase 1 identified best practices on programming implemented by practitioners. High-impact practices such as transitioning students from high school to college to the workplace make an impact on student development. In Phase 2, students provided insightful responses about what practices are working and making the most impact. The students' shared experiences aid practitioners in understanding the effectiveness of student programming.

CHAPTER 5: DISCUSSION, IMPLICATIONS, AND FUTURE RESEARCH

Introduction

This chapter provides a brief review of the study followed by a discussion of the

conclusions related to the research purpose and a review of the literature and highlights best

practices for community colleges. Chapter 1 presented an overview of the study through a

description of the background and history of autism, the purpose of the study, the theoretical

framework, methodology, legislation related to access education, and vocabulary for the study.

Chapter 2 reviewed literature about the research and theory related to categories such as social

development skills, academic support, executive and college functioning skills, and employment

and career support. Specifically, the study sought to answer these research questions:

- Among two-year colleges, what academic and support resources are available to students with Autism Spectrum Disorder?

- What are the challenges faced by young adults with Autism Spectrum Disorder who attend college?

- What are the best practices used to support students with Autism Spectrum Disorder who are enrolled in community colleges?

Chapter 3 described the research design used to conduct the study, outlining the

theoretical framework, methodology, and technique used to conduct data collection, study

limitations, delimitations, and reliability and validity. Chapter 4 outlined the study's results and

analysis. The analysis of results was presented in alignment with the study's research questions.

This final chapter presents a discussion of the study's findings related to the research questions

and concludes with best practice suggestions for community college practitioners.

Purpose of the Study

The purpose of this study was to examine programming at community colleges that addressed the needs of students with autism. This two-phase study examined programming offered at community colleges to support students on the autism spectrum and explored students' satisfaction with these services in postsecondary education pursuing degrees in community college settings. The study consisted of two phases: Phase 1 explored best practices in educational settings for autistic students, describing the programs and approaches taken at the institutions related to the three research questions. Phase 2 explored the student experiences, using the same research questions to guide the investigation. Linda Reusser and Arthur Chickering's Seven Vectors of Student Development are the centers of this study's framework: developing competence, managing emotions, developing awareness and acceptance of emotions, moving through autonomy and interdependence, self-sufficiency and self-direction, developing mature interpersonal relationships, establishing identity, developing purpose and developing integrity and personalizing values (Chickering, 1987; Chickering & Reisser, 1993). Additionally, the researcher reviewed the students' responses through Vincent Tinto's theory of student departure lens and the experiences diverse students face while attending two-year colleges (Tinto, 1987).

Key Findings from the Schools

Community college practitioners interviewed reported established best practices when serving autistic students via their respective programs, in particular, the student experience and sense of belonging, student responsibility, and accommodations. Additionally, these practitioners are well aware of the issues that directly impact autistic students' success. Furthermore, they have put systems in place to address autistic students' needs that specifically address the

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challenges related to social, communication, and daily living skills (hygiene, organization, and

time management) and executive functions. As a result of this awareness, these institutions have

implemented programs that go above and beyond the mandated "access" accommodations to

help students identify and develop strategies to work on targeted goals and skills as a way to

support them in the transitioning experience and to help them engage and connect in the college

environment. The identified program supports include peer mentoring relationships, a living-

learning residential experience, or specifically assigned classes or staff to provide support. These

programs share an understanding that students on the autism spectrum often have a unique set of

social needs that cannot necessarily be met through the provision of traditional academic

accommodations. Despite the availability of necessary accommodations and support, the schools

report that all college students are expected to communicate well with professors and ask for

help when it's needed.

College requires students to be more independent and accountable for personal behavior

both in class and out, including involvement in dorm life and extracurricular activities. In

college, expectations are higher in terms of individual independence, student responsibility, and

higher grading standards. Students with ASD have to learn to make more choices and decisions

independently. More independent reading and studying are also required in college. Students

with ASD must learn to establish and attain their own goals. They must be self-motivated to

succeed as they are responsible for independently completing assignments and handing them in

on time. One student commented:

> [I] didn't expect to get a lot of homework. Didn't expect that homework had to be turned
> in and done on time, not a later date, or get an F. The first year was difficult, but the
> second year was better to remember not to do that again [submit late work].

Not only do ASD students have to be self-motivated to succeed, but they also have to manage self-regulation and self-care while dealing with stigmas that neurotypical students, staff, and professors may hold. Neurodiversity support centers like the one at Bellevue College are ideal for integrating and assisting students in the transition from home support to greater independence as they become environmentally safe, quiet places to study and seek assistance.

Implications of the Study for Community Colleges

The colleges involved in this study have demonstrated their awareness of the issues that students on the autism spectrum may experience. These issues significantly impact the students' successful transition to a postsecondary environment. For example, community colleges have developed ways where students can request and receive specific disability-related student accommodations. The goal of accommodations is to level the playing field so that students with disabilities can have equal access to the programs and activities offered within their college environment.

Community college practitioners have focused on providing students with self-awareness and social skills to help them interact with others and to help them stay safe. For example, at the College of DuPage, the Autisamerica Counselor provides group and one-on-one sessions for students on how to read social cues. While Autistic students can be brilliant and knowledgeable in their area of interest, they are typically naïve and sometimes cannot pick up subtle social signals from the people they are talking to in social settings and interactions, confusion which can result in missed social cues. For this reason, practitioners place significance on helping Autistic students understand social cues, such as the difference between the behavior of someone who is being a friend or one who may be mocking them.

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In addition to providing this kind of training for the students, it is equally as valuable for practitioners to engage colleagues, faculty, and staff in training on serving students with ASD students. The practitioners who contributed to this study shared program success tips to guide staff recruitment and incorporate an inclusive culture via training and best teaching practices. For example, all the practitioners interviewed in this study indicated that their program staff provides in-service college training and awareness workshops for their college community on topics including:

- Best teaching practices to assist faculty working with ASD students, such as effective verbal/written instructions, lecture pacing (talking too fast or too slow), abstract assignments that tend to be more challenging, and the process of narrowing a topic for writing assignments

- How best to serve individuals w/Autism and provide student accommodations for students with ASD

- Research and facts about ASD

- Statistics on program success

- Student experience panel

- Cultural responsiveness training from a neurodivergent person

- Universal Design for Learning to teach faculty the model that best supports ASD learners.

The response from Bellevue's practitioner best reflected the most important tips they would provide other practitioners who want to support autistic students:

Hire a full-time neurodivergent professional, create a neurodiverse center that focuses on creating a culture that supports students from high school to college and from college to the workplace.

Why?

Because first of all, we have a low employment rate, so we need jobs. And secondly, we will have a better understanding of what your students need, or our students need.

Practitioners also believe that the academic support the college provides for ASD

students should be a part of the overall systems in place for students across the college. As

Kirkwood's practitioners noted, investing in the student's success is essential to providing

services for students with ASD:

> [At] Kirkwood, this type of support [ASD support] should be available to students, and it aligns really well with the academic supports that we provide to other students, and so it is a part of our regular budget.

The practitioners from the College of DuPage provided these five important tips for

colleges wishing to support ASD students effectively:

> Have laid out expectations on how grades are calculated: have well-defined rubrics of what expectations are, make no assumptions that any student would know what an A paper is or what a B paper is.

> Have handouts and materials available over the internet through some course management system […] by having content available so students can review course outlines and lecture outlines as needed.

> [Demonstrate] skills of empathy. Be available during office hours.

> Give students a chance to express themselves and create some degree of interaction within the classroom. In essence, the best practices are the Universal Design principles.

> Create a student organization such as Autisamerica, an affinity group, where students can come together and support each other on their college journey.

> Finally, Harper College's practitioner emphasized the importance of the transition phase,

safety awareness, and how transition makes students with ASD vulnerable:

> … examine closely how we can assist students with ASD in transitioning from high school to college.

Key Findings from Autistic Students

Recruitment /Admissions

Every college understands that the recruitment and admission process is essential, leading

to student enrollment. However, it is what happens subsequently upon enrollment that retains

students. Students indicate that having a point person — a parent and/or a practitioner to assist

with the admission process was helpful in getting through the admission process. Practitioners

indicated that establishing relationships with high school counselors, connecting with parents in

the autism community, providing summer programming, and offering cohort models are great

ways to bring in students. Furthermore, summer programming helps reduce anxiety about

attending college because students have the opportunity to be on campus in the summer before

classes begin and become familiar with the surroundings. All students indicated they had either a

parent or a new student orientation staff person to help them through the admission process. One

student noted, for example, that

> parents had a major role in the transition. [They] helped with the application process,
> helped with assignments, and helped me write emails to my teachers to use proper
> communication with my teachers.

Another student affirmed that

> the HS 504 counselor and the new student orientation staff at the college helped me apply
> for admission to college.

Chickering's vectors, principles of best practices in higher education, remind us that

developing purpose, vocational plans, and aspirations are part of the student growth process

(Chickering & Reisser, 1993).

Life Function Skills

Kirkwood College's practitioner asks all practitioners to question, "What are we doing

[for ASD students] in assisting with the transition from not being an adult to being an adult?"

The practitioner challenges higher education professionals to closely examine the way we assist

students with ASD in particular with the transition from high school to college. With this

transition, students with ASD are experiencing the complex transition from childhood to

adulthood as they often struggle with separating from the parent support system to self-sufficiency and independence. One participant/student noted that the Access Advocate met with him regularly to help and support him, meeting with him every 2 weeks or monthly, advising "me on how to approach things." Another student noted the "first year was hard. But the second year got better."

Depending on the severity of the autism presented, the individual's transition into adulthood can be more difficult for some. All of the practitioners in this study noted that the transition from childhood to adulthood is a part of their programming. Kirkwood uses specific curriculum and books within the program to support students and develop skills. They recommended these sources:

Peers for Young Adults, by Elizabeth Laugeson

Preparing for Life: The Complete Guide for Transitioning to Adulthood for Those with Autism and Asperger's Syndrome, by Jed Baker.

Furthermore, Bellevue College uses a robust teaching curriculum. The topics covered in the first year include knowing self and strengths, executive functioning, self-regulation, self-advocacy, and social interaction (not to be confused with social skills).

Another area stressed by the students as important for them to learn were strategies to reduce anxiety in social interactions and emotional regulations. One student described these as,

> come up with worse possible scenarios and work through them, tell myself I will be fine. If something bad happens, I am going to be fine. Something that I tend to struggle with until this day and still trying to work on is just being in social situations with people with who I am not familiar which is super stressful for me. Thinking about doing that stresses me out.

Chickering's vectors and principles of best practices in higher education remind us that successful students manage emotions and move towards autonomy and function with self-sufficiency and self-direction (Chickering & Reisser, 1993). "Bridge" years are needed to

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provide autistic students with time to develop self-independence and employment. For example, Lesley University Threshold Program has a Bridge Year Program where autistic student's live on campus housing while they work on life functions skills and are provided with internship opportunities that can lead to employment (*Transition year & bridge year: Threshold program, 2023*). Similar to a Bridge Program, Lesley's two-year program, The First Place Transition Academy, offered by a non-profit organization in Phoenix, Arizona, provides a structured program that includes clinical support, independent living skills, and career readiness training with vocational / community college partnership to autistic adults (First Place Academy, 2023). Appendix D contains a description of the program's structure and a housing brochure from this program.

Student Support

The Autistic students interviewed for this study provided examples of accommodations they received that include extended time and a distraction-reduced environment for exams, support for prioritizing assignments, and time management. The students interviewed reported that the extended time and a distraction-reduced environment for exams was a student accommodation they all used while in college. Among services identified, access to assistive technology for note-taking, support for obtaining employment, and housing accommodations were areas that students indicated led to their success. Also, their participation in campus life activities through student clubs that centered around their interests also led to their ability to make friends easier. Upon their transfer to a four-year university, two of the three students interviewed indicated that they planned on living in the university dorms.

For academic support, the students reported that having a support system through the campus' Learning Support Center made it easier for them to request tutoring assistance. One

student said, "When using the one-on-one tutoring, the tutor would help me figure out the answers." Another student attributed his success to having a:

> support system and library resources available. [I] used some [tutors] of them but not to a great amount. Academically, I am ok. Not knowing what will happen is stressful so a roadmap helps.

For many autistic students, having a preview of the day often helps lessen anxiety. One student reported,

> I would participate in the student life meetings. Did not worry about things that are not important. Plan for the day. A roadmap for the day helps with anxiety.

For students with ASD, planning for what is coming up in the day is a common strategy used by all three students to reduce anxiety.

Bellevue College's Neuronavigators are specially trained staff who serve as advisors and support systems for students making their way through college. Often, these student allies help them navigate day-to-day challenges. Kirkwood practitioners noted that

> barriers in academics are the varying level of students. Some need moderate to little support. Others need more support services. And some need non-credit courses before starting college-bearing courses.

Understanding and being prepared for neurodiverse students to meet them where they are academically is critical to student retention.

Student Clubs, Making Connections, and Student Employment

College is a time to develop meaningful relationships. Some students with ASD do not know the social cues, codes, conventions, and etiquette that are part of a successful conversation, from when to be encouraging, when to be honest, when to be excited, when to stay quiet, and so on. Therefore, making friends can be especially difficult. Strategies to enhance a student's ability to cope with campus life and understand social relationships are provided through student clubs, small group meetings, and individual coaching and mentoring.

Based on the reports of this study's student participants, participation in student clubs allowed participants to make friends easier than if they had not joined a student club. As noted by one participant, joining student clubs helped him feel less isolated as dealing with social anxieties and working through sensory issues can bring feelings of isolation. Tommy described,

> Many days not talking to anyone. Naturally more introverted. I have a hard time starting conversations. Adversely affected my work productivity.

Another student affirmed that he "made friends working on campus and joined the choir and Bible study group." Chickering's vectors and principles of best practices in higher education remind us that developing mature interpersonal relationships, developing a capacity for establishing intimacy, and being emotionally connected and supported are necessary for the student's development (Chickering & Reisser, 1993). Once these connections are made, students become immersed in the college community. As one student said,

> Connections made with people. Getting to know friends and build connections with people [is a] number one takeaway in my college experience.

Employment after attaining a degree is also an integral outcome of student success. As part of the student's transitional services or graduation transition services practitioners reported that the college's employment office assists students with ASD via one-to-one, small group workshops, interactive learning sessions, or by creating an Individualized Plan for Employment (IPE) Practitioners. They also connect students to other agencies in the community such as the Vocational and Rehabilitation State programs. Finding on-campus student employment or work-study opportunities allows for students to make connections with staff on campus. One student said, "working [on campus…] I built a ton of connections with people." Another student reinforced the connections he made through "Work Study and classes. Made friends by working in the multicultural resource center and with other students who came to the center." People on

the spectrum are underemployed or unemployed (60 minutes, 2020). Unemployment is on average of 80 for those with autism (Donovan & Zucher, 2016).

A common concern that practitioners expressed in this study is the employment transition for those on the spectrum upon high school and college completion. To address the difficulty in transitioning students to gainful employment, all schools, in this case study have identified support that includes resume, cover letter writing, coaching on interviewing techniques, and transition support to state vocational programs such as the Department of Workforce Development Division of Vocational Rehabilitation (DVR). However, if employers want to tap into the neurodiverse workforce, they must change the way they interview applicants who are on the spectrum. In an interview, the first 15-30 second first impressions matter. However, these first 15-30 seconds in a job interview are by far the worst moments for an autistic candidate. Their inability to interpret personal cues and body language and their high anxiety level along with the need to have a conversation with the interviewer can be the worst part of the job interview and the decision-maker for many interviewers.

It is important for employers to get past the first impression and take the time to understand the autistic person's skill set as they often have high attention to detail, understand repetitive and rhythmic systems, and have great memories. Once employers have hired neurodiverse persons, employers can make them comfortable by allowing for noise-canceling headphones and providing a quiet room/break room with dim lighting to help reduce sensory overload. Most importantly, employers should be willing to give neurodiverse candidates the opportunity to tap into this skilled workforce. Vanderbilt University has found a great balance in bringing business scholars and disabilities researchers together with experts in neuroscience and education to understand, maximize, and promote neurodiverse talent with the first of its kind

through the Frist Center for Autism and Innovation for engineering students (*The Frist Center for Autism and Innovation* 2023).

Campus Environment & Online Access

Providing students with workshops and educating them on life function skills while helping them with executive functions as they navigate college are critical components to helping students succeed. On the other hand, the staff and faculty must be trained and made aware of the needs of students with ASD to create a welcoming campus environment. For example, some students with ASD struggle with executive functions. Providing online options for students can relieve some of the anxieties the students may have as they navigate completing the admission process, requesting student accommodations, submitting tutoring requests, and completing difficult courses. Therefore, providing easy and early disclosure of student accommodation needs is critical. By making forms available online vs. face-to-face, this practice aids in identifying and following up with students, lessening student anxiety, and giving access to students who take online or evening classes. Online courses can relieve anxiety autistic students may face when taking challenging courses or taking repeat courses. One student noted that she repeated her pre-algebra course:

> I took the course three times to pass. Last time I took it I had a good teacher that did not assign too much homework and assigned homework online. I could re-do the assignments until I got the grade I wanted. He dropped one test. Taking the class online was easier, I could look up answers, and take my time.

Chickering's vectors and principles of best practices in higher education remind us that developing competence is a key outcome (Chickering & Reisser, 1993).

Study Limitations

Site Visit Changes

Any research study has both limitations and delimitations that affect the results and the implications for those results. For this study, the researcher's original plan was to visit the various college campus locations to observe programs in session and hold in-person interviews with professionals in the field and with autistic students attending community colleges. Because the goal of the interviews was to better understand programming for autistic students in four key areas of ASD student success—social development skills, academic support, functioning support (college & executive functioning) skills, and employment/career services support—seeing these in person was preferable.

As noted, though, in the middle of writing this dissertation, the COVID pandemic impacted the study design. This limitation impacted the researcher's ability to conduct in-person observations because of school closings and limited in-person access. Furthermore, Ferris State University and other schools ordered that there was to be no in-person research to be completed. Thus, all interviews from both phases of this study were completed by using the online Google Meets meeting platform.

Student Interview Changes

A second limitation was getting access to the intended number of students. The study design originally included interviews with 5-7 students. However, the virtual and online access to students affected the number of referrals obtained by the professionals. The campus contacts sent multiple emails asking students within their programs to participate. However, fewer students than expected responded. The researcher worked to ensure that, once the students agreed to participate, they were comfortable participating in the interviews.

Study Delimitations

The study's delimitations included the following institutional characteristics applied in Phase 1 and the student characteristics applied in Phase 2.

Phase 1 Delimitations: The institutions were identified by the fact that they serve autistic students, address at least three of the identified student needs, and describe these services on their public-facing websites. No other factors (such as perceived "success" in meeting these needs) were a factor in their selection.

Phase 2 Delimitations: The students interviewed for Phase 2 self-identified as autistic. The interviews captured their perceptions of the services and support they received while enrolled in a community college. The student's level on the autism spectrum was not a factor in their section. Also, the number of classes they completed and the location of the college they attended were not factors in their selection.

Implications for Future Research

Because of the study's design and outcomes, many new questions have risen that invite additional research and investigation. First, the study outcomes could potentially be different if this study were conducted using programming at four-year schools instead of community colleges. In addition, private four-year school populations may reflect different outcomes as well, mainly because some of these institutions have distinctly different marketing strategies to reach potential students and student populations. Some of these private institutions, in fact, target specific populations, such as ASD students. Because parents of autistic students are often part of an active, dynamic network from the time their children are of school age, they can be targeted easily as well. In many regions of the country, these parents have had to be very resourceful during their child's lifetime in order to identify appropriate resources and services. Knowing this,

private four-year colleges may invest in this population as they see it as an opportunity to serve a specific population and expand the reach of the students they recruit. The resources available to all of these institutions can also be a factor in their programming and their outreach. Because four-year private schools and four-year public schools have different resources than public two-year colleges, future research might focus on comparing programming to see where institutional size and type may have an impact.

Another research opportunity would build from the limitations emanating from the Coronavirus pandemic. Because the researcher was limited to virtual and online interviews of the participants and a review of websites on services, future researchers should consider an on-site visit and in-person interviews to get a broader picture of the environment as well as a wider range of student involvement.

Furthermore, future research might focus on comparing programming to see where institutional size and type may have an impact. Future researchers should consider an on-site visit and in-person interviews to get a broader picture of the environment as well as a wider range of student involvement. For example, in addition to institutional size and type, a researcher can consider geography. Perhaps research can dive into the best organizational structure of programs that serve this population, or specific challenges facing these programs (for example, funding, social acceptance by other college community members and students, etc.). Another area for future research would be to study employers who have hired autistic individuals to provide us insight on how they have adapted to the work environment and how employers make it a healthy, productive setting in the workplace. Lastly, future research could be conducted in schools that have well-established programs for autistic students: examine how the culture on campus has

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changed with a broader acceptance of learning differences. For example: are faculty

applying the same approaches to all students and finding increased success for all

students? How have the best practices used to serve autistic students impacted all students

on campus?

The Student Experience

The student experience has become the focus of many institutions seeking to retain their

students and improve graduation rates among community colleges. Vincent Tinto's (1987) model

of college student departure asserts that student departure reflects both the attributes and actions

of an individual, the student, and those members of the institution. Decisions to withdraw are

more a function of what occurs after entry than what precedes it. Furthermore, the decision to

withdraw or leave the institution is a reflection of the dynamics of the social and intellectual life

at the college; in particular, the daily interactions which occur among its members (Tinto, 1987).

Thus, student departure may then serve as a measure of the social and intellectual health of the

institution. Another measure is the student experience within the institution once enrolled.

Student success is synonymous with graduation and establishing a sense of self and identity. One

student participant in this study shared that "[College] prepared me for the future, how to save

money, be ready for retirement, and how to dress professionally." College education has a far

reach beyond attaining employment. The focus categories in this study were to identify ways in

which students developed or obtained: social development skills, academic support, executive

functioning support -college functioning skills and employment/career services support. Outlined

below were top findings of this study.

1. Understand the importance of the transition phase, safety awareness, and how transition makes students with ASD vulnerable: examine closely how we can assist students with ASD in transitioning from high school to college.

2. Understand the transition phase, high school to college by providing summer programming.

3. Train Faculty and Staff for awareness of Autistic student needs is key. Since Autistics cannot easily pick up subtle social signals from the people they are talking to in social settings and interactions, confusion which can result in missed social cues.

4. Safety. Practitioners place significance on helping Autistic students understand social cues, such as the difference between the behavior of someone who is being a friend or someone who may be wanting to take advantage of them or mocking them. Help students understand how not to fall victim to others is important to their safety.

5. Faculty must lay out expectations for students on how grades are calculated. For example, faculty should provide clear expectations on how grades are calculated: have well-defined rubrics of what expectations are, make no assumptions that any student would know what an A paper is or what a B paper should look like when completed.

6. Have handouts and materials online via a course management system by having content available, students can review course outlines and lecture outlines as needed. Use clear and concise language.

7. Demonstrate skills of empathy. <u>Be available</u> during office hours.

8. Give students a chance to express themselves and create some degree of interaction within the classroom. In essence, the best practices are the Universal Design principles.

9. Create a student life organization such as Autisamerica, an affinity group, where students can come together and support each other on their college journey.

10. Hire your students (Work-Study/Student Employment). This practice will help them gain employment and self- confidence needed to land a job. Additionally, student employment provides the student with integration to the campus community.

In summary, practitioners who serve students with ASD must focus on the various moving parts that it takes to serve neurodiverse students. Committing to serving neurodiverse students heightens the awareness of practitioners to fulfill the community college mission and align with the labor to provide a quality education for all.

The Researcher's Reflections

Autism came into my life unexpectedly one year into my doctoral journey. It was not until my grandson Tommy, at around the age of two, began to show regression instead of meeting milestones that we were aware that he was facing challenges. As a mother of five, I recognized that Tommy was not meeting the necessary milestones. I raised my concerns with my daughter. Instead of agreeing with me, she became defensive and felt I was judging her parenting. I am unclear if it was due to my approach, her fears, or both that led us to this place of disagreement. However, it would take my daughter's very observant childcare caretaker and her persistence to get referrals in place for Tommy, a step that began our long journey. Because of Tommy's severe autism, the doctors, his pediatrician, and an ear-nose specialist believed the problem was that Tommy could not hear. Tommy underwent two unnecessary ear surgeries.

Tommy's mother persisted, kept asking questions, and kept seeking answers. Her tenacity led us to Children's Hospital in Milwaukee for a series of evaluations. At age three, he was diagnosed with speech and social delays. Not having the answers, I began reading everything and anything I could on autism. I took online courses on autism. All the while I was in graduate school and working full time, needing to know consumed me. I took a course on teaching students on the autism spectrum at Baltimore Community College. I took all the courses offered by the Autism Certification Center (https://autismcertificationcenter.org). And, as a result, I became a certified trainer in the GeminII software program to aid autistic children. I was consumed by needing to know how we could best help my grandson. Although I was already working on a dissertation topic that I was passionate about, autism became my new passion. I discovered this new world of students, practitioners, and parents.

Finding resources and supportive school placements takes time and energy research. My family researched and researched for sources in our community, at times hitting a brick wall, at other times finding resources and feeling that we had made advancements. I live in southeastern Wisconsin, and I soon discovered there are more resources in some cities and fewer in other cities. For example, Brookfield and Mequon, Wisconsin, offer more services to their autistic community than the area where I live. An agency in the area offers in-home speech and occupational therapy. This option is not available in Racine, Wisconsin, where we reside. However, the PK3-5 program in Racine Unified School District has excellent teachers dedicated to helping autistic students. It was one of these teachers who referred us to Sonnenburg Schools. Sonnenberg was a school I had been researching. However, adding this recommendation provided the golden seal of approval. We were grateful to find a school in Racine County that serves Autistic children K5-12th grade. Sonnenberg has been a valuable partner in Tommy's development. Today, in 2022, my grandson Tommy is six years old and is in 1st grade.

Our journey to seeking services, though, has been never-ending. Tommy has an established medical team that includes a pediatrician; a nurse practitioner trained in child development specializing in children with special needs; a child neurologist who is a doctor who specializes in the brain, spine, and nerves; a child psychologist; a speech therapist to help him with his speech delays; and an occupational therapist to help him learn daily functions. At school, he has trained teachers who support his learning and teacher aids who understand their class of autistic students. Sonnenberg's team communicates with his speech and occupational therapists to monitor progress and plan. Although Tommy cannot verbalize his needs, he makes himself understood through gestures and one-word responses or sounds.

My dissertation writing journey has given me a newfound passion for making our world a better place for others like my beloved grandson, Tommy. The completion of this dissertation is only the beginning of my future work—all in the name of making this world a better place for autistics. Most definitely, everyone on the Autism spectrum deserves a bright future.

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APPENDIX A: IRB APPROVAL

FERRIS STATE UNIVERSITY

INSTITUTIONAL REVIEW BOARD
1010 Campus Drive FLITE 410 Big Rapids, MI 49307
www.ferris.edu/irb

Date: March 8, 2021

To: Susan DeCamillis and Cynthia Galvan
From: Gregory Wellman, R.Ph, Ph.D, IRB Chair
Re: IRB Application *IRB-FY20-21-70 Programs for Autistic Students in CCs*

The Ferris State University Institutional Review Board (IRB) has reviewed your application for using human subjects in the study, *Programs for Autistic Students in CCs(IRB-FY20-21-70)* and approved this project under Federal Regulations Exempt Category 2. (iii). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met:
The information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subjects, and an IRB conducts a limited IRB review to make the determination required by §46.111(a)(7).

Your protocol has been assigned project number IRB-FY20-21-70. Approval mandates that you follow all University policy and procedures, in addition to applicable governmental regulations. Approval applies only to the activities described in the protocol submission; should revisions need to be made, all materials must be approved by the IRB prior to initiation. In addition, the IRB must be made aware of any serious and unexpected and/or unanticipated adverse events as well as complaints and non-compliance issues.

This project has been granted a waiver of consent documentation; signatures of participants need not be collected. Although not documented, informed consent is a process beginning with a description of the study and participant rights, with the assurance of participant understanding. Informed consent must be provided, even when documentation is waived, and continue throughout the study.

As mandated by Title 45 Code of Federal Regulations, Part 46 (45 CFR 46) the IRB requires submission of annual status reports during the life of the research project and a Final Report Form upon study completion. Thank you for your compliance with these guidelines and best wishes for a successful research endeavor. Please let us know if the IRB can be of any future assistance.

Regards,

Gregory Wellman, R.Ph, Ph.D, IRB Chair
Ferris State University Institutional Review Board

APPENDIX B: COLLEGE ANALYSIS

	HARPER COLLEGE	KIRKWOOD COLLEGE	COLLEGE OF DUPAGE	BELLEVUE COLLEGE
Program Description	Transition Autism Program is designed to meet the specific needs of students on the Autism Spectrum as they transition from high school to college. Provides peer mentoring, specialized academic support, social activities, a parent support component, and Job Readiness Workshops that include resume writing, interview skills, and job search strategies (Transition Autism Program, 2020).	Autism Spectrum at Kirkwood (ASK) program is a no-cost voluntary program for Kirkwood Community College students with autism spectrum disorder. ASK works with students to create an individualized plan that builds academic and social skills necessary for college success. The program includes weekly meetings with autism advocates and structured social events. Kirkwood integrates resources, community partnerships, and research-based interventions and curriculums (*Kirkwood, ASK program, 2021*).	Autismerica is a student organization for students on the autism spectrum to better educate themselves about COD and socialize with one another in a safe and supportive environment. Through the participation of the student organization vital support services are encouraged. Parents are also provided a separate meeting opportunity (*College of DuPage, Autismerica, 2021*).	The Neurodiversity Navigators *(formerly Autism Spectrum Navigators)* program offers educational opportunities along with individualized advocacy and access services for Neurodivergent Bellevue College students. Students who have met the College admission requirements must fill out an application form and follow the steps on the Next Steps flyer by the deadlines listed *(Bellevue College, Neurodiverse Navigators, 2021).*
Summer Programs	Yes. Intro to college programming begins in the summer. Cohort begins in the fall.	No. Summer programming is important but, nothing is in place.	Yes. Autisamerica student organization meets in the summer. Additionally, the COACH (Career Opportunity ACHievement) is a two-year cohort program for young adults with mild to moderate intellectual or developmental disabilities. In addition to an academic focus on reading, writing, math, and computer literacy, COACH also promotes social skills, independence, and career exploration.	Yes. 73 students participated in the summer 2021 program. Zoom online course with support in the class. Topics include Orientation- college orientation and how to access the college services. Then the focus turns into the programs. Track GPA last 10 years it has been 3.0 or above, 85% and above completion. Cohort acceptance- students self-identify into the program, 40-60 students normally come in the fall. This year 73. Approx. 150 students enrolled in the fall and spring.
Recruitment	Students self-identify HS relationships with local high schools, counselors refer students and encourage students to register via disability services. Presentations in Life and Learning resources	Students self-identify in the admission application and information is sent to the student disability office. Area K12 systems Advisor works with Counselors to transition students from HS to	Specific program majors are magnets for students on the spectrum such as: Animation, Programming Design and Graphic Design Program Autisamerica Parents with Students on	Students self-identify, fill out a form on line and invited to an in-take meeting/ orientation to explain the program. That it is the student and not the parent. Office is part of the Career Center. Focus is

	HARPER COLLEGE	KIRKWOOD COLLEGE	COLLEGE OF DuPAGE	BELLEVUE COLLEGE
	courses in HS. The TAP advisor meets with HS students to promote TAP opportunities.	College. Referrals come from HS Counselors, Parents and Kirkwood Faculty.	the spectrum is a close-knit community. By word of mouth with students coming from the Chicagoland and Indiana areas.	on neurodivergent not only autism. But also, ADHD and Dyslexia. College does not actively have a recruitment plan. Go to the local HS, and have a FB page on social media. The transition from HS to College, process. FERPA forms must be completed (online) to include parents in conversations. Include parents in initial emails only then back off to students.
College Functioning Skills/ Executive Functions	Once enrolled, students attend Summer Kick-Off event- Students and parents 1st-year seminar On-going support services Peer mentor New and returning Parent/ family events to give updates and promote support with each other, bring speakers in to support college life. Parental involvement; students sign a consent. Meet with parents twice a semester to help them offer support to their college students. Weekly meetings consist of topics on how to study and how to communicate with professors, how to advocate for self, how to seek a job, and how to find resources. Job Interviewing, resume, and Linked In.	Once enrolled, students receive: Advising. Advisor meets with students once or twice a week to support them and work on different skills for college survival. Since every student is different, goal setting will vary. Help in navigating college services. Help with communicating with their instructors. First meetings are "get to know meetings" so that a rapport is established. PROS and CONS on working with Parents, FERPA guidelines followed and consent forms are provided. Advisor explains what is needed for "parents to know" and what parents don't need to know.	Students receive support with: executive functions and making the right decisions, time management, and Study skills. Tutors are disabilities specialists who help map out and plan assignments and explain how grades are calculated. What makes a good student and a bad student? Interpersonal communication skills course 2 credit, college credit-bearing course. Provided in group therapy format that includes: Role playing, and how to face challenges. time management skills. College success courses.	Students receive support with: The best way to function in college. Once a week meet with a peer mentor for 45 min. What is happening in classes? Access campus resources such as tutoring, Setting up calendars, and time management. Problem-solving skills, very individualized support.
Campus Environment	Connect with people/staff on campus. Students learn: How to navigate the campus, How to check in to tutoring, and Connect with	The Student Center redesign: consider how it can be more inclusive to all students. For example, lighting, quiet spaces, and signage improve understanding of DEI, specifically	Identifying Quite places for non-distraction and overstimulation. Faculty know they can call on the advisor/counselors when students have a	Neurodiversity Center Includes: A quiet room space, study carrels, larger room, small meeting rooms, lounge area to sit with laptops.

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	HARPER COLLEGE	KIRKWOOD COLLEGE	COLLEGE OF DUPAGE	BELLEVUE COLLEGE
	Advisors of student organization via (ADS)ACCESS AND DISABILITY SERVICES. The Success Club is a recognized student organization. The Success Club Organization supports activities to help others understand the disability culture.	inclusiveness for neurodiverse students. Universal design for learning- create lessons accessible to all students, space in class, and different ways of testing a student's knowledge from testing to paper writing to oral presentations. Encourage faculty to look at learning objectives to find different ways to demonstrate knowledge. Take a look at their online delivery. Can students review video transcripts?	meltdown.	Staff is housed in the Neurodiversity Center: peer mentors, program manager, Director, faculty, and front desk.
Academic Support	Topics include Tutoring services, note-taking, and time management. Advisor maintains a good relationship with the Manager of academic support center to help Autistic students find appropriate support.	Topics include Time management, study strategies, access to tutoring, writing support, developing a study schedule, prioritization, what to work on first, how long will the assignment take you to complete, self-advocacy- how to express what they need, transitioning from K12 to College. Barriers exist with students self-identifying. The transition from K12 to adulthood is difficult as barriers exist due to a lack of services. Barriers to academics are the varying level of students. Some need moderate to little support. Others need more support services. And, some need non-credit courses before starting college-bearing courses.	Autismamerica student organization Interpersonal communication course College Success Course Tutoring Support with Access and accommodation Specialist. Access to a Counselor	College staff: Provide training for the entire college faculty, counselors, and advisors, the service providers are prepared to work with neurodiverse students. Neurodiversity-friendly college. Faculty use Universal Design for Learning Students must: Place in English 072 level at a minimum, and ENG 092 and ENG 101 (college level course) to participate in the education part of the program (cohort courses). Students are placed in Adult Basic education courses to gain skills if they do not place at ENG 072 level. 3 years' worth of classes in the cohort, career prep courses. Year 1- Know self and strengths, Executive functioning, self-regulation, self-advocacy, and social interaction not to be confused with social

	HARPER COLLEGE	KIRKWOOD COLLEGE	COLLEGE OF DUPAGE	BELLEVUE COLLEGE
				skills. 2nd-year career focuses on 3rd-year internships and taking a formal communication class. Parents: Parent meetings to support and network with each other. Provide workshops on How to live with a college student who is no longer a child but a young adult. How to hand over the reins to the college staff and college students. Will meet with Parent and the student if the student wishes. The parent's only point of contact is the Director, not any other. Parents are asked not to communicate with the faculty directly.
Life functioning Skills	Program supports students with communication skills, self-advocacy, and money management but the focus is on degree completion.	The program supports students via individual goal setting. Connects students with community resources. Books used by the program to support students and develop skills are: *Peers for Young Adults,* by Elizabeth Laugeson and *Preparing for Life: The Complete Guide for Transitioning to Adulthood for Those with Autism and Asperger's Syndrome, by Jed Baker.*	The college provides continuing education courses and non-credit courses/workshops. Topics include: Using public transportation, Money management, identity protection/ theft housing, living independently non-credit workshops. The transition from HS to College is a difficult dance with FERPA. Parents are active if students want them involved. Parents help build the bridge for the transition. Building trust working with families, parents and students is key to student success. New student orientation, specifically students with disabilities orientation helps introduce parents to other parents at the orientation for support.	Activities of daily living, 5 credit summer course offered in the summer in preparation to live in the residence hall. Topics include: Getting along with roommates, Preparing your own food, Grocery Shopping, and Cleaning.
Social	TAP program Advisors	Advisors	Counselor, Professors	Students are provided

	HARPER COLLEGE	KIRKWOOD COLLEGE	COLLEGE OF DUPAGE	BELLEVUE COLLEGE
Develop-ment skills	provide support on social skills, practice the skills with Team building Ice breakers Elevator pitch Self-advocacy, and Practice how to speak with a professor.	Promote student organization involvement. Advisors will help the student reach out to the faculty who runs the organization to find information on meeting times, the advisor might accompany the student to the 'first-time" meeting. Social event opportunities to practice skills are promoted. Ex. How to introduce yourself? Movie nights, bowling, and corn maze to get students involved and socialize with other students. Topics discussed in one-on-one or group settings are Dating, How to talk to other students. Friendships. How to make friends on college campuses. Independence skills such as driving skills, collaboration with driver's education businesses to make community referrals	and Student Accommodations Support Specialist provide support on the following topics: Emotional management, self-advocacy, romantic relationships - students on the spectrum don't always understand no one talks to them about it. Friendships. Appropriate relationships. Elements of a good friend who is pretending to be a friend. Online Scams presentations on identity theft. What info do you can give to who?	with curriculum in year 1 that includes: Know self and strengths, Executive functioning, self-regulation, self-advocacy, and social interaction not to be confused in social skills.
Employment Skills	Teach students skills needed to job seek, interview, and employment behavior. "Rules "in the workplace. Students respond well to the word RULES.	Career Services on campus provide career exploration, resume writing, and interview skills. Workshops include: Environment in the workplace workshops, disclose or not to disclose you have Autism, what point in the process do you disclose? During an interview, once employed? Connect students with a community agency such as Vocational Rehabilitation services in the area to seek extra resources.	Career Services Center staff understand the students on the spectrum. They provide interview preparation and role play to prepare for the interview, Discuss whether or not to talk about their disability. How is disability an asset? Elephant in the room syndrome. Let's talk about it so you can control the narrative. Pros and Cons. Do they anticipate their disability becoming an issue in the workplace?	College provides Neurodiversity hiring program, internship program, and transition to employment outcomes. Connect students to the Center for Career Connections to get help with resume writing, interviewing, job placement, etc.
Housing	No dorms	No dorms. College partners with area	NO student housing. But there are apartments	Yes. Residence Hall Students must take a 5-

	HARPER COLLEGE	KIRKWOOD COLLEGE	COLLEGE OF DUPAGE	BELLEVUE COLLEGE
		apartments to make referrals. Most students live at home due to COVID. About 50/50 stay home and live off-campus in an apartment. Student housing coordinator makes referrals.	across the street that students rent.	credit course.
Professional Develop-ment	Autism friendly workshops for faculty and staff include: Data, Common co-morbid conditions, Strengths and challenges Communication with students, instructions need to be clear and with plain language, Conduct policies, Meltdowns, Student writing, Group projects, and presentations, Calming spaces How they experience autism and how staff and faculty can better support them.	Strategies for helping faculty in the classroom include: Verbal and Written Instructions and Lecture Pacing (talk too fast or too slow) Abstract assignments tend to be more challenging Writing Assignments - the process of narrowing a topic. Send instructors to conferences: Serving individuals w/Autism Regional Association for Disability Services Bring in Autism Expert Speakers	Training provided by the Counselor for staff and faculty: Topics: Dealing with Overstimulation and Sensory overload; Allow for people to ask questions anonymously about Autism; Research and facts; Stats on success; Classroom strategies; Student Panel.	Professional Development days, Neurodiverse training is provided. Rise Learning Institute, Cultural responsiveness training from a neurodivergent person. Universal Design for Learning Teaching strategies includes: Communication being direct and kind, Changing your assignment instruction if you are not getting the outcome, Interacting with students by name and pronoun Meeting one-on-one with students Monitoring progress and intervening when an issue arises Using the TILT framework for your assignments https://tilthighered.com/tiltexamplesandresources Creating structure; practicing flexibility. Transparency and learning and teaching tell student 1 the purpose 2-task 3- criteria (rubrics) High 5 Reading Strategy. 1. Activating background knowledge 2. Questioning 3. Analyzing text structure 4. Visualization. 5. Summarizing

APPENDIX C: STUDENT RESPONSES

Questions	Student 1 Tommy	Student 2 Alondra	Student 3 Nate
Social Development Skills			
Q13 What role did your parents, guardians, or ally have in your transition to college?	Parents were there for me in my transition to community college and university.	New student orientation staff helped me apply for admission to college.	Parents had a major role in the transition. Helped with the application process, help with assignments, and helped me write emails to my teachers to use proper communication with my teachers.
Q6: Once enrolled at the college, how did you make friends in college?	Knowing others from HS helped. "Working the (on campus), I built a ton of connections with people" "Being part of the TAP program and attending the summer program, it was a good kick start for the coming year-meeting people, getting comfortable with my surroundings, getting to know the campus and comfortable with the campus helped me a lot" Social aspect of knowing people going into the school year is a very different situation going on to UIC had an adverse effect on me. "Many days not talking to anyone. Naturally more introverted. I have a hard time starting conversations. Adversely affected my work productivity."	Work Study and classes. Made friends by working in the multicultural resource center and with other students who came to the center.	Made friends working on campus and joined the choir and bible study group.
Q7: What strategies did you use to prepare for social settings such as going to a student club, going to lunch with a classmate, and completing group assignments outside of class? What did you do to take care of yourself?	Go into social settings with an open mind. Come up with worse possible scenarios and work through them, tell myself I will be fine. If something bad happens, I am going to be fine. "Something that I tend to struggle with until this day and still trying to work on is just being in social situations with people who I am not familiar with is super stressful for me. Thinking about doing that stresses me out."	I would participate in the student life meetings. Did not worry about things that are not important. Plan for the day. A roadmap for the day helps with anxiety. Normal things, eat something, get ready for the day. Eat good in the morning to help you have energy. Take time to sit down and do my homework right away so I don't worry about it. Not having	Work and school. Got a google calendar to remind him of upcoming due dates. Hang out with friends during free time. Care for yourself, your parents, and your family's support. Try not to take things personally, weird encounter w instructor I can shake it off."

Questions	Student 1 Tommy	Student 2 Alondra	Student 3 Nate
	"Thinking of working on an assignment with someone (a classmate) I really don't know causes me anxiety" "For example, a roommate next door is having a party in the dorm room next door. I don't know a lot of people there, so I don't want to go. There's a lot of pressure. Let my barriers down, be honest, don't get too caught up in my own head" Self-care-Powerlifting Carve out time to train and go to the gym. Morning Crew- 6 AM the gym is not too busy. Too busy overstimulating. Plan out breaks. Get a snack and watch TV. Lots of moving parts, can't control- stresses me out. Meal- eat alone, put my headphones in and watch TV and eat. My break.	anxiety.	
Academic Support			
Q8: Once enrolled at the college, were you provided with tutoring and academic support to help you with your studies? What was it like? Did you use it?	Support systems and library resources available. Used some of them but not to a great amount. "Academically, I am ok." "Not knowing what will happen is stressful." A roadmap	Learning Success Center got help tutoring especially with Math. One-on- one tutoring. Tutor would help me figure out the answers.	Different activities for different interests. Bible study groups on campus and choir made long-lasting friends.
Q9 Let's think about a college assignment that was challenging for you. What strategies helped you complete that assignment?	Group Work is a challenge. Knowing one person in the group helps. Open and be communicative. Being able to Communicate well with others.	Pre-Algebra, I took the course three times to pass. Last time I took it I had a good teacher that did not assign too much homework, assigned homework online. I could re-do the assignments until I got the grade I wanted.	General studies degree English course research paper with research, MLA format, and citation. Citations can be off and count against the grade. Used Purdue OWL. Library Research. Broke down into chunks- Intro, Body, etc.

Questions	Student 1 Tommy	Student 2 Alondra	Student 3 Nate
		He dropped one test. Taking the class online was easier, I could look up answers, and take my time.	

Functioning/Student Services Support

Questions	Student 1 Tommy	Student 2 Alondra	Student 3 Nate
Q1: When in high school, what support services did you receive such as an IEP or 504 Plan?	IEP Plan freshman- Junior year, ½ junior revisited- transitioned to 504 Plan for accommodations. 100% extended time from elementary through college.	IEP plan. Received extra time on testing, help with homework, assignments, projects and tutoring.	504 Plan, Reader, no distractions testing, extended time.
Q2: Upon applying to the college, were you connected with someone in the student accommodations/ special needs office? (look up office name)	Access and Disability Services, "Access Advocate at Harper was the first person I was in contact with before HS graduation and transition to college."	Student Accommodations Office to receive extra time on tests and tutoring.	Yes, Connected already. Summer camps new the campus, his father was a student, student success coach, accessibility services coordinator and weekly check-ins with her.

Executive Functioning Support

Questions	Student 1 Tommy	Student 2 Alondra	Student 3 Nate
Q3: What are some things that surprised you when you first attended college?	Class size smaller campus at Harper College 20-25. "This was a nice transition to have the classes be a smaller size as it better suited my needs." ` "Surprising easy to build connections. Push myself to build connections. Got a job over the summer at Harper and this help me build connections."	"Didn't expect I would get a lot of homework." "Didn't expect that homework had to be turned in and done on time not a later date or get an F" The first year was difficult but the second year was better to remember not to do that again (late work).	surprised me, "college is a choice, you have full control, not like HS you have to be there, College has more support and comes through more authentic."
Q4: Once enrolled at the college, were you provided with daily function support to help you plan and achieve daily goals?	Access Advocate met with him regularly to help and support him. Every 2 weeks or monthly. How to approach things.	Receive tutoring support and ask teachers for extra credit.	Student Success Coach for support in classes and scheduling, accessibility for accommodations, and general services.
Q5 Did you ever have an issue with self-control? What was the situation? How did it end? (Self-Regulation). a) While in college what did you need to help you succeed?	"Not really. I am a pretty calm, cool, and collected person." In HS, I had issues with anxiety, but I worked through it before coming to college. "Extended time accommodation helped me succeed. Over time I utilized it less and less. It was nice to have as a safety net 'cause there were a few exams that I	Second year, battling depression and anxiety related to ending a relationship. Used time to completely move on. Keep up with homework and not worry about unimportant things. Avoid being distracted by the phone. Worry about being happy. Worry about being	No issues with self-regulation, and I have been pretty grounded with family and the support of staff" Help me succeed was my student success course geared to support accessibility services to students. It is for first-generation students to help them with study skills strategies, test-taking, and time management skills. Help get services outside services

Questions	Student 1 Tommy	Student 2 Alondra	Student 3 Nate
b) What strategy/strategies did you use to get you through a typical college day?	would take longer than the time given to me in class." Talking with an Advocate and meeting with them help me succeed. Strategies: Use of time management. Sports in HS helped character development. Active in school clubs.	happy to find someone, with life, my future, and relationships.	with the tutoring center and career services. Note-taking strategies from the center of academic success. Understand what the professor is saying. Use express captions.

Employment Support & Career Services

Questions	Student 1 Tommy	Student 2 Alondra	Student 3 Nate
Q10: During your enrollment at the college did you receive support with job placement, such as cover letter writing, resume writing, and interviewing?	Workshop cover letter and resume writing. Useful	Build a resume and cover letter geared to get a job in my career.	Career Services and Career Coach to get support on Resume Writing. Get support in getting a job.

Student experiences related to Safe Housing

Questions	Student 1 Tommy	Student 2 Alondra	Student 3 Nate
	Students lived at home while in CC. Now, at University, he lives in the dorms.	Lived at home with mom.	Students live at home close to campus.

General / Closing Questions

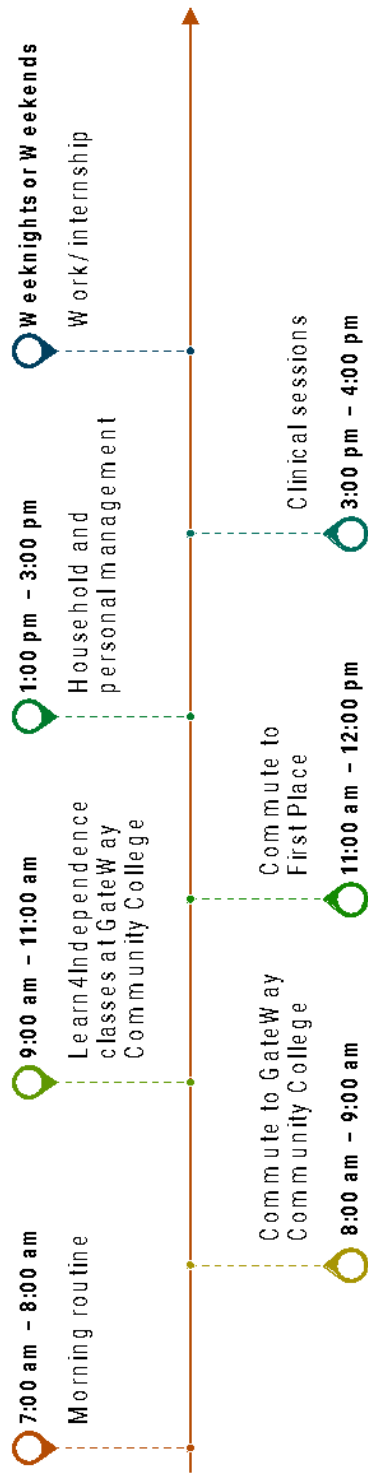| Questions	Student 1 Tommy	Student 2 Alondra	Student 3 Nate
Q11: What do you think has helped you the most during your college experience? Memorable teacher and why? A time Overstimulated?	"Connections made with people. Getting to know friends and build connections with people number one takeaway in my college experience". My First Year Seminar professor, she was always supportive and helped me through my journey. She helped me become a mentor too. Kinesiology Professor, I took him for 5 classes. He was a fun professor. He taught a topic I am interested in. He is passionate, authentic. He legitimately cares about his students, goes out of his way to dig deeper in what your interests are. His assignments he provided step-by-step process. Planned activities. Overstimulation- too many people, Chicago scared me	Prepared me for the future, how to save money, be ready for retirement, and how to dress professionally. Ms. Barnes helped me catch up with my courses. Guided me with career advice. Sometimes, I feel so overwhelmed, I felt like	The College Success coach helped me most in balancing the classes while I got acclimated into college. Genuine and down-to-earth, the teacher was there to support and mentor. The history professor was amazing, when I had questions, he was easy to approach and gave me the skills. Had him for 3 classes. That is how great he was. "I did really well in online classes. Anxious about his face-to-face classes. So, he went to find where his classes were located to help me understand where my class is" PRIMING

Questions	Student 1 Tommy	Student 2 Alondra	Student 3 Nate
	for a while. In my mind, I was thinking, if I am scared of Chicago, all the people and all moving parts, wouldn't it be good to be in that scenario to grow and become a better person in those scenarios. Became a better person. Lots of moving parts, can't control- stresses me out.	dropping out (quitting school) due to battling depression and anxiety. Felt like I ever going to finish. I would question myself, am I ever going to graduate. I also thought of dropping out due to financial problems. .	
Q12: What do we need to know to help other students on the Autism Spectrum?	"In general, I would argue that one of the leading factors that students on the autism spectrum and those with disabilities struggle with is the communication aspect- meet friends and communicate with people." "Push them to try to talk to people as it will help them in the long run. Build connections, build friendships, build relationships help significantly in the long run. Having friends and people who you can turn to helps in the long run."	"Don't be afraid to ask for help on how to enroll. Once in college don't be afraid to ask for tutoring." "Don't think about dropping out of college." My motivation to stay was not to disappoint my mom. We like to plan and be punctual.	"Support is always going to be there, there is no harm in asking questions, don't be afraid to ask and get help."

APPENDIX D: FIRST PLACE PROGRAM (ARIZONA)

TRANSITION ACADEMY DAY IN THE LIFE
Year Two

Mon - Fri

7:00 am – 8:00 am
Morning routine

Commute to GateWay
Community College
8:00 am – 9:00 am

9:00 am – 11:00 am
Learn4Independence
classes at GateWay
Community College

Commute to
First Place
11:00 am – 12:00 pm

1:00 pm – 3:00 pm
Household and
personal management

Clinical sessions
3:00 pm – 4:00 pm

Weeknights or Weekends
Work/internship

firstplace
TRANSITION ACADEMY

Apartments

Now Leasing!

firstplace
A NEW HOME

About the Apartments

The First Place Apartments offer a diverse suite of supports, amenities and community life options included in the monthly rate to help residents thrive as they chart their individual paths to more independent living.

- Support specialists assist residents in developing life skills and adapting supports to each resident's strengths, interests and needs.
- The community life coordinator leads a dynamic schedule of fun activities and special events.
- The vocational coordinator helps residents identify their skill sets and job interests.
- The health & wellness coordinator supports residents in making healthy nutrition, exercise and lifestyle choices.

A diverse community of pride, purpose and endless possibilities.®

2023 Leasing Options

1-Bedroom
$4,400
per month + tax

| 744 sq. ft. | 1 Bedroom | 1 Full Bathroom | Appliances Refrigerator, range, washer, dryer, dishwasher | Utilities Cable, internet, phone, electricity, water, trash valet |

2-Bedroom (single occupancy)
$4,700
per month + tax

| 1,080 sq. ft. | 2 Bedrooms | 2 Full Bathrooms | Appliances Refrigerator, range, washer, dryer, dishwasher | Utilities Cable, internet, phone, electricity, water, trash valet |

12.21.22

Team Approach

| Vocation | Community Life | Support | Health & Wellness |

Skill Building

| Grocery Shopping | Money Management | Personal Care | Transportation & Navigation | Basic Culinary Skills | Household Management |

Amenities & Features

| Building Security | Health & Wellness Center | 24/7 Concierge & Maintenance | Pool, Patio, BBQ & Organic Garden | Transit-Oriented Midtown Location | Culinary Teaching Kitchen |
| LEGO Lounge | Fitness Room | Game Room | Reading Lounges | Zen Room |

Amenities & features and support specialist assistance are included in rent. Unit options are based on availability.