8-2023

Transition Planning for Individuals with Autism Spectrum Disorders; Implications for Post-Secondary Education.

Allison Tacheny

Recommended Citation

Tacheny, Allison, "Transition Planning for Individuals with Autism Spectrum Disorders; Implications for Post-Secondary Education." (2023). *Culminating Projects in Special Education*. 152.
https://repository.stcloudstate.edu/sped_etds/152

Transition Planning for Individuals with Autism Spectrum Disorders; Implications for Post-Secondary Education

by

Allison Tacheny

A Starred Paper

Submitted to the Graduate Faculty of

St. Cloud State University

in Partial Fulfillment of the Requirements

for the Degree

Master of Science in

Special Education

August 2023

Starred Paper Committee:
Bradley Kaffar, Chairperson
Hsueh (Martin) Lo
Brian Valentini

Table of Contents

Page

List of Tables

Chapter 1: Introduction

There is the idea from Dr. Stephen Shore’s quote “ If you’ve met one individual with Autism, you’ve met one individual with Autism.” When taking a look at autism spectrum disorder (ASD), a neurodevelopmental disorder that is characterized by social communication deficits which are associated with restricted and repetitive patterns of behaviors and interests that quote can definitely run true (Gosling et al., 2022). One individual with autism when compared to another can have an array of differences in the specific social and behavioral areas, which can appear at various levels across Autism’s broad spectrum. Those deficits resulting in needs that should be addressed.

Just as there are an array of deficits that effect those with ASD, there is going to be an array of supports and services needed to be put in place for those individuals, not just supporting them throughout their years in primary and secondary school , but post-secondary into adulthood. A way that these supports are put in place to carry from primary and secondary school into post-secondary into adulthood is through Transition planning provided to them with their IEP.

Transition planning is the involvement of the individual on an IEP and their parents or guardians in planning the post high school transition in the areas of post-secondary education, employment, and community living, which starts at the age of 16 if not earlier. This process is done through Individual Education Program (IEP) transition planning meetings, creating a transition plan, which includes transition services (Davenport et al., 2022). By federal education law transition services are required by public schools for individuals on an IEP (Ruble et al., 2019). According to Ruble et al. (2019), there have been three broad areas associated with successful transition planning: those being school, student, and parent-related variables. School factors include interagency collaboration and program content, this would be participation in general education, and opportunities to develop targeted skills that relate to employment like vocational skills training, self-care/independent living and social skills training, support for transition, job placement services, and college services. Student factors include gender, race, social skills, intellectual ability, adaptive functioning, self-advocacy and self-determination skills, and completion of high school. Parent and family factors include household income, parental education, family expectations, and parental involvement. With that said there are many decisions to be made in transition planning and factors that affect those decisions.

Research Questions

1. What is the Importance of transition planning for individuals with autism spectrum disorders?
2. What supports should be put in place for individuals with autism spectrum disorders during planning for post-secondary education?

Focus of paper

The main focus of this paper is to identify the challenges that arise for individuals with Autism spectrum disorders when they move onto post-secondary education and what supports should be put in place for those individuals during transition planning to help mitigate those challenges. When looking into the focus for this paper, it started out as the broad topic of transition planning in general for individuals with ASD. As transition planning is a broad topic, that not only encompasses post-secondary education but also independent living , and employment it was important to narrow it down just to one of those areas as a focus.

As my research for this paper started it became clear that when looking up transition planning for individuals with autism spectrum disorder, post-secondary education was the biggest topic that came up in that area. Once I knew that post-secondary education of individuals with ASD was going to be my focus, I took to Academic search premier as my source and researched articles using the keywords; *autism, autism spectrum disorders, transition planning, special education, post-secondary education,* to help narrow the broad topic. Another resource that I used for the research of this paper was google scholar. The main topic I researched on this source was the history of transition planning as that was an area that I was not finding information about on academic search premier. Although through my coursework I have learned an abundance of information about the history of special education I wanted reputable articles that supplied the data. For some of the articles that I found on google scholar I did have to go to the university library to look up the article so I could gain access to the full text.

Historical Background

To dive into the history of transition planning you need to start by taking a look at the laws and legislature that changed to make transition planning for individuals with disabilities what it is today. In 1975 what was originally the Education for all Handicapped children act (EHCA) and now the (amended) Individuals with Disabilities Education Act (IDEA) of 2004, was put into law. According to McDonnel & Hardman, "EHCA did not include specific provisions for transition services but did state that all children with disabilities must have access to the same programs and services that are available to children without disabilities"(2009, p.10). McDonnel & Hardman also state, "Congress has made significant changes to the legislation five times"(2009, p.5). whose amendments since 1975 have included provisions about transition planning and transition services.

In 1990 EHCA was renamed IDEA. According to McDonnel & Hardman, "1990 amendments, mandated the provision of comprehensive transition planning for all adolescents with disabilities aged 16 years and older"(2009, p.5). McDonnel & Hardman says the amendment of 1990 had the "critical goal of improving the quality of adult life for students with disabilities"(2009, p.4). In 1997 the reauthorization of what became the Individuals with Disabilities Education Act (IDEA), students ages 14 and older were not just to be allowed, but actively invited to attend their transition planning meetings, and all students were mandated to have a transition plan in place by age 16. Then in 2004 reauthorization of IDEA further refined the process for developing a transition plan and mandated that a student be invited to any IEP meeting that includes consideration of postsecondary goals (Wei., 2016).

Importance of this topic

For individuals with disabilities effective transition planning is important. It provides those individuals with the support and services that are needed as they are transitioning out of high school and into adulthood. The reasoning as to why it is important to review this topic more specifically for individuals with autism spectrum disorders is because as time has progressed the prevalence of ASD has become larger.

To supply some further background on the prevalence of ASD, According to Maenner et al. (2021), The Autism and Developmental Disabilities Monitoring (ADDM) Network conducts active surveillance of ASD. This report focuses on the prevalence and characteristics of ASD among children aged 8 years in 2018 whose parents or guardians lived in 11 ADDM Network sites in the United States (Arizona, Arkansas, California, Georgia, Maryland, Minnesota, Missouri, New Jersey, Tennessee, Utah, and Wisconsin). In the surveillance years of 2000 and 2002, ASD prevalence estimates have increased from 6.7 (one in 150) per 1,000 children aged 8 years at ADDM Network sites and as recently as the 2018 surveillance year the overall ASD prevalence was 23.0 per 1,000 (one in 44) children aged 8 years (Maenner et al., 2021).

According to Wei et al. (2016), Given their increasing numbers, it is critical that children and youth with ASDs are supplied with the services and support that will promote positive post–high school outcomes, including employment and postsecondary education. Yet nationally, the combined 2-year and 4-year college enrollment rates for youth with ASDs was 32%, the third lowest among youth in 12 special education disability categories and much lower than that of youth in the general population. With the growing prevalence of individuals with ASD and a continuing lack within that population who enroll in secondary education ,it makes you wonder what is holding those individuals back. This leads to why in my research I will be reviewing the challenges that those individuals face when in or going into post-secondary education and how they should be supported through transition planning.

Definition of Terms

Autism Spectrum Disorder, "a neurodevelopmental disorder that is characterized by social communication deficits which are associated with restricted and repetitive patterns of behaviors and interests" (Gosling et al., 2022, p. 3647).

Transition Planning "is the process during which an individual, his or her parents, his or her educators, and adult service professionals come together to create an adaptive fit between the student's abilities, needs, and preferences and the requirements of the environment in which he or she will live as an adult. The process involves accommodating a change status from the interdependence of being a student to taking on more independent adult roles within and external to the family. These roles include employment, participation in postsecondary education, residential living, and developing personal relationships" (McDonnel & Hardman, 2009, p. 4).

Transition Services "is a coordinated set of activities for a child with a disability that (A) is designed to be within a results-oriented process, that is focused on improving the academic and functional achievement of the child with a disability to facilitate the child's movement from school to post-school activities, including post-secondary education, vocational education, integrated employment (including supported employment), continuing adult education, adult services, independent living, or community participation; (B) is based on the individual child's needs, taking into account the child's strengths, preferences, and interests; and (C) includes instruction, related services, community experiences, the development of employment and other post-school adult living objectives, and, when appropriate, acquisition of daily living skills and functional vocational evaluation"(McDonnel & Hardman, 2009, p. 5).

*IDEA (Individuals with Disabilities Education Act) "*federal act that authorizes federal funding for the education of children with disabilities and requires, as a condition for the receipt of such funds, the provision of a Free Appropriate Public Education (FAPE). The statute has detailed due process provisions to ensure the provision of FAPE. Originally enacted in 1975, the act responded to increased awareness of the need to educate children with disabilities and to judicial decision requiring that states provide an education for children with disabilities if they provided it for those without"(Jones et al., 2004, P. 1).

Person centered planning **"**is an approach that involving individuals and families in the planning process more centrally than traditional planning approaches, an individual and his or her significant others take part in a series of facilitated group sessions to explore and clarify the individual's abilities, aspirations and supports, and develop community participation goals and plans. It has been found to be effective in increasing community participation and enhancing social support for individuals with disabilities and in easing access to employment" (Hagner et al., 2014, p, 4).

Adaptive Behavior "is the ability of an individual to function within everyday environments, is considered a better overall measure of functional impairment for individuals with ASD than diagnostic label or cognitive level" (Hagner et al., 2014, p. 5).

Adaptive Behavior Assessment Scale II (ABAS-II) "is used to assess the level of functional behavior of the individual being assessed. The ABAS II provides a norm-referenced rating of adaptive skill in the areas of communication, functional academics, self-direction, leisure, social, community use, home living, health and safety, self-care, and work; and it provides a composite adaptive behavior score with a mean of 10 and a standard deviation of 3" (Hagner et al., 2014, p. 5)

The National Longitudinal Transition Study–2 (NLTS2) "a comprehensive data set that generalizes the experiences of youth with disabilities nationally as they transitioned out of high school. It was Conducted by SRI International for the U.S. Department of Education, data were collected from parents and/or youth in five waves, 2 years apart, from 2001 to 2009. The first sample included more than 11,000 high school students who were ages 13 through 16 and receiving special education services on December 1, 2000, with about 1,100 of them receiving special education services in the autism category. First randomly sampled local educational agencies (LEAs) and state-supported special schools stratified by region, district enrollment, and wealth. Students with IEPs for special education services were then randomly selected from rosters of LEAs or special schools and weighted to yield nationally representative estimates that generalize to all students in the NLTS2 age range receiving special education services and to those in each special education disability category" (Wei et al., 2016, p, 5).

*McGill Action Planning System(MAPS) "*is a planning process that places primary emphasis on the integral involvement of learners with disabilities in the school community (i.e., regular classes and other typical school environments and activities). The seven key questions that make up the MAPS process provide a structure that assists teams of adults and children to creatively dream, scheme, plan, and produce results that will further the inclusion of individual children with labels into the activities, routines, and environments of their same-age peers in their school community" (Vandercook et al., 1989, p, 205).

Workforce Investment and Opportunities Act (WIOA) “act passed by the U.S. Congress in 2014 to emphasis the importance of transition planning and services. Also, for individuals with barriers to employment, WIOA’s purpose was to increase access to and opportunities for the employment, education, training, and support services they need to succeed in the labor market. WIOA placed a special emphasis on students with the most significant disabilities, including students with intellectual and developmental disabilities and autism spectrum disorder (ASD)” (Snell-Rodd et al., 2020, p. 1165).

Collaborative Model for Promoting Competence and Success (COMPASS) for transition-age students “is a manualized intervention to improve IEP outcomes through systematic assessment of personal and environmental strengths and challenges that lead to selection of pivotal skills (social, communication, and learning/work skills) that underlie educational success and are notably impaired in children with ASD” (Snell-Rodd et al., 2020, p. 1166).

Vocational Rehabilitation (VR) the website Careeronestop.org states that VR is a U.S. Department of Education funded program that supplies these services (help with preparing, obtaining, and maintaining jobs) in every state, territory, and many Indian Nations. Vocational Rehabilitation serves all disability groups, but some states have a separate program called State Services for the Blind that provides specialized services for individuals with legal blindness.

Exploration, Preparation, Implementation, and Sustainment (EPIS) conceptual model “is a comprehensive multiphasic, multi-level implementation framework to guide implementation research and practice. EPIS consists of the implementation process, divided into four phases, and implementation factors, sorted into outer context, inner context, innovation, and bridging factors” (Moullin et al., 2020, p.32).

Chapter 2: Review of Literature

The purpose of this review of literature is to examine the importance of transition planning for individuals with autism spectrum disorders, then look into the supports in place and the challenges that are faced by those individuals moving onto a post-secondary education setting. By doing this, to then be able to look into those challenges to figure out what supports should be put in place for individuals with autism spectrum disorders during planning for post-secondary education. This will include a brief look into literature involving person centered planning. This chapter will be organized chronologically with the Author, year and title of each study followed by the review.

Hagner et al., (2014): Person-Centered Planning for Transition-Aged Youth with Autism Spectrum Disorders

The purpose of this study was to provide a more in-depth summary and qualitative understanding of person-centered planning for young individuals with ASD**.** Hagner et al. (2014) shared there have been no reports of attempts to use or adapt the person-centered planning process specifically for individuals with ASD and the study addressed the following research questions; 1) To what extent can person-centered planning be utilized for planning transition goals with youth with ASD? 2) What adaptations and accommodations allow youth with ASD to take part fully in the process? 3) Is there a relationship between the level of adaptive behavior of youth with ASD and the use of accommodations?

The participants in this study were 47 students (45 male and 2 female) aged 16 to 19 through 28 high schools in New Hampshire and Maine. A requirement was the diagnosis of ASD that was later confirmed by school records and administration of the Autism Diagnostic Observation Schedule. The way in which participants were selected was through replies to an announcement for transition assistance that were distributed by school transition coordinators to the student and family over a period of 3 months (Hagner et al., 2014). The study states that once chosen the student and their at least one parent or guardian identified a planning group of them and an additional member such as extended family, friends or neighbors, and school transition staff and rehabilitation counselors working with the individual if available, and the planning group size ranged from 3 to 9. For each participant and their planning group between 5 and 8 planning meetings that lasted an hour and a half to 2 hours were held in their family homes or preferred another location and typically a core group of 3-4 individuals attended every meeting, with additional participants attending 1 or 2 meetings each. Two trained facilitators in each state provided planning facilitation and used a model originally known as the McGill Action Planning System, they also helped the group move from topic to topic, ensured that everyone had an opportunity to contribute, recorded the group's work on flip chart paper, and emailed photographs of the flip chart pages to attendees and other stakeholders after each meeting.

A mixed method design was used in the study, the first part was a qualitative analysis of narrative data from the planning group meetings. The focus of the meetings were to ensure that the individual with ASD was at the center of the process and participated fully and providing the foundation for engaging in exploratory activities to develop and embark on a meaningful career path with the typical topics including; (1) Introduction and Personal History, (2) Career Profile: Skills, Accomplishments and Personal Qualities, (3) Career Profile: Preferences and Aspirations, (4) Vision For The Future, Resources, and Barriers, (5) Transition and Career Goals and (6) Career Exploration and Work Experience Action Steps. Data was collected by the facilitators on flip chart paper and progress notes that included the following: comments by members of the group, emerging themes, goals and plans, any accommodations or adaptations developed by planning groups for the participants with ASD. Notes were analyzed qualitatively by the first two authors using open coding in which they read the full set of data and independently found each statement indicating an accommodation or adaptation that allowed participants with ASD to take part fully in planning sessions and grouped statements into coding categories based on content similarity. Then researchers met to compare coding schemes, remove duplication, resolve any discrepancies in wording, and agree on a single list of coding categories. The second part of the study consisted of an embedded descriptive quantitative analysis to answer the third research question. To answer research question 3, the Adaptive Behavior Assessment Scale II (ABAS-II) was used to assess the level of functional behavior of participating youth (Hagner et al., 2014).

Based on the results of the study, evidence of accommodation strategies was found for 29 participants (62%) and did not appear to be restricted to a particular range of adaptive behavior. According to Hagner et al., 2014, a tendency for those with lower levels of adaptive behavior to use accommodations more often, but the difference was not significant. Accommodations were coded into five categories: (a) individualized preparation meetings, (b) informal rapport-building preparation, (c) flexible meeting designs, (d) distance attendance, and (e) supported participation. Also, the authors state that several variations of this planning process that seem especially well suited to the needs of youth with ASD transitioning to adult life, the variations allowing individuals who experienced difficulties with communication, anxiety, and other social difficulties to take part actively in facilitated group planning sessions. Lastly person-centered planning can be implemented for youth across the autism spectrum as a tool for enhancing participation in transition planning.

Limitations of the study shared by Hagner et al. (2014) include that the long-term and time-consuming nature of person-centered planning is difficult to implement in a sustainable way on a large scale. The authors then end the literature with the focus for future research which includes the following: examining the effect of varying degrees and styles of planning participation and planning group size on transition outcomes and increasing youth involvement in transition planning should examine the impact of new digital technologies in easing the transition of youth with ASD to adulthood.

Cai & Richdale, (2016): Educational Experiences and Needs of Higher Education Students with Autism Spectrum Disorder

The purpose of this study was to examine the experiences and support needs of students with ASD in Victoria, Australia that were enrolled in either a Technical and Further Education (TAFE) college or university. Based on Cai & Richdale (2016) sharing that not much research has directly examined the experiences and needs of people with ASD, or effective educational supports that address their needs.

The participants of this study were 23 Australian students with ASD from metropolitan and regional campuses of 4 TAFE colleges and 2 universities, with 15 family member (14 parents and 1 sibling). It is later noted in the study that 1 student did not answer questions. Students in the study had to provide evidence of a formal diagnosis of ASD and were registered with their Disability Support Unit. The majority of the students were found to be completing undergraduate degrees or TAFE qualifications. Once chosen, students nominated family members to take part in the family focus groups. The focus groups (9 students and 6 family member) were held at students' higher education institutions for a single session lasting from 1- to 3-h lead by either a facilitator (RC), and a co-facilitator/note taker or by the first author. Focus groups were recorded and the content went through thematic analysis (Cai & Richdale, 2016).

The materials used in the study included the following for the students; The Autism Spectrum Quotient (AQ), a 50-item, self-report screening questionnaire related to behavior associated with ASD, and then questions including demographic information, and information about preparation for higher education, academic performance, motivation, disclosure, disability support, academic support, social support, student rights, transition support provided by their family, social and educational support provided by their higher education institution, and awareness of the Australian Federal Disability Discrimination Act (DDA) 1992. Then the following for family members; a question about their awareness of the DDA and rating of the support provided by the higher education provider for their student's education and social support needs. And then The Social Communication Questionnaire—Lifetime form (SCQ) with 40 yes/no questions related to the social-communicative difficulties found in ASD.

Cai & Richdale (2016) state in the results that 5 themes within 10 areas were identified during the focus groups they were; (1) the core features of ASD including Social-Communication difficulties and Structure, routine and sensory sensitivities, (2) common comorbid conditions of individuals with ASD including Psychopathology, Executive function, and Fine-motor skills, (3) Transition, (4)Disclosure, and (5)Services and Support including Disability, Academic and Family. The study expressed results that were positive and negative which included the following; students felt their educational needs were met, but they didn't receive adequate social support, parents felt their child did not receive either adequate educational or social support, student's with anxiety and depression, and executive function difficulties had significant difficulties, those with no formal transition planning did not feel adequately prepared, for most students disclosure happened after enrollment, some disclosed and registered with their disability support unit following crises, students generally found disability support staff helpful, Several students and parents referred to the need for timely support, and 1 student discussed mentoring as a form of support.

According to the authors, implications that can be made from the study's results included; peer mentoring to help students in improving their social and academic outcomes, online mentoring utilized by 4 students with positive results of learning new skills like studying, time management and social communication strategies, students registering for their disability support unit which provided support/advice on time-tabling, subject selection, time management skills, examination conditions, restructuring assignments, lecture theatre or classroom aids for behavioral issues, and note-taking which the students provided was very helpful. Another implication from Cai & Richdale (2016) is that with students who relied heavily on the support of their parents/guardians it's important that the student gives written permission for this person to advocate and communicate directly with disability support staff, or they may run into issues getting the supports they need.

Wei et al., (2016): The Effect of Transition Planning Participation and Goal setting on College Enrollment Among Youth With Autism Spectrum Disorders. Remedial and Special Education

The purpose of this study was on the following two research questions; examining whether the college enrollment rates for students with ASDs were associated with (a) their participation in transition planning and (b) having a primary transition goal of college enrollment specified in their transition plans. Then applying propensity score modeling methods to data from the NLTS2. Some of the basis of the study's purpose Wei et al. (2016) state is that a larger scale quasi-experimental study is needed to explore the connection between transition planning, goal-setting, and college enrollment as it is unethical in the context of an educational system to randomly assign students to participate in transition planning or to set a primary goal to enroll in college or not to do so.

The participants of this study were Approximately 920 youth with ASD whose parents responded to a phone or mail survey that included data from parent/youth telephone surveys or mail questionnaires across all five waves as well as students' high school transcripts and responses to surveys of school staff who were familiar with youth's high school programs. This occurred during waves 1 through 5 of the

National Longitudinal Transition Study–2 (NLTS2), with approximately 660 of them staying at wave 5 (Wei et al., 2016).

There were several aspects in the method of this study that included Intervention variables, outcomes, covariates, propensity score methodology, and the Handling of missing data. Intervention variables came from Student's School Program Survey items relating to transition planning and included transition planning participation that was either coded as active or very little, to not at all, and having a primary goal of college enrollment in their transition plan that were coded if they did or did not have one. Outcomes included college enrollment and was coded on if they were or were not attending a 2- or 4-year college. Covariates in this study included gender, age, race/ethnicity, disability severity, high school achievement, family income, mother's education level, whether parents ever enrolled in a postsecondary school/program, and parents' expectation of youth attending college and they preceded the intervention as they were measured in the wave 1 parent phone interview and/or mail survey in 2001. The propensity score methods used evaluated the effect of particular aspects of a special education policy, transition planning and goal setting on college enrollment rates (Wei et al., 2016).

According to Wei et al. (2016) the results of the study included; 85.41% of youth were male, sample was diverse in terms of ethnicity, race, and family socioeconomic position, 7 in 10 youth reported having themselves enrolled in some form of postsecondary education, one third definitely or probably thought their student would also, 54.91% were reported to have either a lot of trouble or no ability to converse, 56.07% were not able to participate in the direct assessment of their academic skills,4 in 10 youth participated in transition planning, about one fourth had a primary transition goal of college enrollment in their transition plan, and lastly 3 in 10 attended a 2- or 4-year college after high school. Some other findings of this study were 40.29% of youth with ASDs actively participated in their transition planning meetings, 24.20% had a primary transition goal of college enrollment in their transition plan and that both transition planning participation and having a primary transition goal of college enrollment during secondary school were associated with higher odds of attending a 2- or 4-year college among the sample of youth with ASDs. Lastly the study found that specifying a primary goal related to college attendance in transition plans also can effectively boost the odds of attending college by 564%.

Implications of this study included; Transition planning that began early in high school provided context of which students with disabilities could articulate post–high school goals and work with parents, school staff to work towards them, participation in transition planning is a valuable opportunity to improve postsecondary education outcomes for secondary school students with ASDs and an urgent need to effectively engage youth in the transition planning process so that their interests and desires are reflected in their plans (Wei et al., 2016). The authors include the following implications of this study as well, empowers policymakers, students, parents, teachers that are striving to expand postsecondary education opportunities for youth with disabilities to start the secondary school transition planning process as early as possible so that students' course taking, and other high school experiences can be aligned with and support achievement of transition goals. To increase college enrollment rates and the benefits of a college education for youth with ASDs, high school personnel can ensure that youth with ASDs are given the training and supports needed to take part actively in their own transition planning and explore whether postsecondary education goals can be set and met in their transition planning process.

On the other hand, limitations of this study according to Wei et al. (2016) included, (1) unobserved confounding is a concern in propensity score modeling, (2) college enrollment data were collected via surveys, not college registration records, which may result in reporting biases, (3) future studies should test the mechanism underlying the positive association between transition planning and goal-setting and college enrollment, (4) NLTS2 surveyed youth's expectations of attending college as well as parents' and (5) only youth who were able to respond to an interview or complete a survey and those who were not attending or who had not previously attended a postsecondary education institution were asked this question which is where the missing data comes from.

Anderson, et al., (2018): Perspectives of University Students with Autism Spectrum Disorder.

The purpose of this study was to explore the experiences of university students with ASD in New South Wales (NSW) and the Australian Capital Territory (ACT) using an online questionnaire with the following research questions to guide the study; (1) What are the demographic characteristics of university students with ASD?, (2) What do students with ASD indicate are their strengths and weaknesses?, (3) What supports were offered to university students with ASD, and how satisfied were they with those supports and services? (4) Do students with ASD delay their disclosure to disability services, and if so, what reasons are given, and what consequences can be identified from that delay? (Anderson, et al., 2018)

The participants of the study were 48 students with a formal diagnosis of ASD attending university in in New South Wales (NSW) and the Australian Capital Territory (ACT) that responded to the invitation letter from disability managers of 8 universities to take part in the anonymous online questionnaire.

For the methods of this study Anderson, et al. (2018) shared that they used an on-line questionnaire exploring the experiences of university students with ASD made up of 32 questions that included 13 demographic items, 5 open ended, 6 Likert-style scales, and 8 multiple choice questions. The first item was a screening question and asked the respondents if they had a formal diagnosis of ASD, the rest of the questionnaire included the following; Multiple choice and Likert-style questions were used to collect data on comorbid conditions, disclosure of diagnosis, personal strengths and weaknesses, non-academic experiences, academic and non-academic supports provided, support usage, and satisfaction rating of supports, the open-ended questions allowed respondents to nominate their most helpful and least helpful support, and respondents also provided an overall rating of their support and university experience.

Breaking down the results of each of the research questions guiding the study the first question "What are the demographic characteristics of university students with ASD?" supplied the following: 43.8% of all respondents delayed university for at least a year after high school, they studied a diverse range of disciplines. Also gender prevalence anomalies were seen as half of the respondents were female and that was more than the 20% of females estimated by the Australian Bureau of Statistics (2012) to have an ASD. For the second question, "What do students with ASD indicate are their strengths and weaknesses?”, the Strengths were mainly academic like attention to detail, technology skills, original and creative thoughts, strong memory, and consistency and difficulties were predominantly non-academic like anxiety, depression and loneliness were a difficulty for most Also a small minority reported difficulty with following what was going on in lectures and tutorials or with asking questions in class, a minority of respondents (mostly female) stated that they were bullied and Just over half of the sample agreed that they suffered sensory sensitivities that interfered with their ability to study or cope on campus (Anderson et al., 2018).

For the third question “What supports were offered to university students with ASD, and how satisfied were they with those supports and services?” Anderson, et al. (2018) shared the following: for unclear reason, although a wide array of both academic and non-academic supports and services were offered, used, and most agreed helpful, they typically accessed only a few different services occasionally, respondents chose academic supports as the most helpful support, and more non-academic supports as their least helpful support. Some provided in the open-ended questions that reasons they did not access some supports was the stress from excessive delays between requesting support and receiving assistance, some supports were not available, their self-advocacy skills were poor and others reported the quality of the supports was poor. Also, according to the authors nine respondents had transition support provided by their university with a third stating it was not helpful, less than half of the respondents who had used on-line learning expressed a clear preference for it, a majority in this review indicated that supports were useful and appreciated, but they continued to suffer with a number of concerns, and family support affected the overall university experience. In regard to satisfaction, there were higher amounts of females dissatisfied with their overall university experiences and support services than males. Many females shared instances of bullying , higher comorbidity of anxiety and depression, higher instance of supports not provided.

For the final question “Do students with ASD delay their disclosure to disability services, and if so, what reasons are given, and what consequences can be identified from that delay?” Anderson, et al. (2018) shared all respondents had disclosed to disability services but a quarter of them delayed that disclosure. Reasoning behind a delay included not knowing how to disclose or that disability services existed; that they wanted to try on their own; that they initially believed there was no need; that they feared being stigmatized; and that they disagreed with their ASD diagnosis. Lastly according to the authors both the individuals that delayed their disclosure and didn't, experienced similar difficulties like; being bothered by loneliness, anxiety, depression, lack of structure, and quality of sleep That being said delayers claimed they received fewer supports, a high percentage indicated that they withdrew from a unit due to lack of support, compared with those who did not delay.

Implications from the study according to Anderson, et al. (2018) were some of the following; the results of this study provide the largest quantitative research addressing the experiences of university students with ASD in a very limited area, with the strengths of students were identified those strengths may be used to support students, the sensory sensitivities experienced by more than half of respondents were illuminated, female students may have particular issues that need further investigation, considerations of alternative methods of assisting students with more flexible curriculum designs that to work to their strengths rather than deficits and a need for better transition programs that inform students of the advantages of disclosure. Also, universities may need to provide their own transition programs and not rely solely on the transition programs provided by high schools as many students took leave before starting university, and with the results of poor advocacy skills the need to teach readiness skills that would improve the likelihood of students being successful at university.

Lastly the limitations of this study included the following; participation rate of universities (57%), and completed response rate (14.5%) by respondents was very low restricting detail of the data, there may have been a bias against respondents who have weak computer skills, or those who were academically struggling, or currently experiencing debilitating stress, all respondents were recruited through disability support services so the survey was limited to students registered with those services and the present study was limited to a specific area in Australia may not be applicable to other areas.

Bouck & Park (2018): Exploring Post-School Outcomes across Time Out of School for Students with Autism Spectrum Disorder.

The purpose of this study is a secondary analysis of the National Longitudinal Transition Study-2 (NLTS2) data to explore the relationship between length of time from exiting school and postschool outcomes for students with ASD. According to Bouck & Park (2018) with the unique characteristics of students with ASD in areas of employment, postsecondary education, and independent living it was important to isolate and explore the longitudinal nature of adult life outcomes for individuals with ASD. The study included the following research questions included (1) What are the immediate post-school outcomes of students with ASD? (2) What are the longer-term post-school outcomes of students with ASD? (3) How do longer-term outcomes of students with ASD compare to the more immediate outcomes?

The participants of this study were a total of 4,665 secondary students with ASD. Authors of this study shared the following on the demographics of the participants; majority male at 93.8%, majority Caucasian at 58.7% followed by African-American 36.7%, Asian 2%and Hispanic 2.1%, the majority of students were 17–18 years of age when in school at 56% followed by age 14 at 19.1%, 16 at 16%, and 15 at 8.8%. Also, some specific demographics were the majority of students identified as native English speakers at 68%, and 1.3% at language learners or bilingual but 30.8% did not produce verbal speech, as reported by parents or students themselves. The majority of the students were from families with annual income between $25,000 and $50,000 at 54.8% followed by greater than $50,000 at 28.3% and then less than $25,000 at 16.8%. Lastly over half of the students lived in suburban communities at 60.4% followed by urban at 36.5% and then rural at 3.1% (Bouck & Park, 2018).

The methods of this study had several parts. First, Bouck & Park (2018) shared that the data of the secondary analysis of the NLTS2 came from waves 1–4 of original data collection. To clarify each wave equaled a two-year period of data collection and the NLTS2 data collection occurred across 10 years and five waves and for this study from 2001-2007 from waves 1 to 4. Data in wave 1 and wave 2 represent in-school experiences and data from waves 2, 3, and 4 represent post-school experiences. Also the data for the secondary analysis came from two of the six types of data collection of the NLTS2; the parent/youth survey which was typically a 60-minute phone interview, completed by parents at first but in waves by 2-4 students unless student was unable to respond to the questions and if participation in a phone interview was not possible they were mailed a survey, this provided demographic variables (e.g., gender, ethnicity) and those of postschool experiences (e.g., employment, postsecondary education). and the school program survey which was mailed to and completed by the teacher most familiar with a student's program, providing information relative to a student's school experiences like curriculum, transition planning and demographics.

Second, the study went onto creating an in-school and postschool database from the respective surveys. Bouck & Park (2018) state, they created in-school databases for waves 1 and 2 by first creating separate in-school databases for wave 1 for both parent/youth and school program surveys and then for both in wave 2, then the two wave one in-school databases were merged together as were the two in-school databases from wave 2 which resulted in a complete wave 1 in-school database and a complete wave 2 in-school database. The authors then created separate out of-school parent/youth databases for waves 2, 3, and 4 then merged databases to represent in school in wave 1 and out in waves 2 (within two years), 3 (within four years) and 4 (within six years of high school) and the same was done for the in school in wave 2 and out in waves 3 (within two years) and 4 (within four years of high school). Lastly, they used Complex Samples with SPSS 22 to merge via cases, then to create one database all the variables were renamed within the two in and out databases to be identical and merged the two databases with Complex Samples via variables.

Third, Bouck & Park (2018) shared they moved onto data analysis to answer research questions by frequency distributions and a test equivalent to a F-test using Complex Samples (SPSS 22) and Excel (the equivalency to a F-test). For research questions 1 and 2 they conducted frequency distributions on the variables of interest: attending and earning a diploma from (a) a community college, (b) vocational/technical school, and (c) a four-year institution; ever having a paid job within the period between surveys (i.e., generally two years), currently having a paid job; living independently; hourly wage; working full or part time; liking work; who found individual his/her job; and how one gets oneself to work.

The results of the study include the following: a large portion of student with ASD who were out of school were out because they graduated at 87.2%, others were out because they dropped out or stopped going at 7.5%, 3.0% had some reason not specifically asked in the survey at and 1.6% took a test to receive a diploma or certificate. The following results were also provided by Bouck & Park (2018); the longer an individual was out of high school the more likely s/he is to both attend and then graduate from most all forms of post-secondary education that being similar results of having a paid job both at the time of data collection and ever within the two-year window period and the results for independent living, earning more than minimum wage, and working full-time tell a different , those employed at the time of data collection at a rate of over 50% when out of school more than two years, less than 50% of students who attended an institution of postsecondary education earned a diploma within six years, increased amounts of those who attended a community college or a four-year institution the longer they were out of school, and the increasing frequency of individuals who earned a diploma from the institutions they attended, and it was said some individuals earned more than minimum wage and working full time the longer one was out of school.

The following are the implications from the study; more critically examined post-school services provided to individuals with ASD relative to employment, secondary schools collaborating earlier and to a greater extent with post-school agencies, adults with ASD need additional support in keeping a job, outside of just getting a job, there is a need for additional supports to help adults with ASD complete their postsecondary education, students need to earn a diploma or certificate from postsecondary education institutions. Added research about the factors contributing to the differing rates of postschool success is called for because despite the hypothesis of one’s outcomes improving the longer out of school those results were not consistently obtained for adults with ASD. Bouck & Park (2018) state additional attention in practice to preparing high school students and adults with ASD such as rehabilitation services, for independent living and trying to provide the prerequisite skills for success and supports and services for students with ASD should be investigated for both high school as well as post-secondary to increase student opportunities for the ultimate success of graduating. Lastly, the study provided the following limitations: missing data from individuals not being asked and/or not responding to every question, as this was a secondary analysis it was done with existing data from the NLTS2 or what could be recoded from the original data, and the original data collection from the NLTS2 is based on self-report and self-reported data can be biased.

Elias & White, (2018): Autism Goes to College: Understanding the Needs of a Student Population on the Rise

The purpose of this study was to figure out the challenges and needs encountered by students with ASD related to postsecondary education and seeking to find the parent-identified challenges and support needs of students with ASD who are either attending a postsecondary institution or are postsecondary-bound (Elias & White, 2018).

The participants of this study were parents of 99 individuals with ASD or ADHD living in the United States. For the two groups 52 parents of those with ASD and 47 parents of those with ADHD, they were further subdivided, based on the age and educational status of their child (1) high school students between the ages of 16–25, (2) college students between the ages of 16–25, and (3) individuals aged 16–25 who are not currently enrolled in high school or college and parents of individuals with ASD were not excluded if their child also had a comorbid diagnosis of ADHD (Elias & White, 2018). According to the authors, participants were recruited through Flyers, email distribution, and online resources, and in an effort to find a diverse sample, the study used an anonymous online survey distributed nationwide.

The methods of this study were in several distinct parts. There was the online survey created on SurveyGizmo® that collected data over a 10-month period in which participants first answered demographic questions, then either went ahead to the online survey or were informed that they had not met eligibility criteria for the study. Elias & White (2018) share that the content of the survey was developed based on prior pilot studies, theory, contributions from experts in the field, and a preliminary pilot study. There was then the use of Autism Spectrum Quotient for Children (AQ) and Executive Functioning Measure as part of the evaluation measures. The executive function measure was a 10-item

Likert measure designed to assess executive dysfunction over the past 6 months. For Analysis, the AQ and executive functioning profile were used to characterize the sample based on symptomatology. To distinguish shared versus unique challenges and needed services to those with ASD and ADHD top challenges were identified, then group differences were examined to figure out diagnostic specificity. To investigate group differences between parent groups, quantitative data from the online survey was analyzed with Multivariate Analysis of Variance (MANOVA). Lastly the authors shared that in order to facilitate a more fine-grained examination of the specific challenges at the postsecondary level group differences between parents of postsecondary students with ASD and ADHD were examined and a study-specific coding manual was set up by them and used to categorize themes to examine the needs and challenges of students.

The results of the study provide the following in the characterization; the ASD versus ADHD groups significantly differed on symptoms of ASD per the AQ but the ASD and ADHD groups did not significantly differ on the executive functioning profile, both groups had high rates of service utilization across the lifespan,48.1% with ASD and 48.9% with ADHD sample had received psychotropic medication as part of their service regimen, 86.5% of individuals with ASD had engaged in social skill intervention, academic accommodations were provided to 90.4% with ASD and 78.7% with ADHD at some point during their schooling, just over half of individuals with ASD received independent living training at some point during their development both before and after the age of 15 and individuals with ADHD engaged in less social skill intervention and independent living skill training (Elias & White, 2018).

Results of Parent Identified Challenges and Needed Supports were both qualitative and quantitative. According to Elias & White (2018) those results included the following; students with ASD transitioning to postsecondary education primarily struggle with social tasks and skills of daily living like social interactions and making and maintaining social supports such as friendships, parents identify social difficulties into adulthood that are impairing to postsecondary success, challenges differed significantly for the individuals with ADHD with a primary struggle being with time management and attention, considering the high level of comorbidity of ADHD among people with ASD the almost identical presentation on the executive functioning measure in this study a lack of parent-reported difficulties with time management and attention among parents of emerging adults with ASD is noteworthy, and parents of college students with ASD had challenges in postsecondary students that differed to those with ADHD like difficulties with self-advocacy, managing intense emotions, and managing personal/ adaptive skills. Some other results provided in this area were difficulties with speaking up for oneself and emotion regulation in the postsecondary domain, social impairments were both qualitatively and quantitatively addressed among parents of emerging adults with ASD and parents in both groups (ASD and ADHD) identified high needs for supports, both emotional and tangible in nature, for living outside of the home.

For this study implications from the results include the following; , integrating areas of self-advocacy and self- regulation into planning prior to the transition to the postsecondary setting could prove beneficial, qualitative results suggest that supports for executive function impairments and social competence training, social impairment and independent living skills are needs for college students with ASD despite potentially co-occurring ADHD-related difficulties, and differences of challenges and requested supports provide that those with ASD have a unique profile that need to be addressed in school-based disability personnel as well as external, services and supports to promote college success especially before the student transitions out of secondary school, as that is when parents are often still involved in this process and the primary link of providers and students (Elias & White, 2018). Some other implications of this study that are important include as it may be difficult for service providers and mental health clinicians to reach out to young adults with ASD in a postsecondary educational setting programming that addresses both core (e.g., social disability) and developmental (e.g., growing self-advocacy, functional independence) is beneficial, the use of support and intervention programs in order to promote academic and social success in higher education for students with ASD, and social skills training and opportunity, emotional and tangible independence training, and self-advocacy-related skills need to be addressed. Lastly, the authors share that future research should be done to decide if there are certain types of independent living supports that are uniquely suited to address the needs of emerging adults with ASD or ADHD and should implement the use of a diverse, typically developing comparison sample.

Limitations of the study that are provided by Elias & White (2018) include the following; the total sample was relatively small and not powered to detect differences among all six informant groups and is a is not fully reflective of the wider, more diverse population, which limits generalizability, diagnosis was not confirmed in this study and it is possible that the monetary incentive prompted some participants to complete the survey even if their child did not meet the diagnostic inclusion criteria, few parents emailed the study coordinator to inquire about taking the survey if their child “only” had ‘ADD’ or ‘Asperger’s’, and recruitment efforts were stringent, specifically targeting parents with previously diagnosed offspring of the target age-range.

Jackson et al., (2018): Brief Report: Self-Reported Academic, Social, and Mental Health Experiences of Post-Secondary Students with Autism Spectrum Disorder.

The purpose of this study was to obtain a comprehensive understanding into the range of experiences of postsecondary students with ASD, to gather details on where difficulties are arising from for these students, and to gain important insight into how schools may better be able to support these students and address their unique challenges (Jackson et al., 2018).

The participants of this study were 56 adults with a formal diagnosis of ASD (more specifically 60.7% Asperger’s Syndrome), through an ASD phenotype questionnaire, currently enrolled in a post-secondary academic institution, most participants were undergraduates at 4-year universities in the USA. Jackson et al., 2018 recruited participants by directly contacting disability Support staff and mental health professionals from 50 post-secondary academic institutions asking that they share study details with students at their institution with a reported ASD diagnosis and links to the study were distributed through ASD advocacy/support groups in the US, Canada, and the UK.

Jackson et al. (2018) provide that for the materials they utilized a survey utilized designed to capture information on post-secondary students with ASD across four domains: Demographics (age, gender, ethnicity/ race, ASD diagnosis, ASD symptom severity), Academic Experiences (degree concentration, comfort with academic demands, support service utilization), Social Experiences (friendships, romantic relationships, bullying, feelings of loneliness), and Mental Well-Being (psychiatric diagnoses, medication use, suicidal behavior, symptoms of depression, anxiety, and stress). The survey also included the following materials; ASD Symptom Severity The 10-item Autism-Spectrum Quotient (AQ-10) to assess participant ASD symptom severity, 3-item UCLA Loneliness Scale to assess participant struggles with feelings of loneliness, The Suicide Behavior Questionnaire-Revised was included in the to assess the presence, type, and currency of suicidal behaviors in the study participants and the 21-Item Depression Anxiety and Stress Scale (DASS21) to assess currently symptom levels of depression, anxiety, and stress in study participants. Another part of the methods of this study was that he survey was run through the Qualtrics online survey platform, All survey data that was collected was anonymous, and all aspects of the study were reviewed and approved by the Yale School of Medicine Institutional Review Board.

The study provided the following results: the majority of participants appeared comfortable with their academic workloads, many of the students face a number of challenges that stemmed from non-academic aspects of collegiate life, participants experienced a great deal of difficulty integrating with the broader campus environment. More specifically in the area of supports, accommodations the authors share that they are not always fully covered or addressed by their school’s disability support office even though currently students with ASD are entitled to the supports and accommodations offered by post-secondary academic institutions after showing their diagnosis to educational support staff. There was a big area of concern in the results of this study being high rates of suicidal behavior, nearly three quarters of the participants in this study had some form of suicidal behavior over their lifetime, and over three quarters of the students reported regular struggles with feelings of isolation, being left out, and lacking companionship, and severe’ levels of stress, and ‘Extremely Severe’ symptom levels of depression and anxiety (Jackson et al., 2018).

The following Implications can be taken from the results of the study; academic issues should clearly not be overlooked as academic comfort is found to be a significant of emotional distress in this sample, providing parents and disability providers with appropriate knowledge and information on what to look out for and how they might facilitate this group of student's success while in post-secondary education may represent a beneficial step, colleges could help students improve their experience at school with support programs designed to build social skills/networks like peer-mentor programs, ASD housing/clubs, and by improving the availability and quality of counseling/psychological services (Jackson et al., 2018). The author shares as well, that it's clear that many post-secondary students with ASD would benefit from added support from their institutions of higher education in academic, social, and emotional domains and could go as far as supporting students in becoming fully integrated into their campus environment. Another important implication is that this is the first study to report on prevalence rates of suicidal behavior in post-secondary students with ASD. It will be important for these findings to be replicated. Limitations to this study are that not enough data to supply a comparison sample of post-secondary students without ASD is needed to improve interpretation of these findings and are currently in progress and there was not data on the perspectives of parents and supporters, and this is an area of exploration.

Accardo et al., (2019): College Access, Success, and Equity for Students on the Autism Spectrum.

The purpose of the study was to examine the following research questions In the population of college students with autism spectrum disorders: (1) What factors are perceived as influencing selecting and attending college by young adults on the autism spectrum? (2) What factors are perceived as pathways to success or barriers to success by college students on the autism spectrum? (3) What university supplied accommodations and/or support services are preferred by college students on the autism spectrum? The purpose is based on Accordo et al. (2019) sharing that there is research showing a need to elicit student firsthand experiences and to communicate among universities to improve college access, success, and equity for this population of students.

The participants of this study were 48 college students on the autism spectrum receiving services from their university disability service center with a documented diagnosis of ASD. The public universities that took part in this study were two universities in Northeastern USA, one university in the

Midwest, and one in the West, they ranged in size from approximately 18,000 students in one of the Northeastern universities to 7500 in the Midwestern university and having a faculty to student ratio with a mean of 17:1. According to Accordo et al. (2019) students spanned a wide range of college majors. The participants were recruited through their disability services centers and/or from university faculty.

For the methods, it was a 2-year multi-university study using mixed methods to get its data which was the experiences of college students on the autism spectrum. In the study there was a survey and follow-up semi structured interviews. Mixed methods data collection included a survey with follow-up semi-structured interviews. Students had the choice of completing the survey online, through Qualtrics, or in-person. Interviews were conducted in a faculty office or conference room at each university. Survey and interview responses were analyzed for consistencies/discrepancies to increase reliability of finding. For the survey portion questions asked participants about their academic and social history, use of accommodations and support services. For the interview , the interview protocol was replicated across the four universities with a two-probe rule followed (e.g., can you provide an example?). The interview questions fell under the following categories: college access and success; positive factors; barriers to success; and accommodations and strategies. Students were also asked if they would do follow-up interviews. Another part of the methods of Accordo et al. (2019) study was the data analysis. Data analysis was done through the interview’s audio being recorded and transcribed then having member checks conducted on a majority of interviews to ensure the validity. It was also done through the student responses to the open-ended questions on the survey being analyzed to add meaning then coded into themes.

For the results of this study Accordo et al. (2019) shared there were 13 themes that emerged regarding student perceptions and experiences relating to factors of college access, success, and equity. From the first research question stated above about access two themes appeared. Theme one being societal expectations in which the research shares , students with autism are guided by those expectations, some participants reported their aspirations to attend college come from influences at home or in their community, some share the expectation for future employment and the necessity of attending college, and some students follow the path or advice of their family, peers; and other people that influence them. Theme two under access was attending a college that will accommodate the individual's needs, the study states for some, college aspirations attributed to confidence of their needs being met through a supportive university community and that some reported selecting a college based on supportive factors like a tutoring center.

From the second research question on success an initial step with the question of what students thought the definition of success was asked, and 4 themes appeared in relation to that area . Theme one was earning good grades, some students shared that their grade point average (GPA) was evidence for success for them and it was a key factor. The second theme was achieving balance between academic and social life, this included the demands of employment as well. Theme three was achieving goals, the study states students indicated goals of earning a degree, securing employment upon graduation, and obtaining personal satisfaction. Theme four was increasing self-awareness, students indicated the development of it as a college student can influence and determine your success.

Also, from the second research question, information was asked for about barriers of success and 4 themes came from that area as well. Theme one being limited understanding by university community members, students shared difficulty in explaining to professors their individual needs and accommodations and that faculty may not understand their underlying challenges with autism. The second theme was lacking self-awareness of disability, as well as ability, diagnosis, and identity formation. The research shared increased self-awareness related to increased success, also , timing of the receipt of a diagnosis influenced ability to establish self-awareness, and the research attributed students sharing s lack of knowledge in skills of being successful in college and initially avoiding accommodations to a lack of self- awareness. The third theme was mental health needs, students shared areas of mental health and co-occurring conditions affected their college performance, such as anxiety, stress, depression, fears, low self-esteem, and OCD. Theme four was students sharing information on the lack of financial resources.

Last from the second research question, information was asked for about achieving success and 3 themes appeared. Theme one being the development of a social network, students shared success would be greater given building relationships with professors and peers, engaged in campus activities, had access to organized social activities and also revealed value in establishing a faculty mentor. Theme two was self-determination and executive functioning skills, student shared those skills being flexibility, organization, and time management. The third theme was self-advocacy for accommodations and support services as students reported this as a need and common accommodations include extended time, quiet location, and notetaker, the students suggested requesting the following added accommodations: academic coaching, housing accommodations, tutoring, and counseling.

From the third research question on equity, the study said that in terms of reaching college equity through accessing accommodations and supports, students report extended time, copy of notes, priority registration, academic coaching, tutoring, mentorship and the writing center as top accommodations and support services, and social skills groups as one of the least preferred supports. It can be said students in this study were less positive about summer transition programs, likely due to differences in the programs provided across universities. The other part of this question supplied student thoughts on accommodations and support services needed, those included flexibility in absences, alternative assessments, added courses, or clubs specific to their disability like, special education law disability affinity group and involvement in special Olympics. Some other accommodations and services the participants addressed were an increased response when accommodations are needed in times of stress or when mental health needs are impacting success mentioned seeking mental and physical health supports sought from outside the university, students requested the desire for increased support systems, including a faculty mentor (an accommodation provided that unfortunately had a waiting list) and a service animal (Accordo et al., 2019).

The following implications were provided by Accordo et al. (2019) in this study; a need to provide university faculty with professional development to focus on proactive supports and development of services ensuring college students with autism have the opportunity for a successful and fulfilling college experience, and these students would benefit from non-academic supports including talking with others about their problems, opportunities to develop social skills in natural contexts, and spending extra time with faculty members. Also, university support services that focus on self-determination, positive identity formation, and self-advocacy, a need for disability service centers, counseling services, and faculty to work collaboratively to develop support systems for college students and also universities having more concrete descriptions of the services, accommodations, and programs they provide as that sometimes varies college to college. Some other implications that were provided in the study were a need to take the time to construct well-designed college transition plans for students with autism that include a system of non-academic supports that start at the high school level, need for universities to develop a systematic structure of scheduled supports at the college level, supports for both social and executive function needs and specific training for faculty, staff, and peers and lastly to have the individuals with ASD involved in the study's process from start to finish.

There were a few limitations to this study, those included; a lack of involvement of some students with Autism either due to them having apprehension participating in the study as they didn't know what effects it would have on their future opportunities, causing the researchers to discuss that a need to come up with more creative ways to include all students, like those who identify as self-advocates or those who prefer to camouflage their diagnosis. College limitation was the lack voices of college students who have not reported their diagnosis to university disability service offices as researchers are missing opportunities to access valuable student voices.

Snell-Rodd et al., (2020): Stakeholder perspectives on transition planning, implementation, and outcomes for students with autism spectrum disorder

The purpose of the study by Snell-Rodd et al. (2020) was to better understand the interdependent impacts of policy, organizational, provider, and individual factors that shape the transition planning process in schools, and the subsequent process through which transition plans are implemented as youth with autism spectrum disorder access services and gain employment after school.

The participants of this study were 40 participants across the 10 focus groups in a Midwestern state. The 42 participants were stakeholders across varied roles and contexts shaping implementation including individuals with ASD, parents and caregivers , school providers (classroom teachers; school psychologists), school administrators , adult service providers (service agencies; vocational rehabilitation (VR) counselor), and state agency administrators, including directors of advocacy agencies and policymakers from VR, special education, Medicaid, and developmental disabilities. The way that the participants were recruited varied depending on who they were. Administrators of state agencies and school systems were approached directly about the study, parents were recruited from a local parent support group and from a school serving low-income/resource parents, names of school and adult providers were recommended by special education administrators, VR administrators, or from research team contacts and the individuals with ASD who were recruited were college students attending the university where the principal investigator works. Lastly inclusion criteria included the ability to understand and speak English so only individuals with ASD who had verbal skills commensurate with chronological age were recruited (Snell-Rodd et al., 2020).

There were several parts to the methods of this study, first of all it describes stakeholder perspectives from a larger project to adapt and assess a consultation intervention called the Collaborative Model for Promoting Competence and Success (COMPASS) for transition-age students. The EPIS (Exploration, Preparation, Implementation, and Sustainment) conceptual model aided in the design and analysis of the study due to its focus on the interacting multilevel policies, long-term collaborative relationships, and organizational and provider factors that affect how best practices are sustained. In This study it was specifically how factors impacted the best practices critical to the implementation and sustainment of transition, such as IEPs, student-centered planning with key players, supported employment, and adult services and to explore the ongoing inner context (organizational, practitioner-level) and outer context (inter-organizational, policy) that shape the numerous best practices vital to successful transition that have been mandated in policy since 2004 (Snell-Rodd et al., 2020).

Another part to the methods of this study was a moderator used a semi-structured interview to ask a series of open-ended questions guided by the EPIS framework concerning, barriers and facilitators to transition planning, collaborative relationships and policies, and suggested measures to evaluate added outcomes. According to Snell-Rodd et al. (2020) a slight variation was made to questions to reflect participant roles and simplified questions for individuals with ASD. Focus groups were conducted by the second author and at least one research assistant, lasting about 1 hour, was audio recorded and participants were offered compensation of US$50. The audio recordings were transcribed and entered into MAXQDA qualitative data analysis software, then the first and second authors read interviews to identify primary themes in the data defining an initial codebook, then using an iterative, consensus-building process, research team members further refined the primary themes, developing a detailed codebook with code definitions, typical and atypical exemplars, and exclusions and codes aligned with components of EPIS. The authors shared that to ensure dependability among multiple investigators, coding pairs conducted inter-rater reliability tests of each code by applying codes to transcripts, discussing findings, and then refining code definitions until agreement reached at least 80% and then using the final codebook, we applied codes line by line to the interviews in coding dyads. The authors found these steps strengthened the trustworthiness of our findings through triangulating code definition across investigators and checking the individual coding processes through collaboration. Lastly sub-codes were then re-grouped to integrate them across key practices across the transition process to understand code interrelationships in producing poor transition outcomes and they then presented the results to the Kentucky Commission on ASD, subcommittee on transition, and adult services for checking.

For the results of the study, the authors divided them into 3 primary parts of transition; (a) the planning process that takes place in schools to help students with ASD prepare for transition, (b) the struggle to initiate life beyond school; and (c) efforts to gain and maintain employment, they were all further explained in their relation to the EPIS.

In the area of transition planning, a consensus was of inadequate implementation of transition planning , specifically for goals, assessments, and skill building. For goals, participants shared that how best practice determine both what options are optimal for individuals with ASD after school and what skills would need to be acquired in the interim to fulfill those goals, but many described implementations of planning that was detached from student abilities, needs, and talents. Parents shared planning practices must include setting realistic goals, requiring planners to think beyond educational outcomes to student interests and abilities. For Assessments, there was frustration with the way student abilities were assessed forming inappropriate goals, some parents felt that transition planners formulated inadequate goals or unrealistic goals for their abilities. For skill building, it was noted that inappropriate goal setting led to inappropriate plans to identify and develop individuals' skills, parents felt that schools prioritized educational skills over the skills more relevant to reaching long-term goals in independent living and employment. schools did not supply necessary skills for specific jobs, safety, independent living, money management, and taking public transit. Other results that fell under thew area of transition planning were the following: collaborative relationships needed for EBP were unclear, organizational resources and policies for adult services not made available through transition planning, responsibility for planning implementation shifts from practitioners to families, and practitioners were not identified for implementation of transition planning over long term.

In the second area about the world beyond school, to start there is lack of service capacity for young adults' post-transition despite policy mandates and providers feel like gap between school and adult services often felt abrupt, with services not tailored to individual needs. Some other items in this area were a lack of oversight and accountability of providing adult services, little training for adult service providers to work with adults with ASD. Another item was policies differentiating between children and adults limit access to adult services as after age 18, many students who had received special education services for ASD no longer qualified for community-based services because the eligibility criteria changed and as the student transitioned out of school, parents switched from advocating for a child to advocating for an adult requiring learning an entirely new system of regulations related to guardianship and waivers. Also, a need for collaborative community relationships to enhance best practices as further community investment was needed in the adult lives of individuals with ASD. Lastly measurement of transition outcomes long term, as It was important to continue to assess needs and re-evaluate goals even several years after transition, soliciting feedback from co-workers and community members as well.

In the last area Employment, participants shared transition planning did not address educational benchmarks necessary for employment like having a regular diploma and preparation for employment. It was also shared by the authors that there was insufficient assessment of employment abilities, some saying VR obstructed employment by underestimating individuals with ASD. Also, there was a need for implementing job-specific support throughout placement and employment, a need for ongoing assessment of employment needs, especially in the long term and collaborative community relationships needed to support employment of young adults with ASD as for a lot of cases employers didn't fully understand ASD (Snell-Rodd et al., 2020).

Implications of this study include the following according to Snell-Rodd et al. (2020): specifically for policymakers and organizations, ensuring that school, VR, and adult service agency providers have a common framework for transition that includes: (a) an understanding of the roles and responsibilities of each; (b) the EBPs that do result in positive post-school outcomes for students with ASD; and (c) the resources across agencies that can contribute to successful transitions and creating an interagency, long-term follow-up and tracking system to measure post-school success for former students with ASD. For just organizations, the option of transition navigators must be considered and for providers and individuals/families, student teams should consider using the pre-ETS noted under WIOA as designated IEP services to support measurable student goals and elf-advocacy training, work-based learning, and counseling on employment and postsecondary educational options reflect EBPs promoting positive post-school outcomes for youth with disabilities. A few other implications provided by the authors were in effort to produce more equitable outcomes, transition planning needs to be highly individualized to account for the range of skills present on the spectrum. And it was suggested that appropriate vocational interest inventory tools and exposing students to more options in the community could generate more imaginative goals. Lastly, Direct, continued communication between school providers, families and individuals with ASD, and com-munity providers would improve understanding and enable more educated decision-making. Collaborative, accessible language would ensure that meeting participation was more fair and key players (e.g. employer, service providers) needed for effective transition planning might vary depending on student needs.

Snell-Rodd et al. (2020) supplied the following limitations to their study, the policy leaders for another location that this could take place in may have different views. They did not recruit school or adult service representatives from suburban areas, only urban and rural. The study only had insight from youth with ASD that were in college, there was a lack of racial diversity in the sample and parents were overrepresented in the study.

Lei et al., (2020): Evaluation of a Transition to University Programme for Students with Autism Spectrum Disorder.

The purpose of this study was to describe the short-term outcomes of a pre-transitional program in the form of a summer school for autistic students wishing to attend University. The focus of the program was in supplying direct experiences of life in university but in s supported environment. Lei et al. (2020) shared the hypothesis that students may experience fewer concerns about university transition following participating in the autism summer school, as the program hopes to reduce uncertainty related to various aspects of daily, academic, and social life at university.

The participants of this study were 125 students that took part in the Autism Summer School program from 2013 to 2017. The participants applied for the program through the online application form hosted on the university's website and eligibility had the following criteria: (1) having a prior diagnosis of Autism, Asperger's, Pervasive Developmental Disorder—Not Otherwise Specified (PDD-NOS), or Autism Spectrum Disorder from a clinical professional; (2) 16 years or older; (3) with a planned or actual application to go to university for a 3–4 year undergraduate degree program. Each year 30 places were offered on a first come first serve basis to participants, and prior to taking part in the autism summer school, all parents and students were given an information sheet to read about the autism summer school, and asked to consent for whether they would like to take part in the research evaluation of the autism summer school and participants who did not give consent for research were offered a place on the program to still be able to attend it.

At the Autism summer school, the curriculum was designed to prepare autistic students for typical university life and promote self-care and wellbeing while there. The program was two overnight stays in student accommodation at a campus university, and a curriculum delivered across 3 days. Sessions were structured across three strands ‘work,’ ‘rest,’ and ‘play.’ All sessions were delivered face-to-face in a group and they included; academic life like experiencing a typical lecture, socializing students to the role of staff and tutors, accessing student support and disclosing your diagnosis under the ’work’ theme, stress reduction, management of situational anxiety and the role of physical wellbeing with information about sporting facilities under ‘rest’ and information about clubs and societies at university, experiencing shared meals on campus, social outings and opportunities for informal socializing under the ‘play’ theme. Sessions were provided by staff who have experience working with autistic students at university including academic and clinical staff in the department of Psychology, or staff from the disability and careers service at the campus university and students were supported by student ambassadors. This program was delivered on five separate occasions between the years of 2013 to 2017 (Lei et al., 2020).

For this study, Evaluation data was collected using mixed methods, focusing on, changes in short-term outcomes in respect of worries and concerns about attending university, student satisfaction rating with the overall program and qualitative written feedback about the summer school. The measures used included, the Social Communication Questionnaire (SCQ)—Lifetime; s a 40-item parent-report measure that assesses the presentation of many autism symptoms, such as social communication difficulties, throughout the individual’s lifetime, the Transition to University Questionnaire (TUQ); a 26-item self-report questionnaire developed during the first year of the Autism Summer School. Content was derived from the initial attendees at the Autism Summer School using a semi-structured questionnaire and focus groups and the Student Satisfaction Feedback Questionnaire; a questionnaire that asked students to rate on a 5-point Likert scale as to how enjoyable they found the autism summer school (1=extremely unenjoyable); how helpful they found the autism summer school (1=extremely unhelpful); and how positive or negative they felt about starting university (1=extremely negative). Students were also asked to supply written feedback on: (1) what features of the autism summer school they found to be most helpful; (2) what they looked forward to about starting university.

For the design of this study, Lei et al. (2020) shared that participants were asked to fill out a series of demographics and the SCQ as part of participant characterization to screen for autism symptom severity before arriving at the autism summer school. For years 2013–2017, participants were asked to complete the TUQ pre-arriving at the autism summer school and for years 2015–2017, participants were asked to re-rate at the end of the autism summer school only the concerns they had endorsed on the TUQ pre-arrival and were also provided with space to identify any new concerns. In 2013 the post-autism summer school TUQ was not completed as data was used to pilot and tailor the questionnaire, but Student Satisfaction Feedback was collected for 2013, and 2015–2017 on the last day. Lastly feedback was not collected during the autism summer school due to time shortage.

For the data analysis of this study there was 5 steps including; (1) differences across the five years of student demographics were characterized and if any variables should be controlled for subsequent analysis using one-way ANOVAs and Bonferroni to correct for multiple comparisons, and (2) different concerns and worries students reported using the TUQ pre-arriving at the autism summer school were assessed then an exploratory factor analysis was conducted to assess whether there are any domains of concerns that can be characterized at baseline. Steps (3) and (4) used the TUQ pre- and post-autism summer school scores from years 2015–2017 to evaluation of the effectiveness of the autism summer school in helping students reduce their concerns about going to university and step (5) quantitative and qualitative feedback from the student satisfaction report from years 2013, and 2015–2017 to evaluate students' perception of the summer school program was assessed (Lei et al., 2020).

The results of the study provided the following in the area of demographics and characterizations; parental reports of the SCQ were consistent with being characterized with ASD, over the years there was not significant differences in age, gender, and ethnicity and also there were no differences shown from

2014-2017 in the TUQ concerns score on pre-arrival to the program. According to Lei et al. (2020) the main results of the study were positive which included; the results of the TUQ (transition to university questionnaire) showed a reduction in scores that measured concerns about university transition after attendance of the program, many students found the program as an effective way to alleviate a wide range of concerns associated with university life, it was found usefulness to have a broad scope of different issues addressed at the autism summer school, and the program provided a positive outlook and optimism in participants about starting university.

In the study the thorough evaluation of the TUQ seven factors or domains of concerns emerged; four factors related to changes in the social environment and seeking support, as students move away from home (leave home; Factor 4), the need to make new friends (micro social world; Factor 1), to adapt to various social climates at university during daily living as well as for academic purposes (macro social world; Factor 3), and be able to seek appropriate sources of support (support; Factor 2). Then, Factor analysis of the TUQ also found three domains of concerns that are non-social in nature, including academic challenges (Factor 5), time management (Factor 7), and daily living skills (Factor 6). All three domains correspond to the non-social challenges found in the transition literature faced by autistic students which is often linked to autistic students having poor executive function (Lei et al., 2020). The authors shared that overall, the program found concerns of potential autistic students who are thinking about attending university and highlighted that these concerns can be significantly reduced through a pre-transitional autism summer school.

Implications of the study include considering alterative options following secondary education may be especially important for autistic students, especially ones aiming to help the autistic student gain independence, reach employment and to ensure financial independence. Authors also shared it is necessary to consider that higher education doesn’t equate to employment, and continued support is needed during higher education to further enhance employment success for autistic students. Also Social, non-social, and anxiety-related concerns can be addressed with short pre-transitional programs in a way that autistic students find both helpful, enjoyable and enhance perceptions about starting university.

Authors also shared, future studies should adopt a more longitudinal approach and aim to follow-up with participants over a longer period of time to evaluate the success of university transition following this kind of program and related to long-term quality of life for autistic young people. Lastly that they shared higher education institutions should offer tailored support to autistic students at all phases of university life i.e., pre-transition to university and while at university, on campus, and also include efforts to prepare students for life after graduation (Lei et al., 2020).

There are four limitations that Lei et al. (2020) provided from the results of study those include the internal consistency is fairly low of the factors provided from the factor analysis of the TUQ and there is a need for a larger sample of students with Autism. Second, changes in transition concerns observed in the current study were only monitored for the concerns that each participant had endorsed prior to arriving at the autism summer school, rather than across all the worries of the TUQ which didn’t help capture whether the program increased transition concerns of some students as they become more aware of what university life is genuinely like. Third, the current evaluation did not include the opinions of participants from 2014 and challenge was associated with the written nature of the evaluation feedback. Lastly authors shared, current evaluation of the autism summer school transition program only focused on short-term goals, such as reducing worries associated with going to university, and increasing a positive outlook on the transition process.

Sefotho & Onyishi (2021): Transition to Higher Education for Students with Autism: Challenges and Support Needs

The purpose of this study was to investigate the challenges associated with transitioning to higher education in students with ASD based on students' perspectives. The participants of the study were 10 first year students with ASD in higher education institutions in south-East Nigeria through the purposeful sampling technique of snowball sampling, where participants find other candidates who fit the study criteria.

The methods of this study were the use of a qualitative phenomenological research design where information about the transition experiences of students and a deeper understanding of students' meaningful learning were sourced from the students' perspectives. According to Sefotho & Onyishi (2021), a semi-structured interview with four open-ended questions guided the data collection process, the questions built on the students' perspectives and include: (1) describe your experience about transition since your entry into postsecondary education institution? (2)What do you think are the most important issues about the social experience of being a college/university student with an ASD? (3) What do you think are the most important issues about the academic experience of being a college/university student with an ASD? (4) What are the biggest challenges you face as a student with an ASD? In addition to these questions, the interviewer was also able to ask further questions to discover the perceptions of participants more? Then thematic content analysis was used, data coded inductively to find recurring categories that defined perceived transition challenges, identify patterns across the codes and reflect on underlying meaning to cluster codes and form themes that were consistent across the personal interview.

` . According to Sefotho & Onyishi (2021), five themes appeared from the coding process which were made up of subthemes. The themes contributed to the challenges experienced by students with autism in higher education institutions and included: (1)academic functioning difficulties, (2) social difficulties, (3) structural issues, (4) mental health Problems and (5) lack of resources and supports.

Theme one academic functioning was broken down into 2 subthemes, Assignment completion and Poor organizational skills. For assignment completion, the majority of the participants reported analogous challenges to their academic functioning in this area with including working in small group and having to submit the assignment as a group and or having to submit an assignment in a fixed time. Participants also shared that not knowing how to pace with peers/collaborators during the assignment was a big challenge that worsens the issues with assignments. For Poor organizational skills, participants shared they have difficulty in skills such as time management, academic planning, problem-solving, and self-regulation and setting up/ sustaining a balance between academic demands and self-care. Also, a need more processing time in all academic exercises, including examination, and learning, a difficulty to make use of self-regulation and academic planning skills necessary for time management a motivation difficulty and procrastination.

Theme two social difficulties were broken down into 2 subthemes, social skills challenges, and social participation challenges. For social skills challenges, participants reported finding it difficult to initiate and sustain social interactions, to express themselves to others, and to make new friends. Also, they were afraid about failure and success in social situations thereby making them feel isolated and lonely in the school and some of the identified challenges in this area include difficulty making friends, the hardiness of self-expression, difficulty in self-advocacy, and awareness of problems. For social participation challenges, students with ASD found it difficult to find people with similar interests to mingle with, limiting participation in social and recreational activities and difficulties with peer-relationships, friendship, and peer support. Other things brought up by participants as challenges were confusing social clues and difficulties understanding social situations, and social stigma from peers, lecturers, and administrative workers.

Theme three structural issues were broken down into 2 subthemes, difficulties navigating lecture venue distances and overwhelming school environment. For difficulties navigating lecture venue distances, participants shared, they were confused where the lectures took place , they detested moving from one lecture hall to another for specific courses and the overall stress they caused. For the overwhelming school environment, participants shared higher education schools were complex and that they find it difficult to operate in complex environments. For theme four mental health, participants reported having mental health issues enough to interfere with their daily activities during their first year in higher education. Some of those challenges found were Isolation/loneliness, stress, anxiety depression, sinking feelings.

Theme five lack of resources and support was broken down into 3 subthemes, lack of material aids, lack of disability support and lack of academic support. For lack of materials, participants expressed their limitations due to a lack of material resources to support the learning and social limitations of ASD conditions. For Lack of disability support, participants shared a total lack of disability support staff in tertiary institutions, that they have not accessed any assistance from nor are they linked to any disability support staff Also, participants shared, accessing timetables, time management skills, special arrangements for exams and assignments, lecture or classroom aids for behavioral issues, peer mentoring, note-taking for classes and exams, raising class awareness of ASD, advocacy, and referral to other services were lacking in the higher education system in Nigeria. Lastly, for lack of Academic support, participants shared that support was not received from the lecturers in terms of alternative arrangements, adjustments in teaching style to accommodate our learning needs, and the importance of flexibility and support that addressed the specific needs of individual students. They also shared that teaching styles including lectures were difficult to follow and that no flexibility was provided in academic activities such as assignment submission time, examination, or teaching-learning methods was enjoyed (Sefotho & Onyishi, 2021).

Implications of this study that Sefotho & Onyishi (2021) shared were that in student transition to a tertiary institution, there is an increased need for organizational skills that will enable the students to make important academic planning, manage their time, problem-solve, and self-regulate for academic and social successes. There needs to be awareness of supports that a student with ASD might need to take part in class and complete class work and a first-year orientation program needs that for students to help the transitioning process to reduce adjustment problems. Supports should focus on executive function and social interaction strategies in higher education may be offered to increase the students' coping skills. Also, the study provides a lecturer who teaches students with ASD can offer advanced negotiation of the deadline for tests and assignments, provide a note-taker, allow work assignments to be done at a slower pace, providing models and step by step instruction, providing extra time to take tests, and provide readers, scribes (or technology that reads and takes notes) and a separate "quiet" place for tests. Pairing with peer mentors who help with feedback and supply "proof-read" information for meeting deadlines for work assignments could be used. In the study it is shared emotional, instrumental, and informational supports that helped to buffer college-related stress and ease academic success are needed Planning tools, clear communication, and concrete information are needed for students' understanding of what was expected of them, and to their development of new routines as they transition to higher education. Coaching and mentoring during the transition to, and in higher education is necessary for overcoming transition challenges. The authors provide that written rules for asking questions and other classroom coordination should be provided to support students with ASD. The use of hats, sunglasses, tinted lens glasses, earplugs or earphones, and assistive technologies should be encouraged. Alternative writing tools during tests and assignments may help reduce stress and minimize challenges. Using a computer for classwork, tests and assignments might also be a proper accommodation for improved academic outcomes. Academic advisors and counselors can be trained to address the sensitivity of students with ASD. They can closely guide and aid the students as they make important academic decisions, especially during the first year. Faculties admitting students with ASD can make their curricula and teaching styles friendlier to students with ASD. Explain expectations clearly and specifically, supply explicit consistent structure to classes. The authors did not supply any specific limitations to this study.

Table 1

Summary of Chapter 2 Findings

Author	**Study Design**	**Participants**	**Procedures**	**Findings**
Hagner, Kurtz, May & Cloutier (2014)	Quantitative & Qualitative	Participants in this study were 47 students through 28 high schools in New Hampshire and Maine with a diagnosis of ASD and over 16 years in age	The purpose of the study is to explore strategies and supports used to help transition-aged youth with ASD take part in person-centered transition planning meetings which was analyzed through a Qualitative analysis of participation in person-centered planning for young adults with ASD using research questions and quantitative analysis to answer the third research question	Findings suggest that person-centered planning can be implemented for transition-aged youth across the autism spectrum as a tool for enhancing participation in transition planning.

Cai & Richdale. (2016)	Quantitative	23 Australian students with ASD from metropolitan and regional campuses of four TAFE (Technical and Further Education) colleges and 2 universities. Also 15 family members	The aim of the study being to understand the experiences and need of higher education students with ASD within 12 semi-structured focus groups that had a 1-to-3-hour session at the student's respective higher education institution conducted by researcher's which were recorded then went through thematic analysis.	The students felt their educational needs were met, but did not believe that they received adequate social support, while parents reported that their child did not receive either adequate educational or social support
Wei, Wagner, Hudson, Yu & Javitz, (2016).	Quantitative	Approximately 920 youth with ASD whose parents responded to a phone or mail survey of Waves 1 through 5 of the National Longitudinal Transition Study–2 (NLTS2).	The study used propensity score techniques to assess the relationship in transition planning participation and goal setting to college enrollment among youth with ASD. Data from parent/youth telephone surveys or mail questionnaires form the NLTS2 and responses to surveys of school staff who were familiar with youth's high school programs.	2- or 4-year college enrollment rates were significantly higher among youth with ASDs who took part in transition planning and those who had a primary transition goal of college enrollment
Anderson, Carter & Stephenson (2018)	Quantitative	48 students with ASD attending university in ASD in New South Wales (NSW) and the Australian Capital Territory (ACT)	On-line questionnaire exploring the experiences of university students with ASD based on relevant issues. Contained 32	Findings indicated high rates of academic and non-academic difficulties but low usage of support. Some students showed discomfort from using

			questions that included 13 demographic items, 5 open ended, 6 Likert-style scales, and 8 multiple choice questions	supports or disclosing their disability.
Bouck, & Park (2018)	Quantitative	A total of 4,665 secondary students with ASD , aged 14 to 18	A secondary analysis of the NLTS2 (the National Longitudinal Transition Study–2) through parent/youth survey and the school program survey	The main findings suggest positive results for some post-school outcomes examined when considering improved success, the longer one was out of school (e.g., attending and graduating from post-secondary education and employment)
Elias & White (2018)	Quantitative	Parents of 99 individuals with ASD or parents of individuals with ADHD.	An online survey assessed difficulties in the college setting (e.g., social support, managing emotions, academic difficulty, time management, behavioral problems, etc.); need of postsecondary-based support services; and strengths and assets	Students with ASD struggle more with social tasks and skills of daily living. Such as social interactions and making/keeping friendships. parents of students with ASD provided distinct challenges with self-advocacy, managing emotions, and managing personal/adaptive skills compared to postsecondary students with ADHD
Jackson, Hart, Brown, Volkmar (2018)	Quantitative	56 adults (18 to 57) with a formal diagnosis of ASD currently enrolled in a post-secondary academic institution	An online survey to gain insight into the self- reported academic, social, and mental health experiences of post-	Participants reported elevated levels of academic comfort , struggles with the issues of isolation/loneliness, high levels of stress,

			secondary students with ASD	anxiety, and depression
Accardo, Bean, Cook, Gillies, Edgington, Kuder, & Bomgardner (2019)	Quantitative	48 college students on the autism spectrum who received services from their university disability service center with a documented diagnosis of ASD.	2-year multi-university study that used mixed methods to obtain the experiences of college students with ASD. The study included survey and follow-up semi structured interviews.	Findings suggest the need to take the time to construct well-designed college transition plans for students with autism with a system of non-academic supports starting at the high school level.
Snell-Rood, Ruble, Kleinert, McGrew, Adams, Rodgers, Odom, Wong & Yu (2020)	Quantitative	40 participants in 10 focus groups made of the following stakeholders: individuals with autism spectrum disorder, parents, classroom teachers, school administrators, adult service providers, and state policymakers	Find and analyze the issues around transition planning and implementation of transition IEPs for students with ASD in the United States through a multilevel implementation science approach using the perspectives of those stakeholders.	The transition from school to adult world is problematic for those with ASD. Perspectives provided the need for implementation efforts to target the provider, organizational, and policy levels to improve transition outcomes for individuals with autism spectrum disorder.
Lei, Calley, Brosnan, Ashwin & Russell (2020).	Quantitative & Qualitative	122 students that were 16 years or older with diagnosis of Autism, Asperger's, Pervasive Developmental Disorder—Not Otherwise Specified (PDD-NOS), or autism spectrum disorder looking to apply or attend university and attended the Autism Summer school program from 2013-2017.	Research Evaluation of Autism summer school (a transition to university pilot program) through questionnaires focused on changes in short-term outcomes in respect of worries and concerns about attending university; student satisfaction ratings with the overall program; and qualitative written	Students well received the program, and they reported a significant reduction in total and subscale scores on a questionnaire in regard to measuring concerns about university transition after the program. General optimism from students on starting university

			feedback about the summer school.	
Sefotho & Onyishi (2021)	Qualitative	10 first-year students with ASD in higher education institutions in Nigeria	Participants were interviewed through open-ended questions about their perspectives thus far in Higher education. Then Once the information was reached a thematic content analysis was used to analyze the data, this broke it down into 5 main themes and sub themes.	Students with ASD transitioning to higher education experience a range of challenges in areas of academic and social functioning, school structure, mental health, lack of support and students with ASD require more effort put into their support and planning for higher education transitions

Chapter 3: Summary of Findings

The intention of this paper was to identify the challenges that arise for individuals with Autism spectrum disorders when they move onto post-secondary education and what supports should be put in place for those individuals during transition planning to help mitigate those challenges. The significance of this topic is not only that for individuals with disabilities effective transition planning can aid their needs as they are transitioning out of High school and onto adulthood through support and services in place. Looking into to this topic for those with Autism spectrum disorders has its importance because as time has progressed the prevalence of ASD has become larger.

Chapter 1 provided a background of what my topic and research focus was , why it was important and a history of the laws and legislature that have changed transition planning for individuals with disabilities to what it is today. It also included a list of definitions for important terms throughout the entirety of the paper. In chapter 2 I located 11 studies that provided the importance of transition planning for individuals with autism spectrum disorders, the challenges that are faced by those individuals in a post-secondary education setting as well as what supports where already in place and needed to be put in place. This included a brief look into literature involving person centered planning. For the 11 studies I summarized the following aspects of each : the purpose of the study, the studies participants, the materials, the methods, the results , the implications, and the limitations. Now in chapter 3, I will provide conclusions made from the literature and my research, recommendations for future research of my topic and the implications that this research will have on my current practice as a special education teacher.

Conclusions

Of the 11 studies that I chose for my literature review, only one which was by Hagner et al. (2014), related directly to person centered planning as part of the transition planning for individuals with Autism Spectrum Disorders. That article provided valuable information on strategies and supports used to help transition-aged youth with ASD take part in person-centered transition planning meetings. This is important due to the many diverse needs and abilities of those with ASD, especially who need a lot more help than others and implications from this can be used as an extra level of support in the transition planning process. The remaining 10 studies that I reviewed related more directly to my focus and research questions dealing with transition planning for those with ASD and its implications for post-secondary education.

Of the literature in my review two studies supplied the most information about transition planning. Those being the ones by Wei et al. (2016) and Snell-Rodd et al. (2020), they both supplied information specifically about goals, but in two different perspectives. The study by Wei et al. (2016) provided a more positive look, that being 24.20% of participants had a primary transition goal of college enrollment in their transition plan and that both transition planning participation and having a primary transition goal of college enrollment during secondary school were associated with higher odds of attending a 2- or 4-year college among the sample of youth with ASDs and those goals effectively boost the odds of attending college by 564%. Snell-Rodd et al. (2020) on the other provided more negative findings that the planning of goals was detached from the individuals' abilities, needs and talents and the planning needs to provide what skills are required to fulfill the goals and that parents suggest best practice needs to include setting realistic goals, requiring planners to think beyond educational outcomes to student interests and abilities. It shows a trend that transition planning with specific goals like attending college can have a positive effect on that happening for the individual, but goals need to be realistic and broken down into steps so that they can be attainable for all.

Of my literature in review two studies that more briefly touched on transition planning and were both involving participants with ASD currently in college/university were those by Accardo et al. (2019) and Sefotho & Onyishi (2021). They had similar findings, Accardo et al. (2019) suggested the need to take the time to construct well-designed college transition plans for students with autism with a system of non-academic supports starting at the high school level, while Sefotho & Onyishi (2021) suggested students with ASD require more effort put into their support and planning for higher education transitions especially due to these students experience a range of challenges in areas of academic and social functioning, school structure, mental health, lack of support in the post-secondary setting. This means that there needs to be a lot more effort put into transition planning for those with ASD.

The studies by Wei et al. (2016) and Bouck & Park (2018) used data from the National Longitudinal Transition Study–2 (NLTS2), as part of their research and analysis. Wei et al. (2016) assessed the relationship in transition planning participation and goal setting to college enrollment among youth with ASD, finding that 2- or 4-year college enrollment rates were significantly higher among youth with ASDs who took part in transition planning and those who had a primary transition goal of college enrollment. While in contrast Bouck & Park (2018) analyzed it to explore the relationship between length of time from exiting school and postschool outcomes for students with ASD, finding the longer one was out of school they were more likely to both attend and then graduate from most all forms of post-secondary education. This provides that the NLTS2 was able to address an array of things related to the area of research that I choose.

Some of the studies that I chose had data that didn't come directly from the individual with ASD, which when it comes down to it that is who that information should be coming from because IEP's and transition planning is all about them. It is reasonable to say as not everyone with ASD has the same abilities and some may have higher needs, including in how they communicate to others and advocate for themselves so they may need someone else to be their voice and advocate. One study did not include the individual with ASD as the participant but the parents instead and that was Elias & White (2018), that study also included parents of some individuals with ADHD. Two of the studies included family members as participants alongside the individual with ASD, those being by Cai & Richdale (2016) and Wei et al. (2016). Snell-Rodd et al. (2020) not only included the individual and the parents but other stakeholders as well like caregivers , school providers (classroom teachers; school psychologists), school administrators , adult service providers (service agencies; vocational rehabilitation (VR) counselor), and state agency administrators, including directors of advocacy agencies and policymakers from VR, special education, Medicaid, and developmental disabilities. The rest of the studies the participants were the individuals with ASD, those being by Hagner et al. (2014), Anderson et al. (2018), Bouck, & Park (2018), Jackson et al. (2018), Accardo et al. (2019), Lei et al. (2020) and Sefotho & Onyishi (2021).

The studies by Cai & Richdale (2016), Anderson et al. (2018), Jackson et al. (2018), Accardo et al. (2019), and Sefotho & Onyishi (2021) involved students with ASD that were enrolled in some sort of Higher Education across several different countries. Similarities that I saw across these studies were an array of challenges that related to the mental health of the Individuals with ASD specifically with anxiety and depression, stress, and isolation/loneliness. There was also the overall result that for individuals with ASD, there are an abundance of needs both educational and non- educational at post-secondary level that may not be being addressed or supported and/or not be taken advantage of. The potential reasoning as to why supports may not be taken advantage of could be linked to the results of Cai & Richdale’s study that found a lack of adequate social support or the results of the study by Anderson et al., that there is low usage of support and students show discomfort from using supports or disclosing their disability. This could be linked to challenges related to mental health that are seen across these studies or also be linked to challenges in social functioning and lack of social support seen as well. Both the results of the study by Accardo et al., and Sefotho & Onyishi provide that students with ASD require more effort put into their support and planning for higher education transitions an especially in constructing well-designed college transition plans with a system of non-academic supports starting at the high school level.

I found the study by Lei et al. (2020) about the program in place for individuals with a diagnosis of Autism, Asperger’s, Pervasive Developmental Disorder—Not Otherwise Specified (PDD-NOS), or autism spectrum disorder (Autism summer School) to get a chance to experience post-secondary life if they were looking to eventually apply to some sort of post-secondary college or university. Results of the study led to a reduction in concerns about university transition and general optimism of starting university. There should be more opportunities out there like this for individuals with ASD, especially knowing that many individuals with ASD have such an aversion to substantial changes in their life.

Recommendations for Future Research

With there only being one of my 11 studies revolving around person centered planning as part of the transition planning process for those with ASD , I do believe that this is an area of research that can be added upon. With the positives and negatives related to goals created in transition planning for those with ASD, there needs to be a deeper look into how effective those goals are over time. With changes that have happened in transition planning and higher education and the increase in the prevalence of ASD since the release of the data of National Longitudinal Transition Study–2 (NLTS2) in 2011, it may be important for researchers to start planning on when the NLTS2 will completed or similar study to get updated data in this area. Studies in this area of research should continue to focus on the direct voice of the individuals with Autism unless they need someone to be their voice or be their advocate. Due to the challenges that were seen in many of the studies relating to mental health, it is important for there to be continuing research into why this is so prevalent. There should be future research on the effectiveness of the supports that college and universities already have in place for those with ASD. Through the research that I did for this paper, something that I found was that there is no lack of literature on transition planning for individuals with ASD, but that there was a lack of literature that directly addressed Transition planning for individuals with ASD that are planning for Post-secondary education. I think with the growing number of students with ASD who want to go on to post-secondary education, this is an area of research that needs to be more thoroughly assessed and for individuals with ASD.

Implications for Practice

In my current role as a special education teacher, I am working with students in high school which is the time that transition planning is happening and although most of the information that I reviewed was specifically about students with ASD, many implications could go across the board with students that qualify for special education services in other areas. I am in an Emotional Behavior Disorders (EBD) teaching role with a caseload of students serviced under Other health disabilities (OHD) and EBD, but 4 out of the 15 students on my caseload are on the Autism spectrum so the information that I reviewed in this paper has strong implications for my practice. Moving forward, I want to put an emphasis on person centered planning for my students. In some cases, especially at 9th grade , parents of those students that I work with are hesitant about having their child at their meetings, I would like to provide those parents with a background on why it is important to have their child there, when the plan we are making is about them. While also providing them with accommodations that we could have in place during those meetings to provide that person centered planning. Also an implication that I would like to grow upon is making sure that when I am writing IEPs for my students that I am discussing with them and their parents what accommodations and modifications that are going to be most beneficial to the student if they are going off to post-secondary, because if they are going to look into disability services at that level if it is written into their IEP those are going to be the supports that stick with them.

Another implication that I find important to my practice would be to provide my students who do plan on going onto post-secondary education a background on what disability services look like at the post-secondary level; including how to find more information on them for the specific college or university you plan to go to, what they do for you and how to get signed up with them. This is important as well because as they go off to post-secondary education and training, they are going to have to become better self-advocates based off their needs and abilities. With that being said, I plan to do further research into disability services so that I am providing students and parents with the correct information and support they need in that transition.

Through my research, something that majorly caught my eye was the mental health struggles of students with ASD in the post-secondary setting such as suicidal thoughts and ideations, anxiety, depression, and stress. Currently, I am working with a mixture of students under ASD, EBD and OHD, I have implemented the use of some, " social emotional learning ", alongside the social skills curriculum that I teach, but I would like to implement more social emotional learning curriculum for these students so that they are getting supports in the area of mental health, and provided with skills and strategies that will help them. As I stated, I already provide some social skills instruction in the setting I am currently in which is especially important to my students with ASD, because of the deficits they may have in social communication. With that being said, the research I did provided evidence of those deficits in social skills in the post-secondary for students with ASD , so I see it as an important implication in my practice to provide students with specific skills and strategies that are needed in that setting.

Summary

Transition planning needs to be deliberate for individuals with ASD due to the range of needs and abilities that they may have. It should start no later than 16 years old, and It starts with even just providing the correct support needed for the individual to be successful in taking part in their IEP team planning to make it more person- centered, as every single person with ASD is going to be different. Transition planning for post- secondary education needs to involve social, emotional, and educational support that can provide those individuals with more independence as they make that transition out of high school and need to become self-advocates. As a special education teacher in a high school setting working with students with ASD among other disabilities it is going to be important for me to provide students with supports , skills and strategies that are going to carry through to whatever post-secondary education or training that they may do if that is the route that they choose after high school as well as a background on how to get the extra supports that they need when in those settings. With the growing prevalence of Autism and the history of there not always being a large population of individuals with ASD going on to post-secondary, supplying the right support for them increases that number of individuals.

References

Accardo, Bean, K., Cook, B., Gillies, A., Edgington, R., Kuder, S. J., & Bomgardner, E. M. (2019) College Access, Success and Equity for Students on the Autism Spectrum. *Journal of Autism and Developmental Disorders*, *49*(12), 4877–4890. https://doi.org/10.1007/s10803-019-04205-8

Anderson, A. H., Carter, M., & Stephenson, J. (2018). Perspectives of University Students with Autism Spectrum Disorder. *Journal of Autism & Developmental Disorders*, *48*(3), 651–665. https://doi-org.scsuproxy.mnpals.net/10.1007/s10803-017-3257-3

Bouck, & Park, J. (2018). Exploring Post-School Outcomes across Time Out of School for Students with Autism Spectrum Disorder. *Education and Training in Autism and Developmental Disabilities*, *53*(3), 253–263.

Cai, R., & Richdale, A. (2016). Educational Experiences and Needs of Higher Education Students with Autism Spectrum Disorder. *Journal of Autism & Developmental Disorders*, *46*(1), 31–41. https://doi-org.scsuproxy.mnpals.net/10.1007/s10803-015-2535-1

Davenport, Johnson, D. R., Wu, Y.-C., Thurlow, M. L., Qian, X., & LaVelle, J. M. (2022). An Analysis of Disability Groupings and Transition Planning Experiences. *The Journal of Special Education*, *56*(1), 37–48. https://doi.org/10.1177/00224669211024593

Elias, R., & White, S. W. (2018). Autism Goes to College: Understanding the Needs of a Student Population on the Rise. *Journal of Autism & Developmental Disorders*, *48*(3), 732–746. https://doi-org.scsuproxy.mnpals.net/10.1007/s10803-017-3075-7

Gosling, C. J., Cartigny, A., Mellier, B. C., Solanes, A., Radua, J., & Delorme, R. (2022). Efficacy of psychosocial interventions for autism spectrum disorder: An umbrella review. *Molecular Psychiatry*. https://doi.org/10.1038/s41380-022-01670-z

Hagner, D., Kurtz, A., May, J., & Cloutier, H. (2014). Person-Centered Planning for Transition-Aged Youth with Autism Spectrum Disorders. *Journal of Rehabilitation*, *80*(1), 4–10.

Jackson, S. L. J., Hart, L., Brown, J. T., & Volkmar, F. R. (2018). Brief Report: Self-Reported Academic, Social, and Mental Health Experiences of Post-Secondary Students with Autism Spectrum

Disorder. *Journal of Autism & Developmental Disorders*, *48*(3), 643–650. https://doi-org.scsuproxy.mnpals.net/10.1007/s10803-017-3315-x

Jones, N. L., Apling, R. N., & Smole, D. P. (2004). *Individuals with disabilities education act, Idea: Background and issues*. Nova Science Publishers.

Lei, J., Calley, S., Brosnan, M., Ashwin, C., & Russell, A. (2020). Evaluation of a Transition to University Programme for Students with Autism Spectrum Disorder. *Journal of Autism & Developmental Disorders*, *50*(7), 2397–2411. https://doi-org.scsuproxy.mnpals.net/10.1007/s10803-018-3776-6

Maenner, M. J., Shaw, K. A., Bakian, A. V., Bilder, D. A., Durkin, M. S., Esler, A., Furnier, S. M., Hallas, L., Hall-Lande, J., Hudson, A., Hughes, M. M., Patrick, M., Pierce, K., Poynter, J. N., Salinas, A., Shenouda, J., Vehorn, A., Warren, Z., Constantino, J. N., … Cogswell, M. E. (2021). Prevalence and characteristics of autism spectrum disorder among children aged 8 years — autism and Developmental Disabilities Monitoring Network, 11 sites, United States, 2018. *MMWR. Surveillance Summaries*, *70*(11), 1–16. https://doi.org/10.15585/mmwr.ss7011a1

McDonnell, J., & Hardman, M. L. (2009). *Successful transition programs: Pathways for students with intellectual and developmental disabilities*. Sage Publications.

Moullin, J. C., Dickson, K. S., Stadnick, N. A., Edwards Becan, J., Wiley, T., Phillips, J., Hatch, M., & Aarons, G. A. (2020). "Chapter 2: Exploration, Preparation, Implementation, Sustainment (EPIS) framework". In *Handbook on Implementation Science*. Cheltenham, UK: Edward Elgar Publishing. Retrieved Apr 30, 2023, from https://doi.org/10.4337/9781788975995.00009

Ruble, L., McGrew, J. H., Wong, V., Adams, M., & Yu, Y. (2019). A Preliminary Study of Parent Activation, Parent-Teacher Alliance, Transition Planning Quality, and IEP and Postsecondary Goal Attainment of Students with ASD. *Journal of Autism & Developmental Disorders*, *49*(8), 3231–3243. https://doi-org.scsuproxy.mnpals.net/10.1007/s10803-019-04047-4

Sefotho, M. M., & Onyishi, C. N. (2021). Transition to Higher Education for Students with Autism: Challenges and Support Needs. *International Journal of Higher Education*, *10*(1), 201–213.

Snell-Rood, Ruble, L., Kleinert, H., McGrew, J. H., Adams, M., Rodgers, A., Odom, J., Wong, W. H., & Yu, Y. (2020). Stakeholder perspectives on transition planning, implementation, and outcomes for students with autism spectrum disorder. *Autism : the International Journal of Research and Practice*, *24*(5), 1164–1176. https://doi.org/10.1177/1362361319894827

Vandercook, T., York, J., & Forest, M. (1989). The McGill Action Planning System (MAPS): A Strategy for Building the Vision. *Journal of the Association for Persons with Severe Handicaps, 14*(3), 205–215. https://doi.org/10.1177/154079698901400306

Vocational rehabilitation- workers with a disability. (n.d.). Careeronestop. Retrieved March 9, 2023, from https://www.careeronestop.org/ResourcesFor/WorkersWithDisabilities/vocational-rehabilitation.aspx?lang=en

Wei, X., Wagner, M., Hudson, L., Yu, J. W., & Javitz, H. (2016). The Effect of Transition Planning Participation and Goal setting on College Enrollment Among Youth With Autism Spectrum Disorders. *Remedial and Special Education, 37*(1), 3–14. https://doi-org.scsuproxy.mnpals.net/10.1177/0741932515581495