THESIS

EXAMINING THE EFFICACY OF THE EMPOWERMENT COURSE FOR YOUNG ADULTS WITH DISABILITIES: TRAINING FOR POSTSECONDARY EDUCATION AND EMPLOYMENT

Submitted by

Rachel L. Sjostrand

Department of Occupational Therapy

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Master's Committee:

Advisor: Patricia L. Davies

James Graham
Susan Hepburn

ABSTRACT

EXAMINING THE EFFICACY OF THE EMPOWERMENT COURSE FOR YOUNG ADULTS WITH DISABILITIES: TRAINING FOR POSTSECONDARY EDUCATION AND EMPLOYMENT

Objective. Current secondary transition programs have been less than satisfactory in student outcomes and have not adequately addressed skills necessary to transition into the adult world for students with intellectual disabilities (ID) and autism spectrum disorders (ASD). Individuals with ID and ASD have lower rates of attending postsecondary education, obtaining and maintaining a job, and living independently compared to their peers. The Empowerment Course is a one-year, postsecondary transition program designed to facilitate successful employment and/or educational outcomes for transition aged (18-26) young adults with disabilities. Two occupational therapists (OTs) were the instructors for the course, along with graduate OT students as mentors for participants enrolled in the Empowerment Course. **Method.** Students who completed the full academic year of the Empowerment Course over the past three years were included in analyses (n = 16). Students and instructors completed questionnaires at the beginning of the fall semester and at the end of the spring semester. A pretest-posttest design was used to assess student's perceived self-efficacy, competence in their job-seeking skills, quality of life, self-advocacy skills, and their ability to set and work towards goals. A series of *t*-tests were run to analyze the data. Student's attendance for lectures and labs of the Empowerment Course was also examined. **Results.** Students demonstrated significant improvements in goal attainment, job-seeking skills confidence, and in their self-advocacy skills. On average, student's attendance was greater than 95% for lectures and labs. **Conclusions.**

Results suggest that participation in the Empowerment Course for students with ID and ASD may develop life skills beyond what is taught in high school transition programs. It was feasible to have OTs as instructors for this postsecondary transition program and to facilitate effective results.

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DEDICATION

This thesis is dedicated to my dad and mom, Jeff and Kim Sjostrand.

Thank you for teaching me that education in any form is never wasted, for your continuous support, and endless love.

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CHAPTER ONE

College is becoming more attainable and accessible for individuals with disabilities. Currently, there is no "gold-standard" for postsecondary transition programs towards employment or continued education. After students with disabilities graduate from high school or reach the cut-off age for services, the options and funding dramatically decline. This study intends to examine the initial outcome evaluation of the Empowerment Course for students with intellectual disabilities (ID) and autism spectrum disorders (ASD) to assist in reaching their postsecondary education and/or employment goals.

Prevalence

Both ID and ASD impact daily participation in desired occupations. The functional impacts may prove to be an added challenge—especially in educational and employment settings. ID are marked by limitations in social, cognitive, and adaptive skills (Matson & Shoemaker, 2009). ASD are categorized by impairments in social interaction and social communication, accompanied by restricted and repetitive behaviors (Atchison & Dirette, 2017).

According to the National Health Interview Survey (NHIS) from 2009-2017, 1.1% and 1.74% of children in the U.S. ages 3-17 have a diagnosis of ID and ASD, respectively (Zablotsky et al., 2019). In 2014, a surveillance study found the prevalence of ASD among children aged eight was 1 in 59 children (Baio et al., 2018). It appears the U.S. is in the midst of an "autism boom": from 1997 to 2008 the prevalence of ASD increased 289.5% in children ages 3-17 based on results from the NHIS (Boyle et al., 2011). Diagnostic criteria and wording on the NHIS have changed over the last decade which some believe explain part of the dramatic increase in prevalence (Zablotsky et al., 2019). From 2000 to 2014, the prevalence of ASD increased nearly 540% and is the fastest growing developmental disability (Morningstar et al., 2017; Boyle et al.,

2011). In addition, ID and ASD co-occur at a very high rate. Srivastava and Schwartz (2014) find that at least 10% of individuals with ID have an ASD diagnosis. According to the Centers for Disease Control and Prevention, 31% of children diagnosed with ASD were classified to also have ID (Baio et al., 2018). The cooccurrence of ID and ASD has been decreasing over the past few years, which has been considered due to broadening diagnostic criteria (Zablotsky et al., 2019).

In the 2017-2018 academic year, 10.2% of students served under the Individuals with Disabilities Education Act ([IDEA], 2004) were diagnosed with ASD and 6.3% of students ages 3-21 had ID (National Center for Education Statistics [NCES], 2019). The prevalence of the disabilities is likely higher, as multiple and developmental disabilities were considered separate categories for the statistics. This equates to 710,000 students with ASD and 436,000 students with ID ages 3-21 matriculating in the U.S. within a single school year. A recent study by Morningstar et al. (2017) was conducted on trends of educational placements of least restrictive environments for students with disabilities. The placement trend of students with ASD has increasingly began to favor general education classrooms with only 33% solely taught in special education classrooms. Over half of students with ID are taught in separate special education classrooms, with only 17% spending greater than 80% of their time in general education classrooms (Morningstar et al., 2017).

The NCES analyzed data from students ages 14-21 served under IDEA (2004) and exited school during the 2016-2017 academic year (2018). Students with ID had the lowest graduation rate (43%) among the disability categories. However, this group had the highest rate (35%) of achieving an alternative certificate in lieu of graduating. Approximately 70% of students with ASD graduated with a regular diploma and 19% of students received an alternative certificate.

Students with ID have the lowest postsecondary school enrollment of the disability categories. Only 27.4% of young adults with ID and 57.5% of students with ASD continue on to any postsecondary school within four years of leaving high school (Newman et al., 2009).

Educational attainment is correlated with higher likelihood of employment, regardless of disability status (NCES, 2017a). Employment reports from the 2015 U.S. Census among individuals with disabilities ages 25-64 follow this trend. The following data are based on groups of educational attainment and percentages of each group who were employed: less than high school completion (15%), complete high school (22%), some college (31%), Associate's degree (35%), and a Bachelor's or higher degree (45%). Individuals without disabilities are employed at a much higher rate at the same degree level: 62%, 73%, 76%, 82%, and 84%, respectively (NCES, 2017b).

Impact of Disabilities

Education

Students with ID need different support than their peers and are typically educated in special education classrooms for this reason (Morningstar et al., 2017). According to the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; *DSM-5;* American Psychiatric Association, 2013) ID is classified by an intellectual quotient score of 70 or below with functional deficits of reasoning, problem solving, planning, abstract thinking, judgement, academic learning, experiential learning, social skills, communication, personal independence and social responsibility. Without a foundation of basic skills, it proves difficult to succeed independently in school without proper support.

An Individualized Education Program (IEP) is created in order for a student to receive services and accommodations needed to be successful in a school setting. However, high school

youth with an IEP are more likely to be "socioeconomically disadvantaged and less likely to have experiences and expectations associated with success after high school than were other students in 2012" (National Center for Education Evaluation and Regional Assistance, 2018, p. 1). Young adults with a diagnosis of ID, ASD, deaf-blindness, multiple disabilities, and orthopedic impairments were the disability groups in 2012 to be most at-risk to unsuccessfully transition from high school to the adult world.

Continuation to postsecondary education is encouraged for young adults with ID as those who continue their education are twice as likely to be employed than those who exited school after high school (Winsor et al., 2018). These individuals are also more likely to earn higher wages and income. On average, Carnevale et al. (2011) report that individuals with ID who pursued postsecondary education earn $406 more a month than those who did not. Weekly wages are estimated to be 73% higher for those with continued education, allowing for individuals to become financially self-reliant (Migliore et al., 2009). Postsecondary education is also beneficial for government spending and taxpayers. Students in postsecondary education are 26% more likely to exit State Vocational Rehabilitation Programs, increase case closures, and require $77 less a month in Supplemental Security Income benefits than those without postsecondary education.

Employment

Meaningful employment is the ideal goal from transition programs: to become employed in the workforce or to begin postsecondary education in order to obtain employment. Employment embodies the societal value that individuals with mental health conditions can take pride, which can lead to growth in their identity, self-esteem, and social integration (Woodside et al., 2007). Along with identity and feelings of belonging, individuals are able to work towards

financial independence. This also allows parents and caregivers to become more independent and have time to participate in meaningful everyday tasks. Individuals with ID have high rates of unemployment and are severely underemployed.

According to the 2012-2016 American Community Survey, only 41.2% of Americans with disabilities are employed, while 81% of non-disabled Americans are employed (U.S. Census Bureau, 2017). This employment gap exists even within younger populations and the disparity increases with age. The Economic News Release of Persons with a Disability: Labor Force Characteristics New Release states that 67.4% of young adults ages 20-24 are employed, and only 37.8% of youth with disabilities in the same age range are employed (U.S. Bureau of Labor Statistics, 2019). In 2018, youth with disabilities had an unemployment rate greater than 70%, which is 10 times the rate of youth without disabilities (Winsor et al., 2018). As previously mentioned, young adults with ID and ASD have the lowest rates of employment of the disability categories (Wagner et al., 2005). Overall, youth with disabilities have a more difficult time obtaining and maintaining employment compared to youth without disabilities.

Rehabilitation providers that work with students with severe ID transitioning out of high school state that the following skills are the most important in order to obtain employment: social skills, professionalism, work ethic, quality of work such as speed and stamina, paid work experience before exiting high school, and expectations of participating in household chores (Pickens, 2015). However, many of these skills are not innate and must be taught. This barrier-prone group may not have been exposed to these skills essential for employment entering the labor force. Employers have reported that individuals with ID once trained, are reliable workers, meet high productivity standards, and have lower turnover rates (Lindsay et al., 2019).

Employment can take discriminated young adults with disabilities out of poverty and toward an autonomous life.

Independent Living

The National Longitudinal Transition Survey 2 (NLTS-2) Wave 5 (2009) reported that only 24.3% of young adults with ID and only 5.8% of young adults with a diagnosis of ASD lived independently (alone, or with spouse or roommate). The majority of students are living at home with their parents—64% of individuals with ID and 79.7% of individuals with ASD (NLTS-2, 2003). These students do not have the skills necessary to live independently or to be economically self-sufficient (Sannicandro, 2016).

Parent support and high expectations of their children are highly influential in a successful transition. However, parents of youth with disabilities consistently hold lower expectations for their children in regard to postsecondary education, employment, and independent living than the youth hold for themselves (Kirby et al., 2019). Analysis of the NLTS2 uncovered that students with family support and involvement were 41 times more likely to attend postsecondary education and to report a higher quality of life than students without family involvement (Papay & Bambara, 2014). Parents' high expectations influence professionals working with their children on their upcoming transition create expectations similar to other students without ID to maximize one's abilities (Papay & Bambara, 2014). Parents and youth with higher expectations for the young adult to pursue independent living were linked to a higher likelihood that the youth would pursue moving out from their parent's home (Kirby et al., 2019). Youth expectations were more predictive than their parents regarding independent living outcomes. Youth must be included in their transition planning to honor their self-determination regarding their future living situation.

Relevant Legislation

Key articles of legislation passed in the past half-century have assisted individuals with disabilities to gain access to education and participate in the workforce. The Individuals with Disabilities Education Act, The Americans with Disabilities Act, The Rehabilitation Act of 1973, Workforce Innovation and Opportunity Act of 2014, and the Higher Education Opportunity Act of 2008 have paved the way for individuals with disabilities to experience equal opportunity.

The Education for All Handicapped Children Act was passed in 1975 as the nation's first special education law, later renamed The Individuals with Disabilities Education Act (IDEA). This piece of legislation ensures that students with disabilities are provided with a free appropriate public education in the least restrictive environment (IDEA, 2004). Students can receive special education services under Part B of this Act until they graduate or reach the maximum age cut-off. States determine the maximum age cut off, which currently ranges from 20-22 (NCES 2018). For students that have an IEP under IDEA, they must have a transition plan by age 16 that is directly intended to influence transition from school to post-school activities (Ingram, 2017). The IEP under IDEA is limited to students in K-12 and is no longer active once the student graduates from high school, therefore the IEP and associated services are not relevant once the student is in postsecondary school. Students with disabilities planning to pursue postsecondary education may have difficulty accessing education without the associated services that they experienced when covered by their IEP in high school. To combat this concern, IDEA Part B requires that transition services must be related to training, education, employment, and if applicable—independent living skills (IDEA, 2004).

The following two Acts serve to increase awareness of disabilities within the U.S. The Americans with Disabilities Act (ADA) of 1990 was passed with the purpose to eliminate

discrimination towards people with disabilities. Title I—Equal Employment Opportunity for persons with disabilities allow for the same opportunities as individuals without disabilities. Key aspects of this Title are that employers must list essential functions of a job when posting a job, cannot ask prospective employees if they have a disability, and cannot discriminate applicants with disabilities if they are capable of the essential functions for the job. Employers must provide reasonable accommodations for qualified individuals with disabilities to work at their business, unless it is too difficult or costly for the employer.

Section 504 of The Rehabilitation Act of 1973 also protects qualified individuals with disabilities from discrimination. Section 504 complies with the ADA and IDEA to protect children and adults with disabilities, protecting them from exclusion and unequal treatment in schools, jobs, and the community. Any organization or employer that receives Federal financial assistance cannot refuse to provide equal opportunities to individuals with disabilities. For example, primary and secondary students who receive services covered under Section 504 have a "504 plan." This plan outlines how barriers will be removed and which accommodations and services will be provided for the student to be able to access education. In primary and secondary school, a 504 plan is broader than the requirements for IDEA and does not require a diagnosis to receive services. A 504 plan does not require schools to create a transition plan for students unlike students with an IEP from IDEA (National Center for Learning Disabilities, 2017). Students who begin postsecondary education no longer have an active IEP, although they can receive services under Section 504. Section 504 requires higher education to provide reasonable accommodations for a student to access education and this statute prevents discrimination based upon disabilities. Students must advocate for their accommodations and contact disability services on campus to adapt education services according to one's needs.

A more recent piece of legislation serves its to strengthen the nation's workforce is the Workforce Innovation and Opportunity Act (WIOA) of 2014. This act targets individuals that may face significant barriers to employment, such as a disability, to obtain and sustain quality employment. WIOA (2014) requires State Vocational Rehabilitation Programs to allocate 15% of their total funding towards pre-employment transition services to help high school students enter postsecondary education and employment (Ingram, 2017). The aim of WIOA (2014) was to increase coordination between state education programs in order to involve Vocational Rehabilitation services at an earlier stage in the transition process. Key aspects of this Act are its focus on students in secondary education to provide work-based learning experiences, counseling options related to postsecondary opportunities, workplace readiness training, and self-advocacy (see Table 1 for definition in Ch. 2, p. 23) training to prepare for adult life.

The Higher Education Opportunity Act (HEOA) of 2008 has amendments relevant to students with disabilities. A new type of a higher education program for individuals with intellectual or developmental disabilities is defined a Comprehensive Transition and Postsecondary (CTP) program. Included under this umbrella are Transition and Postsecondary Programs for Students with Intellectual Disabilities (TPSID). Currently there are 48 programs that are receiving TPSID funding from the U.S. Department of Education (Think College, n.d.) (https://thinkcollege.net/tpsid). TPSID programs have goals to expand high quality and inclusive education for individuals with ID. Programs provide individualized academic enrichment, socialization, independent living skills, and career skills. Thirty-two states currently offer CTP programs; however, federal or private student loans are not available for students with ID attending a CTP which may limit enrollment (Think College, 2019; Federal Student Aid, 2019). HEOA (2008) did improve access for these students attending a two-year or 4-year college by

allowing them to receive Federal Pell grants, Federal Work-Study, and Federal Supplemental Education Opportunity Grants as of 2008 (Ingram, 2017).

Aspects of Successful Transition Programs

Much of what has been considered best practice for transition programs has been assumed—without research to back up the current strategies. In particular, the phase of transition from high school to adult life has sparsely been addressed holistically for individuals with disabilities despite the drastic upcoming shift in services and supports (Stewart, 2013a). Under IDEA (2004), if students transition to postsecondary education programs, vocational training programs, or to an integrated employment setting, they are considered to have had a successful transition. Focus tends to remain on job-finding skills rather than transition planning and potential career development (Camoeto et al., 2004). Aspects of a successful transition program include: (1) inclusion; (2) self-advocacy development to enhance self-determination (see Table 1 for definitions in Ch. 2, p. 23); (3) employment skills; (4) independent living skills; (5) academic skills; (6) self-efficacy (see Table 1 for definition in Ch. 2, p. 23); and (7) positive social environments including parent involvement and expectations, mentors, and peer relationships (Baer et al., 2011; Blackburn et al., 2019; Hillier et al., 2018; Jones & Goble, 2012; Papay & Bambara, 2014; Stewart, 2013b; Wehman, 2013).

The two most influential aspects of a successful transition program from high school to postsecondary education or employment are inclusion within general education classrooms and parental expectations (Baer et al., 2011; Papay & Bambara, 2014). Baer et al. (2011) reviewed and analyzed responses of 409 students with ID at the end of high school and one year later as a follow-up measure. It was found that inclusion was the only significant evidence-based predictor that students will continue towards postsecondary education. However, only 21% of students

with ID are in an inclusive secondary education environment. Inclusion allows for age-appropriate participation with peers without disabilities (Papay & Bambara, 2014).

Building on successful aspects of the social environment of a transition program, student mentoring has been found to enhance educational and social experiences during this challenging phase of life (Jones & Goble, 2012). A mentor can be practically anyone; a friend, a study partner, or an academic tutor. Social support helps to provide direction to maximize self-determination. Students with disabilities who have another college student as their mentor in college leads to better academic performance, socialization, self-determination, an easier transition out of high school, lower dropout rates, and greater career skills (Hillier et al., 2018).

The last component of a positive social environment for transition programs is the opportunity to build peer relationships with those similar to themselves and to those who may be different. Social and communication skills are learned throughout their interactions which enhances the students' social competence. Collaboration opportunities among peers with disabilities help to develop interpersonal skills, enhance emotional regulation, and understand the views of others (Stewart, 2013b; Wehman, 2013).

Employment skills, academic skills, and independent living skills are the three breadths of skills that are essential to teach within a transition program. These skills cannot be assumed basic knowledge for students with disabilities. Work experiences help to provide vocational competence necessary for future employment, functional life skills beyond high school curriculum enhances independence, and academic skills are essential for those going on to postsecondary education (Baer et al., 2011; Papay & Bambara, 2014; Wehman, 2013).

Self-determination and self-advocacy skills go hand-in-hand. Self-determination must develop before self-advocacy skills can be taught, so that an individual is confident in their

control of their life (Wehman, 2013). Involving the student in their transition planning is one way to empower an individual to take control of their life (Papay & Bamba, 2014). This recognition of control of one's actions is linked to positive leisure, employment, and independent living outcomes in the future (Stewart, 2013b). With a firm belief in one's self-determination, one can be taught how to advocate for themselves—understanding it is up to themselves to know they have control over their life and advocating for what they believe is necessary. It is especially important for students with disabilities to know about their condition, their rights, and the option to disclosure their condition in work and school environments. Lastly, self-efficacy ties into these previous to concepts: belief one is capable of a task. Goal setting is an example of the previous three themes. Knowing oneself to decide upon a goal (self-determination); Asking for help or overcoming roadblocks (self-advocacy); and believing oneself is capable of achieving their desired goal (self-efficacy).

The development of these skills is necessary in order to complete college and for future career endeavors. In Blackburn et al. (2019), "successful completion of college requires more than attending to coursework, it also requires the development of foundational skills and personal competencies such as working with others in a collaborative manner, effective communication, problem solving, and self-direction skills" (p. 1). Conveniently, these are the same skills that facilitate career success.

Current Transitional Programs for Young Adults with ID and ASD

Programs for students with disabilities seeking postsecondary education or employment vary in length, location at two- or four-year colleges, public or private college, and for different disability types. College Search (https://thinkcollege.net/college-search) is a site to search for college programs for students with ID in the U.S. and can be filtered based on disability type,

public or private and two-year or four-year institution options. An example of a federally funded TPSID two-year program is College to Career at the Community Colleges of Spokane, WA (Think College, 2018). Students are 18-24 years old, have an ID or ASD, and are seeking to gain employment or continuing postsecondary education. A team approach includes a transition coach, an employment specialist, a program manager, staff from the disability office, and a peer partner are paired up with each student in the program. Topics covered include academic skills, campus involvement, health and wellness, self-advocacy, accommodations, assistive technology, social skills, relationships, independent living skills, and employment skills. Students are enrolled in program-specific courses that are free and inclusive college courses that cost the community college's tuition.

Empowerment Course

The Empowerment Course is designed to facilitate successful employment and/or educational outcomes for transition aged (18-26) young adults with disabilities (https://www.chhs.colostate.edu/ccp/programs/empowerment-course/). This course is a part of the TPSID program at Colorado State University (CSU) and is funded by a grant from the U.S. Department of Education. CSU Continuing Education/Online and the Center for Community Partnerships host this two-semester course on CSU's campus, and students are non-matriculating. Eight to ten students are accepted each year. Students are eligible for the course if they have previously qualified for an IEP, graduated high school, are 18-26 years old, willing to talk about their disabilities and challenges, are unemployed or underemployed, and are motivated and interested in finding their right career path. The course tuition is $2,400 and with the funds to support job coaching, training, and community work, the total program cost is $6,400 for the academic year. Students enrolled in the Empowerment Course earn 6.4 credits of continuing

education units and a certificate through CSU's continuing education. The goals of the Empowerment Course were to increase students' ability to self-advocate, obtain and maintain employment, develop academic skills, and a focus on independent living skills (see Appendix A for course modules).

Importance of Postsecondary Education and Employment Goals

The goals of postsecondary education or employment for individuals with ID is multifaceted. In general, youth with disabilities have poorer outcomes as adults in employment, postsecondary education, housing, finances, and social isolation compared to adults without disabilities (Sannicandro, 2019). Stigma, low expectations, and inadequate preparation for employment decrease the opportunity for individuals with disabilities to become self-sufficient. Postsecondary education can increase earning potential, lead to employment, and decrease reliance on social security. Employment can enhance one's identity, create a sense of belonging, financial health, and potential for independent living. The quality of life for individuals with ID can be improved through postsecondary education and employment.

Goal Attainment Scaling an Outcome Measure used for this Population

Goal Attainment Scaling (GAS) was developed as a solution to the lack of individualized assessments available to measure patients' goal attainment and program efficacy (Kiresuk & Sherman, 1968). The patient and the therapist co-create goals and identify behaviors that indicate progress towards the goal. Goal progress is measured at baseline and throughout the intervention period to quantify goal attainment on a five-point scale. Originally used in community mental health programs, GAS has been shown to be an effective measurement beyond mental health populations.

McLauren and Roger (2003) examined GAS literature within pediatric populations and found it effective evaluative measure for intervention among children and children with disabilities. Standardized tests or norm referenced assessments are difficult to use with children with disabilities as their development may be atypical. The benefits of GAS are that one can determine the environment they assess, is client-centered as goals are decided between therapist and client, provides therapists an objective and sensitive measure for clinical progress which can easily be communicated with families (McLauren & Roger, 2003).

Bailey and Simeonsson (1988) were the first to extend GAS to clients with "severe and profound mental retardation," (p. 289). The clientele and interventions for this population are different than Kiresuk and Sherman's (1968) population of community mental health. Results from their study find that GAS can be effortlessly be applied to populations with severe and profound mental retardation (Bailey & Simeonsson, 1988). Staff who implemented GAS with their clients found that it improved their team meetings and ability to document progress. GAS is also used in special education settings in schools (Carr, 1979). Using GAS provides students the opportunity to become involved in the evaluation process. It has been shown that students involved in their transition planning and goal setting are "very successful at achieving self-set goals" (Wehmeyer et al., 2006).

Self-Report Bias

ID and Self-Report Bias

Individuals with ID are more likely to have a bias towards acquiescence in self-report measures (Finlay & Lyons, 2002). This population is more likely to 'yea-say' to item prompts despite the content of the items—potentially causing a ceiling effect. Self-report measures for individuals with ID may not be representative of their actual perceptions. The variability in

responsiveness can be accounted by the level of disability and verbal communication skills (Stancliffe, 2014).

Self-report measures with this population need to be considered with caution due to possible difficulty understanding the questions, cognitive processing, and their expression of beliefs (Emerson et al., 2013). However, there are now techniques used to detect acquiescence such as nonsense questions, pairs of questions that are opposites, and informant checks. Acquiescence occurs when the answers may be unknown, the question is ambiguous, or the respondent does not put time into considering a question (Finlay & Lyons, 2002).

Best practice for selecting self-report measures to use with individuals with ID is to ensure the individuals can respond most accurately. People with ID will more accurately report when minimal wording and concrete examples are used, when comprehension is frequently checked, and when the questions ask for specifics rather than generalities (Finlay & Lyons, 2001, 2002). With these standards set in place, "it is now well established that many people with intellectual disabilities are able to provide reliable, unbiased, and valid accounts of their feelings, as the research on subjective quality of life, self-esteem, and mental health can testify" (Emerson et al., 2013, p. 335).

ASD and Self-Report Bias

There has also been a question as to the validity of self-report measures of individuals with ASD. Individuals with ASD are more conservative on self-report measures than their peers and minimize difficulties when reporting about their performance (Baron-Cohen et al., 2001). Even autistic children who were categorized as high-functioning (HF) self-report lower scores. Shalom et al. (2006) finds that children with and without ASD respond similar physiologically when presented with pleasant, unpleasant, and neutral pictures. After accounting for verbal skills

and intelligence, children with HF-ASD self-report less conscious feelings than the control group when asked about the pictures. Blakely-Smith et al. (2012) poses that a possible explanation to underreporting is related to "poor child insight, child minimization of symptoms, and/or child difficulty truly understanding the nature of the questions posed" (pp. 712-713). Greater language ability (verbally fluent and verbal skills) has been correlated to more accurate self-reporting for the ASD population.

Purpose of Study

According to the U.S. Bureau of Labor Statistics, individuals with disabilities aged 20-24 are half as likely as their peers to be employed (2019). The trend progresses into adulthood as only 19.1% of individuals with a disability were employed in 2018 compared to 65.9% of those without a disability (U.S. Bureau of Labor Statistics, 2019). In particular, young adults with ID or ASD have the lowest rates of employment (Wagner et al., 2005). The large gap in employment has been attempted to be bridged by programs developed to assist young adults transitioning from high school to post-secondary education and/or employment.

Transition programs in high schools exist to teach independent living skills and to assist students obtain employment (Jirikowic et al., 2013). Other programs provide on the job training, but do not provide an inclusive college experience on a campus. There is no "gold-standard" program for students who have exited high school to continue onto further post-secondary education or lasting employment. These graduates would benefit from such programs to build upon independent living skills taught in their high school transition programs.

The Empowerment Course provides the opportunity for students with disabilities to develop self-advocacy skills and other necessary skills to successfully obtain and maintain meaningful employment. The purpose of this study is to perform an initial outcome evaluation of

the Empowerment Course over the span of an academic year and the impact on students participating in the program. The study outcome measures examine student's self-advocacy skills, perceived self-efficacy, quality of life, their ability to set and work towards goals, and their attendance of Empowerment Course lectures and labs.

CHAPTER TWO

College is becoming more attainable and accessible for individuals with disabilities. Currently, there is no "gold-standard" for postsecondary transition programs towards employment or continued education. After students with disabilities graduate from high school or reach the cut-off age for services, the options and funding dramatically decline. Individuals with intellectual disabilities (ID) and autism spectrum disorders (ASD) are impacted in their participation in daily life activities. The functional impacts may prove to be an added challenge—especially in educational and employment settings. ID are marked by limitations in social, cognitive, and adaptive skills (Matson & Shoemaker, 2009). ASD are categorized by impairments in social interaction and social communication, accompanied by restricted and repetitive behaviors (Atchison & Dirette, 2017).

Need for Postsecondary Transition Programs

According to the National Health Interview Survey (NHIS) from 2009-2017, 1.1% and 1.74% of children in the U.S. ages 3-17 have a diagnosis of ID and ASD, respectively (Zablotsky et al., 2019). In addition, ID and ASD co-occur at a very high rate (Baio et al., 2018; Srivastava & Schwartz, 2014). In general, youth with disabilities have poorer outcomes as adults in employment, postsecondary education, housing, and finances, along with experiencing more social isolation compared to adults without disabilities (Sannicandro, 2019). These individuals may need different support than their peers to have a successful transition. The Individuals with Disabilities Education Act (IDEA) of 2004, states that students have transitioned successfully if they transition to postsecondary education programs, vocational training programs, or to an integrated employment setting. The quality of life for individuals with disabilities can be improved through postsecondary education and employment.

Notably, having disabilities such as ID or ASD, has a tremendous impact on successful transitioning to adult life, including postsecondary education, employment, and even independent living. In fact, only 27.4% of young adults with ID and 57.5% of students with ASD continue on to any postsecondary school within four years of leaving high school (Newman et al., 2009). However, young adults with ID who continue onto postsecondary education are twice as likely to be employed than those who exited school after high school (Winsor et al., 2018). They earn approximately 73% higher weekly wages, are more likely to exit State Vocational Rehabilitation Programs, and are more likely to become financially self-reliant (Carnevale et al., 2011; Migliore et al., 2009). Employment embodies the societal value that individuals with mental health conditions have pride, which can lead to growth in their identity, self-esteem, social integration, and financial independence (Woodside et al., 2007). Unfortunately, young adults with ID and ASD have the lowest rates of employment of the disability categories and high unemployment rates up to 70% (Wagner et al., 2005; Winsor et al., 2018). Overall, youth with disabilities have a more difficult time obtaining and maintaining employment compared to youth without disabilities.

The National Longitudinal Transition Survey 2 (NLTS-2) Wave 5 (2009) reported that only 24.3% of young adults with ID and only 5.8% of young adults with a diagnosis of ASD were living independently (alone, or with spouse or roommate), as the majority of young adults with ID and ASD live with their parents (NLTS-2, 2003). These young adults do not have the skills necessary to live independently or to be economically self-sufficient (Sannicandro, 2016). Parent support and high expectations of their children are highly influential in a successful transition, as young adults with ID are 41 times more likely to attend postsecondary education

and to report a higher quality of life compared to young adults without family involvement (Papay & Bambara, 2014).

Transition Programs

Postsecondary transition programs vary program to program and aim to support individuals with disabilities achieve their goals related to postsecondary education, employment, and independent living skills. Some aspects of a successful transition program include: (1) inclusion; (2) self-advocacy development to enhance self-determination (see Table 1 for definitions); (3) employment skills; (4) independent living skills; (5) academic skills; (6) self-efficacy (see Table 1 for definition); and (7) positive social environments including parent involvement and expectations, mentors, and peer relationships (Baer et al., 2011; Blackburn et al., 2019; Hillier et al., 2018; Jones & Goble, 2012; Papay & Bambara, 2014; Stewart, 2013b; Wehman, 2013).

Table 1

Definitions

Term	Definition
Self-advocacy	"Advocating for oneself, including making one's own decisions about life, learning how to obtain information to gain an understanding about issues of personal interest or importance, developing a network of support, knowing one's rights and responsibilities, reaching out to others when in need of assistance, and learning about self-determination" (American Occupational Therapy Association [AOTA], 2014, p. S45)
Self-determination	"Acting as the primary decision maker in one's life, includes self-awareness, problem solving, setting goals and planning for their attainment, self-regulations, and self-advocacy" (Hollenbeck et al., 2015, p. 1)
Self-efficacy	One's belief in their performance capabilities with respect to a specific task (Bandura & Adams, 1977)

The Empowerment Course at Colorado State University (CSU) is a two-semester postsecondary transition program designed to facilitate successful employment and/or educational outcomes for transition aged (18-26) young adults with ID and ASD (https://www.chhs.colostate.edu/ccp/programs/empowerment-course/). This course is part of the Transition and Postsecondary Programs for Students with Intellectual Disabilities (TPSID) at CSU which is one of 48 institutions funded by a grant from the U.S. Department of Education (Think College, n.d.). The Center for Community Partnerships (CCP) hosts and manages the Empowerment Course and it is credited through CSU's Continuing Education/Online program on CSU's campus. The students are non-matriculating and receive certificates for course completion through the CSU Online program. TPSID programs have goals to expand high quality and inclusive education, provide individualized academic enrichment, socialization, independent living skills, and career skills for individuals with ID. Similarly, the goals of the Empowerment Course are to increase students' ability to self-advocate, obtain and maintain employment, develop academic skills, and a focus on independent living skills (see Appendix A for course modules).

Purpose of Study

The purpose of this study is to perform an initial outcome evaluation of the Empowerment Course over the span of an academic year and the impact on students participating in the program. The study outcome measures examine students' self-advocacy skills, perceived self-efficacy, quality of life, their ability to set and work towards personal goals, and their attendance of Empowerment Course lectures and labs.

Research Questions and Hypotheses

Research Question 1

Will students be able to achieve their chosen goals?

Hypothesis 1. Students will show significant improvement in attaining their set GAS goals throughout the academic year.

Research Question 2

Will there be a relationship between participation in the Empowerment Course and students' self-advocacy/self-efficacy skills?

Hypothesis 2a. Participation in the Empowerment Course will increase students' self-reported confidence in job seeking skills as measured by scores on the Job Seeking Self-Efficacy Scale.

Hypothesis 2b. Participation in the Empowerment Course will increase students perceived self-efficacy as measured by scores on the General Perceived and Self-Efficacy Scale.

Hypothesis 2c. Participation in the Empowerment Course will improve students' ability to advocate for themselves as measured by the scores on the Self-Advocacy Scale.

Research Question 3

Does the Empowerment Course affect students' quality of life?

Hypothesis 3. Participation in the Empowerment Course will increase students' self-reported quality of life as measured by the World Health Organization Quality of Life-BREF Scale.

Research Question 4

Will students attend the Empowerment Course lectures and labs?

Hypothesis 4. Students will attend at least 85% of all lectures and labs.

Methods

Participants

Participants were referred to the Empowerment Course at CSU through the Department of Vocational Rehabilitation, doctor and speech therapist referrals, post-high school transition programs, college staff, and via self-referrals. A total of 22 students began the program, while a total of 17 students completed the course over the past three years. The enrollment in the Empowerment Course in the first through third year of the program was 5, 7, and 10 students—with 4, 6, and 7 students, respectively, completing the course. One male student in year 2 denied consent for his data to be included in the research, which left a sample consisting of 8 males and 8 females (n = 16). All students were high functioning with verbal communication (see Table 2). The target population for the Empowerment Course were youth with disabilities transitioning out of high school and into the 'adult world.' Students were unemployed or underemployed, desired to explore long-term career options, interested in higher education, and needed more support than the typical vocational rehabilitation process. The mean age of participants upon starting the program was 22.50 years old (SD = 3.73), with ages ranging from 16 to 32 years old.

Description of the Empowerment Course

The Empowerment Course at CSU is a two-semester postsecondary transition program for young adults with ID and ASD. Eight to ten students are accepted each year. Students are eligible for the course if they have previously qualified for an Individualized Education Program, graduated high school, are 18-26 years old, willing to talk about their disabilities and challenges, are unemployed or underemployed, and are motivated and interested in finding their right career path. The course tuition is $2,400 and with the funds to support job coaching, training, and community work, the total program cost is $6,400 for the academic year. Students enrolled in the

Empowerment Course earn 6.4 credits of continuing education units and a certificate through CSU's Continuing Education Program.

Table 2

Student Demographics

Student	*Age* [a] *(Years)*	*Gender*	*Diagnosis* [b]	*Completed Program?*
1	23	M	NA	Yes
2	24	M	ADHD; epilepsy	Yes
3	20	F	NA	Yes
4	23	M	ASD/PKU	Yes
5	19	F	DD	No: Left for internship post-fall
6	19	F	Mental health	Yes
7	21	F	ID; deletion syndrome	Yes
8	19	F	ASD; FAS; ADHD; bipolar disorder	Yes
9	20	M	ASD; HFASD	Yes
10	16	M	ASD; Speech/language	Yes
11	28	M	BI	No: No need for program
12	32	F	ASD, without ID; w/ adaptive impairment; ADHD (inattentive); anxiety; depression	Yes
13	27	M	ASD	Yes
14	24	F	ID	Yes
15	21	M	ASD	Yes
16	23	F	ID: moderate cognitive impairment	Yes
17	19	M	LD	Yes
18	20	F	LD; non-verbal learning disorder	Yes
19	18	M	ASD	No: Left for part-time job post-fall
20	20	M	LD	No: Left post-fall
21	21	M	ADHD; anxiety	No: left for part-time job post-fall

[a] Age as of August 15th, the year the student started the course. [b] ADHD = attention deficit/hyperactive disorder, ASD: autism spectrum disorder, BI = brain injury, DD = developmental disability, FAS = fetal alcohol syndrome, ID = intellectual disability, LD = learning disability, NA = not available, PKU = phenylketonuria.

The Empowerment Course was taught by two occupational therapists (OT), each with at least 6 years of experience. First semester, weekly lecture and lab sessions were each two hours; Second semester consisted of a weekly two-hour lecture and the possibility of an internship three

hours weekly. Graduate OT students were mentors for the students taking the course and met outside of class approximately once a week (based on student need) with their mentees. The course is designed for universal learning and uses multiple modes of teaching. The goals of the Empowerment Course were to increase students' ability to self-advocate, obtain and maintain employment, develop academic skills, and a focus on independent living skills (see Appendix A for course modules). This course took place on a college campus and students were able to attend recreational, cultural, and sports events at CSU.

Materials

Goal Attainment

Students' ability to set and work towards their self-determined goals was measured by Goal Attainment Scaling (GAS). Students' identified areas in their life they desired to improve upon and created achievable goals within a specific timeframe. The Goal Attainment Scale created by Kirusek and colleagues (Kirusek et al., 1994; Kirusek & Sherman, 1968) used a scale ranging from "-2" to "+2" which was adapted for the Empowerment Course to a positive range of "0" to "4" on a ratio scale (see Figures 1 and 2; Kothe et al., 2017; Schelly & Davies, 2013; Schelly & Davies, 2012). The adjusted scale numbers used by this program, were converted for data analysis to align with the numbers used in the original scale so that the conversion to T-scores remained the same as described by Kiusek and Sherman's (1968). All students' baseline score was set at "1," meaning "*Where I am right now*." Lost progress was denoted by a decrease of score since last measurement and progress towards one's goal was measured by an increase in the value since the last measurement. Each level of the scale has equal intervals between consecutive scale points. GAS goals were assessed every two weeks during the second semester by either the instructors or student mentors. A copy of the GAS worksheet is included in

Appendix B. Three examples of students' GAS goals related to effective budgeting, self-advocating for responsibility, and managing a schedule are located in Appendix C.

Levels	Description
- 2	Much less than expected outcome
- 1	Somewhat less than expected outcome
0	Projected level of performance
+ 1	Somewhat more than expected outcome
+ 2	Much more than expected outcome

Figure 1

Original Goal Attainment Scale (Kiresuk et al., 1994).

Job Seeking Skills Self-Efficacy

The Job-seeking Skills Self-efficacy subscale from the Job Seeking Self-Efficacy Scale by Hergenrather et al. (2008) was used as a self-report measure by participants of their confidence in their skills to obtain employment. The prompts included: completing a job application, interviewing skills, and working as a team. The 12 statements were rated on a Likert scale with 1 (*not at all confident*) to 10 (*very confident*) with total scores ranging from 12-120. Lower scores indicated low confidence in one's abilities to obtain employment, with high scores indicating high confidence in tasks necessary to obtain employment. Empowerment students were administered this questionnaire at the start of the first semester and at the end of the second semester. A copy of this questionnaire is located in Appendix D.

Numerical Level of Goal Attainment	Descriptive Level of Goal Attainment
I lost ground. 0	
Where I am right now. (Baseline) 1	
I'm getting close to my goal. 2	
I reached my goal! **3**	
I did even better than expected! 4	

Figure 2

CCP Goal Attainment Scale.

General Self-Efficacy

The students' self-report of their self-efficacy was measured by Schwarzer and Jerusalem's (1998) General Self-Efficacy Scale. The scale consists of 10 questions rated on a Likert scale of 1 (*not at all true*) to 4 (*exactly true*) that corresponds closest to the prompt. Total scores ranged from 10-40, with lower scores indicating less confidence in one's ability to complete a task and higher scores indicating higher self-efficacy. Students were given this questionnaire at the start of the first semester and at the end of the second semester. A copy of this questionnaire is included in Appendix E.

Quality of Life

Students' perceived quality of life was measured by The World Health Organization Quality of Life (WHOQOL-BREF) brief assessment. This is the abbreviated form of the WHOQOL-100, with 100 questions. The assessment prompted students to reflect on their past

two weeks for the questions. Domains 1, 2, and 4 were included of the 4 domains. A total of 22 questions were included and responses ranged on a Likert scale from 1-5, *not at all* (1), *very poor* (2), *very dissatisfied* (3), *never* (4), and with a rating of "5" signifying, "*an extreme amount, completely, very good, very satisfied, or always*." Scores for each subscale ranged from 4-20. Domain 1 examined one's physical health such as mobility, pain, sleep, medications, work capacity, and activities of daily living. Domain 2 examined one's psychological health including body image, feelings, self-esteem, beliefs, and cognition. Domain 4 examined one's environment, including access to information and healthcare, financial resources, freedom, home and physical environment, and opportunities. Lower domain scores indicated less satisfaction in physical health, psychological health, and environment; Higher corresponding domain scores indicated greater satisfaction and quality of life. Domain 3 was excluded because it measures social relationships, which is not the Empowerment Course's main priority. It also asks a question about sexual relations which was deemed not an appropriate question for this population. Students were given this questionnaire at the start of the first semester and at the end of the second semester. A copy of this questionnaire is included in Appendix F.

Self-Advocacy

Instructors of the Empowerment Course filled out an adapted version of the Student Veteran Self-Advocacy Skills Assessment based on their perception of the student's self-advocacy skills (Kinney & Eakman, 2017). A total of seven statements with scores ranging from *N/A* (0) to *excellent* (4) in half-point increments were reported at the beginning, middle, and end of the academic year. Lower scores indicated more support was needed from the Empowerment instructors, while higher scores represented less staff support needed. A composite score was calculated by taking the mean of the seven items. Seeking assistance from Empowerment staff

when needing help, utilizing ADA accommodations, and demonstrating effective communication and assertiveness skills are a few outcomes assessed for self-advocacy. This assessment also provided a section at the end for Empowerment instructors to detail qualitative data about students. Please see Appendix G for text of all items.

Procedure

The study protocol was approved by the Institutional Review Board at CSU. This study and the Empowerment Course were made possible via *CHOICES: Creating Higher-education Opportunities for Individualized Career and Employment Success. Grant #* P407A150048 – funded by U.S. Department of Education. Participants were informed of data that would be collected, to which they gave written consent and those who were not their own guardian had parental consent. Students participated in the Empowerment Course to gain further postsecondary education and employment as discussed in the introduction.

Within this program, students were administered the Job-Seeking Self-Efficacy Scale and the General and Perceived Self-Efficacy Scale at the beginning, middle, and end of the academic school year. Course instructors completed the Self-Advocacy questionnaires also at the beginning, middle, and end of the academic year. The WHOQOL-BREF was administered only at the beginning and end of the academic year. All students were given the assessment pieces for individualized programming, but only the data from participants that gave informed consent was used for research purposes. Student mentors and the instructors provided individualized assistance as needed for the students to complete the paper questionnaires—such as re-explaining questions, reading questions verbally, or recording the students' responses. However, the majority of students completed the questionnaires independently.

Instructors provided a one-hour of training session on GAS goals for student mentors using a PowerPoint presentation. Mentors were trained on the background, purpose, and how to create GAS goals. Training emphasized how to write GAS goals with equal interval levels. The mentors then practiced drafting goals for their mentees for the semester, and the instructors provided feedback. Student mentors were told they could contact the instructors if a goal no longer seemed relevant or for scoring help over the course of the semester. Each Empowerment student had one to three GAS goals. GAS data was obtained by student mentors bi-weekly during the second semester and recorded into the information management system. Data was exported into Access database and imported into IBM SPSS Statistics. Responses to the questions were recorded, however, identifying information was not recorded in order to secure confidentiality. Participants were assigned an identification number.

Data Analysis

Responses and data from questionnaires were input into an Access database for further analysis. Research question 1: Will students be able to achieve their chosen goals; Research question 2: Will there be a relationship between participation in the Empowerment Course and students' self-advocacy/self-efficacy skills; and Research question 3: Does the Empowerment Course affect students' quality of life; was analyzed by paired *t*-test, assuming normality of the population (Gliner et al., 2017). A paired samples *t*-test for this within-groups analysis was used to compare the means of one group over time to track group changes throughout the academic year of the Empowerment Course. A normality test was run to test if data was nonparametric. The results from the Job-Seeking Self-Efficacy Scale were nonparametric and a Wilcoxon signed-ranks test was used to confirm the results of the *t*-test. Research question 4: Will students attend the Empowerment Course lectures and labs; was analyzed by using the frequencies of

students who attended class lecture and lab each week by semester and academic year. A percentage was calculated by dividing the number of times each student attended class by the total number of classes by semester. The academic year total was the average of each students' attendance by fall and spring semester. An overall total attendance rate was calculated by the average of all six semesters.

Results

A series of paired-samples t-tests were run to analyze data collected surrounding the first three research questions. The means, standard deviations, and statistics are reported in Table 3.

Question 1: Goal Attainment

Hypothesis 1 proposed that students would show significant improvements in their ability to attain their GAS goals. A paired-samples *t*-test was conducted to evaluate whether a student's self-determined goals were achieved throughout completion of the Empowerment Course. The results indicated that the mean GAS *T* score at the end of the course ($M = 53.26$, $SD = 11.24$) was significantly greater than the mean at the start of the course ($M = 38.47$, $SD = 1.33$), $t(14) = 5.02$, $p = <.0001$ (see Table 3 and Figure 3). The standardized effect size index, d, was 1.30.

Question 2: Self-Advocacy and Self-Efficacy Skills

Hypothesis 2a: Job Seeking Self-Efficacy

The Job Seeking Self-Efficacy Scale (JSSES) was administered to identify changes in students' confidence in their ability to obtain and maintain a job. Hypothesis 2a stated that students' confidence would increase throughout completion of the Empowerment Course. A paired-samples *t*-test was conducted to evaluate change. The results indicated that the mean JSSES score at the end of the course ($M = 98.50$, $SD = 17.55$) was significantly greater than the paired-samples *t*-test was conducted to evaluate change. The results indicated that the mean

Table 3

Results of the paired-samples t-tests.

Measure	Pretest	Posttest	*t*	*df*	*p*	*Cohen's d*	*95% CI*
	M (SD)	*M (SD)*					
GAS Goals	38.47 (1.33)	53.26 (11.24)	5.02	14	<.0001	1.30	[8.47, 21.10]
Self-Advocacy Scale	10.84 (2.72)	17.72 (3.08)	6.96	15	<.0001	1.74	[4.77, 8.98]
Job Seeking Self-Efficacy Scale	83.00 (27.07)	98.50 (17.55)	2.22	15	.042	.56	[0.64, 30.36]
General Perceived Self-Efficacy Scale	28.50 (4.98)	30.94 (5.65)	1.63	15	.125	.41	[-0.76, 5.63]
WHOQOL-BREF: Domain 1	16.13 (2.23)	17.00 (1.36)	1.60	14	.132	.41	[-.30, 2.03]
WHOQOL-BREF: Domain 2	15.75 (2.27)	15.81 (2.11)	.12	15	.91	.03	[-1.06, 1.12]
WHOQOL-BREF: Domain 4	16.13 (2.63)	17.06 (1.73)	1.27	15	.22	.32	[-.64, 2.51]

JSSES score at the end of the course (M = 98.50, SD = 17.55) was significantly greater than the mean score at the start of the course (M = 83.00, SD = 27.07), $t(15) = 2.22$, $p = .042$ (see Table 3 and Figure 4). The standardized effect size index, d, was .56.

A nonparametric Wilcoxon Signed Ranks test was also conducted on the JSSES because the data violated the assumption of normality. This analysis also indicated a significant difference, z = -2.33, p < .02. The mean of the ranks prior to beginning the Empowerment Course was 5.75, while the mean of the ranks after completing the Empowerment Course was 9.42.

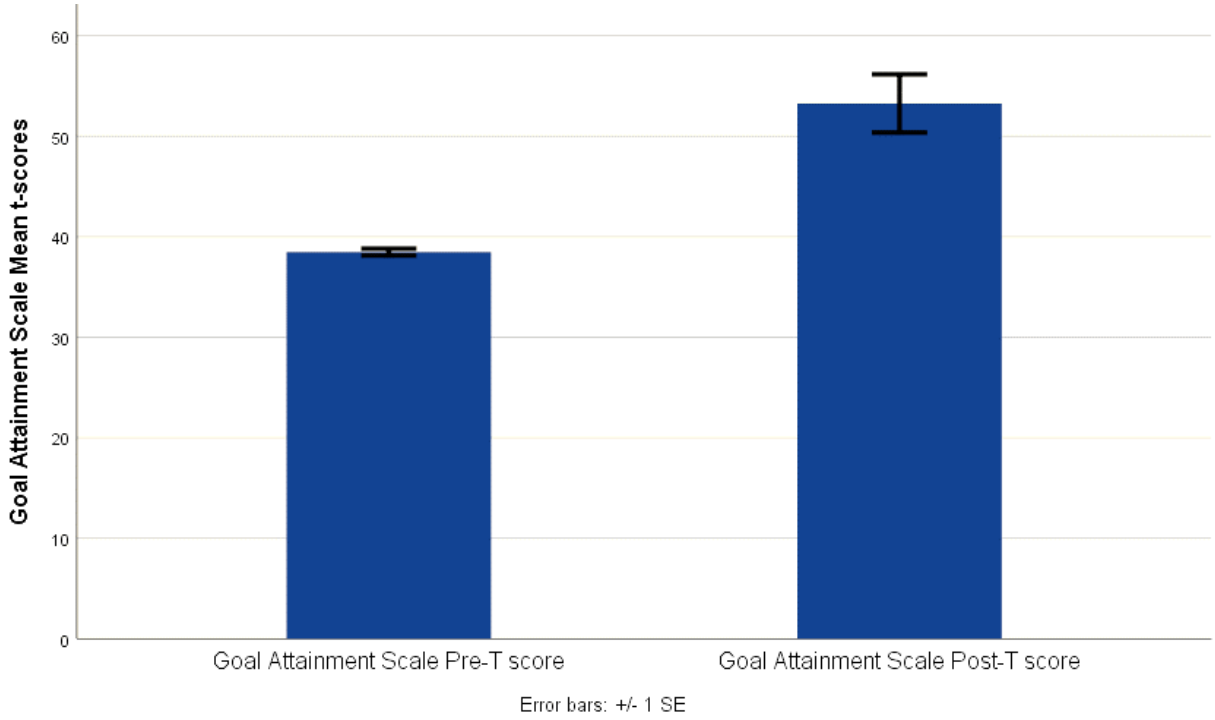

Figure 3

Changes in Goal Attainment Scaling T scores during Empowerment Course

Note. The mean and standard errors for the Goal Attainment Scaling *T* scores are displayed with the pretest score on the left and the posttest score on the right.

Hypothesis 2b: Self-Efficacy

Hypothesis 2b speculated that students perceived self-efficacy would have increased throughout completion of the Empowerment Course. Data from the General Perceived and Self-Efficacy Scale was analyzed using paired samples *t*-tests. The results did not reach significance, therefore not supporting the hypothesis (see Table 3). Students' perceived self-efficacy was not significantly impacted in participation in the Empowerment Course.

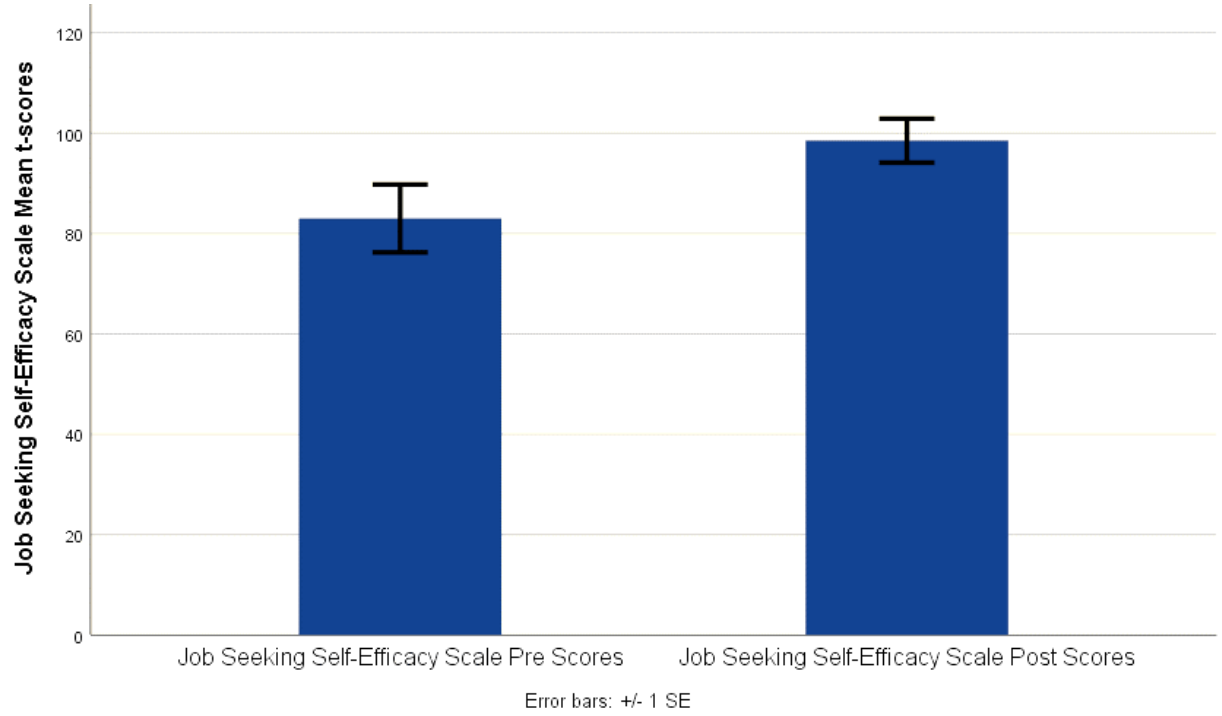

Figure 4

Changes in Job Seeking Self-Efficacy T scores during Empowerment Course

Note. The mean and standard errors for the Job Seeking Self-Efficacy *T* scores are displayed with the pretest score on the left and the posttest score on the right.

Hypothesis 2c: Self-Advocacy

In order to determine if students' self-advocacy skills had improved, the instructors completed the Self-Advocacy Scale. Hypothesis 2c postulated that students would improve their ability to advocate for themselves throughout participation in the Empowerment Course. A

paired-samples *t*-test was conducted to evaluate potential changes in the academic year. The results indicated that the mean score at the end of the course (M = 17.72, SD = 3.08) was significantly greater than the mean score at the start of the course (M = 10.84, SD = 2.72), $t(15)$ = 6.96, p = <.0001 (see Table 3 and Figure 5). The standardized effect size index, d, was 1.74.

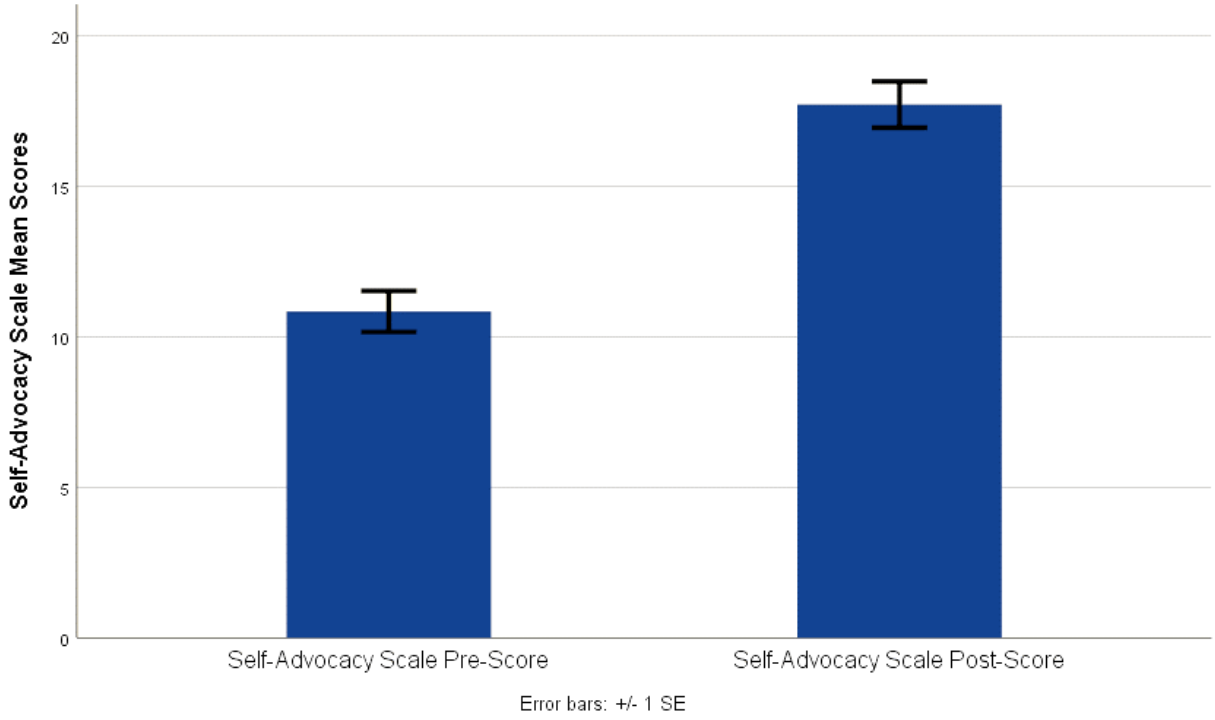

Figure 5

Changes in Self-Advocacy Scale T scores during Empowerment Course

Note. The mean and standard errors for the Self-Advocacy Scale *T* scores are displayed with the pretest score on the left and the posttest score on the right.

Question 3: Quality of Life

To address hypothesis 3 that participation in the Empowerment Course will increase students' perceived quality of life, the WHOQOL-BREF (Domains 1, 2, and 4) was administered at the start and end of the year. The three domains were analyzed with paired-samples *t*-tests and did not yield significant results (see Table 3). Participation in the

Empowerment Course did not significantly impact the students' perceived quality of life, which did not support our hypothesis.

Question 4: Attendance

Hypothesis 4 assumed that students would attend at least 85% of all Empowerment Course lectures and labs. The findings support the hypothesis as the mean student attendance was greater than 85% in each semester and academic year for the students who completed the course. Year 3 had the lowest total attendance rate, while year 2 had the highest total attendance rate. Attendance rates are reported by semester, academic year, and overall attendance in Table 4. The total attendance rates for all of the students that participated in the Empowerment Course at some point are depicted in Table 5.

Table 4

Empowerment Course Attendance Rates (%) for Participants that Completed the Course

	Year 1 (n = 4)	Year 2 (n = 5)	Year 3 (n = 7)	Average of all 3 years
Semester 1	96.88	97.42	95.85	96.72
Semester 2	95.31	97.33	95.92	96.19
Year total	96.10	97.38	95.89	96.46

Note. For all participants that completed the course (n = 16).

Table 5

Total Empowerment Course Attendance Rates (%) for All Participants Ever Enrolled

	Year 1 (n = 5)	Year 2 (n = 6)	Year 3 (n = 10)	Average of all 3 years
Semester 1	96.88	85.48	94.84	92.25
Semester 2	76.25	81.13	57.86	71.75
Year total	86.57	83.31	76.35	82.08

Note. For all participants that enrolled in the course (N = 21). Year 1: One student did not attend Semester 2; Year 2: One student attended 4 weeks of class during Semester one; Year 3: Three students did not attend Semester 2.

A total of five of the 21 students did not complete the Empowerment Course. The completion rate of the course over the past three years is 76%. One of these students dropped out four weeks into the first semester. The remaining four students exited the course during winter break after the first semester and did not begin the second semester. Of the 21 students, 20 completed the first semester and 16 completed the second semester. Table 6 breaks apart course completion by semester and academic year.

Table 6

Empowerment Course Completion Rates

Year		Semester 1		Semester 2		Year average (%)
	Enrolled (*n*)	Completed semester (*n*)	%	Completed semester (*n*)	%	
Year 1	5	5	100	4	80	90
Year 2	6	5	83.33	5	83.33	83.33
Year 3	10	10	100	7	70	85
Average	—	—	94.44	—	77.78	86.11

Note. N = 21

Discussion

The definition of empowerment is to "make [someone] stronger and more confident, especially in controlling their life and claiming their rights" (Lexico, n.d.). This study assessed if the intervention—the Empowerment Course—was influential in students' beliefs of control and self-efficacy. Current transition programs for students with disabilities have poor outcomes in postsecondary education enrollment and employment, as Pierce et al. (2020) references that only 17.5% are employed years later in comparison to 65% of their peers (U.S. Bureau of Labor Statistics, 2016). This is the first study examining the effects of the Empowerment Course at CSU in its first three years. Participants in this study served as their own baseline to reduce

potential errors of individual differences. A series of paired *t*-tests were administered to assess within group differences to gather subjective and objective data.

Goal Attainment

GAS goals were created for each student during their second semester in the Empowerment Course. The number of goals per student ranged from one to three goals. Instructors, student mentees, and Empowerment students created the goals together based on students' current strengths and areas of desired improvement. All goals targeted occupations from the Occupational Therapy Practice Framework (OTPF). Examples of student goals of instrumental activities of daily living include: 1) Communication management (including appropriateness and initiation of conversations); 2) Financial management (primarily budgeting); 3) Health management and maintenance (exercise schedule). Rest and sleep goals focused on sleep hygiene and developing sleep drive. Education goals focused on formal educational participation including sustained attention in class, active participation, applying a study schedule, completion of homework, organization, managing a schedule, and stress management. Work goals focused on professionalism, sending appropriate emails, and advocacy in the workplace. Goals about leisure focused on participation in leisure activities for a balanced life. Students significantly improved in their daily occupations related to these education, work, and independent living skills. Students were very successful achieving their goals. It is possible that students' success was partly due to meeting with student mentors weekly and discussing goal progress every ~2 weeks.

Self-Advocacy and Self-Efficacy Skills

Analysis of data from the Self-Advocacy Scale, course instructors rated students to have significantly improved from the beginning to the end of the academic year. In the first semester,

week 15 addressed self-advocacy skill development. Throughout the course self-advocacy was also addressed in a variety of other modules including self-determination, requesting accommodations, disclosure of disability, and understanding one's rights. Instructors met with the students twice a week and were able to observe changes in students' self-advocacy skills. Results indicate that students did not significantly identify any changes in their overall self-efficacy based on the General Perceived and Self-Efficacy Scale. However, students rated themselves to be more confident in their job-seeking skills based on the Job Seeking Self-Efficacy Scale. This finding could be due to course modules weeks 6 through 15 in the fall semester that focused on skills related to employment and having experience applying and interviewing for a job. Students may have also felt more comfortable after their internship in the spring semester in their ability to obtain a job.

Quality of Life

The WHOQOL-BREF assessment domains 1, 2, and 4 were administered to assess quality of life. Analysis of the students' self-reported quality of life did not show statistically significant improvement from the beginning to end of the Empowerment Course. This outcome did not come as a surprise, since improvement in quality of life was not an emphasis of the program. Keptner et al. (2016) discovered similar findings, that student participation in a five-week OT group did not lead to any positive improvements in quality of life. The WHOQOL-BREF also may not be a sensitive measure for change with this population of young adults with ID or ASD (Power et al., 2010). The WHOQOL was not designed intentionally for individuals with disabilities, specifically ID.

Power et al. (2010) wanted to create and add-on module for the WHOQOL. Their study had three rounds of data collection: 1) a pilot phase which carried out focus groups for

individuals with physical and mental disabilities to identify missing coverage in the WHOQOL; 2) a pilot study of 1,400 respondents assessed with topics identified in the focus groups; 3) a field trial study of 3,800 respondents. The findings led to the creation of the WHOQOL Disabilities Module (WHOQOL-DIS). This module has simplified wording of items, a three-point response scale, and includes smiley faces as a visual scale. The WHOQOL-DIS is a 12-item questionnaire that can be used in conjunction with the WHOQOL or WHOQOL-BREF to assess a range of disability-specific issues including advocacy, control, and inclusion. Best practice for future research with individuals with ID would be to administer the WHOQOL-DIS in addition to the WHOQOL-BREF or WHOQOL-100 (Power et al., 2010).

Student Course Attendance and Completion

Course Attendance

The results of Research Question 4 focused on attendance refers to the 16 students who completed the Empowerment Course. The students who completed both semesters overall had excellent course attendance, and attendance did not drastically fluctuate between the two semesters. However, excluding the data of the five students who did not complete the Empowerment Course of the total 21 students' skews attendance rates. Table 5 reflects course attendance including all 21 students for both semesters. Students who did not attend semester 2 were marked as zero percent attendance when calculating the average which steeply decreased the attendance rates. Attendance the first semester was remarkedly better than the second semester (see Table 5).

Course Completion

Not all of the Empowerment students enrolled completed the course. In fact, zero students who exited the course began the second semester. In the first year, student 5 increased

hours at their internship and elected not to continue the course. In the second year, student 11 exited the program after four weeks into the fall semester as they felt they were too high functioning for the course. In the third year, three students (19, 20, 21) exited the program after completion of the fall semester. Student 19 obtained a part-time job and decided both would be too overwhelming. Student 20 was dually enrolled in a free post-high school transition program and was self-paying for the Empowerment Course. This student also had a part-time job, and all three obligations were overwhelming. Student 21 choose to focus on their mental health and their paid part-time job obtained towards the end of the fall semester. Many reasons students exited the course prematurely were due to time commitments of jobs and internships. Interestingly, the core purpose of the Empowerment Course was to facilitate successful employment outcomes.

Successful Transition Factors

The Empowerment Course contained all aspects of a successful transition program to some extent, and emphasized skills related to a successful transition to the 'adult world.'

1) Inclusion: The course took place on a college campus where students were allowed to participate in campus activities but did not have any inclusive classes with peers without disabilities. It is unknown if these students were involved in inclusive settings in high school.

2) Self-advocacy/self-determination: This course includes modules that focus on when and how to disclose their disability, how to request for accommodations, education on the ADA and Section 504, and identifying their own strengths and challenges. WIOA (2014) requires that vocational rehabilitation funding that supports transition services must include counseling related to post-secondary opportunities and self-advocacy training. Wehmeyer et al. (2006) argues that students ages can and should be actively involved in all parts of an education program to emphasize self-determination and foster independence.

3) Employment skills: Some of the course modules focused on how to job search, the application process, how to network, building a resume and cover letter, gathering references, and interviewing. This course also provided the opportunity for an internship which aligns well with current transition evidence to provide work experiences (Baer, 2011; Papay & Bambara, 2014).

4) Independent living skills: Course modules included training on how to find housing, managing finances and how to budget, medication and health management, nutrition and grocery shopping, sleep, and information on community resources. Best practice for transition services include skill training for individuals (Papay & Bambara, 2014).

5) Academic skills: The Empowerment Course helped student to understand their learning style and strategies relevant to succeed in school based on their learning style. Other skills that were taught included organization, time management, improving memory, how to take notes, studying, and test-taking strategies.

6) Self-efficacy: This course aimed to improve students' self-efficacy. Students created a plan for their future, with short- and long-term goals, and who they would need to employ to help them achieve their goals. Goal setting has been shown to be a facilitator in the transition to adulthood (Stewart, 2013).

7) Positive social environments: The Empowerment Course includes student mentoring with other college students to provide guidance, which is a key aspect of a successful transition program. Mentors serve as role models who have gone through similar experiences, provide psychosocial and academic support (Hillier et al., 2018).

Limitations

Lack of Protocol for Questionnaires

One procedural aspect of data collection that could be considered a limitation is the lack of standardization of how the students were assisted in completing the questionnaires. The majority of students were able to complete the questionnaires independently. However, some of the students had difficulty filling out the paper questionnaires. Student mentors and one of the instructors provided individualized assistance to the Empowerment students based on student needs. Only certain students required extra support completing the questionnaires and not the same person provided the assistance to the students. Examples of assistance provided include re-explaining questions differently to facilitate understanding and reading the questions out loud for students to respond verbally. Instructor and student mentor biases may have influenced responses with potential leading wording or projected opinions on how they may have thought the student would answer.

Self-Report Bias

Our study included three self-report measures and two informant response measures. The three self-report measures for the individuals with ID may not be representative of their actual perceptions. Individuals with ID are more likely to have a bias towards acquiescence in self-report measures (Finlay & Lyons, 2002). This population is more likely to 'yea-say' to item prompts despite the content of the items—potentially causing a ceiling effect. Nevertheless, our data did not show ceiling effects. The variability in responsiveness can be accounted by the level of disability and verbal communication skills (Stancliffe, 2014). However, all students in the Empowerment Course were verbal and high functioning. Individuals with ID will more accurately report when minimal wording and concrete examples are used, when comprehension is frequently

checked, and when the questions ask for specifics rather than generalities (Finlay & Lyons, 2001). This may help to explain the findings from the General Self-Efficacy Scale which is a broad and abstract questionnaire. This measure may not have been sensitive enough to detect change or appropriate for the comprehension level of students with ID.

Individuals with ASD are more conservative on self-report measures than their peers and minimize difficulties when reporting about their performance (Baron-Cohen et al., 2001). Even autistic children who were categorized as high-functioning (HF) self-report lower scores. Greater language ability (verbally fluent and verbal skills) has been correlated to more accurate self-reporting for the ASD population. All participants in our study were verbal and high functioning, which increases the likelihood that the self-report measures for the young adults with ASD are trustworthy. Course instructors and student mentors may have counteracted the potential self-report biases by providing individualized assistance to students when they completed the questionnaires.

Lack of Follow Up Data

Another limitation to this study is that we were not able to collect follow up data on the students who were enrolled in the Empowerment Course. We were able to measure the skills that were emphasized in this course, however, are not able to link to outcomes in postsecondary enrollment, employment, or independent living.

Small Sample Size

For the assessments that did not reach significance, we ran post-hoc power analyses. These findings were consistent with our results, that a larger sample size would be necessary to reach significance. The GPSE and WHOQOL Domain 1 (physical health) would require a sample size of 39 participants, WHOQOL Domain 4 (environmental health) would require 62

participants, and WHOQOL Domain 2 (psychological health) would require 6,871 participants for the analysis to reach significance. A small sample size of n = 16 may have limited our ability to detect differences in these two assessments due to reduced power.

Unidentifiable Sources of Change

Participation in this course led to significant improvements in students' ability to set and attain goals, have increased confidence in their ability to obtain and maintain employment, and their ability to advocate for themselves. This course was 32 weeks long, and it is not possible to detect which specific modules led to the improvements in these skills and beliefs. Each week had a specific module for lecture and lab. Among the modules were Planning Alternative Tomorrows With Hope (PATH) planning (individualized goal setting), job seeking skills, and self-advocacy development (O'Brien et al., 2010; Pearpoint et al., 1991). It is likely these modules were influential, although this information may have been integrated throughout the semesters and other modules as well.

Recommendations for Future Studies

Future studies should include longitudinal follow-up reporting after the students have exited the Empowerment Course. It would be beneficial to assess if the young adults were successful applying the skills they gained from this course in their future endeavors in education, employment, and independent living. Future research with young adults with ID examining quality of life would benefit from using the WHOQOL-DIS module in conjunction with the WHOQOL-100 or the WHOQOL-BREF. The WHOQOL-DIS is a measure that is sensitive to change in this population, and also assesses quality of life related to disability-specific issues.

Conclusion

These findings suggest that participation in the Empowerment Course for students with ID and ASD may develop essential life skills beyond what is taught in high school transition programs. Students showed significant gains in their ability to set and attain goals, job-seeking skills, and their ability to self-advocate. These results may help educators of these populations to establish optimal learning environments for their course topics which allow for maximal real-world experiences and growth. Postsecondary transition program developers can also consider these results to fine-tune current programs and to create future programs. This study adds to the literature that it is feasible for OTs to have a role in transition services as many core services fall under OTs practice domain. The Empowerment Course lays the foundation for skills necessary upon entering the real world,' which may assist students to continue onto postsecondary education, gain employment, and live independently.

CHAPTER THREE

Occupational Therapists Role in Postsecondary Transition Services

The field of occupational therapy (OT) seeks to optimize human performance and participation in everyday occupations and contexts across the lifespan (Colorado State University, 2020). According to the Occupational Therapy Practice Framework (OTPF), occupations are "central to a client's identity and sense of competence and have particular meaning and value to that client" (AOTA, 2014, p. S5). Occupations are highly individualized, and OTs are experts of occupation and in enabling others to be able to pursue their desired occupations. OTs examine multiple areas of life such as the individual, their context, their occupation, and the transactional relationship between these three factors for their interventions.

Many OTs do not feel competent to be involved in transition services. In a survey of 112 OTs in a school setting in Arkansas, only 6% of OTs felt prepared to be involved in secondary transition services (Mankey, 2011). The Manky study also finds that 63% of the OTs had never assisted educators with the secondary transition planning process. Similarly, a pilot study of school-based OTs finds just 16.7% of the OTs feel knowledgeable of their role in transition services (Abbott & Provident, 2016). Albeit, OTs have the skills necessary to provide transition services. Since the majority of students with disabilities exit high school without OT services, postsecondary transition programs are an ideal setting to learn valuable life skills to achieve a successful transition. Keptner & McCarthy (2020) reviewed 25 articles of OTs in postsecondary education setting. Their review finds that OTs are effective in semester-long courses, in specific modules, as part of a peer mentoring program, and as a consultant with other campus services. OTs—despite low self-reported competence—have the skillset to be involved in transition services.

Person-Environment-Occupation Model

A conceptual practice model that OTs use is the Person-Environment-Occupation Model (Law et al., 1996). The person factor in this model describes a dynamic individual who interacts with their environment and has personal qualities that impact one's performance. The environment is a dynamic context in which occupational performance takes place, and the occupation factor is activities and task done to accomplish a purpose. In our study, the person factors included the students' diagnoses of intellectual disabilities (ID) and autism spectrum disorders (ASD), their values and goals, and capabilities. The college campus was the environment, and the occupation was that of being a student with the purpose of gaining skills for postsecondary education and employment.

Personal Factors

OTs in postsecondary transition programs can help with underlying skill development. Some of the skills OTs can successfully help students with disabilities develop include: Interpersonal skills including communication and public speaking (Cleary et al., 2014; Keptner & McCarthy, 2020; Pierce et al., 2020; Stewart, 2013); Employment skills such as career searching skills, resume building, interviewing skills and professional behavior development (Keptner & McCarthy, 2020; Pierce et al., 2020); Independent living skills such as money management, grocery shopping, laundry, and community mobility (Cleary et al., 2014; Keptner & McCarthy, 2020; Pierce et al., 2020); Academic skills including study skills, test-taking skills, computer skills, concentration, and helping students discover their preferred learning style and use these strategies while learning (Keptner & McCarthy, 2020); Sleep hygiene (Keptner & McCarthy, 2020); Productive habits and daily routines including time management, organization, goal setting and attainment skills, and how to achieve an occupational balance (Jirikowic et al.,

2013; Keptner & McCarthy, 2020); Health management skills such as medication management, helping students understand their disability related needs, and sensory modulation (Jirikowic et al., 2013; Stewart, 2013); Self-determination and self-advocacy skills to facilitate autonomy (Jirikowic et al., 2013; Keptner & McCarthy, 2020; Stewart, 2013); and helping students understand their rights and legislation, teaching self-disclosure skills, and how to request accommodations in postsecondary education or in workplaces (Jirikowic et al., 2013).

Environment Factors

OTs examine how the environment may enhance or inhibit one's participation in everyday occupations. Individuals with disabilities in postsecondary education, jobs, and in the community upon exiting high school are no longer covered by the Individuals with Disabilities Education Act ([IDEA], 2004) services. Accommodations provide equity in these realms of life, and OTs can help students understand their rights. Section 504 of The Rehabilitation Act of 1973 ensures accessibility and OT also has a role in educating students of their rights to have accommodating environments based on their needs. OTs can advocate for students and teach students self-advocacy skills to request accommodations in the workplace or schools (Jirikowic et al., 2013; Pierce et al., 2020). OTs can provide assistive technology or adaptive equipment and training to modify the students' environment so that they can be successful (Jirikowic et al., 2013).

OTs can also use a group setting to help their clients achieve their goals. In the OTPF, a client is defined as a person, group, or population (AOTA, 2013). Groups are created based on individuals with similar goal or education needs, or according to a condition and its impact (Egan & Dubouloz, 2013). The Empowerment Course can be viewed as a group setting in a classroom of young adults with ID and ASD who have similar needs to develop skills for postsecondary

education and employment. Some of the most notable findings from a group context is the socialization benefits (Parham & Mailloux, 2014). Group members learn social skills through observation and imitation of the group and a group setting can increase one's confidence by being able to master challenges similar to what other group members are experiencing (Egan & Dubouloz, 2013; Parham & Mailloux, 2014). Carroll and Tomlinson (2011) state that "interpersonal learning in groups can provide a rich opportunity to develop more accurate relations with others, greater interaction abilities, and more effective occupational performance (p. 301).

Occupational Factors

Occupations can fulfill personal roles and give a sense of meaning to individuals (Yerxa et al., 1990). Common occupations during young adults' time of transition includes education, employment, and independent living skills. Transition-aged young adults with disabilities yearn to belong in the adult community, but do not always have the skills or necessary support (Dubois et al., 2019). OTs can support individuals enhance their occupational participation and performance by providing the "just-right" challenge to clients (Ayres & Robbins, 2005). Pierce et al. (2020) was able to support OT's role in transition services as students who received OT services "developed functional behaviors at a higher rate than what might have been expected from maturation," such as social, daily living, and work skills in a high school transition setting (p. 31). OTs examine the interplay between a person, their environment, and desired occupations.

Rehabilitation Science Perspectives

Rehabilitation science (RS) studies the transaction between a person's individual factors, environment, and potential health conditions. One's environment, physical or social, can be altered to either become a barrier or facilitator for participation in daily activities (World Health

Organization [WHO], 2002). RS attempts to understand disability through this enabling-disabling process, emphasizing function. RS emphasizes it is not the quantity of life that matters, but one's quality of life (IOM, 1997a). This framework is useful for OTs to gain a holistic understanding of an individual and how to enable participation in meaningful occupations. The WHO defines participation as the involvement in a life situation (WHO, 2002). Currently, there is no standardized way to measure participation which causes ambiguity in interpretations of data. Chang and Coster (2014) recognized this gap of knowledge and created a conceptual model to define constructs to use in research that measure participation. Similar to Hammel et al. (2008), they recognized that both objective and subjective measures ought to be examined to gain a holistic view of participation. Our study included both objective and subjective outcome measures to understand the young adults with disabilities participation in their occupations.

A large contributor to RS was the publication of *Enabling America* by the Institute of Medicine (IOM) in 1997, edited by Brandt and Pope. The IOM created the enabling-disabling model which states that "disability is a function of the interaction between the person and environment" (IOM, 1997b, p. 70). Seelman (2000) also emphasizes the purpose of RS is to use empirically based knowledge that can lead to better treatments and technology for people with disabilities in their best-fit environments. Individuals with ID and ASD are more apt to be successful and enabled to engage in their occupations when there are adequate environmental supports set in place and removal of barriers in settings such as school and places of employment. The Empowerment Course teaches students how and when it may be useful to request for accommodations in college or their workplace. Examples of accommodations may be assistive technology, extended deadlines, support animals, or even environmental modifications such as lighting changes, ergonomic improvements, or a quieter room. Accommodations can

create equity which allows for students with disabilities to be successful in their school and work environments.

Congress began to realize the importance of securing equal opportunity for individuals with disabilities in realms of employment, technology, and for everyday living (Seelman, 2000). The passage of legislation including the Rehabilitation Act of 1973 and Americans with Disabilities Act (2004) helped to legitimize the field of RS (Seelman, 2000). As Senator Robert Dole stated, "advances in rehabilitation science are essential to realizing the Nation's commitment to equal opportunity, economic self-sufficiency, and full participation of Americans with disabilities" (Senate Report 103-318). Students in the Empowerment Course were protected by such legislation and provided with reasonable accommodations so that they may fully participate in the program and internship sites.

These early legislative acts and policies have helped to lay the groundwork to fund programs for individuals with disabilities. The second and third IOM reports, *Enabling America* (1997) and *The Future of Disability in America* (2007), identified the need for further federal support and funding for disability research. This repeated recommendation exhibits the need to "provide funding for programs of disability and rehabilitation research" (Ottenbacher et al., 2012, p. 1393). The Empowerment Course is a federally funded TPSID for individuals with ID and ASD, directly contributing to the field of RS and the recommendations of the IOM reports. Findings from our study add to the knowledge base of RS, OT, and disability sciences to enhance function in everyday activities.

Occupational Science Perspectives

Occupational Science (OS) is the study of "the human as an occupational being including the need for and capacity to engage in and orchestrate daily occupations in the environment over

the lifetime" (Yerxa et al., 1990, p. 6). OS is the knowledge base that informs professions about the innate ability and need humans have for engaging in meaningful occupations. A focus is placed on the actual "doing" of occupations and development of new skills. The Empowerment Course helped students to develop concrete skills, a sense of mastery, and self-advocacy skills.

Empowerment Course modules focused on building tangible skills to create a sense of self-efficacy and competency. Skills taught included how to build a resume, interviewing skills, soft skills, self-advocacy skills, note-taking, study skills, budgeting, and time-management. Students also had to develop skills to achieve their individualized Goal Attainment Scaling goals. Hands-on opportunities were available including the possibility of an internship. When individuals feel proficient in dealing with life's situations, they develop a sense of mastery. Eakman et al. (2018) states "as mastery in occupations aligns with personally held beliefs and values, these occupations can result in positive subjective experiences associated with fulfillment of needs for belonging and purposiveness" (p. 15).

Having a sense of belonging is considered a basic human need, which can be established through occupational engagement (Blank et al., 2015). Work, an occupation, provides the opportunity to provide the individuals with new skills, the opportunity to feel valued, and to be socially engaged. Yerxa et al. (1990) explain that humans are occupational beings who attach their self-worth to the occupations we chose to engage in. Occupational identities allowed individuals to redefine or create new identities revolving around the occupations one engages in rather than being defined by a diagnosis. (Blank et al., 2015).

Conclusion

To conclude, occupational therapists have the skillset and holistic lens to provide efficacious post-secondary transition services. OTs look towards features of an individual, their

environment, and their desired occupations to optimize their participation in their desired life activities. It was viable to have OTs as instructors for the Empowerment Course to provide real-world experiences and training on necessary life skills for a successful transition to the 'adult-world.' Although ID and ASD impact areas of occupational performance, OTs are equipped to help young adults be successful in postsecondary education, employment, and independent living. This study adds to the literature of benefits of transition services for students with disabilities beyond the coverage of IDEA (2004).

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APPENDIX A

Empowerment **FALL** Semester Weekly Objectives

Week	Topic	Objective
1	Review syllabus and CANVAS, begin PATH process	Understand purpose and importance of PATH planning
2	Continue PATH process, begin developing portfolio	Engage in individualized PATH planning
3	Self-Determination, identify strengths and challenges	Identify individual strengths and challenges, and how these relate to employment/academic settings
4	Accommodations and Compensatory Strategies	Identify individual accommodations/compensatory methods and strategies
5	Disclosure of Disability	Understand advantages/disadvantages of disclosure, begin to strategize when/how/if to disclose
6	Job Search and Applications	Learn how to effectively search for appropriate employment opportunities and engage in application process
7	Networking	Understand how to effectively market oneself and what is/is not appropriate for networking and social media sites
8	What Do Employers Look For?	Develop an understanding of what employers are looking for in candidates and employees
9	Resume, Cover Letters, Letters of Reference	Develop unique resume catered to employment goal; understand cover letter components
10	Interviewing	Identify appropriate vs. inappropriate behavior during an interview, learn and practice best/effective answers to interview questions
11	Understanding Your Rights (ADA and 504)	Develop an understanding regarding rights and responsibilities under ADA, such as reasonable accommodations
12	Developing Soft Skills for the Workplace: Communication and Teamwork	Learn skills necessary for maintaining employment once hired: communication and teamwork
13	Developing Soft Skills for the Workplace: Enthusiasm and Professionalism	Learn skills necessary for maintaining employment once hired: professionalism and enthusiasm
14	Developing Soft Skills for the Workplace: Problem-Solving and Critical Thinking	Learn skills necessary for maintaining employment once hired: problem solving and critical thinking
15	Self-Advocacy Development	Become comfortable with how to disclose, request accommodations and express needs with employers
16		N/A

Empowerment **SPRING** Semester Weekly Objectives

Week	Topic	Objective
1	Soft Skills for Post-secondary Education, Learning Styles	Identify and understand soft skills appropriate in a post-secondary education setting and develop an understanding of your learning style and strategies
2	Executive Functioning: Organization	Learn about and implement effective strategies for optimal coursework/employment task organization
3	Executive Functioning: Time Management	Be able to identify and begin to utilize effective time management strategies
4	Academic Skills Strategies: Memory/Concentration, Taking Notes	Learn and begin to implement strategies to improve memory, concentration and note taking
5	Academic Skills Strategies: Reading and Writing	Learn and begin to implement strategies to improve reading and writing
6	Academic Skills Strategies: Studying, Test Taking	Learn and begin to implement strategies to improve studying and test-taking
7	Academic Accommodations	Identify helpful and necessary academic accommodations and how to request them
8	Housing	Be able to understand and identify types of housing available, how to search for housing and read/review a lease
9	Finances and Budgeting	Learn how to plan and manage a budget and practice doing so
10	Health/Medication Management	Develop an understanding of what your medical needs are and how to advocate for yourself
11	Nutrition and Grocery Shopping	Learn strategies for effective grocery shopping and nutrition
12	Sleep	Understand the importance of a healthy sleep routine and the impact poor sleep can have on health, well-being and daily functioning
13	Community Resources	Be able to identify and access available social and fitness programs in the community
14	Time Management and Organization in the Home	Learn strategies to organize and manage all areas of life
15	Empowerment in Action	Complete “next steps” of PATH planning
16	Course Wrap Up	N/A

APPENDIX B

Goal Attainment Scaling at CCP

Goal: _____
Semester: _____

NUMERICAL LEVEL OF GOAL ATTAINMENT:	**DESCRIPTIVE LEVEL OF GOAL ATTAINMENT:**
I lost ground. **0**	
Where I am right now. 1	
I'm getting close to reaching my goal. 2	
I reached my goal! **3**	
I did even better than expected! 4	

Date Goal is established:_____ Anticipated Goal Attainment_____

Goal Attainment Progress to be measured (circle timeframe): Bi-Weekly Monthly

Date of goal approval by Cathy and/or Julia:_____

CCP Staff (TC or EC):_____ _____

Student Mentor:_____ Student Mentor Signature:_____

Mentee/Participant Name:_____Mentee/Participant Signature:_____

Category: OPS/CSU Student:_____Project Search Student Intern:_____

Foundation for GAS Goal(s) – Self-Advocacy:

1. **Knowing yourself**
2. **Knowing what you need and want**
3. **Knowing how to get what you need and want, taking action**

APPENDIX C

Goal Attainment Scaling Examples

GAS Goal: Student will manage a budget each month to meet spending and savings goals using organization and planning skills.

Numerical Level of Goal Attainment	Descriptive Level of Goal Attainment
I lost ground. 0	Does not organize, track, or manage spending or savings.
Where I am right now. 1	Organizes, tracks, and manages spending and savings with maximum assistance.
I'm getting close to my goal. 2	Organizes, tracks, and manages spending and savings with moderate assistance.
I reached my goal! **3**	**Organizes, tracks, and manages spending and savings with minimal assistance.**
I did even better than expected! 4	Organizes, tracks, and manages spending and savings independently.

GAS Goal: With reminders and support from mentor, student will advocate for increased responsibility in the classroom during her internship.

Numerical Level of Goal Attainment	Descriptive Level of Goal Attainment
I lost ground. 0	Student is no longer interested in advocating for her learning needs.
Where I am right now. 1	Student is getting to know her coworkers, supervisor and children at her internship. She is beginning to learn the schedule and expectations of the classroom environment.
I'm getting close to my goal. 2	With moderate support, student will advocate for learning needs (ie. training to run a small group or mitigate behaviors of the children).
I reached my goal! **3**	**With minimal reminders/support from mentor, student will advocate for increased responsibility in the classroom (ie. execute small group activity).**

I did even better than expected! 4	Student is regularly advocating for new responsibilities and opportunities (ie. planning and executing small group activities) independently.

GAS Goal: Modified independence in managing a schedule

Numerical Level of Goal Attainment	Descriptive Level of Goal Attainment
I lost ground. 0	I lose track of assignment and events and need to be reminded frequently by others.
Where I am right now. 1	I can keep track of important events and assignments, but do not use a physical calendar.
I'm getting close to my goal. 2	With the help of weekly reminders, I maintain a calendar to track weekly events and big due dates and track smaller events sporadically.
I reached my goal! **3**	**I actively use my calendar to track all events and check/update it at least twice a week with minimal reminders.**
I did even better than expected! 4	I independently update and check my calendar multiple times per week and am able to plan accordingly (ex. Asking parents for a ride in advance.

APPENDIX D

Job Seeking Self-Efficacy Scale

Name: _____

Date: _____

Student ID #: _____

Job Seeking Self-Efficacy Scale

Please check the box that most accurately corresponds to how confident you are of your skills in the following situations, with 1 being not at all confident and 10 being very confident.

	Not at all Confident									Very Confident
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
1. Requesting a job application form	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
2. Completing a job application form	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
3. Producing a curriculum vitae (CV)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
4. Travelling to the interview	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
5. In your interview skills generally	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
6. In your physical self-presentation at interview	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
7. In your oral self-presentation at interview	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
8. Meeting new people	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
9. Contributing to a meeting or discussion	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
10. Working within a team	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
11. Working on your own	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
12. Career progression	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

APPENDIX E

The General Perceived and Self-Efficacy Scale

Name: _____

Date: _____

Student ID #: _____

The General Perceived and Self-Efficacy Scale

English version by Ralf Schwarzer & Matthias Jerusalem, 1995

For each of the following questions please check the box that corresponds most closely with your situation.

1 = Not at all true **2** = Hardly true **3** = Moderately true **4** = Exactly true

	Not at all true			Exactly true
	1	**2**	**3**	**4**
1. I can always manage to solve difficult problems if I try hard enough.	☐	☐	☐	☐
2. If someone opposes me, I can find the means and ways to get what I want.	☐	☐	☐	☐
3. It is easy for me to stick to my aims and accomplish my goals.	☐	☐	☐	☐
4. I am confident that I could deal efficiently with unexpected events.	☐	☐	☐	☐
5. Thanks to my resourcefulness, I know how to handle unforeseen situations.	☐	☐	☐	☐
6. I can solve most problems if I invest the necessary effort.	☐	☐	☐	☐
7. I can remain calm when facing difficulties because I can rely on my coping abilities.	☐	☐	☐	☐
8. When I am confronted with a problem, I can usually find several solutions.	☐	☐	☐	☐
9. If I am in trouble, I can usually think of a solution.	☐	☐	☐	☐
10. I can usually handle whatever comes my way.	☐	☐	☐	☐

APPENDIX F

World Health Organization Quality of Life-Bref

Please read each question, assess your feelings, and circle the number on the scale for each question that gives the best answer for you.

		Very Poor	Poor	Neither Poor nor Good	Good	Very Good
1(G1)	How would you rate your quality of life?	1	2	3	4	5

		Very Dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very Satisfied
2(G2)	How Satisfied are you with your health?	1	2	3	4	5

The following questions ask about **how much** you have experienced certain things in the last two weeks.

		Not at all	A little	A moderate amount	Very much	An extreme amount
3(F1.4)	To what extent do you feel that physical pain prevents you from doing what you need to do?	1	2	3	4	5
4(F11.3)	How much do you need any medical treatment to function in your daily life?	1	2	3	4	5
5(F4.1)	How much do you enjoy life?	1	2	3	4	5
6(F24.2)	To what extent do you feel your life to be meaningful?	1	2	3	4	5

		Not at all	A little	A moderate amount	Very much	An extreme amount
7(F5.3)	How well are you able to concentrate	1	2	3	4	5
8(F16.1)	How safe do you feel in your daily life?	1	2	3	4	5
9(F22.1)	How healthy is your physical environment?	1	2	3	4	5

The following questions ask about **how completely** you experience or were able to do certain things in the last two weeks.

		Not at all	A little	Moderately	Mostly	Completely
10(F2.1)	Do you have enough energy for everyday life?	1	2	3	4	5
11(F7.1)	Are you able to accept your bodily appearance?	1	2	3	4	5
12(F18.1)	Have you enough money to meet your needs?	1	2	3	4	5
13(F20.1)	How available to you is the information that you need in your day-to-day life?	1	2	3	4	5
14(F21.1)	To what extent do you have the opportunity for leisure activities?	1	2	3	4	5

		Very Poor	Poor	Neither Poor nor Good	Good	Very Good
15(F9.1)	How well are you able to get around?	1	2	3	4	5

The following questions ask you to say how **good or satisfied** you have felt about various aspects of your life over the last two weeks.

		Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very Satisfied
16(F3.3)	How satisfied are you with your sleep?	1	2	3	4	5
17(F10.3)	How satisfied are you with your ability to perform your daily living activities?	1	2	3	4	5
18(F12.4)	How satisfied are you with your capacity for work?	1	2	3	4	5
19(F6.3)	How satisfied are you with yourself?	1	2	3	4	5
23(F17.3)	How satisfied are you with the conditions of your living space?	1	2	3	4	5
24(F19.3)	How satisfied are you with your access to health services?	1	2	3	4	5

25(F23.3)	How satisfied are you with your transport?	1	2	3	4	5

The following question refers to **how often** you have felt or experienced certain things within the last two weeks.

		Never	Seldom	Quite Often	Very Often	Always
26(F8.1)	How often do you have negative feelings such as blue mood, despair, anxiety, depression?	1	2	3	4	5

Did someone help you fill out this form? _____

How long did it take to fill this form out? _____

Do you have any comments about the assessment?

_____

_____

_____

_____

_____

THANK YOU FOR YOUR HELP

APPENDIX G

Self-Advocacy Scale for Empowerment

SA1 Demonstrates self-understanding: Demonstrates an understanding of personal strengths and challenges that contribute to academic and employment progress

- N/A (0)
- 1 (poor) - Student does not describe personal strengths or challenges. (1)
- 1.5 (1.5)
- 2 (fair) - Student can describe some strengths or challenges with staff prompts. (2)
- 2.5 (2.5)
- 3 (good) - Student can describe most strengths and challenges with staff prompts. (3)
- 3.5 (3.5)
- 4 (excellent) - Student accurately and independently describes personal strengths and challenges. (4)

SA2 Utilizes Empowerment supports: Proactively seeks and utilizes assistance from Empowerment Staff.

- N/A (0)
- 1 (poor) - Student's request for assistance from Empowerment staff is reactive or not apparent. (1)
- 1.5 (1.5)
- 2 (fair) - Student's request for assistance from Empowerment Staff is moderately proactive (e.g. after academic concerns arise) with staff support. (2)
- 2.5 (2.5)
- 3 (good) - Student's request for assistance from Empowerment Staff is proactive and effective (e.g. before academic concerns arise) with staff support. (3)
- 3.5 (3.5)
- 4 (excellent) - Student independently requests assistance that is proactive and effective. (4)

SA3 Communicates clearly with instructors/supervisors: Communicates with university faculty and/or employment supervisors to clarify academic/employment expectations.

- N/A (0)
- 1 (poor) - Student does not approach faculty/employers to clarify academic/employment expectations. (1)
- 1.5 (1.5)
- 2 (fair) - Student occasionally approaches faculty/employers to clarify academic/employment expectations when prompted. (2)
- 2.5 (2.5)
- 3 (good) - Student usually approaches faculty/employers to clarify academic/employment expectations when prompted. (3)
- 3.5 (3.5)

- 4 (excellent) - Student independently approaches faculty/employers to clarify academic/employment expectations. (4)

SA4 Utilizes RDS services: Effectively utilizes ADA accommodations to support academic/employment progress.

- N/A (0)
- 1 (poor) - Student denies need for, or is uninterested in, ADA accommodations. (1)
- 1.5 (1.5)
- 2 (fair) - Student occasionally requests and/ or utilizes needed ADA accommodations with staff support. (2)
- 2.5 (2.5)
- 3 (good) - Student usually requests and/ or utilizes needed ADA accommodations with staff support. (3)
- 3.5 (3.5)
- 4 (excellent) - Student independently and appropriately utilizes needed ADA accommodations. (4)

SA5 Demonstrates initiative: Requests/ informs university faculty/employers of ADA accommodations.

- N/A (0)
- 1 (poor) - Student does not request/ inform faculty/employers of ADA accommodations. (1)
- 1.5 (1.5)
- 2 (fair) - Student occasionally requests/ informs faculty/employers of ADA accommodations with staff support. (2)
- 2.5 (2.5)
- 3 (good) - Student usually requests/ informs faculty/employers of ADA accommodations with staff support. (3)
- 3.5 (3.5)
- 4 (excellent) - Student consistently and independently requests/ informs faculty/employers of ADA accommodations. (4)

SA6 Demonstrates effective communication and assertiveness skills: Demonstrates the communication and assertiveness skills needed to foster healthy interpersonal relationships.

- N/A (0)
- 1 (poor) - Student demonstrates mostly ineffective communication and assertiveness skills. (1)
- 1.5 (1.5)
- 2 (fair) - Student demonstrates somewhat effective communication and assertiveness skills with clinician prompts. (2)
- 2.5 (2.5)
- 3 (good) - Student demonstrates mostly effective communication and assertiveness skills with or without clinician prompts. (3)
- 3.5 (3.5)

- 4 (excellent) - Student consistently and independently demonstrates effective communication and assertiveness skills. (4)

SA7 Demonstrates effective conflict resolution and emotional (e.g. anxiety, anger, sadness) management skills: Demonstrates the conflict resolution and emotional management skills needed to foster healthy interpersonal relationships.

- N/A (0)
- 1 (poor) - Student demonstrates mostly ineffective conflict resolution and emotional management skills. (1)
- 1.5 (1.5)
- 2 (fair) - Student demonstrates somewhat effective conflict resolution and emotional management skills with clinician prompts. (2)
- 2.5 (2.5)
- 3 (good) - Student demonstrates mostly effective conflict resolution and emotional management skills with or without clinician prompts. (3)
- 3.5 (3.5)
- 4 (excellent) - Student consistently and independently demonstrates effective conflict resolution and emotional management skills. (4)

Comments Please add any additional comments about how assigning a score for a particular item or items for this student was or was not challenging for you: