Fostering Disability Pride to Promote Self-advocacy and Career Adaptability in Young Adults with Autism: A Randomized Controlled Trial of Internet-based Intervention

by

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DEDICATION

I dedicate this dissertation to

My parents,

who always encouraged me to do my best and provided me with boundless love over the years.

My late grandmother,

to whom I will remain forever indebted.

All my mentors,

This work would not have been possible without your guidance and support.

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Abstract

Positive identity development is essential for young adults with disabilities to achieve meaningful societal inclusion (Forber-Pratt et al., 2017; Mueller, 2021; Schwartz et al., 2013). Autistic young adults often encounter stigma, prejudice, and discrimination, which can lead to internalized negative beliefs and poorly developed disability and vocational identities (Corby et al., 2019; Han et al., 2022; Richard & Hennekam, 2021; Yanchak et al., 2005). These challenges contribute to significantly lower employment rates among individuals with autism spectrum disorder (ASD) than among those with other disabilities (Lee et al., 2024a; Roux et al., 2013).

This study examined whether fostering Disability Pride can counter internalized stigma, promote a more positive self-concept, and build political advocacy skills that support adaptive career behaviors. To this end, an internet-based program—the Autism & Disability Advocacy, Pride Training (ADAPT)—was developed. A parallel two-arm randomized controlled trial with pre- and post-tests was conducted to evaluate the effectiveness of this intervention in autistic young adults. Based on self-determination theory (Deci & Ryan, 2008), the intervention was designed to strengthen disability identity, increase socio-political awareness, and enhance advocacy skills relevant to workplace and community settings. The results demonstrated that the ADAPT intervention significantly improved advocacy engagement, disability identity development, and career adaptability, particularly among participants with a moderate baseline readiness for change.

Findings revealed that the interaction between disability identity and self-advocacy serves as a key mechanism in promoting autonomy, competence, and relatedness, aligning with the core principles of self-determination. While participants exhibited the greatest gains in behavioral and skill-based outcomes, more enduring attitudinal changes may require longer-term or more intensive interventions. This study contributes to the limited but growing body of empirical research on Disability Pride and provides evidence that structured, identity-affirming interventions can empower autistic young adults to navigate the transition to employment and engage more fully in their communities and society. The findings also underscore the importance of tailoring interventions to individuals' awareness, acceptance, and readiness to foster meaningful and lasting changes.

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CHAPTER 1: INTRODUCTION

Autism Spectrum Disorder (ASD) is a neurodevelopmental disability characterized by unique patterns of interests, preferred activities, repetitive behaviors, and differences in social communication and interaction (American Psychiatric Association, 2023). In the U.S., the Centers for Disease Control and Prevention (CDC) reported that one in 36 children across all racial, ethnic, and socioeconomic groups is diagnosed with ASD (Maenner et al., 2023). Whereas 16.2% of the children aged 3-17 between 2009 and 2011 were diagnosed with a developmental disability, 17.8% of the children in the same age range were diagnosed in 2015-2017. Among developmental disabilities, autism had the highest increase in the rate of diagnosis, with 1.1% diagnosed to 2.5% diagnosed during the respective periods (Zablotsky et al., 2019). As more children are diagnosed with autism, there is a drastic increase in the number of youths transitioning into emerging adulthood (Roux et al., 2015, 2017).

In a seminal work, Arnett (2000) referred to the developmental stage in which an individual typically transitions from adolescence to postsecondary education or employment as emerging adulthood. Emerging adults, typically conceptualized as ages 18 to 26, are often tasked with major developmental and psychosocial milestones, such as the exploration of new social identities (e.g., employee, citizen), decision-making around careers and relationships, and transition into new roles and responsibilities (Schwartz et al., 2013). This phase encompasses substantial changes in social and vocational contexts, which can be overwhelming for many. Nonetheless, these tasks are essential for emerging adults as they make career decisions and navigate society as citizens (Schwartz et al., 2013).

Gainful employment offers many benefits for emerging adults, leading to skill development, financial independence, social integration, and a sense of purpose (Bonaccio et al., 2020). For individuals with disabilities, employment is not merely a source of income; it plays a pivotal role in rehabilitation, bolstering independence, and a positive sense of self within society (Strauser, 2014; Tomlinson & Jackson, 2021). However, a significant and persistent employment gap exists between individuals with and without disabilities, particularly among young adults with ASD transitioning into the workforce (Roux et al., 2013, 2018, 2019).

Civic and political engagement are crucial for a healthy democracy and the well-being of young adults transitioning into society (Burke et al., 2021). Civic action and engagement, such as voting, volunteering, lobbying for policy change, contacting government officials, and joining advocacy groups, predict positive youth development (Hawkins et al., 2009). Civic engagement empowers young people to advocate for their rights, influence policies and contribute to their communities. However, recent trends show a decline in civic engagement among young people, particularly those from marginalized groups, such as individuals with disabilities (Martyn & Dimitra, 2019; Sloam, 2014). This disengagement can lead to disenfranchisement and a lack of representation in decision-making processes. As these are learned skills through experience, education, and support from parents and caregivers, it is essential to provide resources and opportunities for youth with autism to develop their civic engagement and political advocacy skills (Benson et al., 2011).

Negative attitudes towards disability, both from society and internalized by individuals with disabilities, present significant barriers to the development of a positive disability, civic and political engagement, and the development of a robust career identity. These attitudes can manifest as self-stigma, where individuals internalize societal prejudices, leading to feelings of shame, inadequacy, and low self-worth (Rüsch et al., 2009). Such negative self-perceptions can undermine self-efficacy and limit aspirations, hindering the exploration and pursuit of fulfilling career paths (Santuzzi et al., 2014). Internalized stigma is often associated with the concealment of disability, further isolating individuals and preventing them from accessing necessary support and resources (Link & Phelan, 2001).

Internalized stigma, particularly among individuals with intellectual and developmental disabilities (IDD), has been shown to significantly compromise self-determination (Sinclair et al., 2024; Wehmeyer, 2020). It can erode self-worth, diminish the quality of life, and disrupt the development of essential behaviors needed to navigate employment, relationships, and community engagement. Self-Determination Theory (SDT; Deci & Ryan, 2008) offers a valuable framework for understanding how stigma undermines the fulfillment of basic psychological needs (i.e., autonomy, competence, and relatedness) that are foundational to self-directed action and well-being. When individuals internalize negative societal messages, they may experience chronic need thwarting, leading to disengagement, low motivation, and a negative impact on quality of life (Jahoda et al., 2010; Wehmeyer, 2020). Stigmatizing experiences at intrapersonal, interpersonal, and institutional levels not only impede personal growth but also constrain civic and vocational participation (Sinclair et al., 2024). Conversely, environments that actively support autonomy and relatedness through inclusive policies, affirming relationships, and opportunities for meaningful contribution can buffer the adverse effects of stigma. As societies become increasingly diverse and interconnected, addressing stigma through needs-supportive practices remains critical for research and intervention design. SDT provides a valuable theoretical foundation for this study (Ryan & Moore, 2023). Interventions that challenge negative attitudes, promote self-acceptance, and provide opportunities for meaningful work experiences are crucial for fostering positive disability and career identity.

Statement of the Problem

Negative societal attitudes and stigma present significant barriers for young adults with autism, impeding their full integration into society and the workforce (Scott et al., 2015). Despite momentous legislation such as the Americans with Disabilities Act of 1990 (ADA), the ADA Amendment Act of 2008 (ADAAA), and support for transition-aged youths under the Workforce Innovation and Opportunity Act (WIOA; 2014), youths with disabilities still experience poor employment outcomes (Carlson, 2022). The persistent societal bias and internalized stigma that many individuals with autism experience continue to hinder their acceptance within the community and limit their ability to achieve their full potential (Han et al., 2022; Harmens et al., 2022).

The failure to integrate transition-age young adults with autism into society due to persistent stigma and negative attitudes can lead to significant personal, economic, and social costs for society. The isolation that stems from societal exclusion can exacerbate mental health issues such as depression and anxiety (Botha & Frost, 2020), which are already more prevalent in individuals with autism compared to the general population (Gillberg et al., 2016). This isolation may also result in reduced life skills, heightened vulnerability, and diminished capacity for independent living, thereby perpetuating the cycle of dependency and exclusion (James et al., 2017).

The consequences extend beyond individuals directly affected by societal biases and prejudices. When these young adults are not integrated into the workforce and social networks, their potential to contribute economically and socially is largely untapped, which not only affects their personal development and self-esteem but also has broader economic implications (Doyle et al., 2022). Unemployment and underemployment among this population lead to an unnecessarily high dependence on social services. However, economic costs pale in comparison to social costs. Societal attitudes that foster stigma and discrimination against individuals with autism can contribute to a culture of intolerance, limiting the richness of diversity within community settings and workplaces. This lack of diversity can prevent organizations and societies from fully benefiting from the unique perspectives and talents that individuals with autism can offer (Doyle et al., 2022).

Building a positive disability identity is crucial for combating internalized stigma among individuals with disabilities. It reshapes how individuals perceive themselves and influences their societal perceptions. Internalized stigma, where individuals accept negative beliefs and stereotypes about their disabilities as true, can significantly impede personal and social development (Sheehan & Ali, 2016). By fostering a positive disability identity, individuals can reject these stereotypes and embrace and celebrate their unique attributes and capabilities (Nario-Redmond et al., 2013). This self-acceptance is vital for developing self-esteem and resilience against social discrimination.

Moreover, a strong, positive disability identity can also alter meta-perceptions, which are the assumptions individuals believe others hold about them (Bogart, 2023). When people with disabilities display confidence and pride in their identity, it challenges the dominant society's preconceived notions and stereotypes of them. This visibility and assertiveness in identity politics can catalyze broader societal shifts (Anspach, 1979; Putnam, 2005). It increases public awareness and encourages the reevaluation of existing attitudes towards disability, promoting more inclusive attitudes and policies. When individuals collectively embrace and express their positive identities related to disabilities, it can drive substantial social change. This collective effort can challenge and reshape deep-rooted societal perceptions of disability, ultimately promoting a more inclusive society that appreciates diversity and the contributions of every individual.

Purpose of the Study

Although emerging research suggests that embracing a neurodiversity-affirming narrative is associated with higher self-esteem and stronger disability identity development (Corden et al., 2021; Gallo et al., 2016; Harmens et al., 2022; Teti et al., 2016), it remains unclear whether endorsement of Disability Pride directly shapes how autistic young adults perceive themselves and their capacity for advocacy. Additionally, prior studies have indicated that self-advocacy skills acquired in one domain (e.g., education) often generalize to others, such as employment or community engagement (Roberts et al., 2016; Zhang et al., 2019). Building on this foundation, the current study explores whether the development of disability Pride and positive identity translates to broader outcomes in political advocacy and career adaptability.

To answer this question, a randomized controlled trial (RCT) was conducted to assess the effectiveness of an Internet-based training program for young adults with autism. This intervention, called the Autism & Disability Advocacy, Pride Training (ADAPT) program, aimed at nurturing autism Pride, enhancing self-advocacy skills, and promoting a positive disability identity rooted in the principles of self-determination and the affirmative model of disability. Specifically, the program sought to boost participants' confidence and ability to advocate for themselves in both civic and vocational settings by focusing on three interconnected areas: disability identity development, advocacy skill building, and career adaptability.

First, the intervention aimed to promote a positive disability identity by challenging internalized stigma and encouraging participants to view autism and disability as valuable aspects of human diversity. Educational modules highlight the contributions of individuals with autism and disabilities while advancing social (Oliver, 1980) and affirmative (McCormack & Collins, 2012) models of disability. Through this approach, the program sought to foster self-acceptance, Disability Pride, and a sense of belonging within the broader disability community.

Second, recognizing the empowering role of civic engagement (Brady et al., 2020; Burke et al., 2021; Schur & Adya, 2013), the training provided instructions on sociopolitical participation and legislative advocacy. Participants were introduced to foundational concepts of disability rights, policies, and political participation. The intervention taught practical tools for articulating their needs and participating in decision-making through legislative advocacy. By developing these advocacy skills, participants were positioned not only to advocate for themselves but also to contribute meaningfully to collective efforts toward social change.

Third, the program addressed career adaptability by equipping participants with the knowledge and strategies necessary to navigate workplace challenges and to promote their own success. The modules focused on identifying vocational strengths, understanding legal protections (e.g., reasonable accommodation), and building confidence in requesting support. By developing self-advocacy skills specific to employment contexts, the intervention supported the formation of a strong vocational identity that aligned with participants' values and goals.

This advocacy and Pride training intervention represents a multifaceted, empowerment-focused approach designed to affirm identity and promote self-determination during the pivotal transition to adulthood. By integrating Disability Pride, advocacy skill development, and career adaptability, the program aimed to support autistic young adults in becoming confident self-advocates and active participants in their communities. This comprehensive framework has the potential to foster both personal growth and systemic change, enabling participants to lead fulfilling and self-directed lives.

Theoretical Framework

Self-Determination Theory

Self-Determination Theory (SDT; Deci & Ryan, 2008) is a psychological framework that underscores the essential roles of *autonomy, competence,* and *relatedness* in human motivation, personal growth, and well-being. Within SDT, autonomy is defined as the experience of having control and ownership over one's decisions and actions; competence involves feeling capable and effective in engaging with the environment; and relatedness signifies the need to establish meaningful connections and experience acceptance from others. When these three psychological needs are met, individuals often experience heightened intrinsic motivation, better mental health, and improved overall functioning. On the other hand, when these needs are not satisfied, individuals may face reduced motivation, lower self-esteem, and a decline in psychological well-being.

The ADAPT intervention aligns coherently with the self-determination theoretical framework by integrating disability identity development models, evidence-based self-advocacy instructional models, and participatory principles. In developing the ADAPT intervention, Disability Pride is conceptualized as a powerful mechanism to counter internalized stigma. The ADAPT program promotes a positive self-concept guided by self-determination theory, emphasizing autonomy, competence, and relatedness as fundamental psychological needs that are critical to motivation and well-being. While internalized stigma, characterized by the absorption and internal acceptance of negative societal attitudes toward disability, significantly undermines self-worth and impedes personal growth, Disability Pride can foster a counter-narrative by encouraging individuals to embrace disability as a valuable and integral aspect of their identity.

This positive reframing is closely aligned with the concept of autonomy, empowering individuals to take ownership of their identities and resist societal pressure to conform to ableist norms. It also enhances competence, as participants begin to recognize and utilize their unique strengths and capabilities, particularly through active involvement in advocacy, leadership, and community engagement. Finally, relatedness is fostered through meaningful connections within a broader disability community, which validates individual experiences and provides a supportive environment that promotes a sense of belonging. By addressing these three essential psychological needs, Disability Pride facilitates a shift from shame to pride, reinforcing a stronger sense of self and enabling individuals to lead more empowered and fulfilling lives. Furthermore, by engaging autistic participants in co-creating and refining the curriculum, ADAPT was developed in accordance with neurodiversity-affirming and participatory research methodologies.

Disability Identity Development and Pride

Disability identity development is an intricate and prolonged process that often unfolds over many years and features multiple dimensions that can lead to positive outcomes, despite their diverse manifestations (Darling & Heckert, 2010; Forber-Pratt et al., 2017). While different models of disability identity development vary in their specifics, there is consensus that key components include self-awareness, acceptance of one’s disability, and meaningful engagement with the disability community (R. B. Darling & Heckert, 2010; Forber-Pratt & Zape, 2017; Gill, 1997; Nario-Redmond et al., 2013). These components form a developmental pathway that can culminate in Disability Pride: a confident, affirming sense of self that is rooted in disability identity and collective belonging.

Deep self-awareness is fundamental in this process. It involves recognizing one’s strengths and limitations, understanding how societal biases shape perceptions of disability, and reframing those perceptions through the lens of self-acceptance and resilience. In this context, acceptance is not a resignation but a transformative acknowledgment of disability as an important part of one’s identity. Connections with the community are equally important. Engaging with others who share similar experiences fosters validation, solidarity, and opportunities to co-create cultural narratives that resist marginalization. This sense of belonging reinforces Pride and empowers individuals to define themselves outside of deficit-based frameworks (Darling, 2013; Gill, 1997).

Disability Pride, as defined and championed by leaders within disability communities, reflects a confident and affirmed sense of self, as well as active participation in the broader disability rights movement. Historically, disabled activists and self-advocates have been at the forefront of social change, challenging oppressive systems, advancing legal rights, and creating spaces for authentic representation and inclusion. Viewed through the lens of the psychosocial model of disability identity development (Forber-Pratt & Zape, 2017), Disability Pride represents not only a static identity, but also the culmination of a dynamic, multi-stage developmental process.

Disability identity development models emphasize key psychosocial components (e.g., self-awareness, acceptance, and connection to the community) that contribute to a positively integrated sense of self as a disabled person. Reframing Disability Pride as the *product* of successfully navigating these developmental stages deepens our understanding of Pride as an achievable, scaffolded outcome. This perspective also provides a roadmap for designing intentional interventions that promote Pride by targeting emotional, cognitive, and behavioral dimensions through structured, learnable activities. For example, cultivating Disability Pride may involve providing tools and knowledge that affirm diverse abilities, exposing individuals to the disability rights movement, and fostering community connections. These experiences support participants in developing more empowered narratives about disability, fueling greater self-advocacy, civic engagement, and leadership. Even if broad societal change is gradual, individuals can begin to reshape narratives on a personal level, challenging internalized stigma, affirming disability as an aspect of human diversity, and asserting their right to be seen and heard. In doing so, they lay the groundwork for cultural transformation and social inclusion.

Watson (2002) underscores that disability identity is not about denying impairment, but about redefining what is considered “normal.” This reframing aligns closely with the principles of the neurodiversity movement, a foundational element of this advocacy and Pride training program. Neurodiversity recognizes neurological differences, such as autism, not as deficits but as natural variations in human cognition and behavior. The movement has played a powerful role in shifting public discourse, particularly through digital storytelling platforms like blogs, vlogs, and social media content created by autistic individuals (Angulo-Jiménez & DeThorne, 2019; Davidson, 2008; Welch et al., 2022). These online spaces provide critical opportunities for identity expression, community building, and resistance to pathologizing narratives. Preliminary qualitative research suggests that exposure to these empowering narratives supports more positive identity formation in autistic youth (Cooper et al., 2021; Corden et al., 2021).

Darling’s (2013) model of disability orientation offers a useful lens for conceptualizing autism Pride. It frames disability identity in three dimensions: (1) identity (shame vs. pride), (2) model (medical vs. social), and (3) role (passive vs. active). When understood as a positive attitudinal stance, autism Pride represents a deliberate rejection of deficit-based frameworks and an embrace of disability as an identity to be valued. Borrowing from the tripartite model of attitudes (Rosenberg & Hovland, 1960), Disability Pride can be broken down into three components: (1) the affective component reflects positive emotions, such as appreciation, respect, and joy, toward one's disability, the disability community, and disability culture; (2) the cognitive component includes beliefs consistent with the affirmative model of disability (Swain & French, 2000), such as valuing lived experiences and embracing neurodiversity; and (3) the behavioral component involves active participation in self-advocacy and, for some, public or collective activism in disability rights efforts.

When identity development is supported through structured learning, community engagement, and exposure to affirming narratives, individuals are more likely to progress toward Disability Pride. Thus, it can be seen as a measurable and achievable outcome that reflects the integration of self-awareness, acceptance, community belonging, and empowerment. In turn, Pride serves as a powerful protective factor against internalized stigma and a catalyst for self-determination and systemic change.

Test and Colleagues' (2005) Model of Self-Advocacy

The ADAPT intervention utilized the self-advocacy model developed by Test et al. (2005) to shape and guide its learning objectives. In a seminal study, Test et al. (2005a) reviewed 25 articles spanning various disability populations, and identified four essential components of self-advocacy: understanding one's rights, self-awareness, effective communication, and leadership. According to Test et al. (2005b), individuals must first develop *self-knowledge*, understanding their strengths, weaknesses, and needs, before effectively communicating those needs to others. This self-awareness is critical for developing strategies to address weaknesses and capitalize on one's strengths (Daly-Cano et al., 2015). Furthermore, self-awareness is crucial for self-acceptance and interpersonal relationships (Daly-Cano et al., 2015). It can help reduce negative emotions, defensiveness, and self-blame while promoting positive feelings such as happiness and forgiveness (Stuntzner & Harley, 2015). A strong sense of self-awareness allows individuals to navigate challenges more effectively, advocate for their needs, and build healthier relationships, ultimately contributing to their overall well-being and success in various aspects of their lives.

Additionally, individuals must acquire *knowledge of their rights* in different settings to advocate effectively. This involves explicitly learning about the rights to which individuals are entitled in their workplace and community settings. Understanding these rights is essential for effective advocacy and as a protective measure against potential abuse by those in authority. *Knowledge of rights* equips individuals with specific strategies for addressing rights violations, ensuring that they can access the resources and support to which they are entitled. Students, for instance, should understand their right to quality education and seek help when needed, as greater knowledge in this area often translates to more successful self-advocacy (Test & Walker, 2011). Moreover, learning about rights extends beyond the realm of personal protection. This fosters a broader understanding of societal roles and responsibilities (Kwok, 2008).

Test et al. (2005b) identified *communication* as a vital component of self-advocacy, emphasizing the need for individuals to articulate their needs and rights effectively. This ability to communicate clearly and confidently empowers individuals to negotiate their needs, leading to increased engagement and enthusiasm in the classroom (Test & Walker, 2011). The *communication* component also extends to peer interactions, as peers can be valuable resources for self-advocacy (Test & Walker, 2011). Effective communication involves not only expressing one's needs but also listening, negotiating, and reaching a mutual understanding, thereby enhancing overall social competency (Shore, 2004). This comprehensive approach to communication skills strengthens self-advocacy and fosters positive interactions and relationships in various social contexts.

Finally, *leadership* skills enable individuals to advocate for themselves and others, representing a natural progression in self-advocacy development. This component is particularly crucial in decision-making processes within group settings, as strong leadership skills foster positive relationships among group members and facilitate an understanding of different roles (Pennell, 2001). Leadership training promotes self-management skills and independence, enabling individuals to take initiative and act as change agents (Martin et al., 1993). Furthermore, developing leadership skills fosters assertiveness, a key attribute for advocating for oneself and others in various contexts. By cultivating leadership qualities, individuals with disabilities can become more confident and effective advocates for their needs and those of the broader community.

Significance of Study

This study examined the effectiveness of an intervention that implemented disability and Autism Pride concepts to improve self-advocacy at work and political engagement among young adults with autism. The present study contributes to the evidence base of self-advocacy interventions and to the current knowledge and understanding of Pride among young adults with ASD. The study also has important implications for the employment and civic and political engagement of young autistic people, which are major psychosocial tasks during this transition period.

This intervention study is anticipated to yield multiple levels of impact. First, community participants are expected to develop self-advocacy skills to address social issues and enhance their ability to advocate for themselves in postsecondary education or employment settings. Through this program, they will have the opportunity to connect with peers who share similar experiences, seek mentors, and serve as mentors in their respective communities. Second, the project is immediately scalable, as an online platform will be established to disseminate resources and training materials, allowing for expansion. If successful, the intervention may transition to a fully virtual and asynchronous model, adapting to the needs and preferences of the participants. Finally, the third level of impact revolves around the broader societal benefits of nurturing future advocates for autism. By enhancing advocacy capacity, the intervention is poised to foster community growth and promote a more significant societal impact through training and education of advocates.

Programs aimed at fostering a positive disability identity present a new perspective on self-advocacy. This study employed a participatory, social, and cultural framework that acknowledges individuals' lived experiences and encourages involvement in disability culture and communities. On a personal level, engaging in autism communities can result in a shared sense of belonging, unity, and drive to contribute to the group. These feelings of connection can further enhance their advocacy and leadership abilities. On a broader societal scale, it is crucial to bring together minoritized groups to amplify their collective voices, thereby achieving political empowerment and driving social change.

Finally, this investigator acknowledges the heterogeneity of the disability community, recognizing that the term "disability community" is a collective label that encompasses a wide range of diverse and unique experiences. There is no single, universal disability experience, and individuals sharing the same diagnosis may have vastly different perspectives and needs. This acknowledgment underscores the importance of valuing the diversity of experiences within the disability community and avoiding generalizations or assumptions that could erase or diminish the voices of individuals. Furthermore, this investigator positions participation in advocacy and engagement with the disability community as a personal choice, respecting the autonomy of individuals with disabilities to determine their level of involvement based on their unique circumstances and preferences.

Research Questions and Hypotheses

Research Question 1: Does the Autism and Disability Advocacy, Pride Training (ADAPT) intervention improve self-acceptance of autism for the treatment group participants compared to the control group?

Hypothesis 1: Treatment group participants report gains in the *Autism Acceptance Scale (AAS)* from baseline to post-intervention compared with the control group.

Research Question 2: Does the ADAPT intervention improve the evaluation of their social identity as autistic persons for the treatment group compared to the control group?

Hypothesis 2: Treatment group participants report gains on the adapted *collective self-esteem scale (CSES)* from baseline to post-intervention compared with the control group.

Research Question 3: Does the ADAPT intervention increase treatment group participants' confidence in socio-political advocacy compared to the control group?

Hypothesis 3**:** Treatment group participants report gains in the adapted *Social Issues Advocacy Scale (SIAS)* from baseline to post-intervention compared with the control group.

Research Question 4: Does participation in the ADAPT intervention improve participants' internal attitude toward disability and endorsement of the affirmative model of disability?

Hypothesis 4**:** Treatment group participants report gains in the *Pride and Social Model Subscales of the Questionnaire on Disability Identity and Opportunity (QDIO)* scale from baseline to post-intervention compared with the control group.

Research Question 5: Does participation in the ADAPT intervention improve integration of disability into participants' overall self-concept and sense of belonging within disability community?

Hypothesis 5: Treatment group participants report gains in the *Disability Identity Development Scale (DIDS)* from baseline to post-intervention compared with the control group.

Research Question 6: Does the ADAPT intervention improve participants' confidence in their ability to assert themselves in the workplace to protect their interests and needs?

Hypothesis 6: Treatment group participants report gains in the *self-assertiveness efficacy at workplace advocacy scale (SAE-W)* from baseline to post-intervention compared with the control group.

Research Question 7: Does participation in the ADAPT intervention improve career adaptability (i.e., readiness and perceived resources to cope with current and anticipated tasks, uncertainties, and challenges in occupational roles)?

Hypothesis 7: Treatment group participants report gains in the *career adaptability scale (CAAS)* from baseline to post-intervention compared with the control group.

CHAPTER 2: LITERATURE REVIEW

Identity Development in Emerging Adulthood

Emerging adulthood is a critical developmental period marked by heightened introspection, identity exploration, and consideration of future possibilities (Reifman & Niehuis, 2023). This transitional phase, spanning roughly from ages 18 to 26, is associated with both opportunity and uncertainty, as individuals navigate the shift from adolescence to adulthood. Erik Erikson’s psychosocial theory remains foundational to understanding identity development during this stage. Erikson (1950) posited that the central task of emerging adulthood is to resolve the conflict between identity confusion, characterized by uncertainty and internal inconsistency, and identity synthesis, which reflects a stable, coherent sense of self (Potterton et al., 2022). James Marcia (1966) expanded on this model by introducing the constructs of exploration and commitment, which represent active processes through which individuals consider and adopt various identity options. More recently, neo-Eriksonian models have provided a refined understanding of identity development, emphasizing the dynamic interplay between different exploration and commitment strategies over time (Crocetti et al., 2008; Luyckx et al., 2008). These frameworks underscore that identity formation is not a one-time event but a fluid recursive process that is particularly salient during emerging adulthood.

Disability, Stigma, and Challenges of Identity Formation

Although identity development is complex for all young adults, those with disabilities face unique challenges. According to the 2019 Behavioral Risk Factor Surveillance System (BRFSS) data, approximately one in four adults (26.8%) reported having a disability (Varadaraj et al., 2021). As the largest minoritized social group, disability differs from many other marginalized identities in its "open membership": anyone can acquire a disability at any point in life, and the likelihood of doing so increases with age. Despite its ubiquity, disability is often stigmatized and misunderstood, resulting in systemic exclusion and persistent discrimination.

Despite its prevalence, disability is often stigmatized, resulting in systemic exclusion, social isolation, and discrimination. Negative societal attitudes are frequently internalized, giving rise to self-stigma, in which individuals absorb and believe in devaluing stereotypes about disability (Sheehan & Ali, 2013; 2016). Self-stigma obstructs the development of a positive disability identity, instead promoting shame, inadequacy, and diminished aspirations. This internal conflict can hinder the formation of a coherent sense of self during a critical development period.

The effects of stigma are especially profound for young people with neurodevelopmental disabilities such as autism. For these individuals, self-stigma may manifest as beliefs like “I am incapable” or “I do not belong,” undermining self-esteem and leading to secrecy, shame, and social disengagement (Vogel et al., 2007; Han et al., 2022). Empirical research has consistently shown that students with cognitive and neurodevelopmental disabilities report lower self-concept and self-efficacy across domains including physical appearance, social competence, and academic performance (Elbaum & Vaughn, 2001; Freer, 2023; Lackaye et al., 2006; Mason et al., 2021).

Employment and Civic Engagement: Domains of Identity Expression

Employment and Identity Development

Securing and maintaining employment is a critical milestone in the transition to adulthood. The benefits of work are numerous. Work is essential for emerging adults as it provides financial independence and fosters crucial skills development, social integration, and a sense of purpose, laying the groundwork for future success and well-being (Bonaccio et al., 2020). Employment is often an important rehabilitation goal for individuals with disabilities (Strauser, 2014). There is a persistent and substantial employment gap between individuals with and without disabilities, a gap that is even more pronounced among transition-age young adults entering the workforce. Despite advancements in disability rights and inclusion efforts, data from the U.S. Bureau of Labor Statistics (2023) reveals that the employment rate for people with disabilities remains significantly lower than for their non-disabled peers: In 2023, only 22.5% of individuals with disabilities aged 16-64 were employed, significantly lower compared to the 65.8% for those without disabilities. This disparity is more pronounced among young adults, where the employment rate for individuals with disabilities aged 20-24 was only 32.3%, compared to 71.8% for their non-disabled counterparts. Young adults with intellectual and developmental disabilities experience even worse employment outcomes (Castruita Rios et al., 2023). Only about half of all young adults with ASD ever work for pay within six years of graduating high school in the U.S. (Roux et al., 2013). Furthermore, the National Longitudinal Transition Study-2 (NLTS2) reported that among individuals with IDD, those with autism were less likely to secure employment than their counterparts with learning disabilities, speech/language disabilities, mood disorders, and intellectual disabilities (Roux et al., 2013). For young adults on the autism spectrum who worked, nearly 80% worked part-time and earned lower wages compared to their counterparts with other disabilities (Roux et al., 2015).

Employment not only fosters financial stability and independence but also robust and positive identity development as an adult in U.S. society (Tomlinson & Jackson, 2021). Despite some indications of positive attitudes toward hiring individuals with disabilities, a review of the literature revealed that underlying negative attitudes and beliefs among employers persist (J. Burke et al., 2013). Disability diagnosis, especially cognitive disability diagnosis, negatively impacted employers' hiring decisions, and candidates without disabilities were often rated as more employable (Millington et al., 1994; Bricout & Bentley, 2000). Additionally, surveys have indicated that HR personnel and employers, particularly from small businesses, express concerns about costs, safety, and the capabilities of workers with disabilities, resulting in significant barriers to their employment (McFarlin et al., 1991; Harrison, 1998; Fraser et al., 2010; Domzal et al., 2008). Yanchak and colleagues (2005) posit that persons with disabilities often encounter difficulty forming a secure vocational identity because of self-identity issues rather than decision-making problems. Intellectual and developmental disabilities (IDD) are often more stigmatized than other disabilities, such as sensory or physical disabilities (Babik & Gardner, 2021). This negative perception is heightened in employment settings, where vocational expectations make intellectual disabilities more salient and impactful for acceptance.

Civic Engagement and Social Participation

Civic and political engagement are the cornerstones of a thriving democracy, particularly in the United States. As youth transition into adulthood, their participation in civic life becomes crucial for the well-being of both individuals and society (Burke et al., 2021). By engaging in activities such as voting, volunteering, and advocating for change, young adults not only ensure the protection of their civil rights but also contribute to shaping a fair and just society (Alegría et al., 2022; Barrett & Pachi, 2019). Civic engagement empowers individuals to voice their concerns, hold elected officials accountable, and influence policies that directly impact their lives (Barrett & Pachi, 2019).

However, recent trends indicate a concerning decline in civic and political engagement among young people (Martyn & Dimitra, 2019; Sloam, 2014). This disengagement can have detrimental consequences, leaving young adults disenfranchised and voiceless in the face of critical issues that shape their futures (Chryssochoou & Barrett, 2017; Dalrymple, 2005). Historically marginalized populations, including individuals with disabilities, often exhibit lower levels of civic engagement due to systemic barriers, a lack of accessible information, and feelings of disempowerment (Bueso, 2022; Burke et al., 2016; Mattila & Papageorgiou, 2017).

Autism communities rely heavily on organized advocacy to protect their rights (Burke et al., 2021), and this lack of engagement among young people is particularly worrisome. Fostering civic and political engagement among youth with autism is paramount. These skills are not innate but are acquired through exposure, education, and mentorship. Parents and caregivers play a significant role in modeling and encouraging civic participation, and access to resources and opportunities for engagement is essential (Benson et al., 2011). The tools and knowledge to voice their political concerns effectively empower young people with autism to advocate for their rights, contribute to their communities, and actively participate in shaping a more inclusive and equitable society.

Overview of Theoretical and Conceptual Framework

Self-Determination

Self-determination represents an essential construct within disability and autism advocacy, emphasizing individuals' rights and capacities to make choices, set goals, and assert agency. Rooted in the early advocacy of Nirje (1972) and formally integrated into U.S. special education policy via the Office of Special Education Programs (OSEP), self-determination encompasses a constellation of skills, such as problem-solving, goal-setting, decision-making, and self-advocacy (Burke et al., 2024; Chambless et al., 2019). Contemporary theoretical integration with Causal Agency Theory further elucidates how individuals harness internal and external resources to enact self-determined lives (Wehmeyer, 2004). In autism research, self-determination is emerging as a critical determinant of positive outcomes in adolescence and young adulthood. Martino et al., (2025) report that higher capacity for self-determination and self-advocacy correlates with enhanced educational attainment, employment, relational quality, self-concept, and life satisfaction among autistic individuals.

Empirical interventions that apply self-determination frameworks have shown promising results. Studies on young adults with autism have demonstrated improvements in agentic actions through structured programs rooted in self-determination principles (Andrés-Gárriz et al., 2025). Furthermore, scoping reviews affirm that interventions targeting self-determination components (goal setting, choice-making, self-regulation) yield measurable improvements in youth with disabilities (Wood et al., 2005). Key instructional models such as the Self-Determined Learning Model of Instruction (SDLMI) reinforce the universality and adaptability of self-determination pedagogy across diverse educational settings (Shogren et al., 2019). More recently, AI-driven and visually oriented- tools further supported self-determined behavior among individuals with developmental and intellectual disabilities (Wu & Szafir, 2023). These advances affirm that fostering self-determination is fundamental to empowering autistic and disabled identities.

Disability Pride

Over the past five decades, there has been a transition from the medical model of disability, which focuses on individual deficits, to the social model, which emphasizes societal barriers as the primary source of disability (Oliver, 1980). This shift has fueled disability rights movements and influenced policies worldwide, promoting accessibility, anti-discrimination measures, and greater social inclusion (Oliver, 2020). The emergence of newer models, such as the biopsychosocial (Engel, 1977; WHO, 2001, 2011), disability justice (Bahner, 2022), diversity (Andrews & Forber-Pratt, 2022; Wehmeyer & Dunn, 2022), and affirmative models

(McCormack & Collins, 2012; Swain & French, 2000), expands on the social model by incorporating factors such as social determinants of health, intersectionality with other marginalized identities, and celebrating disability as a form of diversity.

Disability Pride, as a social movement, traces its origins to the disability rights movement (DRM) that gained momentum in the 1970s. It is influenced by the civil rights movements of various marginalized groups, including women, Black Americans, and members of LGBTQ+ communities. The DRM has shown remarkable resilience and strength, playing a crucial role in advancing the civil rights of people with disabilities. Among their notable achievements is the landmark legislation of the Americans with Disabilities Act (ADA) of 1990, which stands as a testament to their unwavering determination and a source of immense pride.

Disability Pride gained momentum with the emergence of the concept of 'disability culture.' This term became recognized in the 1990s, when disability activists began to embrace and acknowledge the unique culture that individuals with disabilities contributed to society (Fleischer, 2000). Carol Gill (1994) initially defined disability culture as "core values shared by people with disabilities," such as "tolerance for others’ differences" and "highly developed skills at managing multiple problems." Disability Pride not only builds upon the foundational work of the original disability rights movement, which focuses on equal rights and accessibility but also celebrates a distinct and beautiful culture and heritage. This empowers individuals with disabilities to take control of their narratives, challenging the dominant culture's perception of disability. Beyond endorsing countercultural beliefs, Disability Pride involves fostering positive disability identities by creating supportive communities and networks, allowing individuals with disabilities to connect, share experiences, and collectively advocate for their rights.

The Disability Pride movement is supported by numerous organizations and advocacy groups, including the American Association of People with Disabilities (AAPD), the National Disability Rights Network (NDRN), and the Arc. Many disability rights activists, such as Judith Heumann, Alice Wong, and Vilissa Thompson, along with other notable figures in the disability community, have played a significant role in advancing the movement. In recent years, the Pride movement has gained considerable momentum, with Disability Pride events, parades, and celebrations occurring in cities worldwide. The movement has also made progress in raising awareness and promoting positive disability representation in the media and popular culture. Nonetheless, challenges persist, particularly in the ongoing presence of ableism and discrimination in various sectors of the society.

Although Disability Pride is gaining recognition in advocacy and social spheres, it remains insufficiently defined in empirical literature. This lack of consensus arises from its overlap with other constructs, such as disability identity and the broader disability social movement, complicating efforts to isolate and operationalize its specific dimensions. Additionally, there is a scarcity of theoretical and conceptual frameworks that specifically address the structure and components of Disability Pride, hindering the development of robust research questions and hypotheses. The absence of a psychometrically valid measure further complicates the task of quantifying and analyzing Disability Pride in its entirety, limiting the ability to explore its potential impact on various psychosocial outcomes. This lack of clarity and measurement tools presents a significant challenge to researchers and practitioners seeking to leverage Pride as a means of empowerment and well-being within the disabled community.

Self-Advocacy

Self-advocacy, which involves expressing one's needs and ensuring that one's voice is acknowledged, is crucial for young adults with autism. It involves understanding personal priorities and rights and knowing how to assert these rights in daily life (Roberts et al., 2016). For individuals with autism, these skills are particularly important because of the extensive involvement of various support providers in their education, social care, and healthcare. Frequently surrounded by professionals who make decisions on their behalf, individuals with autism may experience limited personal autonomy and confidence in making their own life choices (Watts et al., 2023). Moreover, individuals with intellectual and developmental disabilities often live highly structured lives in which decisions and activities are often made for them (Murugami, 2009).

Self-advocacy is a critical skill for students transitioning to college or the workforce (Wehmeyer & Palmer, 2000). Unfortunately, many neurodivergent learners struggle with self-advocacy and often lack guidance in overcoming these challenges (Roberts et al., 2016; Zhang et al., 2019). Students with disabilities must learn their rights in postsecondary institutions, be able to make informed decisions about disclosing their disabilities, and advocate for the necessary accommodations from their instructors (Garrison-Wade, 2012). Developing self-advocacy strategies before entering the workplace is equally essential for successful employment (Black, 2010). Employees must be able to explain the specifics of their disabilities and the accommodations that will assist them in the workplace. However, many students enter postsecondary education and employment settings without the self-advocacy skills needed to seek and access accommodations (Garrison-Wade, 2012).

Self-advocacy for individuals with intellectual and developmental disabilities (IDD) is not merely a personal skill but also a powerful tool for social and political change. It empowers individuals to assert their needs and rights, fostering self-confidence and leadership, while also building a collective identity that can fuel grassroots activism (Tilly, 2013). Historically, self-advocacy has been conceptualized in various ways, from a civil rights movement to a personal skill or a combination of both (Frawley & Bigby, 2015). Self-advocacy is also an essential element of self-determination, which Wehmeyer (1995) defines as the attitudes and abilities necessary for individuals to take charge of their lives, making choices and decisions that impact their quality of life without undue external influence.

Efficacy of Advocacy Interventions

Emerging adulthood is a crucial period for developing the skills necessary for a successful transition into adulthood, which is a particularly challenging process for youth with disabilities (Crowley, 2022). To facilitate this transition, accessible youth development programs that incorporate participatory activities are essential for teaching self-advocacy and leadership skills (Larson, 2000; Test et al., 2005). Research has shown that instruction in self-advocacy skills can enhance positive post-school outcomes for youth with disabilities (Grenwelge & Zhang, 2013; Roberts et al., 2016; Watts et al., 2023; Zhang et al., 2019).

In the realms of vocational rehabilitation and special education, numerous self-advocacy training programs for youth and young adults with disabilities emphasize teaching and practicing specific skills such as identifying needs, understanding disability rights, and communicating with confidence. A recent systematic content and methodological review of self-advocacy interventions revealed that most programs aimed to enhance participation in IEP or transition planning as their primary intervention goal (Zuber & Weber, 2019). Other self-advocacy training initiatives included learning about the structure of self-advocacy efforts, gaining knowledge of disability rights and accommodations, and communicating assertively (Roberts et al., 2016). There is a pressing need for self-advocacy interventions that embrace acceptance of autism and foster a positive disability identity. Autism Pride can be cultivated through positive experiences in autism advocacy group participation and engagement in socio-political action. The intervention encourages positive autism identity development by exposing individuals to the Autism Pride movement and involving them in autism communities, thereby promoting political advocacy and personal agency throughout their lives.

Overview of the Study Outcomes

Disability Identity Outcome Domain

In counseling psychology, identity encompasses not only self-conception and the expression of individuality but also group affiliation and social roles (Oyserman et al., 2012). Consequently, identity is significantly influenced by social groups, some of which are imposed, such as ethnoracial groups, while others are chosen, such as political affiliations. In social psychology, social identity theory (Tajfel & Turner, 1979) posits that an individual's sense of self is rooted in group membership. The theory further elaborates that individuals categorize themselves and others into various social groups based on factors such as nationality, religion, and social class. This categorization process fosters identification with one's own group, referred to as the 'in-group,' and differentiation from others, known as 'out-groups.' The theory also elucidates that one's self-concept and self-esteem are shaped by group membership and the group's perceived prestige in both the member's and society's eyes. Consequently, perceived prestige can lead to in-group favoritism and even prejudice against out-groups in efforts to gain or maintain the group's perceived prestige (Tajfel and Turner, 1979, 1986).

Disability identity is defined as a person's recognition of their disability and sense of belonging to the disability community (Dunn & Burcaw, 2013). This concept includes two main aspects: how individuals perceive themselves and connect with the wider disability community (Forber-Pratt et al., 2022). By accepting their disability and engaging with the disability community, individuals with disabilities may develop a more consolidated, integrated, and positive sense of self (Forber-Pratt et al., 2017; Hahn & Belt, 2004). There are several models of disability identity development, but the original framework for understanding how individuals with disabilities integrate their disability into their overall sense of self was provided by Gill (1997). Gill's (1997) model of disability identity development proposes a four-stage process, beginning with recognizing oneself as part of the disability community (i.e., *coming to feel we belong*) and progressing towards publicly embracing one's disability identity (i.e., *coming out*). The model emphasizes the importance of community and social connections in this process, highlighting how a sense of belonging and shared experience can foster a positive disability identity. It also underscores the role of advocacy in challenging societal stigma and discrimination, ultimately promoting greater acceptance and inclusion of people with disabilities.

Awareness of disability culture and the development of positive disability identities facilitate the building of supportive communities and networks, enabling individuals with disabilities to connect, share experiences and collectively advocate for their rights. Across different sectors, such as healthcare, education, and employment, an understanding of disability culture leads to more respectful and responsive service delivery, as well as enriched service provision with community-driven insights. These are key to the well-being and satisfaction of individuals with disabilities.

Advocacy Domain

Socio-Political Advocacy

Much of the developmental literature on political identity for individuals with disabilities focuses on civic engagement and its antecedents. Research suggests that emerging adult citizenship activities (e.g., voting, serving on juries, staying informed about important local and national issues) may be predicted by academic and social competence in adolescence (Obradović & Masten, 2007) and by connections to parents, school officials, neighbors, and other adult figures (Duke, Skay, Pettingell, & Borowsky, 2009). Sherrod (2008) found that adolescents' beliefs about civic responsibilities were associated with their beliefs about the types of services and freedoms to which people are entitled. Furthermore, citizenship and beliefs about civic responsibilities in emerging adulthood are linked to prosocial community activities such as volunteering, mentoring, and helping others (Youniss & Yates, 1996). Political identity appears to be nurtured by participation in organized community-based activities in adolescence, especially given that the benefits of political involvement are often conferred on others and oneself (Youniss et al., 2003).

Young people with ASD experience challenges in civic and political participation. Research has shown that these individuals often face barriers to achieving independence and full civic participation due to societal stigma, limited access to resources, and a lack of tailored support systems (Barrett & Pachi, 2019; Bueso, 2022; Chryssochoou & Barrett, 2017). However, empowering young adults with ASD through sociopolitical advocacy offers a promising pathway to overcoming these obstacles (Alegría et al., 2022).

Socio-political advocacy not only equips young adults with ASD with the tools to navigate complex systems and advocate for their rights but also fosters a sense of agency and empowerment (Test et al., 2017). By effectively communicating their needs, understanding their rights, and engaging with decision-makers, individuals with ASD can become active participants in shaping the policies and programs that directly impact their lives (Lee & Wehmeyer, 2019). Moreover, sociopolitical advocacy fosters a sense of community and belonging among young adults with ASD. By connecting with others who share similar experiences and challenges, they can build a support network, share knowledge and resources, and collectively advocate for systemic changes (Burke et al., 2021). This sense of community can be particularly empowering for individuals with ASD who often face social isolation and stigma.

Workplace Self-Advocacy

Lent and Brown's (2013) social cognitive model of career self-management (SCCSM) expands on their broader Social Cognitive Career Theory (SCCT) and provides a comprehensive framework for understanding how individuals navigate their careers. The model posits that individuals engage in adaptive career behaviors, such as decision-making, job searching, and career advancement, by drawing on personal and contextual resources (Lent & Brown, 2013). These resources include learning experiences, self-efficacy beliefs, outcome expectations, and personal goals, all of which are shaped by contextual factors such as social support and environmental barriers.

The model highlights the interplay between personal attributes (e.g., self-efficacy, outcome expectations), learning experiences, and contextual factors in shaping career-related behaviors. Within this model, self-advocacy is identified as a key adaptive career behavior (Moturu & Lent, 2023). It involves individuals' ability to assert their needs and advocate for their interests to achieve their career goals. Self-advocacy can be proactive (e.g., asking for a raise) and reactive (e.g., refusing excessive work hours). SAE-W (Moturu & Lent, 2023) is proposed as a measure of an individual's belief in their ability to advocate for themselves in the workplace. This construct, rooted in Bandura's (2006) concept of self-assertive efficacy, explicitly focuses on workplace behaviors that protect one's interests and promote career sustainability.

This framework is particularly relevant in understanding the connection between components of Pride, self-assertive efficacy at work, and work-related self-advocacy behaviors. Disability Pride, a multifaceted construct encompassing valuing one's identity, endorsing disability culture and its beliefs, and engaging in advocacy, can be viewed as a personal attribute within the SCCSM. As individuals with disabilities internalize and embrace Pride, they are more likely to develop stronger self-efficacy beliefs in their ability to advocate for themselves in the workplace. Advocacy training facilitates assertive communication and effective advocacy for the rights of people with disabilities. This increased self-efficacy in assertiveness can translate into work-related self-advocacy behaviors such as requesting accommodations, negotiating promotions, or challenging discriminatory practices.

Finally, the SCCSM acknowledges the influence of contextual factors on career behavior (Lent & Brown, 2013). Environments that are supportive and value diversity and inclusion can further enhance the positive impact of Disability Pride on self-assertive efficacy and self-advocacy. Conversely, discriminatory or unsupportive environments may undermine these outcomes, highlighting the importance of considering individual and contextual factors when examining the impact of Pride on workplace behavior. This intervention seeks to connect individuals with accepting communities where individuals with similar experiences may share and come together to create a supportive environment.

Vocational Outcome Domain

Vocational identity, defined by Holland et al. (1980) as the clarity individuals possess regarding their career goals, interests, and skills, plays a crucial role in guiding confidence and decisiveness in their career choices. However, the presence of a disability can significantly influence vocational identity development (Richard & Hennekam, 2021). Individuals with disabilities often encounter unique challenges such as internalized stigma, limited self-awareness, inadequate guidance, and mental health barriers that impede career exploration and establish a stable vocational identity (Brzezińska & Piotrowski, 2011; Yanchak et al., 2005). Santuzzi and Waltz (2016) highlight that cultivating a positive disability identity can empower individuals to overcome vocational barriers through enhanced self-efficacy, confidence, and resilience. Conversely, a negative disability identity, marked by internalized stigma and self-doubt, restricts vocational aspirations and limits self-exploration (Quinn et al., 2015; Yanos et al., 2011).

Central to vocational identity development is the concept of career adaptability, as extensively detailed by Savickas (2005, 2013) and Savickas and Porfeli (2012a). Career adaptability refers to an individual's preparedness and resources to manage current and anticipated career tasks, transitions, and challenges. This multidimensional construct encompasses four critical dimensions, known as the 4Cs: *concern* (future orientation and engagement in career preparation), *control* (autonomy and responsibility in career decision-making), *curiosity* (exploration of the alignment between self and vocational opportunities), and *confidence* (belief in one's abilities and successful outcomes in addressing career challenges). These adaptabilities significantly influence vocational development. Youths exhibiting higher career adaptability demonstrated enhanced future orientation, perceived fewer career-related obstacles, and displayed greater proficiency in translating intentions into actions (Johnston, 2018; Taber & Blankemeyer, 2017; Taber & Blankemeyer, 2015). Research has emphasized that career adaptability is significantly correlated with higher self-efficacy and vocational satisfaction, particularly in individuals facing structural or identity-related barriers such as disabilities (Santilli et al., 2017; Volmer et al., 2023). Longitudinal research further underscores the centrality of career adaptability in facilitating successful educational and school-to-work transitions, fostering personal empowerment, life satisfaction, and positive youth development (Marcionetti & Rossier, 2019).

Understanding the intricate relationship between vocational identity, career adaptability, and disability highlights the need for tailored career counseling and vocational rehabilitation interventions. Previous literature suggests that career adaptability can be enhanced through targeted interventions, such as vocational training, mentorship programs, and structured self-advocacy workshops in young adults with autism (Lam et al., 2023; Lee et al., 2024b). These interventions can foster clearer vocational identities, support active career exploration, and enable smoother transition into educational and occupational roles. Emphasizing career adaptability thus emerges as a pivotal approach to achieving meaningful vocational outcomes and sustainable career development for individuals with disabilities.

CHAPTER 3: METHODS

Study Design

This study used a parallel, two-arm, randomized controlled trial design with pre- and post-tests. The participants were randomly assigned equally to the treatment and control groups. Two-arm trials are beneficial when the primary focus is on the effects of a single intervention (Wolfenden et al., 2021). These trials are the most commonly used randomized designs for comparing groups or measuring changes in experimental treatments (Dimitrov & Rumrill, 2003; Dugard & Todman, 1995). Both groups underwent baseline (pre-test) and follow-up (post-test) assessments; however, only the treatment group received training. The methodology section below follows the reporting guidelines for non-pharmacologic RCT by the Consolidated Standards of Reporting Trials (CONSORT) (Boutron et al., 2017).

Study Sample

The present study recruited a total of 64 participants. A priori power analysis was conducted using G*Power software 3.1.9.7 (Faul et al., 2007). ANCOVA with pre-test scores as covariates was used to analyze the intervention's effect on the dependent variables. A literature review found a moderate effect size in the majority (28 out of 32) of experimental studies on evidence-based transition practices (Test et al., 2009). In a meta-synthesis of self-determination and self-advocacy interventions, the median effect size reported was a moderately large effect size of Cohen's $d = 0.60$ (Cobb et al., 2009). In another meta-analysis of interventions for transition-age youth with disabilities, effect sizes for person-centered planning interventions that sought to foster self-determination, improved career decision-making, and community inclusion all had a positive effect, with moderate to large effect sizes, ranging from $g = 0.3$ to 2.11 (Crowley, 2022).

In ANCOVA with pre-test as a covariate, error variance is reduced drastically since baseline scores are powerful covariates (Dugard & Todman, 1995). The reduced error variance provided additional power to the statistical analysis. Thus, assuming a large effect size of $f = 0.40$ ($\alpha = 0.05$) at 80% power using ANCOVA to test for fixed main effects, the power analysis suggested that the sample size must reach a minimum of 52 participants (i.e., 26 participants in each group). Therefore, this researcher recruited 32 participants for treatment and 32 for the control group to account for potential dropouts. Dropout rates for randomized controlled trials of Internet-based interventions are relatively low, ranging from approximately 10% to 20% (Christensen et al., 2009).

Eligibility Criteria

A five-item pre-screening survey was used to identify participants who met the inclusion criteria outlined in Table 3.1. Eligible participants had a primary diagnosis of autism, were between 18 and 26 years of age, had a self-reported English reading level of 5th grade or above, and had regular internet access for the survey and intervention. An email address was also required to receive the study information and intervention link. Individuals who did not meet these criteria were excluded from the study, and the survey was automatically terminated if all the inclusion criteria were not self-reported.

Table 1

Inclusion and Exclusion Criteria for the Study

Inclusion Criteria	Exclusion Criteria
• Between the ages of 18 and 26. • A primary diagnosis of autism. • Regular access to the Internet and technology. • Agree to enter an e-mail address to receive information throughout the study.	• Those who do not meet the inclusion criteria. • Participants with foreign IP addresses.

- Has a self-reported English reading level of 5th grade or above.

Recruitment

Locally, the researcher contacted former and current internship site supervisors to disseminate the study promotional flyer and recruitment letter to potentially eligible participants: *Project SEARCH* at the University of Wisconsin Hospital, *Campus Connect* at Madison Area Technical College (MATC), and the *Cutting Edge* program at Edgewood College. The Wisconsin Board for People with Developmental Disabilities (BPDD) disseminated the study to its members via social media (Facebook and Instagram).

National recruitment efforts for this study included contacting Inclusive Postsecondary Education (IPSE) programs and autism advocacy groups (e.g., the Autism Society, Autism Speaks, Autism Self-Advocacy Network, Autism Research Institute, National Autism Association, ARC-IDD, and Pathfinders for Autism) to help disseminate study promotional flyers and recruitment letters. The investigator contacted the University of North Texas's *Elevar* program and the Maryland Autism Society to disseminate the study announcement flyers and recruitment letters. The study announcement flyer and recruitment letter were emailed to prospective participants through recruitment contacts.

Study Procedures

A randomized controlled trial (RCT) was conducted to assess the effects of an internet-based advocacy and Pride training intervention designed to enhance disability identity, self-advocacy, and career adaptability among young adults with autism. The researcher completed the Human Subjects Protection Training required by the University of Wisconsin-Madison Institutional Review Board (IRB). Upon IRB submission, the study was classified as a program evaluation and a minimal risk research IRB was certified. The investigator recruited the participants by distributing the study announcement and recruitment letters. Participants received a survey link via email from the researcher. Data were collected using *Qualtrics*, which is an online survey platform.

Participants who were meticulously chosen based on the eligibility criteria of the pre-screening survey received comprehensive informed consent documents. These documents, crafted to emphasize the voluntary nature of the study, detailed their rights and potential risks and benefits of participation. Additionally, contact information for the principal and student investigators, as well as the University of Wisconsin-Madison Educational and Behavioral Sciences IRB was provided. Participants were informed of the opportunity to receive $110 in Amazon gift cards via e-mail upon completing all phases of the study if selected (i.e., two surveys and four modules) and $30 if chosen only for survey completion (i.e., pre- and post-surveys) (see Table 3.1). The control group participants were notified that they would receive priority access to the intervention in the subsequent study. The study was registered on the ClinicalTrials.gov protocol registration and results system to comply with the final rule for clinical trial registration and results information submission (42 CFR Part 11).

Table 2

Study Participant Incentive Table by Group

	Pre-test	Module 1	Module 2	Module 3	Module 4	Post-test
Treatment	$10	$20	$20	$20	$20	$20
Control	$10	-	-	-	-	$20

Randomization

After eligibility checks and completion of the informed consent documentation, the participants completed the baseline survey. The survey was automatically terminated if participants did not meet the inclusion criteria or provided consent. Upon completing the baseline survey, participants were randomly assigned to either the treatment or the control group.

Intervention

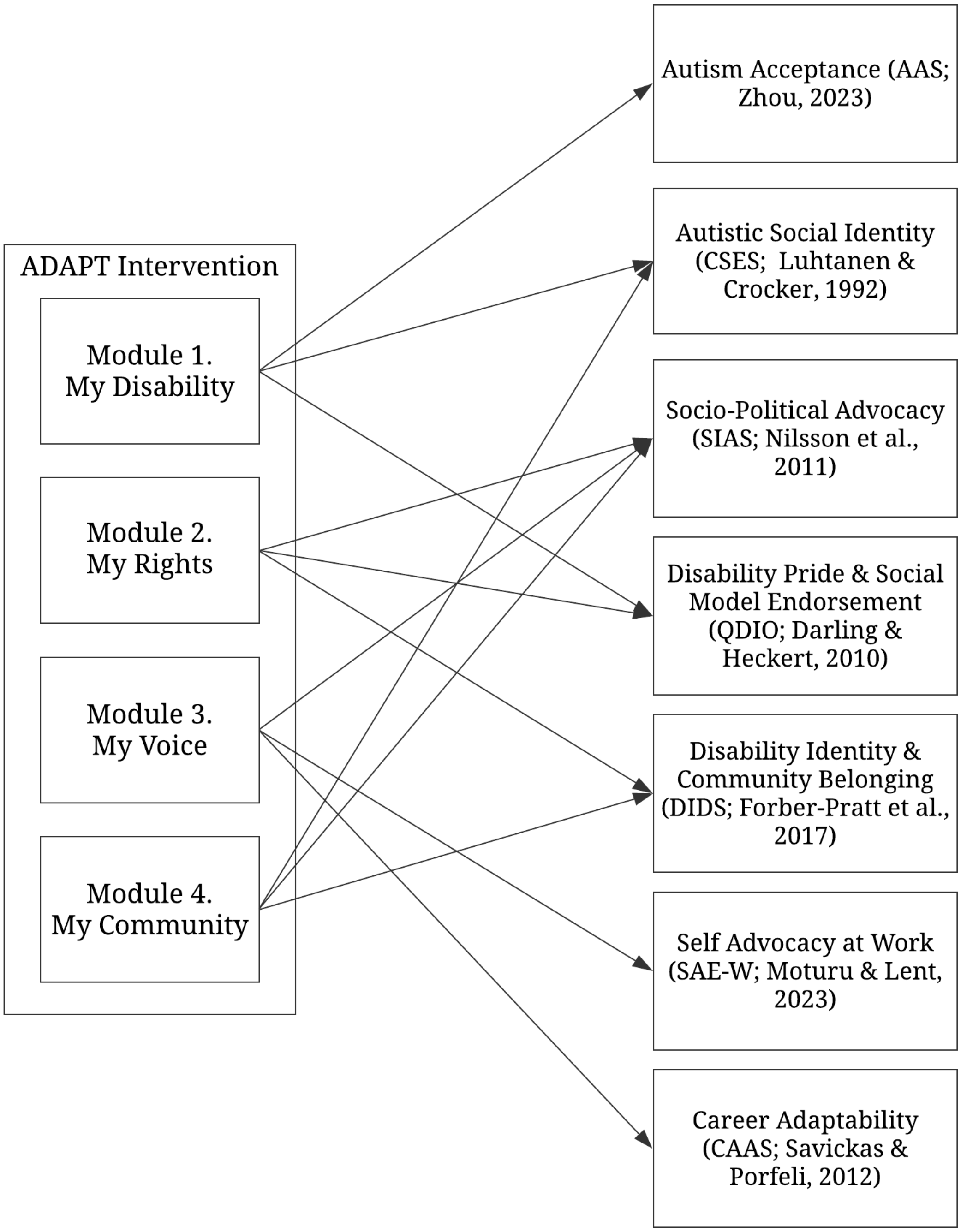
The ADAPT intervention consisted of four weeks of online asynchronous training. Each week, participants engaged in the intervention for approximately two to three hours, including psychoeducation lecture videos, supplemental media materials, writing assignments, quizzes, and module evaluations. The intervention consisted of four modules. This month-long intervention was designed following the conceptual framework of self-advocacy for young people with disabilities based on an extensive literature review and input from multiple stakeholders (Test et al., 2005). Their framework includes four key components: (1) self-awareness, (2) understanding one's rights, (3) effective communication, and (4) leadership. Although this framework informs the current intervention, the specific content and activities were uniquely developed for this study. Test and colleagues' framework informs many self-advocacy interventions, including youth leadership programs (Grenwelge et al., 2010; Grenwelge & Zhang, 2013) and multimedia advocacy training (Watts et al., 2023). The four-module approach was determined to be the most effective in meeting the goals of this intervention, which are to increase political and work-related self-advocacy through learning about disability and Autism Pride.

Text samples from the intervention modules were entered into a free online text readability consensus calculator, and the reading level was set to 5th grade according to the Microsoft Word document accessibility function. The font size was set to a minimum of 14 points. Video and audio recordings were embedded in the modules whenever there were text portions to accommodate visual and reading challenges and fatigue. Participants clicked on the content to play either the video or audio. Participants were also prompted to return to the screen to engage in activities or to type in text boxes. Additionally, the intervention was designed to be mobile-friendly and allow access via computer or any mobile device with Internet access.

The ADAPT training program is designed to empower autistic individuals at three systemic levels: the individual, the autism community, and society as a whole. It aims to cultivate a sense of belonging, self-advocacy, and social responsibility. By addressing personal needs and rights, strengthening community bonds, and promoting systemic change, the program strives to create a more inclusive and equitable world. It also seeks to broaden perspectives and foster empathy. Through self-awareness, participants can improve their interactions and understand the impact of their knowledge on both personal and social levels. The program is designed to facilitate development at the individual, community, and societal levels, with interconnected goals that emphasize empowerment and advocacy. On an individual level, participants will enhance their self-awareness, confront both internalized and external stereotypes, and strengthen their self-advocacy and communication skills. Through creative expression, goal setting, and resilience building, they become more active and confident participants in their own lives. Within the autistic community, participants nurture empathy, forge peer connections, and contribute to more inclusive environments. They will engage with autistic role models, advocate for expanded support systems, and collaborate on collective advocacy efforts by devising innovative solutions and sharing resources to remove systemic barriers. At the societal level, participants will critically examine the structural support and obstacles that shape the experiences of autistic and disabled individuals. They will engage in civic life, deepen their understanding of rights and responsibilities, and work to challenge dominant power structures while promoting a broader acceptance of neurodiversity through informed, justice-oriented action. Each module is designed to enhance one or two specific outcomes by gradually addressing all desired outcomes through a series of interconnected modules.

Figure 1

Targeted Outcome Variables of the Autism & Disability Advocacy, Pride Training Intervention



The second module, “My Rights,” introduced participants to the disability rights movement, Disability Pride movement, and legislation that safeguards the rights of individuals with disabilities. In the third module, “My Voice,” participants reflected on their involvement with the disability community and honed their self-advocacy skills for the workplace. The fourth module, “My People,” involved youths in social and political advocacy by communicating with Congress members, registering to vote, writing letters, and participating in online political actions.

Module 1. My Disability

The first module, *"My Disability,"* delves into the concept of neurodiversity with a particular focus on autism. This module features activities designed to help individuals gain a comprehensive understanding of autism, recognize their unique strengths and challenges, and ultimately learn the importance of acceptance and advocacy. Autistic young adults engage with various media materials and resources from autism communities to deepen their knowledge of neurodiversity. They were introduced to the "spiky profile" to foster understanding and acceptance of individuals with diverse neurological profiles. By learning about the social and affirmative models of disability, they gain insights into autism as a disabling social condition. In the final topic, acceptance and advocacy, youth are introduced to self-advocacy and autism advocacy. Through adapted Dialectical Behavior Therapy (DBT) training, participants reflected on and practiced autism acceptance. Participants contemplate their personal understanding of autism, challenge stereotypes, and promote deeper empathy and acceptance.

Module 2. My Rights

The second module, titled *“My Rights,”* introduces participants to the foundational concepts of power, citizenship, and political advocacy with an emphasis on disability rights and civic engagement. This module situates advocacy within broader social and historical contexts, helping participants understand how individual and collective actions can challenge marginalization and promote equity. Through an exploration of the civil rights and disability rights movements, participants analyzed how historical activism has shaped current protections, such as the Americans with Disabilities Act (ADA, 1990), and how these legal frameworks continue to influence access, opportunity, and inclusion today. Participants engage in reflective and interactive activities, such as interviewing disability rights leaders and navigating voter engagement tools, which encourage them to see themselves as active agents in a democratic society. By learning about voting, civic participation, and platforms for public involvement, participants are empowered to advocate for themselves and the broader autism and disability communities. This module ultimately supports youth in developing the knowledge, confidence, and civic awareness necessary to secure their rights and contribute meaningfully to systems-level change.

Module 3. My Voice

Module 3, titled *"My Voice,"* empowers autistic young adults to strengthen their self-advocacy skills, with a specific focus on the workplace and broader avenues for civic expression. Building on the foundational knowledge from previous modules, this module supports participants in identifying their individual strengths and recognizing areas where accommodations may enhance their success in the workplace. Through guided exploration of workplace conditions and potential accommodations, the participants developed personalized strategies for navigating future employment. A central component of this module is assertive communication training, which equips participants with practical tools to express their needs, preferences, and beliefs confidently and respectfully. Beyond the workplace, participants also examined how to advocate for disability rights and employment equity through digital platforms, particularly social media and online disability communities. These activities encourage participants to engage in dialogue, raise public awareness, and contribute to collective action on issues affecting the autism and disability communities. Module 3 supports participants in finding and strengthening their voices in both professional and civic contexts, preparing them for real-world advocacy and participation.

Module 4. My Community

Module 4, *"My Community,"* serves as the culminating experience of the ADAPT training, equipping autistic young adults with the tools and confidence to harness their social and political influence. Building on the assertive communication and advocacy skills developed in earlier modules, this module emphasizes real-world applications through community engagement and legislative advocacy. Participants begin by exploring the concept of community, both social and political, and reflect on their roles within these spaces. Through activities such as identifying shared interests, connecting with peers, and mapping out advocacy networks, they gain insight into how communities form and how they can meaningfully contribute to collective efforts for change.

The central focus of this module is legislative advocacy, where participants craft persuasive messages, such as personalized letters or phone scripts, to communicate directly with elected officials about issues they care about. This hands-on experience reinforces the power of the individual voice in shaping policy. This module draws on research showing that advocacy is more impactful when messages are self-generated rather than scripted, as they reflect authentic experiences and a deeper personal investment (Hovland et al., 1953; Janis & King, 1954; Mirels & McPeek, 1977). This final module empowers participants not only to understand their rights and needs but also to act as informed, engaged citizens who can advocate for themselves and their communities at the systems level.

Community Partnership and Sensitivity Review

To ensure the training content was culturally appropriate and reflective of the autistic community's values and experiences, the researcher collaborated closely with an autistic transition-age advocate with extensive experience in disability advocacy and peer mentorship. This community partner is the founder of the *NeuroPride* group at the University of Wisconsin–Madison and is actively involved in multiple campus and statewide advocacy initiatives centering neurodiversity, disability rights, and social inclusion.

Her role in this project was integral to the co-creation of an empowering and respectful intervention. Specifically, she conducted a comprehensive sensitivity review of all four modules of the training curriculum. This included a line-by-line evaluation of the content to identify and address language, framing, and instructional elements that might inadvertently perpetuate stigma, overlook intersectional experiences, or fail to resonate with the lived realities of autistic young adults. Her feedback guided revisions that improved the training's accessibility, tone, and relevance, ensuring that the content was affirming, strengths-based, and aligned with principles of disability justice.

Beyond her contributions to curriculum refinement, the community partner also served as a peer mentor within the study. The researcher invited her to participate in a recorded interview to be included in the intervention materials, where she shared her experiences founding *NeuroPride* and leading advocacy initiatives. This interview was included as a component within the final module, offering participants a relatable and inspiring narrative that modeled self-advocacy, leadership, and community-building. Her presence as a peer mentor provided an authentic voice that grounded the training in lived experience and contributed to participants' sense of connection and possibility.

Intervention Delivery

Qualtrics served as the online platform for delivering the intervention, a method proven effective in a prior study (Bunge et al., 2017). Interested individuals were screened, after which they participated in the baseline. Individuals who completed the baseline were randomized into treatment or control groups. Once the participants were randomized into groups, the experimental group received an email with a link to the first module in *Qualtrics*. The participants were instructed to complete one module per week. Each module includes a psychoeducation component, two major activities, a learning objective assessment, and a module evaluation component. The participants were prompted to take a break at the midpoint. Reminder emails to return to the module were sent 1, 3, and 5 days after each module was initiated to encourage timely progress.

The intervention remained active throughout the recruitment period, allowing participants to begin and return at any time after completing the baseline survey. Each module remained open until all participants had completed it and the third reminder to non-completers was sent. Participants were expected to take four weeks to complete the four modules. Upon completion of the four-module intervention, participants in the experimental group were sent a follow-up survey.

Research Questions and Hypotheses

Research Question 1: Does the ADAPT intervention improve self-acceptance of autism for the treatment group participants compared to the control group?

Hypothesis 1: Treatment group participants report gains in the AAS from baseline to post-intervention compared with the control group.

Research Question 2: Does the ADAPT intervention improve the evaluation of their social identity as autistic persons for the treatment group compared to the control group?

Hypothesis 2: Treatment group participants report gains on the adapted CSES from baseline to post-intervention compared with the control group.

Research Question 3: Does the ADAPT intervention increase treatment group participants' confidence in socio-political advocacy compared to the control group?

Hypothesis 3: Treatment group participants report gains in the adapted SIAS from baseline to post-intervention compared with the control group.

Research Question 4: Does participation in the ADAPT intervention improve participants' internal attitude toward disability and endorsement of the affirmative model of disability?

Hypothesis 4: Treatment group participants report gains in the Pride and Social Model Subscales of the QDIO scale from baseline to post-intervention compared with the control group.

Research Question 5: Does participation in the ADAPT intervention improve integration of disability into participants' overall self-concept and sense of belonging within disability community?

Hypothesis 5: Treatment group participants report gains in the DIDS from baseline to post-intervention compared with the control group.

Research Question 6: Does the ADAPT intervention improve participants' confidence in their ability to assert themselves in the workplace to protect their interests and needs?

Hypothesis 6: Treatment group participants report gains in the SAE-W from baseline to post-intervention compared with the control group.

Research Question 7: Does participation in the ADAPT intervention improve career adaptability (i.e., readiness and perceived resources to cope with current and anticipated tasks, uncertainties, and challenges in occupational roles)?

Hypothesis 7: Treatment group participants report gains in the CAAS from baseline to post-intervention compared with the control group.

Measures

The survey questionnaire for the present study comprised instruments and measures developed by other researchers and the present investigator, specifically for this study. The complete survey, including demographic questions and all measures, is presented in the Appendix (Appendix A). The following section describes the demographic questions and measures used, and a summary table (Table 3) is provided for reference.

Table 3

Summary Table of Measures

Measure	Author(s)	Number of Items
Autism Acceptance Scale (AAS)	Zhou, 2023	8 (13)
Collective Self-Esteem Scale (CSES)	Luhtanen & Crocker, 1992	16
Social Issues Advocacy Scale (SIAS)	Nilsson et al., 2011	21
Questionnaire on Disability Identity and Opportunity (QDIO)	Darling & Heckert, 2010	13 (23)
Disability Identity Development Scale (DIDS)	Forber-Pratt et al., 2017	35
Self-Assertive Efficacy at Work (SAE-W)	Moturu & Lent, 2023	18
Career Adaptability Scale (CAAS)	Savickas & Porfeli, 2012	24

***Note*.** Eight (Self-identity & Value change Subscales) out of 13 AAS items were pulled and adapted. Thirteen items (Pride and Social Model Subscales) out of 23 items in the QDIO were pulled. The CSES and SIAS were adapted for autism communities and societal advocacy, respectively.

Demographic Questionnaire

Participants were asked to provide demographic information and details specific to their autism spectrum disorder diagnosis to assess the generalizability of the sample. The demographic questionnaire collected data on age, gender, race/ethnicity, educational status, employment status, and living situations. The diagnosis-specific questionnaire inquired about co-occurring disabilities, chronic conditions, and other neurological diagnoses.

Autism Acceptance Scale (AAS)

The AAS (Zhou, 2023) was developed to measure the multidimensional construct of autism acceptance among transition-age youth with autism spectrum disorder (ASD). Grounded in Moos and Holahan's (2007) conceptual model of psychosocial determinants of health-related outcomes in chronic illness and disability (CID), the AAS captures both external and internal dimensions of acceptance through two higher-order constructs: *Perceived Acceptance* and *Self-Acceptance*. Perceived Acceptance encompasses acceptance from societal systems (macrosystem) and close interpersonal relationships (mesosystem), whereas self-acceptance reflects personal identity processes, including group identity, value change, and self-definition.

The psychometric validation of the AAS involved a rigorous multi-phase analysis (Zhou, 2023). The scale was administered to 204 young adults with ASD (ages 18–26) using an online survey distributed via Prolific and Amazon Mechanical Turk (MTurk). Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) supported a hierarchical structure for both the Perceived Acceptance and Self-Acceptance subscales, with each demonstrating adequate model fit and sampling adequacy. The final 13-item version of the AAS retained five items for Perceived Acceptance (TLI = .940, RMSEA = .077) and eight for self-acceptance (TLI = .909, RMSEA = .074), with strong standardized loadings across all factors. Second-order CFA confirmed the structure of each of the subscales. Convergent validity was established through strong correlations with the corresponding items from the Autism Acceptance Questionnaire (AAQ). Internal consistency was acceptable, with Cronbach's alpha values of .69 for Perceived Acceptance and .75 for self-acceptance. These results suggest that the AAS is a reliable and valid instrument for capturing the nuanced dimensions of autism acceptance in emerging adulthood.

Questionnaire on Disability Identity and Opportunity (QDIO)

The QDIO (Darling & Heckert, 2010) was developed to empirically assess individuals' orientations toward disability, capturing identity-related beliefs, and community engagement patterns. Grounded in opportunity structure theory and informed by qualitative interviews and literature reviews, the QDIO was designed to measure two overarching constructs: participation in mainstream and disability-specific communities and disability orientation, which includes dimensions of identity, model (social vs. medical), and role (activism vs. passivity). The initial validation study included a convenience sample of 388 adults with disabilities in the U.S. Participants responded to 30 Likert-scale items reflecting disability pride, experiences of exclusion, adherence to the social and medical models, and engagement in activism. Exploratory factor analysis (EFA) supported a four-factor structure: *Disability Pride*, *Exclusion/Dissatisfaction*, *Social Model*, and *Personal/Medical Model*. Cronbach's alpha coefficients demonstrated acceptable internal consistency across the three subscales ($\alpha = .72–.78$), with slightly lower reliability on the personal/medical model subscale ($\alpha = .63$) due to a small item set and potential response challenges in the self-report format.

QDIO provides a multidimensional, theory-based tool for measuring how people with disabilities perceive and engage with their identity and environment. It uniquely combines affective (e.g., pride, stigma), cognitive (e.g., model adherence), and behavioral (e.g., activism) components of the disability experience, making it suitable for research exploring intersectional, developmental, or sociopolitical aspects of disability identity. Results from the validation study (Darling & Heckert, 2010) also revealed meaningful age-related differences: younger adults reported higher levels of disability pride and lower feelings of exclusion than older adults. In comparison, older adults were more likely to endorse medical model views and report dissatisfaction with their social participation. These findings highlight the importance of considering the life course and age of onset in disability identity research. Although developed and validated in a U.S. context, the QDIO shows promise for adaptation in cross-cultural and longitudinal studies aiming to examine evolving conceptions of disability, inclusion, and empowerment.

Disability Identity Development Scale (DIDS)

The DIDS is a 35-item scale with a 4-point Likert response scale designed to assess the salience of an individual's personal disability and identification with the disability community (Forber-Pratt et al., 2020, 2022). The scale is based on the disability identity development model (Forber-Pratt et al., 2017; Forber-Pratt & Zape, 2017). The disability identity development model is a psychosocial framework outlining four critical statuses in forming a disability identity: acceptance, relationship, adoption, and engagement. These statuses are not strictly sequential or linear but represent different phases that individuals may experience as they come to terms with and integrate their disability into their self-concept. Acceptance involves acknowledging and accepting one's disability; relationship signifies connecting with others who share similar experiences; adoption involves embracing disability community values and activism; and engagement represents becoming a role model and contributing to the disability community. DIDS encompasses the four subcomponents of the original model: internal beliefs about one's disability and the disability community, anger and frustration with disability experiences, adoption of disability community values, and contributions to the disability community. Higher DIDS scores indicate a stronger alignment with a salient disability identity, whereas lower scores suggest a weaker alignment.

The bifactor analysis supports the use of a sum or total score for the DIDS, reflecting the overall salience of disability identity at a given point in time (Forber-Pratt et al., 2022). Bifactor confirmatory analysis of the 35-item DIDS yielded support with a root mean square error of approximation [RMSEA] = 0.083, comparative fit index [CFI] = 0.933, Tucker-Lewis index [TLI] = 0.083, and standardized root mean square residual [SRMR] = 0.055. The scale has been validated with a diverse sample of individuals with both visible and invisible disabilities, demonstrating its potential for use across various disability and chronic illness groups. Although not prescriptive or diagnostic, the DIDS can be utilized by practitioners to inform and tailor counseling and therapy sessions, fostering a deeper understanding of clients' disability identity development and facilitating targeted support.

Collective Self-Esteem Scale (CSES)

Social identity theory (Tajfel & Turner, 1986) is the theoretical framework that underpins the CSES (Crocker & Luhtanen, 1990). This theory posits that individuals derive their sense of self and self-esteem from their membership in social groups. The CSES builds upon this theory by proposing that collective self-esteem, or the evaluation of one's social identity, is a multidimensional construct comprising membership esteem, private collective self-esteem, public collective self-esteem, and importance to identity.

The CSES (Luhtanen & Crocker, 1992) is a 16-item scale designed to measure individuals' evaluation of their social identities. Whereas the DIDS measures one’s perception of one's personal identity, the CSES measures one’s perception of the person’s social group identity, in this case, the social group of people with autism (Crocker & Luhtanen, 1990; De Cremer & Oosterwegel, 1999). It assesses four distinct factors: membership esteem, private collective self-esteem, public collective self-esteem, and Importance to Identity. Membership esteem refers to an individual's sense of belonging and acceptance within a group. Private collective self-esteem reflects an individual's personal evaluation of their group, whereas public collective self-esteem refers to their perception of how others view their group. The importance of identity indicates the degree to which an individual's group membership is central to their self-concept.

The CSES has demonstrated strong psychometric properties, including high internal consistency reliability for the four subscales and the total scale (Luhtanen & Crocker, 1992). The average standardized item alphas across the three studies were 0.75 for membership, 0.78 for private, 0.79 for public, 0.79 for identity, and 0.87 for the total scale. The 6-week test-retest reliability was $r=0.68$ for the total scale. The scale also showed good convergent validity, significantly correlating with related scales such as Rosenberg's (1965) ($r=0.38$, $p < 0.001$), Coopersmith's (1967) ($r=0.33$, $p < 0.01$), and Janis-field's (1959) ($r=0.34$, $p < 0.001$) self-esteem and group identification measures.

Social Issues Advocacy Scale (SIAS)

The SIAS is a 21-item instrument designed to measure attitudes and behaviors related to social justice advocacy across various academic and professional fields (Nilsson et al., 2011).

Grounded in the concept of social justice, defined as the fair and equitable distribution of resources, rights, and treatment for marginalized groups, the SIAS aims to capture both awareness of social issues and the actions taken to address them (Marszalek et al., 2019; Nilsson et al., 2011). The scale comprises four subscales, each reflecting a different dimension of social justice advocacy. The Political and Social Advocacy (PSA) subscale assesses participation and volunteering for political causes. The Confronting Discrimination (CD) subscale measures willingness to address discriminatory practices and advocate for tolerance and justice within one's profession. The Political Awareness (PA) subscale gauges awareness and discussion of political issues, legislation, and voting behavior. The Social Issue Awareness (SIA) subscale evaluates understanding of how societal forces and government policies impact individuals' access to resources, education, health, and well-being.

The SIAS was developed following the acceptable test development practices of the American Educational Research Association’s Standards for Educational and Psychological Testing (Fietzer & Ponterotto, 2015). SIAS demonstrates strong psychometric properties. Across two studies with diverse samples, the scale consistently exhibited a four-factor structure, accounting for 71.4% (with Kaiser-Myer-Olkin statistics of 0.88) and 73.5% of the variance in the data. The internal consistency reliability, as measured by theta coefficients, ranged from 0.89 to 0.94 for the subscales and 0.93 for the overall scale, indicating excellent reliability (Nilsson et al., 2011). The SIAS also showed convergent validity, correlating positively with other measures of social activism and multicultural empathy (Nilsson et al., 2011).

Self-Assertive Efficacy at Workplace Advocacy Scale (SAE-W)

The Career Self-Management (CSM) model is an extension of the Social Cognitive Career Theory (SCCT) that explains how individuals make career decisions and manage challenges. In this model, self-efficacy, outcome expectations, and goals influence adaptive actions in one's work life. Self-efficacy, the belief in one's ability to perform certain actions, and outcome expectations, the anticipated results of those actions, play crucial roles in goal-setting and behavior. The CSM model suggests that taking action increases the likelihood of achieving desired outcomes while acknowledging the impact of personality traits and contextual factors. This model can be applied to understand self-advocacy behavior at the workplace. SAE-W (Moturu & Lent, 2023) aims to measure the belief in one's ability to speak up for oneself in the workplace to achieve fair treatment, personal goals, and address needs or grievances (i.e., confidence in self-advocacy at work). SAE-W is conceptually related to self-assertive efficacy (Bandura, 2006) but is specifically applied to the workplace context. This reflects confidence in performing extra-role behaviors to protect one's work interests and promote career sustainability.

The SAE-W is an 18-item scale developed based on feedback from employees and measurement experts. Participants rated their confidence in performing each task on a scale of 0 (no confidence at all) to 4 (complete confidence). The Voice Self-Efficacy Scale (Janssen & Gao, 2015) and Occupational Self-Efficacy Scale (Rigotti et al., 2008) were included to assess convergent validity. The Voice Self-Efficacy Scale had an internal consistency of .75 and correlated moderately with voice behavior and strongly with supervisory responsiveness. The Occupational Self-Efficacy Scale had reliability estimates between .85 and .90 and correlated positively with general self-efficacy, self-esteem, job satisfaction, and organizational commitment. The alpha coefficients for voice and occupational self-efficacy in the measure development subsample were .88 and .89, respectively. The SAE-W scale significantly predicted engagement in advocacy behaviors at work (Moturu & Lent, 2023).

Career Adaptability Scale (CAAS)

The CAAS (Savickas & Porfeli, 2012) is a 24-item psychometric tool designed to assess an individual's ability to adapt and adjust to the ever-changing career landscape. The scale was measured on a 5-point Likert scale (1= not strong, 2= somewhat strong, 3= strong, 4= very strong, and 5= strongest). This is grounded in the career construction theory (Savickas, 2005) proposed by Mark L. Savickas, which posits that individuals actively construct their careers and vocational identities through a process of self-reflection, exploration, and adaptation. The CAAS aligns with this framework by assessing an individual's adaptability, a crucial component of successful career construction and vocational identity development. The four critical components of career adaptability are concern, control, curiosity, and confidence (Savickas & Porfeli, 2012a). Concern reflects an individual's level of worry and interest in their future career. Control refers to the perceived ability to influence one's career path. Curiosity represents an individual's willingness to explore new career options and opportunities. Confidence signifies the belief in one's ability to overcome career challenges and succeed in the chosen field.

The psychometric properties of the CAAS, including factor structure and internal consistency reliability, were assessed using mean and covariance structure (MACS) analyses across multiple samples from 13 countries. The multigroup invariance tests assessed whether the CAAS held true across the 13 countries. All tests of invariance (configural, metric, scalar, and strict) met the acceptable CFI (> 0.85) and RMSEA (<0.08) criteria. The fit indices for the CFA of the CAAS-USA were RMSEA = 0.052 and SRMR = 0.040 (Porfeli & Savickas, 2012). Concurrent validity was established using the Vocational Identity Status Assessment (VASA; Porfeli et al., 2011) for the CAAS-USA (Porfeli & Savickas, 2012).

Feasibility and Fidelity Procedures

Feasibility was evaluated through several indicators, including recruitment rate, eligibility rate, retention rate, and data completeness. Eligibility rate reflected the proportion of individuals who met the inclusion criteria among those who expressed initial interest. Recruitment rate was calculated as the number of eligible participants successfully enrolled during the recruitment window. Retention rate was monitored both at the module level and at post-survey completion to determine the consistency of participant engagement across the intervention timeline. The completeness of data was also assessed as a feasibility metric, with particular attention paid to missing data patterns across outcome measures and module activities. Module quizzes were embedded within each weekly session to assess adherence and compliance. These quizzes served as checkpoints to determine whether participants met the learning objectives of each module and completed the material as intended. In addition, participants were asked post-module to rate how well the activities met the stated objectives, the ease of following instructions, and their overall satisfaction with the intervention. These responses provided preliminary evidence of the program’s usability and acceptability.

Fidelity was monitored through multiple strategies aimed at capturing both structural and experiential components of intervention delivery. First, fidelity was supported through built-in features of the online modules, including required video viewing, completion of interactive quizzes, and open-ended feedback prompts. These elements helped ensure that participants engaged meaningfully with core content and allowed the researcher to verify module completion. Timely completion was enforced through the one-week per module pacing structure, with researcher follow-up if a participant fell behind. Participant progress was tracked manually by the researcher using a schedule management system. Individuals who were unable to stay on schedule, defined as unable to complete the module in one week, were excluded from the final analysis to maintain intervention fidelity. Only one individual was dropped from the final analysis for this reason.

Statistical Methods

Data for this study were collected using the *Qualtrics* online survey platform. Subsequently, these data were imported into IBM SPSS Statistics (Version 29.0.1; IBM Corp, Armonk, NY) for initial data management and analyses, and R (Version 4.4.2; R Core Team, 2024) for specific statistical procedures, including robust ANCOVA, as described subsequently. Both software packages were used to conduct quantitative analyses. An *a priori* alpha level of .05 was adopted for all inferential statistical tests to determine statistical significance. Notably, complete data were available for all variables included in the quantitative analyses, precluding the need for imputation techniques for missing data.

Descriptive Statistics

Descriptive statistics were calculated for demographic and clinical characteristics and pre- and post-test scores, focusing on frequencies, percentages, means, and standard deviations. The distribution shape, including skewness and kurtosis, was examined to assess the normality. Measures of dispersion, such as the range, variance, and standard deviation, were also examined. Demographic and autism diagnosis-related characteristics were summarized using frequency counts and percentages. Internal consistency reliability coefficients for all measures were calculated at both the pre- and post-tests.

Baseline comparability between the treatment and control groups was assessed using Welch's *t*-tests for continuous variables (e.g., age and age at diagnosis) and chi-square tests for categorical variables (e.g., gender, race/ethnicity, employment, and living situation). Wilcoxon rank-sum tests were used for ordinal variables (e.g., education). These analyses examined group differences in demographic characteristics, secondary conditions, and primary outcome measures at the baseline.

Outcome Analysis

The data from this pre-test–post-test randomized controlled design were examined using Analysis of Covariance (ANCOVA), incorporating pre-test scores as covariates. ANCOVA was selected because it reduces error variance and minimizes systematic bias (Dimitrov & Rumrill, 2003), offering greater statistical power for detecting group differences than repeated-measures ANOVA (Dugard & Todman, 1995). After evaluating the parametric test assumptions, robust ANCOVA models were conducted using MM-estimation, which offers resistance to violations of normality and heteroscedasticity while maintaining statistical efficiency.

Assessment of Parametric Test Assumptions

Prior to conducting primary analyses, a comprehensive set of diagnostic procedures was conducted to evaluate whether the data met the assumptions required for conducting Analysis of Covariance (ANCOVA). These checks were essential to ensure the validity, reliability, and interpretability of ANCOVA results. The following assumptions were systematically evaluated.

Independence of the Covariate and Treatment Effect

The study design ensured the independence of the covariates and treatment effects. Participants were randomly assigned to the treatment or control group before the administration of the pre-test measures, making it unlikely that the covariate (i.e., pre-test scores) could have been influenced by group assignment (Dimitrov & Rumrill, 2003; Myers et al., 2010).

Normality of Residuals and Dependent Variables

ANCOVA assumes that the residuals of the model are approximately normally distributed. The normality of the residuals and dependent variables was evaluated using the Shapiro-Wilk test (Shapiro & Wilk, 1965) for pre- and post-test scores within each group. In the control group, significant deviations from normality were found for the pre-test SIAS (*W*(32) = .933, *p* = .048), pre-test SAE-W (*W*(32) = .916, *p* = .016), post-test SIAS (*W*(32) = .913, *p* = .014), and post-test SAE-W (*W*(32) = .921, *p* = .022). In the treatment group, violations were widespread across both the pre- and post-test measures, including the AAS, CSES, SIAS, QDIO, DIDS, SAE-W, and CAAS. Only post-test AAS (*W*(32) = .940, *p* = .076) was normally distributed. Overall, the presence of significant non-normality across several variables justified the use of robust statistical methods in subsequent analyses.

Linearity of the Relationship Between Covariate and Dependent Variable

To assess the linearity between the covariates and dependent variables, Pearson's correlation coefficients and tests of linearity using ANOVA were conducted. For AAS, the covariate significantly predicted post-test scores in both groups, with moderate correlations (r = .59 control; r = .35 treatment) and no significant deviation from linearity (F (14, 48) = 1.20, p =.31). For CSES, strong correlations were found in both groups (r = .74 control; r = .85 treatment), and the test of deviation from linearity was non-significant (F (28, 34) = 1.02, p = .48). The SIAS also demonstrated strong linearity with no deviation (F (34, 28) = 1.53, p = .13). For QDIO, correlations were moderate to strong (r = .62 control; r = .68 treatment), with no deviation from linearity (F (20, 42) = 0.72, p =.78). DIDS showed strong linearity in both groups and no deviation from linearity (F (39, 23) = 0.78, p =.75). SAE-W presented strong correlations (r = .69 control; r = .78 treatment) and no deviation (F (26, 36) = 0.81, p = .71).

CAAS had very strong linear relationships (r = .72 control; r = .90 treatment) with no significant deviation (F (29, 33) = 1.27, p = .25). Collectively, these results confirmed the linearity assumption for all the outcome measures.

Homogeneity of Variance

ANCOVA assumes equal error variances across groups. When this assumption is violated, particularly in small or unbalanced samples, the F-test may become biased. To evaluate this assumption, Levene's tests (centered at the median) were conducted for each of the seven post-test outcome variables. The assumption was upheld for four measures: AAS, F(1, 62) = 3.92, p = .052; QDIO, F(1, 62) = 1.42, p = .240; DIDS, F(1, 62) = 2.78, p = .100; and CAAS, F(1, 62) = 0.78, p = .380. However, significant violations of homogeneity of variance were found for three outcomes: CSES, F(1, 62) = 4.40, p = .040; SIAS, F(1, 62) = 4.22, p = .044; and SAE-W, F(1, 62) = 7.96, p = .006. These violations, when considered alongside the results of the normality testing, provided a strong justification for using robust statistical methods in subsequent analyses to ensure the validity of the findings.

Homogeneity of Regression Slopes

The assumption of homogeneity of regression slopes is a critical requirement in ANCOVA, asserting that the relationship between the covariate (pre-test scores) and the dependent variable (post-test scores) should be consistent across groups. If this assumption is violated, the adjustment for the covariate may be inappropriate, and the group comparisons could be misleading. To assess this assumption, interaction terms between group assignment and the respective pre-test scores were included in the preliminary ANCOVA models for each of the seven outcome measures. The interaction terms were not statistically significant for any of the measures, indicating that the assumption was satisfied. Specifically, the interaction effects were as follows: AAS, F(1, 60) = 2.79, p = .100; CSES, F(1, 60) = 0.01, p = .927; SIAS, F(1, 60) = 3.38, p = .071; QDIO, F(1, 60) < 0.01, p = .988; DIDS, F(1, 60) = 0.67, p = .418; SAE-W, F(1, 60) = 3.85, p = .054; and CAAS, F(1, 60) = 1.51, p = .223. Although the interaction terms for SIAS and SAE-W approached significance, they did not reach the conventional alpha level of .05. These findings support the conclusion that the homogeneity of regression slopes assumption was adequately satisfied across all outcome measures.

CHAPTER 4: RESULTS

This chapter presents the results of the randomized controlled trial evaluating the efficacy of the Internet-based Autism and Disability Advocacy and Pride Training (ADAPT) intervention designed for autistic young adults. The intervention aimed to promote affirmed autistic identity, sociopolitical advocacy skills, and workplace self-advocacy skills while fostering career adaptability among participants. By integrating the principles of neurodiversity and the disability rights movement within the framework of self-determination theory, the intervention aimed to empower young adults with ASD to navigate the critical transition to adulthood with greater confidence, agency, and resilience. It focused on equipping them with advocacy skills across multiple levels: the individual level (challenging dominant societal norms and fostering personal autonomy), community level (advocating in the workplace and cultivating a sense of belonging through community engagement), and societal level (participating in civic life and legislative advocacy).

The analyses were guided by seven research questions that evaluated the effects of the ADAPT intervention on key outcomes related to disability identity, advocacy, and career development. Specifically, this study examined whether participation in the intervention improved self-acceptance of autism, as measured by the AAS, and participants' evaluation of their social identity as autistic individuals, assessed using the adapted CSES. The study also explored whether the intervention increased participants' confidence in sociopolitical advocacy, as measured by the adapted SIAS. Furthermore, the analyses assessed whether the intervention enhanced participants' internal attitudes toward disability and endorsement of the affirmative model of disability, as measured by the Pride and Social Model subscales of the QDIO, and improved the integration of disability into their overall self-concept and sense of belonging within the disability community, as assessed by the DIDS. Additionally, the study evaluated whether participation in the intervention increased participants' confidence in their ability to assert themselves in the workplace, as measured by the SAE-W, and whether it improved career adaptability, including readiness and perceived resources to manage career-related tasks and transitions, as measured by the CAAS.

The following sections first describe the sample, providing preliminary data screening and assumption checks, including tests for normality, linearity, homogeneity of variance, and regression slope assumptions. The primary outcome analyses using robust ANCOVA methods are presented. Where applicable, corrections for multiple comparisons using the Benjamini-Hochberg procedure were applied and reported transparently. Finally, exploratory item-level analyses are presented and framed as hypothesis-generating.

Participation and Response Rate

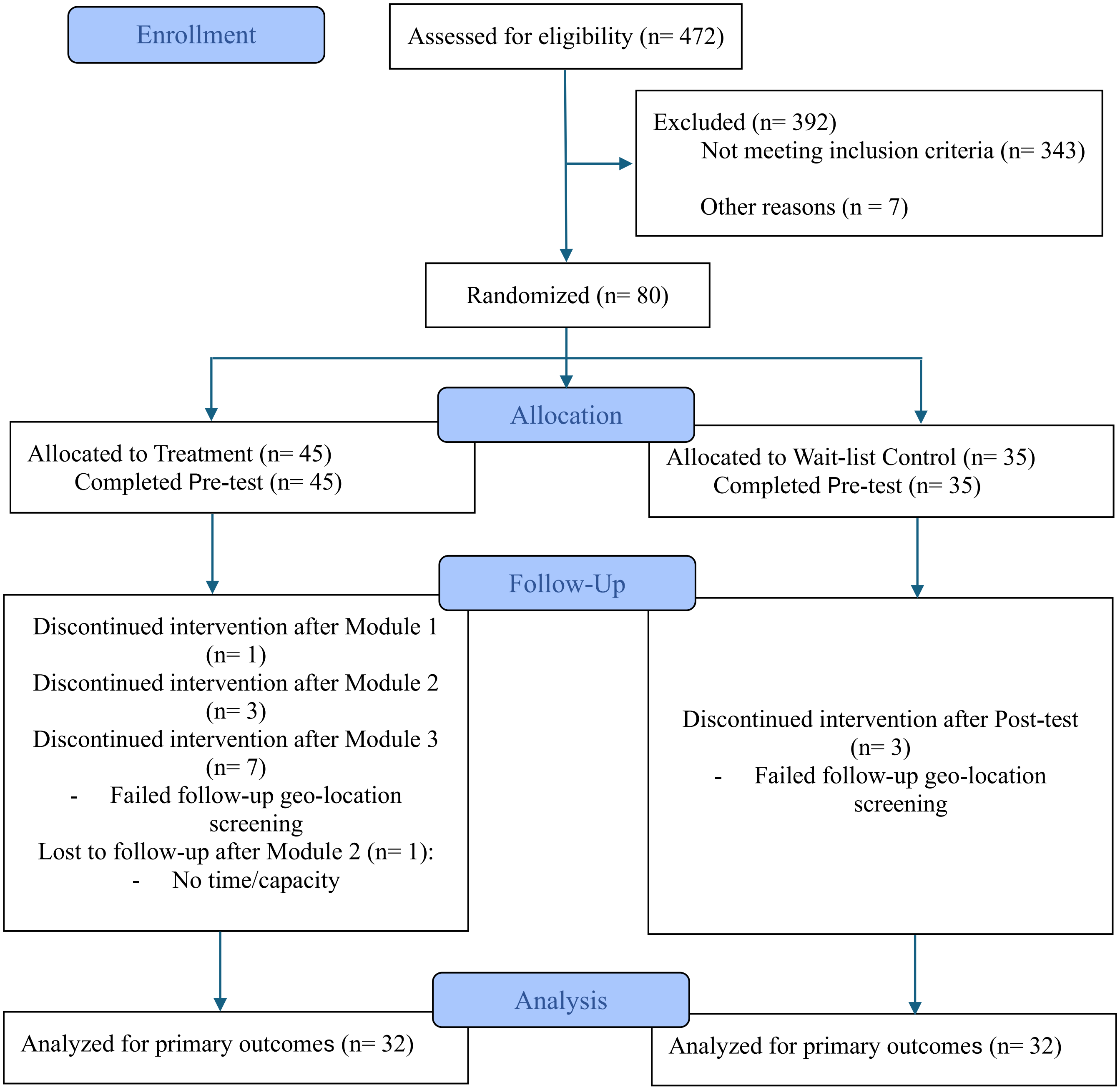
A total of 472 individuals were assessed for eligibility to participate in the study. Of these, 392 (83.1%) were excluded. The primary reasons for exclusion were not meeting the inclusion criteria (*n* = 343, 72.7%), unidentified referral sources (*n* = 42, 8.9%), and other reasons (*n* = 7, 1.5%). Following eligibility screening, 80 participants were randomized to either the treatment group (*n* = 45) or the waitlist control group (*n* = 35), resulting in an overall participation rate of 16.9% of those initially assessed.

In the treatment group, all 45 participants completed pre-test assessments. Attrition occurred progressively throughout the intervention and was primarily researcher-initiated due to follow-up geolocation screening failures. Although all participants passed the initial geo-location screening at baseline, subsequent checks revealed that several participants accessed the intervention from non-U.S. locations. In these cases, the researcher contacted the participants and provided them with the opportunity to verify their U.S. residency status by submitting acceptable documentation such as a utility bill or official mail displaying their first and last names. Participants who did not provide the requested proof of residency were excluded from the study. Specifically, one participant was discontinued after Module 1, three after Module 2, and seven after Module 3 due to failing to provide the required verification. Three additional participants discontinued the study following the post-test assessment for the same reason. Only one participant was lost during the intervention (after Module 2) due to their limited time and capacity to continue with the intervention. Ultimately, 32 participants (71.1%) in the treatment group completed the intervention and were retained for primary outcome analysis.

In the waitlist control group, all 35 participants completed the pre-test assessment (100%). Attrition in this group was minimal compared to that in the treatment group. Similar to the treatment group, follow-up geo-location screenings were conducted during the post-test phase. A small number of participants were identified as accessing the study from outside the United States and, following the same verification procedures, were given the option to submit proof of U.S. residency. Participants who did not provide the requested documentation were excluded from the study. Ultimately, 32 participants (91.4%) in the control group were retained and included in the primary outcome analyses. Figure 2 presents the CONSORT flow diagram illustrating the participants' progression through the randomized controlled trial phases, including enrollment, allocation, follow-up, and analysis for the treatment and control groups.

Figure 2

CONSORT flow diagram illustrating the progression through the phases of the randomized controlled trial involving two groups



Preliminary Analyses

Sample Description

The study sample included 64 participants who completed the pre-test assessment; 32 were assigned to the treatment group and 32 to the waitlist control group. Table 1 summarizes the participants' baseline sociodemographic characteristics. Across the full sample, most participants identified as male (64.6%), and 35.4% identified as female. In terms of race and ethnicity, just over half of the participants identified as White (53.8%), followed by Black (36.9%), Hispanic (3.1%), Asian (4.6%), and American Indian (1.5%). Educational attainment varied, with approximately one-third (33.8%) having completed high school, 20.0% reporting some college education, 15.4% holding a college degree, and 23.1% having earned a graduate degree. Only 1.5% reported less than a high school education.

Regarding employment status, 26.2% of the participants were employed full-time, 27.7% part-time, 12.3% unemployed, and 33.8% identified as students. All unemployed participants indicated that they were seeking work. Most participants reported living with their families (72.3%), while smaller proportions reported living alone (16.9%), with a spouse or partner (4.6%), or with roommates (6.2%). Additionally, 67.7% of participants reported having a secondary cognitive or mental health condition, 27.7% reported a secondary physical condition or impairment, and 13.8% reported a secondary sensory or communication limitation. The mean age of the participants was 21.88 years (SD = 2.41), with an average reported age at autism spectrum disorder (ASD) diagnosis of 8.75 years (SD = 4.45).

Several distinctive characteristics set this participant sample apart. First, participants were generally diagnosed with autism later than is typical. Globally, the average age of autism diagnosis is approximately five years age (van ’t Hof et al., 2021), while in the United States, the median age ranges between three and five years (Maenner, 2021). In contrast, this study's participants were diagnosed notably later in life. Second, the sample was also uniquely high achieving in terms of educational attainment. While national data suggest that autistic youth, particularly those from lower socioeconomic backgrounds, are less likely to complete high school compared to their non-autistic peers (Brendli Brown et al., 2025), the current sample defied this trend. Findings from the U.S. National Longitudinal Transition Study 2 indicate that only about one-third of autistic youth pursue postsecondary education (Kim & Baker, 2022; Wei et al., 2016), yet a large portion of this sample had enrolled in or completed post-secondary programs. These patterns were evident across both treatment and control groups. These sample characteristics suggest that the intervention may have attracted, or been most accessible to, a specific subset of the autistic population—those with higher educational attainment and later diagnoses. As such, the findings should be interpreted with caution, considering the potential influence of these unique participant attributes.

Baseline Comparison

Baseline comparisons were conducted to assess the equivalence of the treatment and control groups on key sociodemographic and clinical characteristics. There were no significant group differences in gender distribution (χ^2 (1, N = 64) = 0.62, p = .43), race and ethnicity (χ^2 (4, N = 64) = 6.28, p = .18), or living situation (χ^2 (3, N = 64) = 4.98, p = .17). Similarly, employment status did not differ significantly between the groups (χ^2 (3, N = 64) = 3.71, p =.29). The education level was compared using a Wilcoxon rank-sum test due to the ordinal nature of the data, which also indicated no significant difference between groups (W = 429.5, p =.25). No significant differences were found in the prevalence of secondary cognitive or mental health conditions (χ^2 (1, N = 64) = 0.00, p = 1.00), secondary physical conditions (χ^2 (1, N = 64)

= 0.70, *p* =.40), or secondary sensory or communication limitations (χ^2 (1, N = 64) = 0.52, *p* =.47). Age at baseline and age at diagnosis of autism spectrum disorder (ASD) were analyzed using Welch's *t*-tests, with no significant differences observed for age (*t* (61.80) = -0.68, *p* = .50, 95% CI = [-1.61, 0.80]) or age at diagnosis (*t* (60.51) = 1.42, *p* = .16, 95% CI = [-0.63, 3.76]). These results suggest that the treatment and control groups were generally comparable across the measured baseline characteristics, supporting the effectiveness of randomization.

Table 4

Sociodemographic and Clinical Characteristics of Participants

Baseline characteristic	Treatment (*n* = 32)		Control (*n* = 32)		Full sample (*n* = 64)			
	n	%	*n*	%	*n*	%	χ^2 / *W*	*p*
Gender							**χ^2(1)= 0.62**	**0.43**
Female	9	30.3	13	40.6	23	35.4		
Male	23	69.7	19	59.4	42	64.6		
Race & Ethnicity							**χ^2(4)= 6.28**	**0.18**
White	18	57.6	16	50.0	35	53.8		
Black	11	33.3	13	40.6	24	36.9		
Hispanic	2	6.1	0	0	2	3.1		
Asian	0	0	3	9.4	3	4.6		
American Indian	1	3.0	0	0	1	1.5		
Highest educational level							***W*= 429.5**	**0.25**
Less than high school	0	0	1	3.1	1	1.5		
High school	13	39.4	9	28.1	22	33.8		
Some college	7	21.2	6	18.8	13	20.0		
College degree	6	18.2	4	12.5	10	15.4		
Some graduate	2	6.1	2	6.3	4	6.2		
Graduate degree	5	15.2	10	31.3	15	23.1		
Employment							**χ^2(3)= 3.71**	**0.24**
Employed (Full-time)	8	24.2	9	28.1	17	26.2		
Employed (Part-time)	7	21.2	11	34.4	18	27.7		
Unemployed	6	18.2	2	6.3	8	12.3		
Student	12	36.4	10	31.3	22	33.8		
Living Situation							**χ^2(3)= 4.98**	**0.17**
Live with family	27	81.8	20	62.5	47	72.3		
Live alone	3	9.1	8	25.0	11	16.9		

Live with a spouse/partner	1	3.0	2	6.3	3	4.6		
Live with roommate(s)	2	6.1	2	6.3	4	6.2		
Secondary **Cognitive or Mental** Health Condition [a]	23	69.7	21	65.6	44	67.7	**$\chi^2(1)= 0$**	**1**
Secondary **Physical** Condition/Impairment [a]	11	33.3	7	21.9	18	27.7	**$\chi^2(1)= 0.70$**	**0.40**
Secondary **Sensory or Communication** Limitation [a]	3	9.1	6	18.8	9	13.8	**$\chi^2(1)= 0.52$**	**0.47**
	M	SD	M	SD	M	SD	$t_{(df)}$	*p*
Age	21.73	2.5	22.03	2.34	21.88	2.41	**$-0.68_{(61.8)}$**	**0.50**
Age at Diagnosis of ASD	9.42	4.79	8.06	4.03	8.75	4.45	**$1.42_{(60.5)}$**	**0.16**

Note. N = 64 (*n* = 32 for Treatment; *n* = 32 for Wait-list control).

[a] Reflects the number and percentage of participants who answered “yes” to this question.

Pre-test Measures

Baseline pre-test assessments were conducted for all participants to examine their initial scores on the study’s primary and secondary outcome measures. Table 5 presents the descriptive statistics for each measure across the treatment and waitlist control groups and the full sample. On the AAS, the full sample reported a mean score of 3.52 (SD = 0.45). Subscale scores showed higher endorsement for Self-Identity (M = 3.94, SD = 0.76) than Value Change (M = 3.39, SD = 0.80). The internal consistency for the AAS total scale was relatively low (Cronbach’s α = .35), indicating limitations in reliability, although the subscales demonstrated improved internal consistency.

For the CSES, participants reported an overall mean of 3.93 (SD = 0.60), with the highest scores observed on the Membership (M = 4.16, SD = 0.69) and Private (M = 4.14, SD = 0.70) subscales. The internal consistency of the total CSES was strong (α = .86). Participants also completed the SIAS, with an overall mean score of 3.97 (SD = 0.66). The subscales reflected moderate endorsement of Advocacy (M = 3.94, SD = 0.82), Political Awareness (M = 3.96, SD = 0.68), and Social Issues Awareness (M = 3.95, SD = 0.72). This measure demonstrated excellent internal consistency (α = .93).

On the QDIO, participants reported a mean of 4.12 (SD = 0.47), with higher scores on the Social Model subscale (M = 4.21, SD = 0.51) than the Pride subscale (M = 3.92, SD = 0.74). The total scale demonstrated good internal consistency (α = .78). For the DIDS, the full sample reported a mean total score of 140.52 (SD = 18.19) with strong internal consistency (α = .94).

Regarding self-advocacy-related outcomes, the SAE-W showed a mean of 4.04 (SD = 0.70) with high reliability (α = .94). Finally, the CAAS indicated a mean of 4.25 (SD = 0.57) for the full sample, also demonstrating excellent internal consistency (α = .94) at baseline.

Table 5

Pre-test measurement scores

Measures	Treatment		Wait-list control		Full sample		
	M	SD	M	SD	M	SD	Cronbach α
Autism Acceptance Scale	**3.59**	**0.43**	**3.45**	**0.46**	**3.52**	**0.45**	**.35**
Self-Identity	4.10	0.68	3.77	0.79	3.94	0.76	.60
Value Change	3.40	0.75	3.38	0.85	3.39	0.80	.574
Collective Self-Esteem Scale	**3.93**	**0.60**	**3.87**	**0.63**	**3.93**	**0.60**	**.864**
Membership	4.23	0.62	4.08	0.75	4.16	0.69	.699
Private	4.11	0.61	4.16	0.79	4.14	0.70	.665
Public	3.60	0.75	3.38	0.97	3.49	0.87	.636
Identity	4.02	0.66	3.85	0.62	3.93	0.64	.531
Social Issues & Advocacy Scale	**3.95**	**0.72**	**4.00**	**0.62**	**3.97**	**0.66**	**.934**
Advocacy	3.92	0.77	3.95	0.87	3.94	0.82	.882
Political Awareness	3.92	0.80	4.00	0.56	3.96	0.68	.799
Social Issues Awareness	3.88	0.82	4.02	0.62	3.95	0.72	.764
Confronting	4.19	0.60	4.06	0.91	4.13	0.76	.779
Questionnaire on Disability Identity & Opportunity	**4.15**	**0.44**	**4.09**	**0.51**	**4.12**	**0.47**	**.782**
Pride	4.05	0.67	3.79	0.79	3.92	0.74	.778
Social Model	4.19	0.49	4.23	0.54	4.21	0.51	.753

Disability Identity Development Scale	**141.88**	**18.30**	**139.16**	**18.27**	**140.52**	**18.19**	**.935**
Self-Assertive Efficacy at Workplace Advocacy	**4.09**	**0.74**	**3.99**	**0.67**	**4.04**	**0.70**	**.943**
Work conditions management	4.22	0.75	4.08	0.68	4.16	0.71	.911
Self-promotion	3.92	0.77	3.87	0.72	3.89	0.74	.87
Career Adaptability Scale	**4.31**	**0.67**	**4.30**	**0.45**	**4.25**	**0.57**	**.942**

Note. $N = 65$ ($n = 32$ for Treatment; $n = 32$ for Wait-list control).

Post-test Measures

Post-test assessments were completed by participants retained in the study (n = 64) to evaluate changes across the outcome measures following the one-month intervention period. Table 6 summarizes the descriptive statistics for post-test scores by group, each measure's full sample, and internal consistency estimates (Cronbach's α). On the AAS, the full sample demonstrated an increase in scores compared to baseline, with a mean of 3.73 (SD = 0.45). Participants in the treatment group reported higher scores (M = 3.86, SD = 0.35) than those in the waitlist control group (M = 3.60, SD = 0.50). Subscale scores showed improvements in both Self-Identity (M = 4.14, SD = 0.66) and Value Change (M = 3.60, SD = 0.81). However, the internal consistency for the total AAS scale remained low (α = .36), indicating limited reliability, though subscales like Self-Identity demonstrated better internal consistency (α = .61).

For the CSES, the full sample reported a mean of 3.98 (SD = 0.68), with higher scores in the treatment group (M = 4.14, SD = 0.60) compared to the control group (M = 3.83, SD = 0.73). The internal consistency of the overall scale was strong (α = .88). Subscale scores continued to show high endorsement, particularly for Membership (M = 4.11, SD = 0.77, α = .71) and Private (M = 4.16, SD = 0.89, α = .76). For SIAS, the full sample reported an increased mean of 4.16 (SD = 0.79). The treatment group reported higher post-test scores (M = 4.38, SD = 0.69) compared to the control group (M = 3.94, SD = 0.84). Internal consistency was excellent (α

= .97), with all subscales, including Advocacy, Political Awareness, Social Issues Awareness, and Confronting, showing high reliability (α range = .75 to .93).

Participants in the treatment group also reported higher post-test scores on the QDIO (M = 4.39, SD = 0.42) than the control group (M = 4.21, SD = 0.55). Internal consistency for the total scale was acceptable (α = .82), with both Pride (α = .81) and Social Model (α = .80) subscales demonstrating good reliability. On the DIDS, the full sample mean increased to 145.83 (SD = 18.11), with the treatment group reporting higher scores (M = 151.66, SD = 14.99) than the control group (M = 140.00, SD = 19.28). The scale showed excellent internal consistency (α = .94).

For the SAE-W, the treatment group reported higher scores (M = 4.39, SD = 0.52) than the control group (M = 3.88, SD = 0.87). The overall scale demonstrated strong reliability (α = .96), with subscales such as Work Conditions Management (α = .92) and Self-Promotion (α = .92) also showing high internal consistency. Finally, the CAAS indicated higher post-test scores in the treatment group (M = 4.43, SD = 0.50) than in the control group (M = 4.25, SD = 0.54). The internal consistency of the overall scale was excellent (α = .94). Overall, descriptive post-test data suggested that participants in the treatment group reported higher scores across all outcome measures compared to the wait-list control group, aligning with the hypothesized direction of the intervention effect. Most measures demonstrated strong-to-excellent internal consistency, supporting the reliability of the observed post-test outcomes.

Table 6

Post-test measurement scores

Measures	Treatment		Wait-list control		Full sample		
	M	SD	M	SD	M	SD	Cronbach α

Autism Acceptance Scale	**3.86**	**0.35**	**3.60**	**0.50**	**3.73**	**0.45**	**.36**
Self-Identity	4.30	0.50	3.97	0.77	4.14	0.66	.61
Value Change	3.72	0.82	3.47	0.79	3.60	0.81	.56
Collective Self-Esteem Scale	**4.14**	**0.60**	**3.83**	**0.73**	**3.98**	**0.68**	**.88**
Membership	4.33	0.62	3.89	0.85	4.11	0.77	.71
Private	4.27	0.82	4.06	0.96	4.16	0.89	.76
Public	3.71	0.77	3.38	0.92	3.55	0.86	.62
Identity	4.24	0.67	3.98	0.74	4.11	0.71	.63
Social Issues & Advocacy Scale	**4.38**	**0.69**	**3.94**	**0.84**	**4.16**	**0.79**	**.97**
Advocacy	4.39	0.71	3.91	0.88	4.15	0.83	.91
Political Awareness	4.30	0.77	3.94	0.85	4.12	0.82	.93
Social Issues Awareness	4.34	0.82	3.91	1.01	4.13	0.94	.90
Confronting	4.51	0.54	4.14	0.80	4.33	0.70	.75
Questionnaire on Disability Identity & Opportunity	**4.39**	**0.42**	**4.21**	**0.55**	**4.30**	**0.49**	**.82**
Pride	4.43	0.52	3.95	0.85	4.19	0.74	.81
Social Model	4.38	0.50	4.32	0.55	4.35	0.52	.80
Disability Identity Development Scale	**151.66**	**14.99**	**140.00**	**19.28**	**145.83**	**18.11**	**.94**
Self-Assertive Efficacy at Workplace Advocacy	**4.39**	**0.52**	**3.88**	**0.87**	**4.13**	**0.76**	**.96**
Work conditions management	4.46	0.52	3.96	0.79	4.21	0.71	.92
Self-promotion	4.27	0.58	3.77	0.97	4.02	0.83	.92
Career Adaptability Scale	**4.43**	**0.50**	**4.25**	**0.54**	**4.34**	**0.53**	**.94**

Note. N = 65 (*n* = 32 for Treatment; *n* = 32 for Wait-list control).

Primary Outcome Analysis

The outcomes of this pre-test-post-test randomized control group design were analyzed using Analysis of Covariance (ANCOVA), with pre-test scores as a covariate. ANCOVA reduces error variance and systematic bias (Dimitrov & Rumrill, 2003). It is also a more powerful test of the hypothesis compared to the repeated measures ANOVA approach (Dugard & Todman, 1995). However, due to violations of normality (assessed via Shapiro-Wilk tests) and homogeneity of variance across groups (assessed via Levene's tests) for several outcome measures, the traditional ANCOVA assumptions were not met. Therefore, a robust ANCOVA was conducted using MM-estimation implemented via the *lmrob()* function from the *robustbase* package in R (Version 4.4.2; R Core Team, 2024).

MM-estimation combines a high breakdown point and high efficiency, making it suitable for scenarios where traditional ANCOVA assumptions of normality and heteroscedasticity (i.e., homogeneity of variance) are violated, but the assumption of homogeneity of regression slopes is met (Wilcox, 2017; Yohai, 1987). MM-estimation produces robust estimates of regression coefficients, standard errors, t-statistics, and approximate p-values using asymptotic theory (Koller & Stahel, 2011). This approach mitigates the influence of extreme values and is robust to heteroscedasticity. The independent variable was the group (treatment vs. control), and the pre-test score for each respective measure was included as a covariate. The dependent variable was the post-test score for each outcome. For each outcome measure, robust ANCOVA was performed, and Benjamini-Hochberg (BH) false discovery rate correction was applied across the seven models to control for multiple comparisons (Benjamini & Hochberg, 1995).

The results indicated statistically significant group differences in three of the seven outcomes following correction. The adjusted group difference for the SIAS was 0.400 (SE = 0.157), with a robust t-statistic of 2.555, $p = .013$. The 95% confidence interval for the group difference ranged from 0.087 to 0.713, and the BH-adjusted p-value was .046. These findings suggest that participants in the treatment group reported significantly greater gains in advocacy engagement than those in the control group, even after controlling for initial scores. The adjusted R^2 for the model was .509, indicating that the model explained approximately 51% of the variance in post-test SIAS scores.

For the DIDS, the adjusted group difference was 8.004 (SE = 2.782), with a t-value of 2.877, p = .006, and a BH-adjusted p-value of .039. The 95% confidence interval ranged from 2.442 to 13.570. These results reflected a significant improvement in identity development scores for participants in the intervention group, and the model accounted for a substantial portion of the variance (adjusted R^2 = .707).

The CAAS also demonstrated a significant treatment effect, with an adjusted group difference of 0.125 (SE = 0.053), t = 2.376, p = .021, and BH-adjusted p = .048. The 95% confidence interval for the difference was between 0.020 and 0.230. This model yielded the highest adjusted R^2 value at .901, suggesting that the intervention substantially contributed to the variance in post-test career adaptability scores.

Although the remaining four outcomes did not meet the threshold for statistical significance after correction, several showed promising trends. For the AAS, the group difference was 0.187 (SE = 0.106), with a 95% CI of –0.024 to 0.399, t = 1.774, p = .081, and BH-adjusted p = .113. The adjusted R^2 value was .276. Similarly, the SAE-W yielded a difference of 0.175 (SE = 0.099), 95% CI [–0.023, 0.373], t = 1.764, p = .083, BH-adjusted p = .116, with an adjusted R^2 of .754. For the CSES, the adjusted group difference was 0.120 (SE = 0.075), with a 95% confidence interval of –0.030 to 0.270, t = 1.596, p = .116, BH-adjusted p = .135, and an adjusted R^2 of .833. The QDIO also did not reach statistical significance, with a group difference of 0.118 (SE = 0.090), 95% CI [–0.061, 0.298], t = 1.323, p = .191, BH-adjusted p = .191, and an adjusted R^2 of .433.

Table 7

Robust ANCOVA Models using MM-estimation

Measure	95% C.I.	SE	*t*	*p*

	Adjusted Group Difference (*b*)	LL	UL				BH-corrected *p*	Adjusted *R*²
Autism Acceptance Scale (AAS)	0.187	-0.024	0.399	0.106	1.774	.081	.113	.276
Collective Self-Esteem Scale (CSES)	0.120	-0.030	0.270	0.075	1.596	.116	.135	.833
Social Issues & Advocacy Scale (SIAS)	**0.400**	**0.087**	**0.713**	**0.157**	**2.555**	**.013**	**.046**	**.509**
Questionnaire on Disability Identity & Opportunity (QDIO)	0.118	-0.061	0.298	0.090	1.323	.191	.191	.433
Disability Identity Development Scale (DIDS)	**8.004**	**2.442**	**13.57**	**2.782**	**2.877**	**.006**	**.039**	**.707**
Self-Assertive Efficacy at Workplace Advocacy (SAE-W)	0.175	-0.023	0.373	0.099	1.764	.083	.116	.754
Career Adaptability Scale (CAAS)	**0.125**	**0.020**	**0.230**	**0.053**	**2.376**	**.021**	**.048**	**.901**

Note. *p*-values are based on robust ANCOVA models using MM-estimation. Benjamini-Hochberg false discovery rate correction was applied across the seven primary outcome measures. Group coded as 0 = Control, 1 = Treatment.

The results suggest that the intervention was particularly effective in improving participants' advocacy for social issues, disability identity development, and career adaptability. These findings are consistent with the intervention's theoretical underpinnings, which were designed to enhance the psychosocial competencies relevant to self-advocacy, identity formation, and vocational development.

Conditional Group Effects Estimated with Robust ANCOVA

Given the sample size (n = 64) and violations of parametric assumptions, including pronounced left skew (i.e., clustering at the high end of Likert-type scales) and heterogeneity of variances for several outcome measures (CSES, SIAS, and SAE-W), the traditional ANCOVA was deemed inappropriate. A standard robust ANCOVA was initially conducted, given that the homogeneity of regression slopes assumption was met. However, two factors prompted the use of the WRS2 *ancova()* function for deeper analysis: (1) interaction terms for SIAS and SAE-W approached significance and visual inspection suggested non-parallel slopes, and (2) the desire to explore treatment effects more thoroughly across the covariate range, accounting for potential violations of slope homogeneity not easily interpreted from a single interaction term in *lmrob()*.

To examine whether intervention effects varied across levels of baseline functioning, a series of robust ANCOVA analyses were conducted using the *ancova()* function from the WRS2 package (Mair & Wilcox, 2020) in R (Version 4.4.2; R Core Team, 2024). This method estimated the adjusted post-test differences between the treatment and control groups at the five anchored pre-test covariate values. These anchor points were based on empirical quantiles (typically the 25th, 37.5th, 50th, 62.5th, and 75th percentiles), allowing for group comparisons across the distribution of baseline scores. The WRS2 *ancova()* function employs 20% trimmed means, which removes the lowest and highest 20% of the scores in each group before calculating the mean. This procedure reduces the influence of extreme values by addressing concerns related to non-normality and outliers. In addition, the method uses robust estimators of covariate slopes and adjusts degrees of freedom to account for potential heteroscedasticity, thus providing greater protection against inflated Type I error rates (Wilcox, 2017).

This analytic strategy served several important functions. First, it allowed the modeling of non-uniform treatment effects. Unlike robust linear regression via *lmrob()*, which assumes a single treatment effect across the range of pre-test values, the WRS2 approach tests whether the intervention effects differ based on baseline functioning. This is particularly relevant in behavioral and educational intervention research, in which treatment responsiveness may be moderated by participants’ initial levels of skill or self-efficacy. Second, this method bolstered the robustness against assumption violations. Although MM-estimation in *lmrob()* addresses similar concerns, WRS2's use of trimmed means and heteroscedasticity-consistent estimators provided an additional safeguard, offering complementary evidence for evaluating group effects under less stringent distributional assumptions.

Additionally, the approach allowed for a more nuanced interpretation of conditional effects. By estimating group differences at multiple covariate values, it was possible to identify where the intervention had the strongest or weakest impact along the pre-test continuum. This level of granularity provided important insights into whether the treatment was particularly beneficial for participants with lower or higher baseline scores. Importantly, using both *lmrob()* and robust ANCOVA via WRS2 allowed triangulation of the results. Convergent findings across methods provided greater confidence in the robustness and reliability of the observed effects. Lastly, this approach aligns with current best practices in robust statistical analysis (Wilcox, 2017; Mair & Wilcox, 2020), particularly in the context of small-sample, non-normally distributed, and heteroscedastic data.

Autism Acceptance Scale (AAS)

At the 25th percentile of the pre-test score distribution (AAS = 3.375), the adjusted mean difference was 0.035 (SE = 0.135, 95% CI [-0.351, 0.422], BH-adjusted $p = .988$). At the 37.5th percentile (AAS = 3.500), the difference slightly favored the control group at –0.021 (SE = 0.109, 95% CI [–0.328, 0.286], BH $p = .988$). At the median (AAS = 3.625), the adjusted difference was essentially null (0.002, SE = 0.099, 95% CI [–0.287, 0.290], BH $p = .988$). Similarly, at the 62.5th percentile (AAS = 3.750), the difference remained negligible at 0.019 (SE = 0.114, 95% CI [–0.322, 0.360], BH $p = .988$). At the 75th percentile (AAS = 3.875), the adjusted difference was slightly larger (0.094, SE = 0.130) but still non-significant (95% CI [–

0.298, 0.486], BH p =.988). No statistically significant group differences were observed in the pre-test distribution of the AAS scores. These results suggest that the intervention did not yield measurable gains in autism self-acceptance outcomes relative to the control group, regardless of the participants' baseline levels.

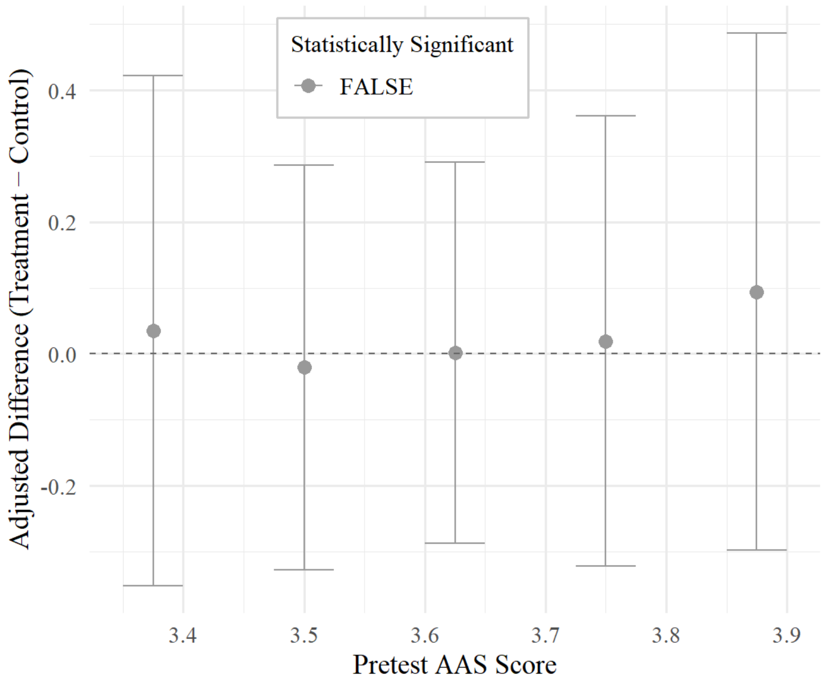
Table 8

AAS Adjusted Group Difference Across Pre-test Scores

Covariate Level (Pre-test Score)	n1	n2	Adjusted Mean Difference (SE)	95% C.I.		Test Statistic	*p*	BH *p*
				LL	UL			
3.375	16	17	0.035 (0.135)	-0.351	0.422	0.262	.797	.988
3.500	20	18	-0.021 (0.109)	-0.328	0.286	0.191	.850	.988
3.625	24	16	0.002 (0.099)	-0.287	0.290	0.016	.988	.988
3.750	23	13	0.019 (0.114)	-0.322	0.360	0.171	.867	.988
3.875	18	12	0.094 (0.130)	-0.298	0.486	0.720	.485	.988

Figure 3

AAS Adjusted Group Difference Across Pre-test Scores



Collective Self-Esteem Scale (CSES)

At the lowest covariate level (CSES = 3.000), the adjusted mean difference was 0.350 (SE = 0.181), with a 95% confidence interval of [–0.182, 0.882], and Benjamini-Hochberg (BH) adjusted *p* = .240. At the 37.5th percentile (CSES = 3.500), the difference was nearly identical at 0.349 (SE = 0.230), 95% CI [–0.296, 0.994], BH *p* = .240. The median covariate level (CSES = 4.000) yielded an adjusted mean difference of 0.226 (SE = 0.194, 95% CI [–0.309, 0.761], BH *p* = .278). At the 62.5th percentile (CSES = 4.563), the difference was 0.130 (SE = 0.117, 95% CI [–0.200, 0.461], BH *p* = .278). Finally, at the 75th percentile (CSES = 4.813), the adjusted difference was 0.192 (SE = 0.111, 95% CI [–0.131, 0.516], BH *p* = .240). While point estimates consistently favored the treatment group, none of the comparisons was statistically significant after correction. These findings suggest a modest but non-significant trend toward increased collective self-esteem in the treatment group relative to the control group, regardless of the initial baseline levels.

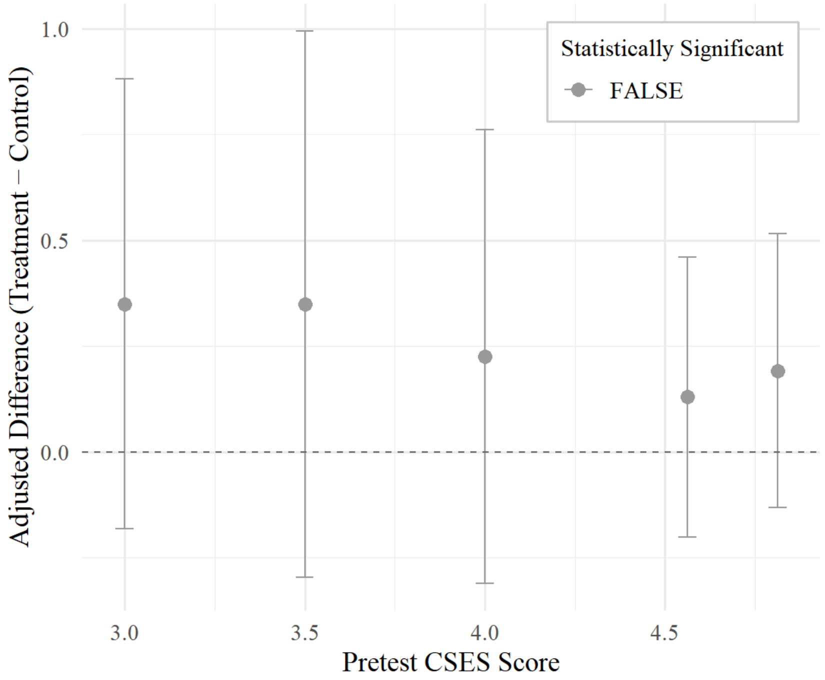
Table 9

CSES Adjusted Group Difference Across Pre-test Scores

Covariate Level (Pre-test Score)	n1	n2	Adjusted Mean Difference (SE)	95% C.I.		Test Statistic	*p*	BH *p*
				LL	UL			
3.000	14	14	0.350 (0.181)	-0.182	0.882	1.931	.074	.240
3.500	20	20	0.349 (0.230)	-0.296	0.994	1.517	.144	.240
4.000	28	26	0.226 (0.194)	-0.309	0.761	1.164	.255	.278
4.563	18	18	0.130 (0.117)	-0.200	0.461	1.116	.278	.278
4.813	14	15	0.192 (0.111)	-0.131	0.516	1.742	.103	.240

Figure 4

CSES Adjusted Group Difference Across Pre-test Scores



Social Issues Advocacy Scale (SIAS)

The results indicated statistically significant adjusted mean differences favoring the treatment group at several levels, particularly among participants with lower-to-moderate baseline SIAS scores. At the 25th percentile (SIAS = 3.333), the treatment group demonstrated a significantly higher adjusted post-test score than the control group, with a mean difference of 0.833 (SE = 0.304, 95% CI [–0.058, 1.725], BH-adjusted *p* = .039). A similar pattern was observed at the 37.5th percentile (SIAS = 4.000), with a difference of 0.511 (SE = 0.190, 95% CI [–0.032, 1.054], BH *p* = .039). At the median level (SIAS = 4.333), the adjusted mean difference remained positive at 0.254 (SE = 0.121, 95% CI [–0.087, 0.595]), with a marginal *p-value* of .048 and BH *p* = .061. Additional group differences at higher pre-test levels (SIAS = 4.571 and 4.714) also favored the treatment group. At SIAS = 4.571, the adjusted difference was 0.312 (SE = 0.129, 95% CI [–0.070, 0.694], *p* = .030, BH *p* = .051), indicating a trend toward significance. However, at the highest covariate level (SIAS = 4.714), the adjusted difference of 0.235 (SE = 0.166) did not reach significance (95% CI [–0.261, 0.730], p =.181). These findings suggest that the intervention had the strongest effect on enhancing social issue engagement and advocacy among participants with lower-to-moderate baseline SIAS scores. The observed pattern provides preliminary evidence of nonuniform treatment effects, with greater gains for individuals starting with less prior advocacy experience or identification.

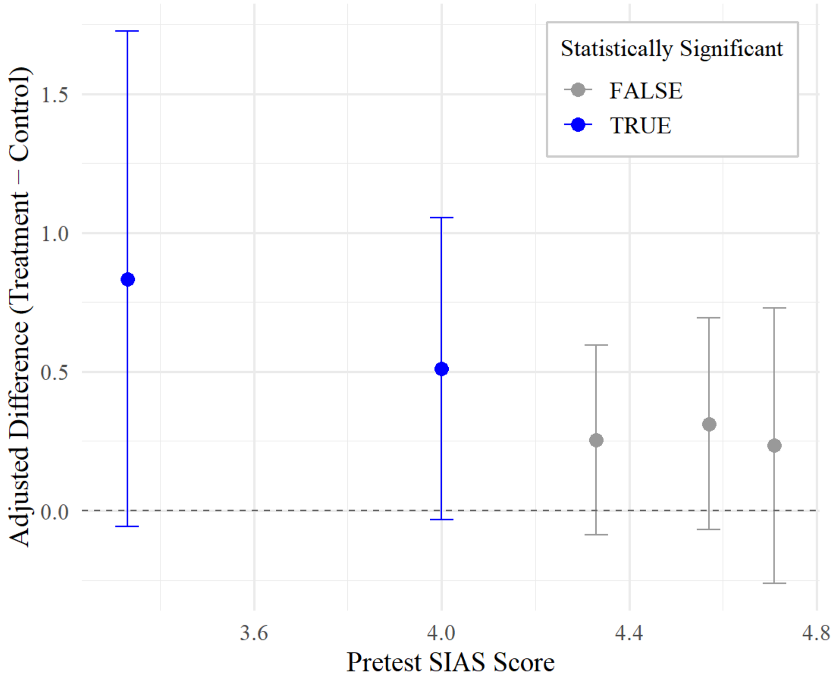
Table 10

SIAS Adjusted Group Difference Across Pre-test Scores

Covariate Level (Pre-test Score)	n1	n2	Adjusted Mean Difference (SE)	95% C.I.		Test Statistic	*p*	BH *p*
				LL	UL			
3.333	**12**	**15**	**0.833 (0.304)**	**-0.058**	**1.725**	**2.746**	**.016**	**.039**
4.000	**22**	**23**	**0.511 (0.190)**	**-0.032**	**1.054**	**2.695**	**.015**	**.039**
4.333	23	23	0.254 (0.121)	-0.087	0.595	2.104	.048	.061
4.571	20	21	0.312 (0.129)	-0.070	0.694	2.419	.030	.051
4.714	18	17	0.235 (0.166)	-0.261	0.730	1.417	.181	.181

Figure 5

SIAS Adjusted Group Difference Across Pre-test Scores



Questionnaire on Disability Identity and Opportunity (QDIO)

Although group differences generally favored the treatment condition at lower-to-moderate covariate levels, none of the comparisons reached statistical significance after applying the Benjamini-Hochberg (BH) correction for multiple comparisons. At the lowest covariate level (QDIO = 3.846), the adjusted mean difference was 0.214 (SE = 0.102, 95% CI [–0.082, 0.509]), with a *p-value* of .053 and a BH-adjusted *p* = .175, suggesting a marginal trend favoring the treatment group. A similar pattern emerged at QDIO = 3.923, with an adjusted difference of 0.193 (SE = 0.100, 95% CI [–0.093, 0.479], BH *p* = .175). At the median level (QDIO = 4.077), the group difference decreased to 0.093 (SE = 0.125, 95% CI [− 0.263, 0.449], BH *p* = .583). At the 62.5th percentile (QDIO = 4.154), the adjusted difference remained small and non-significant at 0.080 (SE = 0.146, 95% CI [–0.325, 0.484], BH *p* = .592. At the highest covariate level (QDIO = 4.308), the direction of the effect was reversed, with a small difference favoring the control group –0.133, SE = 0.120, 95% CI [–0.476, 0.211], *p* = .284, BH *p* = .474). While there was a modest, non-significant trend toward greater improvement in disability identity and opportunity scores among participants in the treatment group with lower baseline scores, these effects did not achieve statistical significance after correction.

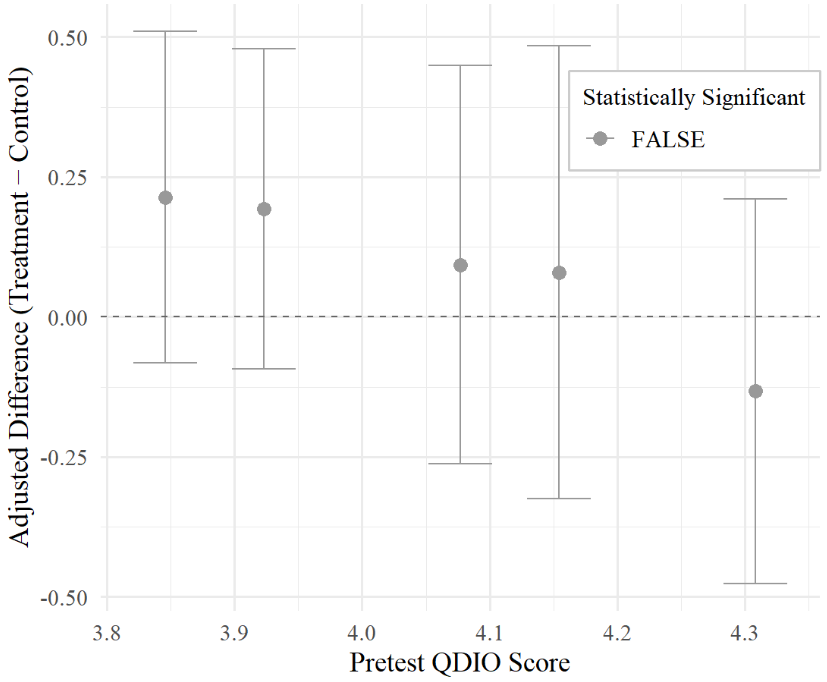
Table 11

QDIO Adjusted Group Difference Across Pre-test Scores

Covariate Level (Pre-test Score)	n1	n2	Adjusted Mean Difference (SE)	95% C.I. LL	95% C.I. UL	Test Statistic	*p*	BH *p*
3.846	15	15	0.214 (0.102)	-0.082	0.509	2.089	.053	.175
3.923	17	16	0.193 (0.100)	-0.093	0.479	1.934	.070	.175
4.077	20	19	0.093 (0.125)	-0.263	0.449	0.743	.467	.583
4.154	19	22	0.080 (0.146)	-0.325	0.484	0.543	.592	.592
4.308	16	21	-0.133 (0.120)	-0.476	0.211	1.105	.284	.474

Figure 6

QDIO Adjusted Group Difference Across Pre-test Scores



Disability Identity Development Scale (DIDS)

The results revealed statistically significant differences favoring the treatment group at several mid-range covariate levels, suggesting that the intervention was the most effective among participants with moderate baseline identity development scores. At the lowest covariate level (DIDS = 120), the adjusted mean difference was 9.750 (SE = 5.543, 95% CI [–6.204, 25.704], BH-adjusted *p* = .121), indicating a marginal trend toward significance. A significant group difference emerged at DIDS = 130, where the treatment group outperformed the control group by 12.487 points (SE = 5.012, 95% CI [–1.648, 26.622], BH *p* = .036). At the median covariate level (DIDS = 151), the intervention effect was strongest, with a significant adjusted mean difference of 13.010 (SE = 3.501, 95% CI [2.891, 23.130], BH *p* = .010).

At the 62.5th percentile (DIDS = 157), the treatment effect remained significant at 10.532 (SE = 3.960, 95% CI [–1.378, 22.442], BH *p* = .036). However, at the highest covariate level (DIDS = 168), the group difference was no longer statistically significant, with an adjusted mean difference of 2.014 (SE = 2.511, 95% CI [–5.719, 9.747], BH *p* = .440). These findings indicated that the intervention was associated with meaningful gains in identity development, particularly among participants with mid-range baseline scores. The lack of significant effects at the highest and lowest levels suggests that the intervention may have had a limited impact on participants with very low or very high initial identity development.

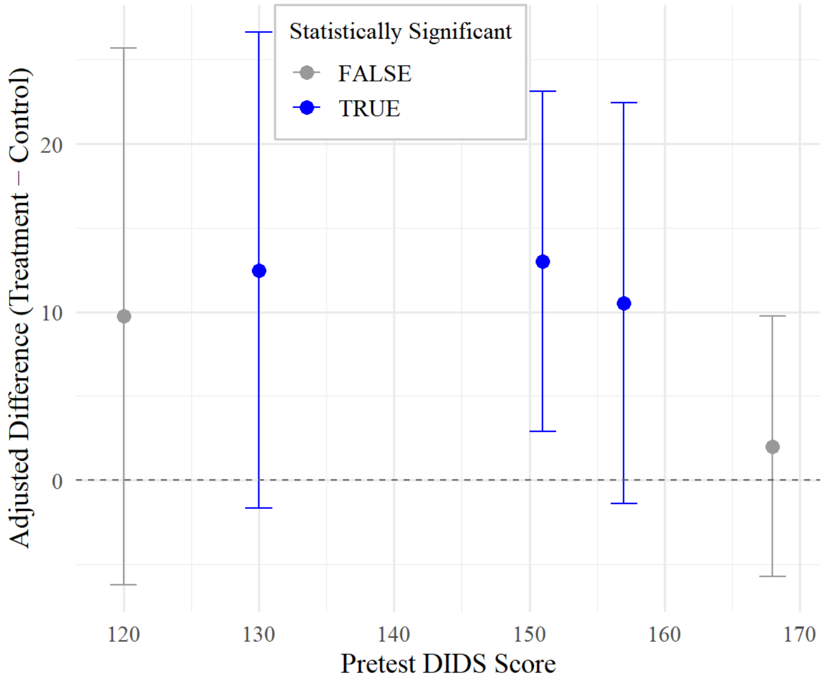
Table 12

DIDS Adjusted Group Difference Across Pre-test Scores

Covariate Level (Pre-test Score)	n1	n2	Adjusted Mean Difference (SE)	95% C.I.		Test Statistic	*p*	BH *p*
				LL	UL			
120	13	18	9.750 (5.543)	-6.204	25.704	1.759	.097	.121
130	**13**	**19**	**12.487 (5.012)**	**-1.648**	**26.622**	**2.491**	**.022**	**.036**
151	**21**	**25**	**13.010 (3.501)**	**2.891**	**23.130**	**3.717**	**.002**	**.010**
157	**19**	**20**	**10.532 (3.960)**	**-1.378**	**22.442**	**2.660**	**.021**	**.036**
168	15	12	2.014 (2.511)	-5.719	9.747	0.802	.440	.440

Figure 7

DIDS Adjusted Group Difference Across Pre-test Scores



Self-Assertiveness Efficacy at Workplace Advocacy Scale (SAE-W)

The results revealed a statistically significant treatment effect at one covariate level before BH corrections, but did not withstand the adjustment. However, the non-significant results were consistently positive in their trends across all levels. At the 25th percentile of the pre-test distribution (SAE-W = 3.611), the adjusted mean difference was 0.278 (SE = 0.180, 95% CI [–

0.242, 0.798], *p* = .142, BH-adjusted *p* = .178). A similar non-significant effect was found at the 37.5th percentile (SAE-W = 3.778), with a group difference of 0.270 (SE = 0.164, 95% CI [–0.195, 0.735], *p* = .116, BH *p* = .178). At the median level (SAE-W = 4.389), the intervention produced a significant adjusted mean difference of 0.355 (SE = 0.124, 95% CI [–0.011, 0.720], *p* = .013, BH-adjusted *p* = .064). Although this BH-adjusted *p*-value did not meet the conventional .05 threshold, it indicated a potentially meaningful effect. At higher pre-test levels, SAE-W = 4.611 and 4.722, the differences remained positive but were not statistically significant with 0.293 ([SE = 0.181], p =.133, BH p =.178) and 0.179 ([SE = 0.185], p =.355), respectively. These results suggest that the intervention may have been particularly effective in enhancing workplace advocacy self-efficacy among participants with moderate baseline levels, with diminished effects observed at the lower and higher ends of the pretest distribution.

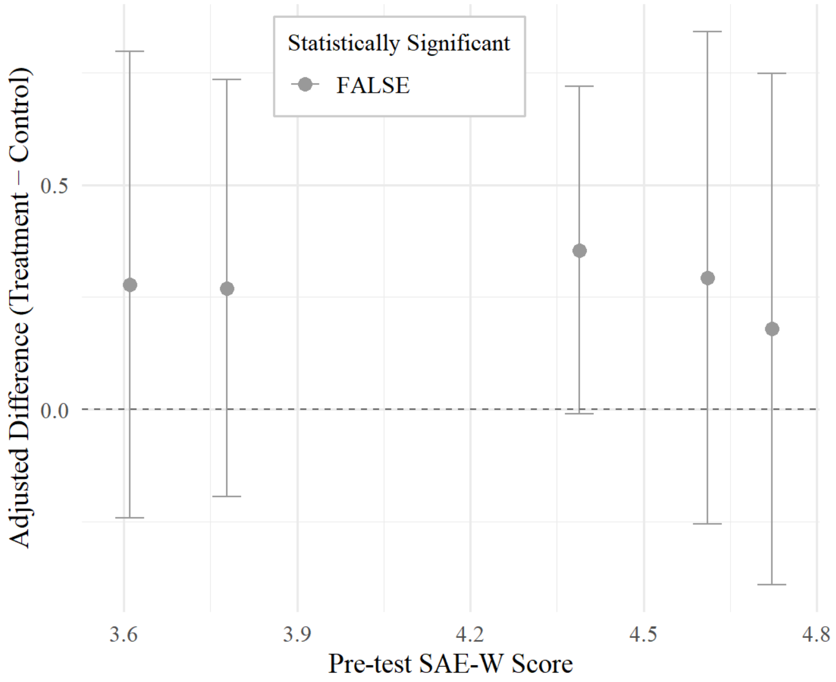
Table 13

SAE-W Adjusted Group Difference Across Pre-test Scores

Covariate Level (Pre-test Score)	n1	n2	Adjusted Mean Difference (SE)	95% C.I.		Test Statistic	*p*	BH *p*
				LL	UL			
3.611	14	15	0.278 (0.180)	-0.242	0.798	1.544	.142	.178
3.778	13	20	0.270 (0.164)	-0.195	0.735	1.647	.116	.178
4.389	18	22	0.355 (0.124)	-0.011	0.720	2.855	.013	.064
4.611	17	17	0.293 (0.181)	-0.255	0.841	1.617	.133	.178
4.722	17	14	0.179 (0.185)	-0.391	0.748	0.968	.355	.355

Figure 8

SAE-W Adjusted Group Difference Across Pre-test Scores



Career Adaptability Scale (CAAS)

The results revealed one statistically significant group difference favoring the treatment group, with other comparisons showing positive but nonsignificant effects. A statistically significant group difference emerged at the 37.5th percentile (CAAS = 4.208), with a difference of 0.333 (SE = 0.088, 95% CI [0.086, 0.581], *p* = .001, BH *p* = .006), indicating that participants in the treatment group reported significantly greater post-test engagement in counseling and advocacy activities at this level of baseline functioning. At higher covariate levels, the adjusted mean differences remained positive but were not statistically significant. The results suggest that the intervention may have had the most substantial impact on increasing engagement in counseling and advocacy activities among participants with moderate levels of baseline functioning. The absence of significant effects at the lowest and highest covariate levels may reflect ceiling effects or limited responsiveness to the intervention among those already highly engaged, or with minimal prior involvement.

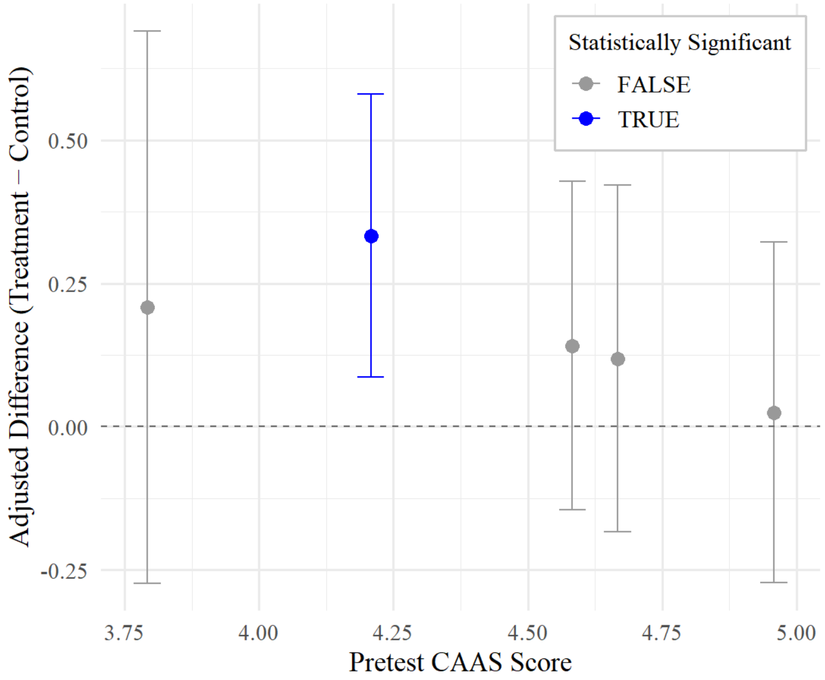
Table 14

CAAS Adjusted Group Difference Across Pre-test Scores

Covariate Level (Pre-test Score)	n1	n2	Adjusted Mean Difference (SE)	95% C.I.		Test Statistic	*p*	BH *p*
				LL	UL			
3.792	12	14	0.208 (0.165)	-0.273	0.689	1.265	.226	.340
4.208	**19**	**21**	**0.333 (0.088)**	**0.086**	**0.581**	**3.803**	**.001**	**.006**
4.583	19	18	0.141 (0.100)	-0.145	0.428	1.410	.176	.340
4.667	19	17	0.119 (0.104)	-0.184	0.422	1.140	.272	.340
4.958	16	12	0.025 (0.100)	-0.272	0.322	0.251	.806	.806

Figure 9

CAAS Adjusted Group Difference Across Pre-test Scores



Taken together, the results from both the robust linear models using MM-estimation *(lmrob)* and the trimmed adjusted means comparison analyses using the WRS2 package *(ancova)* converged, suggesting that the intervention produced particularly meaningful effects for participants with moderate baseline scores across several outcome domains. While the *lmrob* models provided a single overall adjusted group difference for each measure, the WRS2 analyses offered a more granular perspective, revealing how treatment effects manifested at different points along the distribution of baseline functioning.

Convergent evidence supporting the reliability of observed intervention effects was noted for key outcomes such as the SIAS, DIDS, and CAAS, where both methods indicated positive intervention impacts. WRS2 analyses further illuminated these findings by identifying specific ranges of pre-test scores, where group differences were most pronounced or achieved statistical significance. For instance, several statistically significant or near-significant conditional effects detected at specific covariate anchor points via WRS2 might have been less apparent or averaged out in the single effect estimate from the *lmrob* models alone, particularly for measures such as the SAE-W scale.

Effect Size

For the robust ANCOVAs conducted in this study, the effect size was reported using confidence intervals. While other commonly used effect size metrics for ANCOVA include partial eta squared (η^2p) and omega squared (ω^2), reporting the confidence interval for the effect size offers a distinct advantage in clarity and interpretation. A confidence interval provides a range of plausible values for the true effect size in the population, communicating the precision of the estimate. A narrow confidence interval indicates high precision, whereas a wider interval suggests more uncertainty. This approach is particularly adequate for robust methods, as it avoids the potential biases associated with traditional effect size estimators when the assumptions of standard ANCOVA are violated (Wilcox, 2005). Furthermore, a confidence interval for the effect size directly conveys the magnitude and direction of the effect in the original units of measurement, which can be more intuitive and easier to interpret in a practical context. This makes the confidence interval a comprehensive and, at times, preferred method for reporting effect sizes, as it offers a clearer and more complete picture of the findings.

CHAPTER 5: DISCUSSION

The primary purpose of this study was to evaluate the effectiveness of a month-long Internet-based intervention designed to enhance autism advocacy, disability identity development, and career adaptability among autistic young adults. Grounded in the principles of the self-determination theory (Deci & Ryan, 2008), this intervention aimed to support participants in developing greater self- and disability awareness, social empowerment, and vocational confidence. Although disability has historically been viewed as a medical problem to be solved, it is now increasingly recognized as a natural aspect of human diversity that can serve as a source of affirmation, contribution, and pride (Ginis et al., 2021). Evolving perspectives on disability—reflected in both the affirmative model (Swain & French, 2000) and the neurodiversity paradigm—are reshaping how we understand what it means to live with a disability, moving away from deficit-based framings, and toward models that center on identity, community, and agency. In alignment with this evolving view, this study assessed outcomes across seven key domains: autism acceptance, collective self-esteem, social advocacy engagement, disability identity orientation, identity development, workplace advocacy efficacy, and career adaptability.

A randomized controlled trial with pre- and post-test measures was conducted to address these objectives. A dual analytic strategy was employed to assess the intervention and explore the results. First, robust linear models were estimated using MM-estimation via the *lmrob* function from the *robustbase* package in R (Version 4.4.2; R Core Team, 2024) to evaluate group differences in each measure while accounting for violations of normality and homogeneity of variance. Second, trimmed adjusted means comparisons across selected covariate values were conducted using the *ancova* function from the WRS2 package to explore whether intervention effects varied depending on participants' baseline functioning. This approach allowed for the estimation of adjusted group differences at five empirically anchored covariate levels (pre-test scores), offering a more nuanced understanding of when and for whom the intervention was most effective (Wilcox, 2017).

The results revealed consistent patterns across unconditional (MM-estimation) and conditional (trimmed adjusted means comparison) analyses. Robust linear models using MM-estimators indicated significant group differences for three outcome measures: the SIAS, DIDS, and CAAS. These findings suggest that the intervention had a meaningful impact in fostering social advocacy engagement, disability identity integration, and vocational adaptability. These effects were further substantiated by the conditional robust ANCOVA models, which demonstrated more substantial intervention effects among participants with moderate baseline scores. This pattern suggests that the intervention was particularly effective for individuals with some readiness who were receptive to structured support for advocacy and identity growth.

In contrast, the remaining outcomes (i.e., AAS, CSES, QDIO, and SAE-W) did not exhibit statistically significant group differences in either analytic approach. Nevertheless, several of these measures showed small to moderate trends favoring the treatment group, especially at the mid-range covariate levels. For example, positive but non-significant trends were observed at moderate baseline scores for the CSES, QDIO, and SAE-W. Considering the high adjusted R^2 values observed in the robust linear *lmrob* models, longer-term or more intensive interventions may be required to produce significant shifts in internal attitudes and perceptions.

These findings suggest the utility of integrating robust linear models with distribution-sensitive ANCOVA to capture both the overall and conditional treatment effects. While MM-estimation identified general group differences, conditional robust ANCOVA revealed where effects were most pronounced. A consistent curvilinear pattern emerged: participants with moderate baseline functioning showed the most significant benefit, whereas those at the lower or upper ends exhibited smaller or non-significant gains. These patterns may reflect readiness to change, ceiling effects, or the need for intervention adaptations tailored to the individual starting points. Along with these topics, the interpretation of each outcome measure, methodological considerations, limitations, and implications are explored in depth in the following sections.

Interpretation by Outcome Domain

In this section, the researcher first explores the interpretation of findings by individual outcome measures, including their relationship to existing literature and potential implications.

Identity-Related Outcomes

Autism Acceptance Scale (AAS)

Despite the intervention's emphasis on neurodiversity-affirming perspectives, no statistically significant gains were observed in AAS. Across the distribution of pre-test scores, the adjusted mean differences between the intervention and control groups were small and non-significant. Several measurement-related factors may have contributed to these results. Most notably, the internal reliability of the AAS in this sample was low, with Cronbach's alpha of 0.35 at pretest and 0.36 at posttest. This low internal reliability is likely due to significant adaptations. Such low reliability substantially limits the sensitivity of the scale in detecting changes.

Autism acceptance is a well-documented protective factor for the mental health of autistic adults (Cage et al., 2018). Higher levels of self-acceptance are associated with reduced symptoms of depression and stress, whereas masking autistic traits, often in pursuit of external social acceptance, is linked to poorer psychological outcomes. These findings underscore the importance of interventions that explicitly foster internalized acceptance and promote an affirming, strength-based understanding of autism.

In response to this need, several tools are currently being developed to measure autism self-acceptance. Among these, the Autism Spectrum Identity Scale (ASIS) developed by McDonald and Donnelly (2022) represents the most robust and empirically supported option. The ASIS captures multiple dimensions of autistic identity, including perceptions of autism as a positive difference, beliefs about trait changeability, perceived strengths, and contextual variability in identity salience (McDonald, 2017; 2020). The Positive Difference subscale is particularly relevant to internalized acceptance and has shown strong associations with subjective well-being and life satisfaction. The ASIS is well aligned with the goals of identity-focused interventions and may be especially sensitive to capturing meaningful shifts in autism self-acceptance over time. Future research should continue to refine the construct of autism acceptance by establishing behavioral definitions, advancing theoretical clarity, and conducting rigorous psychometric testing. These efforts are essential for improving measurement precision and designing interventions that support identity development and psychological well-being among autistic individuals.

Collective Self-Esteem Scale (CSES)

Although the intervention did not yield statistically significant improvements in the CSES, modest trends toward improved scores were observed. These trends suggest that the intervention may have begun to influence participants' sense of connection to the autism community and their perceptions of its value and status. This aligns with prior research demonstrating that collective self-esteem functions as both a psychological outcome and developmental process linked to social identity and belonging.

Theoretical models, such as that proposed by Amiot and Aubin (2013), position collective self-esteem within an SDT framework, where self-determined identification with a social group is associated with the fulfillment of basic psychological needs—autonomy, competence, and relatedness. According to this model, individuals who feel positively about their group membership and internalize their identity through autonomous motivation are more likely to experience well-being. This reinforces the importance of fostering a positive collective identity within autism-affirming interventions. Specific to autism, autistic individuals who associated more positive traits with autism and felt a stronger connection to other autistic people reported higher collective self-esteem (Cooper et al., 2021b). Their findings suggest that interventions designed to strengthen group identification and enhance positive in-group perceptions may have downstream effects on well-being and self-concept.

While the current intervention may not have significantly shifted collective self-esteem within the study timeframe, its components, such as community connection activities, likely contributed to incremental change. For identity-focused interventions, particularly those grounded in neurodiversity frameworks, fostering collective self-esteem may be a key pathway for long-term empowerment and social belonging. Future research should examine how group identification processes evolve over time and how interventions can more explicitly cultivate a positive autism social identity.

Questionnaire on Disability Identity and Opportunity (QDIO)

Although statistically significant group differences did not emerge in QDIO, positive trends were observed for participants with lower baseline scores. QDIO assesses multiple dimensions of disability orientation, including pride (versus shame) and endorsement of the social (versus medical) model of disability. These two subscales were used to capture how individuals view disabilities in relation to their self-concept and worldview. The findings may reflect the initial movement along this continuum for some participants, especially those beginning to internalize more affirming perspectives. These patterns suggest that the intervention may have initiated subtle shifts in disability identity development and community-oriented perspectives, particularly for those early in the process of exploring or embracing disability identity.

Bogart et al. (2017) highlighted the importance of environmental factors, such as social support, stigma, and opportunities for community engagement, in shaping whether individuals identify as disabled and how positively they view that identity. Importantly, they found that pride buffered the negative psychological effects of stigma. This suggests that, while short-term interventions may not fully shift deeply rooted identity beliefs, they can plant seeds for future growth, particularly when they create supportive, inclusive environments that affirm disability as a valued identity. The initial findings of this study also suggest that while shifts in internal identity may take longer to materialize, integrating reflective storytelling and fostering disability community connections into programming may provide the scaffolding necessary for a more profound transformation. Future iterations of the intervention may benefit from extending its duration, incorporating booster sessions, or tailoring identity modules to better support participants in their journey toward Disability Pride and community integration.

Disability Identity Development Scale (DIDS)

The DIDS revealed significant and robust conditional effects, particularly among participants with moderate baseline scores. These findings suggest that the intervention was most effective for individuals already engaged in early reflection on their disability identity, as they were poised to transition from initial awareness toward deeper integration of disability into their self-concept. The DIDS is designed to capture stage-wise identity development, and these results affirm its sensitivity to changes in participants, who are at a pivotal point in the identity trajectory.

This developmental progression is consistent with existing literature on disability identity. Dunn and Burcaw (2013) conceptualized disability identity as a multidimensional sense of self that includes disability status and community connections. They argued that positive identity formation, marked by self-worth, pride, and belonging, supports psychological adaptation and resilience. These theoretical insights align with the observed improvements in DIDS, which may indicate increased self-acceptance and affirmation catalyzed by a neurodiversity-affirming community-based intervention. Forber-Pratt et al. (2017) further reinforce this interpretation through their systematic review, highlighting that disability identity development often culminates in political awareness, advocacy, and social integration. They describe identity not only as a psychological construct but also as a pathway to empowerment and systemic engagement. The present findings underscore the value of timed and structured interventions to support individuals as they begin actively integrating disability identity into their worldview.

Advocacy Outcomes

Social Issues Advocacy Scale (SIAS)

SIAS showed statistically significant and consistent improvements, particularly among participants with lower and moderate baseline scores. These results suggest that the intervention effectively enhanced advocacy-related knowledge, motivation, and skills, especially in those with limited prior experience in structured advocacy. The SIAS assesses engagement with social justice advocacy across cognitive, emotional, and behavioral dimensions, including commitment to systemic change (Nilsson et al., 2011).

These findings align with the original SIAS and its updated version, the SIAS-2 (Marszalek et al., 2019), which highlights key facets of advocacy, such as political voice, personal responsibility, and community participation. The intervention reinforced these areas through experiential activities, such as community mapping, self-advocacy practice, and engagement in legislative advocacy. Gains were most pronounced among participants with initially low scores, suggesting that the curriculum met participants at their developmental level and effectively supported growth in advocacy, confidence, and competence.

Advocacy, when framed as a personally meaningful and community-affirming act, fosters empowerment and agency, particularly among those who have experienced marginalization (Caldwell, 2011). Caldwell (2011) illustrated this through interviews with disability rights advocates, showing how political engagement and community connections strengthen identity and promote self-determination. The current intervention likely provided a similar foundation by offering structured, supportive opportunities for participants to develop skills, clarify values, and envision themselves as change agents.

These outcomes underscore the importance of incorporating advocacy skill building into autistic empowerment programs. For practitioners and educators, the findings point to the value of experiential and participatory learning. Curricula that emphasize foundational competencies, provide opportunities for practice and feedback, and foster peer support may be particularly effective in cultivating advocacy readiness and long-term engagement across diverse starting points.

Self-Assertiveness Efficacy at Workplace Advocacy Scale (SAE-W)

Although the intervention did not yield statistically significant gains in the SAE-W, marginal significance was observed at moderate baseline levels. This suggests that the program may have modestly enhanced participants' confidence in workplace advocacy behaviors, particularly for those with some initial awareness or capacity, but who have not yet developed consistent skills. The SAE-W measures self-efficacy beliefs around advocating for one's needs and rights in employment settings, including requesting accommodations or asserting boundaries (Moturu & Lent, 2023). Moturu and Lent's (2023) development of the SAE-W emphasizes its grounding in both Social Cognitive Career Theory (Lent et al., 1994) and Self-Determination Theory (Deci & Ryan, 2008). Their findings demonstrated that self-assertive efficacy predicts workplace advocacy behaviors and downstream career outcomes. These theoretical foundations reinforce the importance of early skill-building in advocacy and assertiveness.

While this study did not yield significant changes across the full distribution of pre-test scores, the observed trend at moderate baseline levels may reflect increased readiness to engage in workplace self-advocacy when participants are self-aware and empowered. Wehmeyer and Palmer (2003) provided longitudinal evidence that youth with higher self-determination skills (e.g., self-advocacy skills) experience better adult employment outcomes. Their study suggested the long-term significance of workplace self-efficacy in achieving autonomy and success. The modest trend in this study suggests that, while short-term interventions may not be sufficient for dramatic shifts in efficacy across all participants, they can begin to lay the groundwork for growth, especially for those in a transitional stage of identity and confidence development.

Vocational Outcomes

Career Adaptability Scale (CAAS)

CAAS demonstrated statistically significant conditional intervention effect among participants with moderate baseline adaptability levels. These results suggest that the intervention was particularly effective for individuals with foundational awareness of career goals and vocational interests but had not yet fully developed the psychosocial competencies needed to act on them. The gains observed in this subgroup reflect meaningful improvements in core adaptability dimensions, such as future planning (*concern*), decision-making agency (*control*), vocational exploration (*curiosity*), and self-efficacy (*confidence*) (Savickas & Porfeli, 2012). As a measure of career-related psychosocial resources, the CAAS is grounded in the framework of self-determined career development. According to Savickas and Porfeli (2012), these four adaptability dimensions enable individuals to anticipate and manage vocational transitions and challenges effectively. In the context of this study, intervention activities such as strengths-based career exploration and workplace self-advocacy skills training likely contributed to participants' improved adaptability profiles, especially for those who were already contemplating their future but lacked the tools to move forward confidently.

The results also align with the findings that individuals with intellectual disabilities who reported higher career adaptability also experienced greater hope and life satisfaction (Santilli et al., 2017). This underscores the role of adaptability as both a vocational and psychological resource. While this study focused on autistic young adults, the pattern holds that structured, identity-affirming interventions may bolster the practical skills and internal resources needed to build vocational direction and optimism about the future. Moreover, a meta-analysis confirmed that career adaptability is positively associated with adaptive traits (e.g., resilience), active coping behaviors, and positive career outcomes such as job satisfaction and vocational success (Rudolph et al., 2017). The conditional nature of the gains observed in this study supports their conclusion that adaptability functions dynamically when participants are ready to engage in career planning. Moderate baseline levels may reflect a readiness-to-change window in which participants are especially responsive to skill-based, future-oriented interventions. These findings demonstrate the utility of CAAS as a robust outcome measure and tool for identifying readiness for vocational growth.

Theoretical Integration

Interplay Between Disability Identity Development and Self-Advocacy Skill Building

The development of disability identity and self-advocacy skills represent interconnected psychosocial processes that can be strategically cultivated to promote self-determination among autistic young adults. This study supports a conceptual model in which the psychosocial stages of disability identity development (*Acceptance, Relationship, Adoption,* and *Engagement*; Forber-Pratt & Zape, 2017) and the instructional components of self-advocacy (*Knowledge of Self, Knowledge of Rights, Communication,* and *Leadership*; Test et al., 2005) operate as mutually reinforcing developmental mechanisms. When activated in parallel, these two pathways build the emotional, relational, and behavioral foundation needed for autonomy, competence, and relatedness—the three basic psychological needs outlined in Self-Determination Theory (SDT; Deci & Ryan, 2008). (See **Figure 10**.)

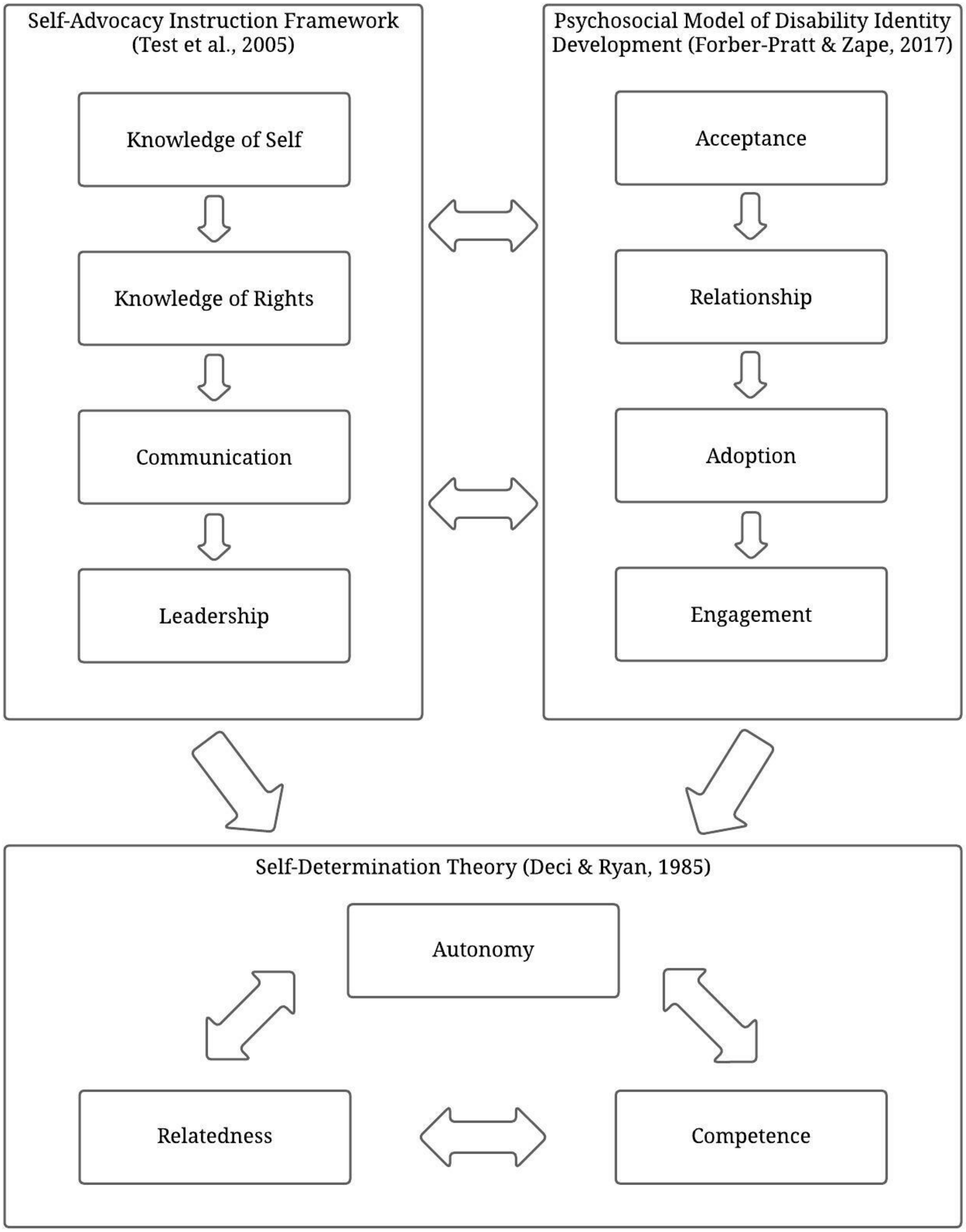
In the early stages of identity development, particularly during *acceptance*, participants benefit from gaining *knowledge of self*, learning to recognize personal strengths, needs, and values. Reflective practices, such as strength-based identity exploration exercises and learning about social and affirmative models of disability, help normalize disability and reduce internalized stigma. Simultaneously, acquiring *communication* skills, such as explaining one's disability or requesting accommodation, can reinforce identity acceptance by promoting self-expression and self-efficacy.

As individuals progress into the *relationship* stage, where connections to the disability community and culture emerge, the role of *knowledge of rights* becomes more prominent. Understanding legal protections and shared barriers (e.g., under the ADA) strengthens group solidarity and nurtures relatedness, a core tenet of SDT. Participation in group-based advocacy activities and the cultivation of shared narratives allows individuals to connect with peers, mentors, and community leaders in meaningful ways.

The *adoption* stage of disability identity development, where disability is redefined as a source of strength and pride, is further supported through *communication* and the continued development of *knowledge of self and rights*. By practicing self-expression, boundary setting, and participation in disability culture, individuals shift from deficit-oriented framing toward empowered identity narratives. At this stage, participants begin to see themselves as individuals with needs and contributors to a broader resistance and resilience movement (Forber-Pratt & Zape, 2017).

Figure 10

Dual-Process Flow Diagram of Mutual Reinforcement between Disability Identity Development Model and Self-Advocacy Instructional Model



In the final stage of *engagement*, disability identity is expressed outwardly through activism, leadership, and systemic efforts to change. At this point, *leadership* becomes a vital advocacy competency. The opportunity to lead, mentor, and influence policy helps affirm individuals as change agents, reinforcing the SDT's *competence* and *autonomy* components. This progression also fosters *relatedness*, as advocacy is performed in connection with communities and in service of shared goals.

Importantly, the relationship between disability identity development and self-advocacy skills is both dynamic and bidirectional. Developing communication or leadership skills may accelerate identity development, just as an emerging sense of community belonging can motivate deeper engagement in advocacy. Similarly, individuals who cultivate advocacy competencies may revisit and enhance their identity formation. Similarly, achieving visibility as a leader may solidify the adoption of a disability identity. This reciprocal feedback loop highlights how self-advocacy and Disability Pride are co-constructed and foster self-determined growth.

Despite this theoretical bidirectionality, findings from the current study suggest a predominantly linear trajectory in disability identity development, with *acceptance* emerging as a foundational stage that precedes *relationships, adoption,* and *engagement*. Participants who demonstrated higher levels of acceptance, recognizing both the challenges and strengths associated with autistic and disabled identities, were more likely to build meaningful relationships within the disability community and adopt values aligned with Disability Pride and rights-based advocacy.

The intervention intentionally emphasized identity acceptance through structured reflective activities, such as creating personal profiles of strengths and limitations, engaging in radical acceptance exercises, and learning about prominent disability activists with great societal contributions. These components aim to establish a firm foundation for self-understanding and normalizing disability as a valued aspect of identity. Participants who achieved this initial stage of *acceptance* were more likely to excel in adopting the disability culture and actively engaging in advocacy efforts. Moreover, these identity and advocacy gains extended into the vocational domain, contributing to improvements in career adaptability. Increased career adaptability suggests enhanced capacity for self-determination, proactive decision-making, and resilience in the face of vocational transitions.

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Advancing Self-Determination through Identity and Advocacy

The dynamic interplay between the psychosocial stages of disability identity development (Forber-Pratt & Zape, 2017) and the instructional components of self-advocacy (Test et al., 2005) also contributes meaningfully to the development of self-determination, particularly when viewed through the lens of Self-Determination Theory (Deci & Ryan, 2008). SDT posits that optimal growth and well-being are facilitated when individuals experience autonomy (sense of volition and self-authorship), competence (sense of mastery and effectiveness), and relatedness (sense of belonging and connection with others). Each outcome domain—social advocacy, disability identity development, and career adaptability—supports and activates core psychological needs.

For instance, engaging in social advocacy (as measured by the SIAS) fosters autonomy and competence by enabling individuals to assert their values and challenge the dominant narrative while deepening relatedness through connections with shared causes and communities (Nilsson et al., 2011; Test et al., 2005). Autonomy is deeply connected to self-awareness and positive disability identity. When participants realize that dominant narratives have bound them, yet possess the power to subvert those narratives and reshape them in ways that reflect their true values, they can begin to break free from those constraints. In doing so, participants may reclaim a sense of autonomy grounded in a self-defined meaning rather than imposed limitations.

Similarly, the process of exploring and affirming one's disability identity, as measured by the DIDS, fosters autonomy and relatedness by enabling individuals to integrate their disability into their self-concept with Pride. This integration is associated with psychological well-being and positive identity development (Amiot & Aubin, 2013; Forber-Pratt et al., 2017). A key component of DIDS is the development of meaningful connections within the disability community. To support relatedness, the curriculum incorporated multiple intentional activities designed to help participants find, engage with, and build relationships within autism and broader disability communities.

Additionally, building career adaptability (as assessed by CAAS) inherently involves strengthening a sense of control and agency over one's vocational future. This directly supports autonomy and competence, while often promoting relatedness through mentorship and social role exploration (Savickas & Porfeli, 2012; Wehmeyer & Palmer, 2003). These findings suggest that the intervention's emphasis on actionable, future-oriented, and relational domains may have been particularly effective because they aligned closely with the motivational processes described in the SDT.

Conversely, measures such as the AAS, CSES, and QDIO assess internal attitudes and perceptions not only about oneself, but also about one's relationship to the broader autism and disability communities. These instruments focus less on the three components of Self-Determination Theory (autonomy, competence, and relatedness) and more narrowly on complex, often deep-seated, identity-related beliefs, such as how individuals perceive their group's social standing or internalize societal messages about disability. For example, the CSES evaluates how individuals appraise the value of their autism identity in both personal and societal terms, a process that is unlikely to shift meaningfully through a brief, individual-level intervention. These constructs may remain relatively stable without prolonged engagement and explicit emphasis on reshaping group identity narratives and social meaning. This limitation underscores the need for long-term, community-rooted strategies that align more directly with identity formation and value-based transformation (Bogart et al., 2018; R. B. Darling & Heckert, 2010; Shogren et al., 2015).

Emphasis on Behavioral Competencies and Skill-Building

Furthermore, the significant gains observed in SIAS, DIDS, and CAAS may be attributed to their explicit focus on actionable behaviors, competencies, and skill-building practices. These measures assess practical, behavior-oriented constructs that structured interventions can effectively target and modify within relatively short time frames.

SIAS measures advocacy competencies, such as engaging in concrete advocacy activities, effectively articulating needs, and participating in structured skill-building training. Prior research underscores that advocacy skills are responsive to targeted instructional approaches, including role-play scenarios, direct skill instruction, and hands-on training (Caldwell, 2011; Nilsson et al., 2011). Similarly, DIDS emphasizes disability identity development practices, which can be facilitated through reflective exercises, advocacy storytelling, intentional identity, and community exploration activities (Dunn & Burcaw, 2013; Forber-Pratt et al., 2017). Structured opportunities to share personal stories and experiences with the community created environments conducive to immediate and measurable identity engagement practices (Shakespeare & Watson, 2010). Finally, the intervention targeted specific vocational skills and competencies, such as identifying vocational strengths and career pathways, refining accommodation request techniques, and communication skills in vocational contexts. Vocational interventions that explicitly train these skills have repeatedly demonstrated efficacy in enhancing career competencies due to their concrete and teachable nature (Rudolph et al., 2017; Santilli et al., 2017). Such structured interventions provide clear guidance, actionable steps, and tangible feedback, thus making measurable improvements readily achievable.

In contrast, measures such as AAS, CSES, and QDIO depend more heavily on deeply rooted internal attitudes, beliefs, and self-perceptions. Altering these psychological constructs typically requires sustained and intensive interventions, significant interpersonal shifts, or broader social-environmental changes (Bogart et al., 2018; Darling & Heckert, 2010). Brief or moderate-length interventions may lack the depth and duration necessary to cause substantial changes in internalized constructs.

Conditional Intervention Effects and the Transtheoretical Model (TTM)

The Transtheoretical Model (TTM; Prochaska & DiClemente, 1983) provides a valuable theoretical framework for understanding why significant gains were observed on specific outcome measures with pronounced effects at a moderate pre-test score range. According to TTM, individuals progress through distinct stages of change: pre-contemplation (no intention to change), contemplation (considering change), preparation (planning for change), action (actively engaged in changing behavior), and maintenance (sustaining behavior change over time). The baseline scores of this intervention may correspond to these stages of change. Lower scores may indicate pre-contemplation or early contemplation, representing limited readiness for substantial behavioral shifts. Moderate scores likely reflect the contemplation or preparation stages, where participants are receptive, motivated, and positioned for significant growth. Conversely, higher scores represent individuals already engaging in advocacy-related behaviors (action/maintenance), thereby experiencing limited measurable growth owing to ceiling effects.

This interpretation closely aligns with the differential results observed across the measures. For instance, significant improvements in the SIAS suggest that participants were likely already contemplating engagement in advocacy but required concrete training and practice, positioning them effectively in the contemplation and preparation stages (Nilsson et al., 2011). These TTM stages are characterized by an emerging awareness of the need for change and the intention to take action (Prochaska & Velicer, 1997). Similarly, the DIDS, which assesses the reflective and exploratory processes associated with disability identity development (Dunn & Burcaw, 2013; Forber-Pratt et al., 2017), showed the most improvement for participants with moderate baseline scores. The intervention's explicit identity exploration and self-reflection activities may have resonated most with the participants already primed for such developmental shifts. CAAS, encompassing concern, control, curiosity, and confidence, measures readiness and perceived resources to cope with current and anticipated tasks, uncertainties, and challenges, particularly within the vocational realm (Savickas & Porfeli, 2012). Because this scale directly assesses readiness and preparation, it is likely to show the most significant improvement among individuals in the contemplation and preparation stages, those beginning to explore and develop actionable vocational skills and strategies.

ADAPT interventions generally yield the most pronounced gains among participants at the contemplation and preparation stages, suggesting that participants' readiness and openness are important factors for substantial behavioral and attitudinal changes. Lower baseline scores (pre-contemplation) likely indicate insufficient motivational readiness and reduced intervention effectiveness. Conversely, participants with higher baseline scores may encounter ceiling effects as they have already integrated significant elements of advocacy behaviors and identities, leaving minimal room for measurable improvement.

Integrating TTM theoretically enriches autism advocacy interventions by highlighting the necessity of aligning intervention strategies with participants' stages of change. This empirical support for TTM underscores its value in guiding tailored intervention design, improving participant readiness, and targeting intervention content to specific individual needs. Practitioners and educators can leverage TTM to inform intervention intensity, modality, and content. Baseline assessments could effectively identify participants' stages of change, guiding appropriate intervention strategies from motivational enhancement for early-stage individuals to targeted skill building for mid-stage participants and advanced maintenance-oriented activities for those at higher stages.

Procedural and Methodological Considerations

Participant Interest and Relevance

One important factor that may have influenced the pattern of findings in this study was the perceived relevance of the intervention content to the participants' personal goals. Measures that demonstrated significant improvements, such as the SIAS, DIDS, CAAS, may have aligned more directly with goals that participants found meaningful, such as employment readiness, community involvement, and identity integration. The intervention's emphasis on real-world skills, including advocacy techniques, vocational planning, and identity exploration, likely resonated with participants actively seeking greater autonomy, self-definition, and practical tools to navigate adulthood. This alignment may have contributed to higher motivation, deeper engagement, and greater gains in behaviorally anchored outcome measures.

In contrast, scales such as the AAS, CSES, and QDIO assess internalized attitudes and self-perceptions. These constructs may not have felt immediately applicable or urgent to the participants' present needs, particularly within the limited timeframe of the intervention. Without a clear connection to short-term goals or tangible action steps, participants may have been less motivated to fully engage with the elements of the curriculum designed to influence these areas, resulting in smaller or non-significant changes.

Furthermore, the broader sociopolitical context in which the intervention took place may have shaped participants' interest and engagement, particularly with advocacy-related content. Recruitment and program delivery coincided with the U.S. presidential election cycle, during which public discourse around disability policy, voting rights, and social justice was heightened. Participants may have been more attuned to these topics because of increased media exposure and conversations in their social environments, potentially amplifying their interest in advocacy and civic participation. This heightened relevance may explain the particularly robust improvements observed in the SIAS.

Study Strengths

This study employed robust analytical techniques that account for violations of traditional parametric assumptions. Specifically, using MM-estimation and trimmed mean robust ANCOVA procedures allowed for more accurate estimation in the presence of non-normality, heteroscedasticity, and potential outliers, common challenges in small-sample, Likert-based educational intervention research. The two analytical methods bolster confidence in the consistency and robustness of the findings. The conditional analysis provided nuanced insights into differential responsiveness to the intervention by examining treatment effects across varying baseline levels. This stratified method enhanced interpretation and offers a more fine-grained understanding of who benefits most from the intervention and under what conditions.

Another strength is the consistently high adjusted R^2 values yielded by the MM-estimation models, which provide strong evidence of model predictive validity and reliability. For example, the Career Adapt-Abilities Scale (CAAS) model yielded an adjusted R^2 of .90, indicating that the combination of group assignment and pre-test scores explained 90% of the variance in the post-test scores. Even in cases where the group effect (i.e., treatment vs. control) was not statistically significant (e.g., for AAS, CSES, QDIO, and SAE-W), high adjusted R^2 values suggest that the models were highly effective in predicting post-intervention outcomes.

Study Limitations

The treatment outcomes may have been influenced by sampling effects, as the participants, who were largely self-selected and highly motivated, may not be representative of the broader population, potentially inflating observed engagement and limiting the generalizability of the findings. Furthermore, the relatively modest sample size (i = 64) limits the statistical power to detect small-to-moderate effects and constrains the generalizability of the findings to broader populations. While robust methods help mitigate some of the issues associated with small samples, caution is warranted in extending the conclusions beyond the study's sample.

In addition, participant attrition, particularly among those from geographically remote areas, may have introduced sampling bias with potential implications for the representativeness of the final sample. The use of Internet-based data collection methods, which are practical and accessible, introduces the possibility of response bias. These may include social desirability effects, variations in attention or comprehension, and environmental distractions that are difficult to control in unsupervised online settings.

Ceiling effects and baseline functioning pose interpretive challenges for several outcome measures. Participants entered the study with relatively high pre-test scores on constructs such as autism acceptance (i.e., AAS), self-esteem (i.e., CSES), and disability identity (i.e., QDIO), suggesting limited room for observable improvement. The SAE-W, which targets assertiveness in workplace settings, may have shown limited variability owing to participants' initial lack of exposure to employment contexts, potentially obscuring meaningful changes. These factors should be considered when interpreting the absence of statistically significant group effects. Lastly, the measurement limitations were also evident. The researcher-adapted AAS resulted in suboptimal internal reliability, potentially attenuating the ability to detect true intervention effects in that domain.

Implications of the Study

Research Implications

A notable contribution of this study is the application and demonstration of the utility of psychosocial measures within clinical or treatment settings. This area remains largely underexplored in existing research. Among the instruments that showed significant improvement in scores following the intervention (i.e., CAAS, SIAS, and DIDS), only the CAAS has been previously employed within experimental designs (Eryilmaz & Kara, 2020; Koen et al., 2012). For instance, Koen and colleagues (2012) evaluated the efficacy of a training program designed to enhance career adaptability among recent high school graduates. They further examined training effects on job quality six months later. Similarly, Eryilmaz and Kara (2020) adapted the CAAS for prospective counselors in Turkey to assess a program aimed at improving all core dimensions of career adaptability, as defined by Savickas and Porfeli (2012).

By contrast, the SIAS has been primarily utilized in cross-sectional research. It has served as a measure of social justice leadership capacity among multiple identity groups (Collins, 2019) and has been used to examine the relationship between beliefs and advocacy behaviors (Davis, 2019). Within the disability literature, the SIAS has been employed to explore the advocacy experiences of individuals with disabilities and the role of family dynamics in advocacy engagement (Landmark et al., 2017). However, to this researcher's knowledge, it has yet to be integrated into treatment or therapeutic frameworks. This reveals a significant gap in leveraging advocacy-related measures to evaluate interventions aimed at promoting empowerment, self-efficacy, and identity development for disabled populations.

Likewise, although several studies report moderate to strong intervention effects on psychosocial outcomes related to self-advocacy, mental health, and disability identity (Bogart, 2015; Nieweglowski et al., 2025; Zapata & Worrell, 2023), few have employed validated instruments such as the DIDS within rigorous randomized controlled trials (RCTs). The majority of existing

DIDS research has focused on scale development and psychometric validation (Forber-Pratt et al., 2022), rather than its use in assessing change over time or evaluating treatment impact.

This study addresses these gaps by demonstrating how select psychosocial measures—including the CAAS, SIAS, and DIDS—can be meaningfully applied to evaluate intervention efficacy within clinical and training contexts. Through the integration of these scales into a structured, internet-based advocacy intervention, this study not only extends the empirical utility of these tools but also introduces a novel framework for their use in experimental and practice-based settings.

Theoretical Implications

This study contributes to theoretical advancements in understanding autism and disability advocacy through the lens of SDT (Deci & Ryan, 2008). By demonstrating substantial intervention impacts on domains explicitly aligned with autonomy, competence, and relatedness (i.e., advocacy engagement, disability identity development, and career adaptability), the findings add to SDT's relevance and applicability within autism-focused interventions. Furthermore, this study supports and extends existing theories of disability identity integration by highlighting the critical role of affirmative disability identity frameworks (Swain & French, 2000) and Pride in promoting self-advocacy and a positive self-concept among autistic adults. The significant changes observed in identity-related outcomes provide empirical support for the disability identity theories that emphasize self-affirmation, community connectedness, and political empowerment.

Moreover, the findings offer valuable theoretical clarification regarding the conditional effect hypothesis. The consistent curvilinear pattern observed, where participants at moderate baseline functioning levels benefited the most, provides clear empirical evidence that participants' initial acceptance of disability and readiness for change are key to intervention effectiveness. Aligning closely with the TTM (Prochaska & DiClemente, 1983), these results underscore the importance of conceptualizing baseline characteristics as critical moderators in intervention responsiveness, thereby enriching theoretical frameworks guiding behavioral and educational interventions.

Clinical and Practical Implications

Clinically and practically, these findings emphasize the necessity of tailoring the intervention according to participants' baseline profiles to optimize its effectiveness. Practitioners should leverage initial assessments to strategically match intervention content and intensity with individual readiness, skill levels, and motivational states. This targeted approach can help clinicians, educators, and rehabilitation counselors deliver autism advocacy, disability identity, and career development programs more effectively, maximizing participant gains and fostering meaningful engagement.

This program has strong potential for integration across a range of applied settings. It is especially well-suited for use by Independent Living Centers and State Developmental Disability Councils aiming to provide youth leadership training and empowerment programs. The intervention also aligns well with school-to-work transition services and programs. For instance, it can be incorporated into Pre-Employment Transition Services (Pre-ETS) offered by state vocational rehabilitation (VR) agencies, particularly under the "instruction in self-advocacy" service category. Additionally, the curriculum may be valuable to transition coordinators in secondary education settings, disability resource professionals in postsecondary institutions, and staff within community-based organizations that provide inclusive leadership training, civic engagement opportunities, or peer mentoring for disabled youth and young adults.

Finally, this study provides actionable guidance for clinicians, educators, and rehabilitation practitioners in autism advocacy and vocational contexts. Professionals are encouraged to incorporate structured advocacy training, targeted identity development activities, and career adaptability support within their practice frameworks, grounded explicitly in the principles of self-determination. Additionally, recognizing that deeper attitudinal shifts (e.g., collective self-esteem, Disability Pride) may require longer-term engagement, professionals should plan for sustained intervention delivery, ongoing reflection, and community-based support.

Policy Implications

At the policy level, this study's findings strongly advocate personalized, stage-based intervention models within autism education, employment, and advocacy frameworks. Policymakers are encouraged to prioritize funding and resources for tailored programs that address participants' baseline readiness and developmental stages. Implementing policies that facilitate comprehensive baseline assessments followed by customized intervention approaches can significantly enhance service effectiveness and efficiency, ultimately improving outcomes for individuals with autism and their allies.

Furthermore, policymakers and funders may benefit from supporting programs that incorporate predictive indicators of intervention success, such as robust ANCOVA models with high predictive validity, to ensure informed evidence-based resource allocation. Strategic funding and training priorities should be informed by this robust analytic evidence, emphasizing personalized, adaptive, and sustained interventions that comprehensively address autism advocacy, identity development, and vocational readiness within diverse populations and contexts.

This study also carries direct implications for the implementation and refinement of Pre-ETS within federal and state VR programs. Specifically, the research supports enhancing the "instruction in self-advocacy" component by integrating stage-based, internet-delivered interventions that address both developmental readiness and disability identity formation. Findings suggest that self-advocacy instruction can be more effective when it aligns with participants' psychosocial profiles and career adaptability needs. As such, VR agencies may consider policies that fund the integration of validated psychosocial measures, such as the CAAS, SIAS, and DIDS, into Pre-ETS programming to tailor instruction, track progress, and evaluate outcomes. This personalized approach aligns with WIOA mandates for early and effective transition planning. This approach may also strengthen the long-term vocational and psychosocial outcomes of autistic youth preparing for competitive integrated employment.

Future Directions

Curriculum Update

Robust statistical indicators, such as the high adjusted R^2 values observed in the ANCOVA models, signal strong predictive validity and meaningful practical significance, extending beyond conventional thresholds of statistical significance. When considered alongside psychosocial measures that did not yield significant treatment effects, these findings suggest that targeted program modifications may enhance overall effectiveness. One potential refinement involves restructuring the intervention to scaffold key components of the curriculum more intentionally. For participants demonstrating lower levels of disability awareness and acceptance at baseline, modules focused on self-awareness, social understanding of disability, and disability identity development may be more impactful when delivered as a foundational phase prior to engaging in the latter half of the program, which emphasizes legislative advocacy and civic engagement.

In addition, offering pre-sessions tailored to individual readiness levels could further support participant success. These sessions might include activities such as community mapping, guided self-reflection, or motivational interviewing techniques that can simultaneously assess needs and promote foundational readiness. By frontloading the intervention with these supports, the curriculum can more effectively meet participants where they are, ultimately fostering greater engagement, more meaningful learning, and stronger advocacy outcomes.

Based on participant feedback and the researcher's experience facilitating the program, several updates are warranted to improve future iterations. First, some participants indicated that the later modules, particularly those addressing political and legislative advocacy, were less interesting compared to earlier modules that focused on self-identity exploration. To sustain participant motivation throughout the program, future iterations may benefit from the integration of additional interactive or reflective activities specifically designed to boost engagement.
In alignment with the critical consciousness framework (Freire, 1965), another recommended update is to frame content through inquiry rather than directive statements. For instance, rather than beginning a section with "Voting is a meaningful civic engagement activity through which you can contribute to society and effect change," it may be more impactful to ask, "Why do you think voting is important? Why might it be particularly meaningful for individuals with disabilities?" This shift toward inquiry-based framing may encourage deeper personal reflection and enhance participant ownership of learning.

While the program's high retention rate is encouraging, it may have been influenced in part by the competitive financial incentive provided to participants. As such, participant engagement may not have been fully reflective of intrinsic interest in the content. Consequently, it remains unclear whether the program’s current length and number of modules are optimal. In future iterations, participant engagement, satisfaction, and learning outcomes will be carefully monitored to assess whether restructuring—such as shortening, extending, or reorganizing modules—is warranted.

Future Research Directions

Building on the current study’s promising findings and methodological contributions, several critical avenues for future research directions have emerged. First, replication and validation studies using larger and more diverse samples are needed. Such studies can enhance generalizability and clarify how intervention effects translate across different subgroups, including varied demographic characteristics, geographic regions, and cultural contexts. Incorporating broader participant diversity will help to ensure that intervention approaches are culturally responsive and broadly effective.

Longitudinal research designs are another essential direction for future research. Long-term follow-up studies can provide insights into the durability and sustainability of intervention effects, particularly those related to identity development, advocacy behaviors, and vocational resources. Tracking participants over extended periods would clarify whether initial intervention gains persist, fade, or evolve, thereby informing them of optimal timing, duration, and support frequency.

Further methodological inquiry is warranted, particularly regarding predictive modeling in autism and disability research. Future studies should explore additional moderators and mediators of intervention effectiveness beyond baseline skill levels alone. Sociodemographic factors, such as age, gender, socioeconomic status, and cultural background, may significantly influence intervention responsiveness and should be explicitly considered. Exploring autism identity profiles, including varying degrees of identity affirmation, Pride, and community engagement, may reveal critical insights into differential intervention responsiveness. Understanding how engagement with advocacy communities and peer networks mediates treatment outcomes could further enrich intervention strategies, fostering more meaningful and sustained behavioral and identity changes.

Given the significant alignment of the current findings with the TTM (Prochaska & DiClemente, 1983), future research should prioritize stage-based intervention designs. Explicitly integrating TTM assessments into intervention development and delivery could enhance sensitivity to participants' baseline readiness and facilitate more precisely scaffolded interventions. Interventions incorporating repeated practice opportunities, modeling of desired behaviors, and real-world application scenarios, tailored explicitly to individuals' starting points, hold promise for maximizing effectiveness. Additionally, pairing interventions with sustained follow-up coaching and real-world support may ensure successful transfer and maintenance of skills and advocacy behaviors over time. Longitudinal investigations examining the impact of stage-based readiness-sensitive interventions are also recommended. These studies may illuminate how participants progress through TTM stages over time and how interventions might be dynamically adjusted to align with the changing readiness states. Larger-scale replications explicitly using TTM-informed measures can robustly validate the conditional effectiveness observed in this study. Finally, future studies should consider integrating explicit disability awareness or readiness-building components into targeted advocacy training programs to test whether combining readiness enhancement with advocacy skill-building further optimizes the intervention outcomes. These directions will substantially advance the scientific understanding of autism advocacy interventions, guiding more effective, tailored, and sustainable supports for autistic individuals across diverse contexts.

Conclusion

This study contributes to the evolving body of research on autism and disability advocacy, identity development, and career adaptability by demonstrating that tailored, affirming interventions can facilitate significant growth. Applying robust linear modeling and distribution-sensitive ANCOVA mitigated the common limitations associated with small sample sizes and non-normal data distributions, and uncovered important conditional effects. High adjusted R^2 values across all models further underscored the strong predictive power of the intervention design, offering valuable insights, even in the absence of conventionally significant group differences.

These findings suggest that meaningful change is most likely among participants in the contemplation and preparation stages of readiness for advocacy and identity development. Significant gains in social issue advocacy, disability identity development, and career adaptability indicate the efficacy of interventions grounded in self-determination theory and the affirmative model of disability. These results highlight the importance of fostering autonomy, competence, and relatedness in ways that are responsive to each individual's starting point.

Ultimately, the findings emphasize the need for interventions that do more than impart skills. They must also affirm identity, nurture self-advocacy, and create space for authentic belonging. Evidence-based, baseline-sensitive approaches that recognize and support the diverse needs of autistic young adults hold promise for promoting long-term empowerment, inclusion, and success. As such, this study serves as an important step toward building more responsive, equitable, and affirming support systems for neurodivergent individuals across educational, vocational, and community contexts.

References

Alegría, M., Alvarez, K., NeMoyer, A., Zhen-Duan, J., Marsico, C., O'Malley, I. S., Mukthineni, R., Porteny, T., Herrera, C., Najarro Cermeño, J., Kingston, K., Sisay, E., & Trickett, E. (2022). Development of a youth civic engagement program: Process and pilot testing with a youth-partnered research team. *American Journal of Community Psychology, 69*(1/2), 86–99. https://doi.org/10.1002/ajcp.12548

Amiot, C. E., & Aubin, R. M. (2013). Why and how are you attached to your social group? Investigating different forms of social identification. *British Journal of Social Psychology, 52*(3), 563–586. https://doi.org/10.1111/bjso.12004

Andrés-Gárriz, C., Farriols Hernando, N., Gómez Hinojosa, A. M., Pretel-Luque, T., Fàbregues, S., & Mumbardó-Adam, C. (2025). Promoting self-determination in young adults with autism: A multicenter, mixed methods study. *Journal of Autism and Developmental Disorders*, 1–20. https://doi.org/10.1007/s10803-025-06739-6

Angulo-Jiménez, H., & DeThorne, L. (2019). Narratives about autism: An analysis of YouTube videos by individuals who self-identify as autistic. *American Journal of Speech-Language Pathology, 28*(2), 569–590. https://doi.org/10.1044/2018_AJSLP-18-0045

Anspach, R. R. (1979). From stigma to identity politics: Political activism among the physically disabled and former mental patients. *Social Science & Medicine. Part A: Medical Psychology & Medical Sociology, 13*, 765–773. https://doi.org/10.1016/0271-7123(79)90123-8

Babik, I., & Gardner, E. S. (2021). Factors affecting the perception of disability: A developmental perspective. *Frontiers in Psychology, 12*, Article 702166. https://doi.org/10.3389/fpsyg.2021.702166

Bahner, J. (2022). Nothing about us without … who? Disability rights organisations, representation and collaborative governance. *The International Journal of Disability and Social Justice, 2*(2), 40–64.

Barrett, M., & Pachi, D. (Eds.). (2019). *Youth civic and political engagement*. Taylor & Francis. https://doi.org/10.4324/9780429025570

Benjamini, Y., & Hochberg, Y. (1995). Controlling the false discovery rate: A practical and powerful approach to multiple testing. *Journal of the Royal Statistical Society: Series B (Methodological), 57*(1), 289–300.

Benson, P. L., Scales, P. C., & Syvertsen, A. K. (2011). The contribution of the developmental assets framework to positive youth development theory and practice. In R. M. Lerner, J. V. Lerner, & J. B. Benson (Eds.), *Advances in child development and behavior* (Vol. 41, pp. 197–230). Elsevier. https://doi.org/10.1016/B978-0-12-386492-5.00008-7

Bogart, K. R. (2015). Disability identity predicts lower anxiety and depression in multiple sclerosis. *Rehabilitation Psychology, 60*(1), 105–109. https://doi.org/10.1037/rep0000029

Bogart, K. R. (2023). Disability is a social identity It's time for therapy to affirm it. *Developmental Medicine & Child Neurology, 65*(3), 300–301. https://doi.org/10.1111/dmcn.15412

Bogart, K. R., Lund, E. M., & Rottenstein, A. (2018). Disability pride protects self-esteem through the rejection-identification model. *Rehabilitation Psychology, 63*(1), 155–159. https://doi.org/10.1037/rep0000166

Bonaccio, S., Connelly, C. E., Gellatly, I. R., Jetha, A., & Martin Ginis, K. A. (2020). The participation of people with disabilities in the workplace across the employment cycle: Employer concerns and research evidence. *Journal of Business and Psychology, 35*(2), 135–158. https://doi.org/10.1007/s10869-018-9602-5

Botha, M., & Frost, D. (2020). Extending the minority stress model to understand mental health problems experienced by the autistic population. *Society and Mental Health, 10*(1), 1-15. https://doi.org/10.1177/2156869318804297

Boutron, I., Altman, D. G., Moher, D., Schulz, K. F., Ravaud, P., & for the CONSORT NPT Group. (2017). CONSORT statement for randomized trials of nonpharmacologic treatments: A 2017 update and a CONSORT extension for nonpharmacologic trial abstracts. *Annals of Internal Medicine, 167*(1), 40–47. https://doi.org/10.7326/M17-0046

Brady, B., Chaskin, R. J., & McGregor, C. (2020). Promoting civic and political engagement among marginalized urban youth in three cities: Strategies and challenges. *Children and Youth Services Review, 116*, Article 105184. https://doi.org/10.1016/j.childyouth.2020.105184

Brendli Brown, K. R., Enayati, H., & Shaw, L. (2025). Predictors of postsecondary education and high school exit for autistic youth. *Career Development and Transition for Exceptional Individuals*, Article 21651434251328580. https://doi.org/10.1177/21651434251328580

Brzezińska, A., & Piotrowski, K. (2011). Identity, self-sufficiency and disability in the context of educational and vocational activity. *Polish Psychological Bulletin, 42*(3), 130-139. https://journals.pan.pl/dlibra/publication/114627/edition/99680

Bueso, L. (2022). Civic equity for students with disabilities. *Teachers College Record, 124*(1), 62–86. https://doi.org/10.1177/01614681221086092

Burke, J., Bezyak, J., Fraser, R. T., Pete, J., Ditchman, N., & Chan, F. (2013). Employers' attitudes towards hiring and retaining people with disabilities: A review of the literature. *The Australian Journal of Rehabilitation Counselling, 19*(1), 21–38. https://doi.org/10.1017/jrc.2013.2

Burke, K. J., Greene, S., & McKenna, M. K. (2016). A critical geographic approach to youth civic engagement: Reframing educational opportunity zones and the use of public spaces. *Urban Education, 51*(2), 143–169. https://doi.org/10.1177/0042085914543670

Burke, K. M., Shogren, K. A., Parente, A., Alsaeed, A., Myers, A. M., & Aleong, S. (2024). Self-determination research: Current and future directions. *Behavioral Sciences, 14*(7), Article 613. https://doi.org/10.3390/bs14070613

Burke, M. M., Rossetti, Z., Aleman-Tovar, J., & Rios, K. (2021). Examining the relation between empowerment and civic engagement among parents of individuals with intellectual and developmental disabilities. *Journal of Applied Research in Intellectual Disabilities, 34*(6), 1569–1581. https://doi.org/10.1111/jar.12901

Cage, E., Di Monaco, J., & Newell, V. (2018). Experiences of autism acceptance and mental health in autistic adults. *Journal of Autism and Developmental Disorders, 48*(2), 473–484. https://doi.org/10.1007/s10803-017-3342-7

Caldwell, J. (2011). Disability identity of leaders in the self-advocacy movement. *Intellectual and Developmental Disabilities, 49*(5), 315–326. https://doi.org/10.1352/1934-9556-49.5.315

Carlson, S. R. (2022). Pre-employment transition services: What secondary special education teachers need to know. *Intervention in School and Clinic, 57*(5), 338–342. https://doi.org/10.1177/10534512211032631

Chambless, C. E., McCormick, S., Ipsen, C., Kurth, N., & Hall, J. (2019). Teaching self-determination to youth with disabilities: The ASPIRE model. *Journal of Vocational Rehabilitation, 51*(2), 199–210. https://doi.org/10.3233/JVR-191038

Chryssochoou, X., & Barrett, M. (2017). Civic and political engagement in youth: Findings and prospects. *Zeitschrift Für Psychologie, 225*(4), 291–301. https://doi.org/10.1027/2151-2604/a000315

Cobb, B., Lehmann, J., Newman-Gonchar, R., & Alwell, M. (2009). Self-determination for students with disabilities: A narrative metasynthesis. *Career Development for Exceptional Individuals, 32*(2), 108–114. https://doi.org/10.1177/0885728809336654

Collins, J. (2019). A comparative group factor analysis of the SIAS: Implications for measuring social justice leadership capacity. *Journal of Leadership Education, 18*(3), 20–37. https://doi.org/10.12806/V18/I3/R2

Cooper, R., Cooper, K., Russell, A. J., & Smith, L. G. E. (2021). “I’m proud to be a little bit different”: The effects of autistic individuals’ perceptions of autism and autism social identity on their collective self-esteem. *Journal of Autism and Developmental Disorders, 51*(2), 704–714. https://doi.org/10.1007/s10803-020-04575-4

Corby, S., William, L., & Richard, S. (2019). Combatting disability discrimination: A comparison of France and Great Britain. *European Journal of Industrial Relations, 25*(1), 41–56. https://doi.org/10.1177/0959680118759169

Corden, K., Brewer, R., & Cage, E. (2021). Personal identity after an autism diagnosis: Relationships with self-esteem, mental wellbeing, and diagnostic timing. *Frontiers in Psychology, 12*, Article 699335. https://www.frontiersin.org/journals/psychology/articles/10.3389/fpsyg.2021.699335

Crocker, J., & Luhtanen, R. (1990). Collective self-esteem and ingroup bias. *Journal of Personality and Social Psychology, 58*(1), 60–67. https://doi.org/10.1037/0022-3514.58.1.60

Crowley, S. (2022). Interventions for transition-age youth with disabilities: A meta-analysis of group design studies. *American Journal on Intellectual and Developmental Disabilities, 127*(3), 169–193. https://doi.org/10.1352/1944-7558-127.3.169

Dalrymple, J. (2005). Constructions of child and youth advocacy: Emerging issues in advocacy practice. *Children & Society, 19*(1), 3–15. https://doi.org/10.1002/chi.828

Darling, R. B., & Heckert, D. A. (2010). Orientations toward disability: Differences over the lifecourse. *International Journal of Disability, Development and Education, 57*(2), 131–143. https://doi.org/10.1080/10349121003750489

Davis, M. C. (2019). *Counselor educators' social justice and advocacy beliefs and relationship to their actions* (Publication No. 13426437) [Doctoral dissertation, Walden University]. ProQuest Dissertations & Theses Global.

Davidson, J. (2008). Autistic culture online: Virtual communication and cultural expression on the spectrum. *Social & Cultural Geography, 9*(7), 791–806. https://doi.org/10.1080/14649360802382586

De Cremer, D., & Oosterwegel, A. (1999). Collective self-esteem, personal self-esteem, and collective efficacy in in-group and outgroup evaluations. *Current Psychology, 18*(4), 326–339. https://doi.org/10.1007/s12144-999-1007-1

Deci, E. L., & Ryan, R. M. (2008). Self-determination theory: A macrotheory of human motivation, development, and health. *Canadian Psychology / Psychologie Canadienne, 49*(3), 182–185. https://doi.org/10.1037/a0012801

Dimitrov, D. M., & Rumrill, P. D., Jr. (2003). Pretest-posttest designs and measurement of change. *Work, 20*(2), 159-165.

Doyle, N., McDowall, A., & Waseem, U. (2022). Intersectional stigma for autistic people at work: A compound adverse impact effect on labor force participation and experiences of belonging. *Autism in Adulthood: Challenges and Management, 4*(4), 340–356. https://doi.org/10.1089/aut.2021.0082

Dugard, P., & Todman, J. (1995). Analysis of pre-test-post-test control group designs in educational research. *Educational Psychology, 15*(2), 181–198. https://doi.org/10.1080/0144341950150207

Dunn, D. S., & Burcaw, S. (2013). Disability identity: Exploring narrative accounts of disability. *Rehabilitation Psychology, 58*(2), 148–157. https://doi.org/10.1037/a0031691

Elbaum, B., & Vaughn, S. (2001). School-based interventions to enhance the self-concept of students with learning disabilities: A meta-analysis. *The Elementary School Journal, 101*(3), 303–329. https://doi.org/10.1086/499670

Eryilmaz, A., & Kara, A. (2020). Investigation of the effectiveness of a career adaptability program for prospective counsellors. *Current Psychology, 39*(4), 1260–1268. https://doi.org/10.1007/s12144-018-9827-5

Fietzer, A. W., & Ponterotto, J. (2015). A psychometric review of instruments for social justice and advocacy attitudes. *Journal for Social Action in Counseling & Psychology, 7*(1), 19-40. https://doi.org/10.33043/JSACP.7.1.19-40

Forber-Pratt, A. J., Lyew, D. A., Mueller, C., & Samples, L. B. (2017). Disability identity development: A systematic review of the literature. *Rehabilitation Psychology, 62*(2), 198–207. https://doi.org/10.1037/rep0000134

Forber-Pratt, A. J., Price, L. R., Merrin, G. J., Hanebutt, R. A., & Fairclough, J. A. (2022). Psychometric properties of the disability identity development scale: Confirmatory factor and bifactor analyses. *Rehabilitation Psychology, 67*(2), 120–127. https://doi.org/10.1037/rep0000445

Forber-Pratt, A. J., & Zape, M. P. (2017). Disability identity development model: Voices from the ADA-generation. *Disability and Health Journal, 10*(2), 350–355. https://doi.org/10.1016/j.dhjo.2016.12.013

Freer, J. R. R. (2023). Students' attitudes toward disability: A systematic literature review (2012–2019). *International Journal of Inclusive Education, 27*(5), 652–670. https://doi.org/10.1080/13603116.2020.1866688

Gallo, L. L., Self, T., & Raush, M. A. (206). School counselors' experiences with empowerment and students on the autism spectrum: A qualitative study. *Journal of Child and Adolescent Counseling, 2*(2), 159–174. https://doi.org/10.1080/23727810.2016.1252652

Gill, C. J. (1997). Four types of integration in disability identity development. *Journal of Vocational Rehabilitation, 9*(1), 39–46. https://doi.org/10.1016/S1052-2263(97)00020-2

Gillberg, I., Helles, A., Billstedt, E., & Gillberg, C. (2016). Boys with Asperger syndrome grow up: Psychiatric and neurodevelopmental disorders 20 years after initial diagnosis. *Journal of Autism & Developmental Disorders, 46*(1), 74–82. https://doi.org/10.1007/s10803-015-2544-0

Ginis, K. A. M., van der Ploeg, H. P., Foster, C., Lai, B., McBride, C. B., Ng, K., Pratt, M., Shirazipour, C. H., Smith, B., Vásquez, P. M., & Heath, G. W. (2021). Participation of people living with disabilities in physical activity: A global perspective. *The Lancet, 398*(10298), 443–455. https://doi.org/10.1016/S0140-6736(21)01164-8

Grenwelge, C., & Zhang, D. (2013). The effects of the Texas Youth Leadership Forum summer training on the self-advocacy abilities of high school students with disabilities. *Journal of Disability Policy Studies, 24*(3), 158–169. https://doi.org/10.1177/1044207312457415

Grenwelge, C., Zhang, D., & Landmark, L. (2010). Comprehensive leadership training for youth with disabilities. *Teaching Exceptional Children, 42*(4), 62–68. https://doi.org/10.1177/004005991004200407

Hahn, H. D., & Belt, T. L. (2004). Disability identity and attitudes toward cure in a sample of disabled activists. *Journal of Health and Social Behavior, 45*(4), 453–464. https://doi.org/10.1177/002214650404500407

Han, E., Scior, K., Avramides, K., & Crane, L. (2022). A systematic review on autistic people's experiences of stigma and coping strategies. *Autism Research, 15*(1), 12–26. https://doi.org/10.1002/aur.2652

Harmens, M., Sedgewick, F., & Hobson, H. (2022). The quest for acceptance: A blog-based study of autistic women's experiences and well-being during autism identification and diagnosis. *Autism in Adulthood: Challenges and Management, 4*(1), 42–51. https://doi.org/10.1089/aut.2021.0016

Hawkins, M. T., Letcher, P., Sanson, A., Smart, D., & Toumbourou, J. W. (2009). Positive development in emerging adulthood. *Australian Psychologist, 44*(2), 89-99. https://doi.org/10.1080/00049530802001346

Jahoda, A., Wilson, A., Stalker, K., & Cairney, A. (2010). Living with stigma and the self-perceptions of people with mild intellectual disabilities. *Journal of Social Issues, 66*(3), 521–534. https://doi.org/10.1111/j.1540-4560.2010.01660.x

James, T. L., Lowry, P. B., Wallace, L., & Warkentin, M. (2017). The effect of belongingness on obsessive-compulsive disorder in the use of online social networks. *Journal of*

Management Information Systems, 34(2), 560–596. https://doi.org/10.1080/07421222.2017.1334496

Johnston, C. S. (2018). A systematic review of the career adaptability literature and future outlook. *Journal of Career Assessment, 26*(1), 3–30. https://doi.org/10.1177/1069072716679921

Kim, H., & Baker, D. (2022). Dreaming of college versus going to college: Expectations and enrollment among autistic students. *Remedial and Special Education, 43*(4), 222–236. https://doi.org/10.1177/07419325211046050

Koen, J., Klehe, U.-C., & Van Vianen, A. E. M. (2012). Training career adaptability to facilitate a successful school-to-work transition. *Journal of Vocational Behavior, 81*(3), 395–408. https://doi.org/10.1016/j.jvb.2012.10.003

Koller, M., & Stahel, W. A. (2011). Sharpening Wald-type inference in robust regression for small samples. *Computational Statistics & Data Analysis, 55*(8), 2504–2515. https://doi.org/10.1016/j.csda.2011.02.014

Lackaye, T., Margalit, M., Ziv, O., & Ziman, T. (2006). Comparisons of self-efficacy, mood, effort, and hope between students with learning disabilities and their non-LD-matched peers. *Learning Disabilities Research & Practice, 21*(2), 111–121.

Lam, G. Y. H., Timmons, J., & Zalewska, A. (2023). Program logic model and impacts perceived by stakeholders in a post-school transition program for autistic young adults. *Research in Autism Spectrum Disorders, 107*, Article 102220. https://doi.org/10.1016/j.rasd.2023.102220

Landmark, L. J., Zhang, D., Ju, S., McVey, T. C., & Ji, M. Y. (2017). Experiences of disability advocates and self-advocates in Texas. *Journal of Disability Policy Studies, 27*(4), 203–211. https://doi.org/10.1177/1044207316657802

Lee, N. R., McQuaid, G. A., Grosman, H. E., Jayaram, S., & Wallace, G. L. (2024). Vocational outcomes in ASD: An examination of work readiness skills as well as barriers and facilitators to employment identified by autistic adults. *Journal of Autism and Developmental Disorders, 54*(2), 477–490. https://doi.org/10.1007/s10803-022-05804-8

Lent, R. W., & Brown, S. D. (2013). Social cognitive model of career self-management: Toward a unifying view of adaptive career behavior across the life span. *Journal of Counseling Psychology, 60*(4), 557–568. https://doi.org/10.1037/a0033446

Lent, R. W., Brown, S. D., & Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice, and performance. *Journal of Vocational Behavior, 45*(1), 79–122. https://doi.org/10.1006/jvbe.1994.1027

Maenner, M. J., Shaw, K. A., Bakian, A. V., Bilder, D. A., Constantino, J. N., Dash, M., ... & Dietz, P. M. (2021). Prevalence and characteristics of autism spectrum disorder among children aged 8 years—Autism and Developmental Disabilities Monitoring Network, 11 sites, United States, 2018. *MMWR Surveillance Summaries, 70*(11), 1. https://doi.org/10.15585/mmwr.ss7011a1

Mair, P., & Wilcox, R. (2020). Robust statistical methods in R using the WRS2 package. *Behavior Research Methods, 52*(1), 464–488. https://doi.org/10.3758/s13428-019-01246-w

Marcionetti, J., & Rossier, J. (2019). A longitudinal study of relations among adolescents' self-esteem, general self-efficacy, career adaptability, and life satisfaction. *Journal of Career Development, 48*, 475–490. https://doi.org/10.1177/0894845319861691

Marszalek, J. M., Barber, C., & Nilsson, J. E. (2019). A cognitive diagnostic analysis of the Social Issues Advocacy Scale (SIAS). *Educational Psychology, 39*(6), 839–858. https://doi.org/10.1080/01443410.2019.1585516

Martino, D. C., Brantley, A., & Scarpa, A. (2025). The role of self-advocacy and self-determination in positive adjustment for autistic adolescents and young adults: A mini-review. *Frontiers in Child and Adolescent Psychiatry, 4*, Article 1542543. https://doi.org/10.3389/frcha.2025.1542543

Martyn, B., & Pachi, D. (2019). Youth civic and political engagement. In M. Barrett & D. Pachi (Eds.), *Youth civic and political engagement* (pp. 1-16). Taylor & Francis. https://doi.org/10.4324/9780429025570

Mason, D., Capp, S. J., Stewart, G. R., Kempton, M. J., Glaser, K., Howlin, P., & Happé, F. (2021). A meta-analysis of outcome studies of autistic adults: Quantifying effect size, quality, and meta-regression. *Journal of Autism and Developmental Disorders, 51*(9), 3165–3179. https://doi.org/10.1007/s10803-020-04763-2

Mattila, M., & Papageorgiou, A. (2017). Disability, perceived discrimination and political participation. *International Political Science Review, 38*(5), 505–519. https://doi.org/10.1177/0192512116655813

McCormack, C., & Collins, B. (2012). The affirmative model of disability: A means to include disability orientation in occupational therapy? *British Journal of Occupational Therapy, 75*(3), 156–158. https://doi.org/10.4276/030802212X13311219571909

McDonald, T. A. M. (2017). Discriminative and criterion validity of the Autism Spectrum Identity Scale (ASIS). *Journal of Autism and Developmental Disorders, 47*(10), 3018–3028. https://doi.org/10.1007/s10803-017-3221-2

McDonald, T. A. M. (2020). Autism identity and the "lost generation": Structural validation of the Autism Spectrum Identity Scale (ASIS) and comparison of diagnosed and self-diagnosed adults on the autism spectrum. *Autism in Adulthood: Challenges and Management, 2*(1), 13–23. https://doi.org/10.1089/aut.2019.0069

Moturu, B. P., & Lent, R. W. (2023). Self-assertive efficacy and workplace advocacy behavior: A social cognitive analysis. *Journal of Counseling Psychology, 70*(1), 41–51. https://doi.org/10.1037/cou0000645.supp

Mueller, C. O. (2021). "I didn't know people with disabilities could grow up to be adults": Disability history, curriculum, and identity in special education. *Teacher Education and Special Education, 44*(3), 189–205. https://doi.org/10.1177/0888406421996069

Murugami, M. W. (2009). Disability and identity. *Disability Studies Quarterly, 29*(4). https://doi.org/10.18061/dsq.v29i4.979

Myers, J. L., Well, A. D., & Lorch, R. F., Jr. (2010). *Research design and statistical analysis* (3rd ed.). Routledge.

Nario-Redmond, M. R., Noel, J. G., & Fern, E. (2013). Redefining disability, re-imagining the self: Disability identification predicts self-esteem and strategic responses to stigma. *Self and Identity, 12*(5), 468–488. https://doi.org/10.1080/15298868.2012.681118

Nieweglowski, K., Qin, S., & Ko, E. (2025). A randomized controlled trial for self-advocacy intervention in college students with disabilities. *Rehabilitation Psychology, 70*(3), 255–266. https://doi.org/10.1037/rep0000583

Nilsson, J. E., Marszalek, J. M., Linnemeyer, R. M., Bahner, A. D., & Misialek, L. H. (2011). Development and assessment of the Social Issues Advocacy Scale. *Educational and Psychological Measurement, 71*(1), 258–275. https://doi.org/10.1177/0013164410391581

Porfeli, E. J., & Savickas, M. L. (2012). Career Adapt-Abilities Scale-USA form: Psychometric properties and relation to vocational identity. *Journal of Vocational Behavior, 80*(3), 748–753. https://doi.org/10.1016/j.jvb.2012.01.009

Potterton, R., Austin, A., Robinson, L., Webb, H., Allen, K. L., & Schmidt, U. (2022). Identity development and social-emotional disorders during adolescence and emerging adulthood: A systematic review and meta-analysis. *Journal of Youth and Adolescence, 51*(1), 16–29. https://doi.org/10.1007/s10964-021-01536-7

Prochaska, J. O., & Velicer, W. F. (1997). The transtheoretical model of health behavior change. *American Journal of Health Promotion, 12*(1), 38–48. https://doi.org/10.4278/0890-1171-12.1.38

Putnam, M. (2005). Conceptualizing disability: Developing a framework for political disability identity. *Journal of Disability Policy Studies, 16*(3), 188–198. https://doi.org/10.1177/10442073050160030601

Quinn, D. M., Williams, M. K., & Weisz, B. M. (2015). From discrimination to internalized mental illness stigma: The mediating roles of anticipated discrimination and anticipated stigma. *Psychiatric Rehabilitation Journal, 38*(2), 103–108. https://doi.org/10.1037/prj0000136

Reifman, A., & Niehuis, S. (2023). Extending the five psychological features of emerging adulthood into established adulthood. *Journal of Adult Development, 30*(1), 6–20. https://doi.org/10.1007/s10804-022-09412-9

Richard, S., & Hennekam, S. (2021). Constructing a positive identity as a disabled worker through social comparison: The role of stigma and disability characteristics. *Journal of Vocational Behavior, 125*, Article 103528. https://doi.org/10.1016/j.jvb.2020.103528

Roberts, E. L., Ju, S., & Zhang, D. (2016). Review of practices that promote self-advocacy for students with disabilities. *Journal of Disability Policy Studies, 26*(4), 209–220. https://doi.org/10.1177/1044207314540213

Roux, A. M., Anderson, K. A., Rast, J. E., Nord, D., & Shattuck, P. T. (2018). Vocational rehabilitation experiences of transition-age youth with autism spectrum disorder across states: Prioritizing modifiable factors for research. *Journal of Vocational Rehabilitation, 49*(1), 1-17. https://doi.org/10.3233/JVR-180976

Roux, A. M., Garfield, T., & Shattuck, P. T. (2019). Employment policy and autism: Analysis of state Workforce Innovation and Opportunity Act (WIOA) implementation plans. *Journal of Vocational Rehabilitation, 51*(3), 285–298. https://doi.org/10.3233/JVR-191046

Roux, A. M., Shattuck, P. T., Cooper, B. P., Anderson, K. A., Wagner, M., & Narendorf, S. C. (2013). Postsecondary employment experiences among young adults with an autism spectrum disorder. *Journal of the American Academy of Child and Adolescent Psychiatry, 52*(9), 931–939. https://doi.org/10.1016/j.jaac.2013.05.019

Rudolph, C. W., Lavigne, K. N., & Zacher, H. (2017). Career adaptability: A meta-analysis of relationships with measures of adaptivity, adapting responses, and adaptation results. *Journal of Vocational Behavior, 98*, 17–34. https://doi.org/10.1016/j.jvb.2016.09.002

Rüsch, N., Corrigan, P. W., Wassel, A., Michaels, P., Larson, J. E., Olschewski, M., Wilkniss, S., & Batia, K. (2009). Self-stigma, group identification, perceived legitimacy of discrimination and mental health service use. *The British Journal of Psychiatry, 195*(6), 551–552. https://doi.org/10.1192/bjp.bp.109.067157

Ryan, W. S., & Moore, A. (2023). A self-determination theory perspective on stigma and prejudice. In R. M. Ryan (Ed.), *The Oxford handbook of self-determination theory* (pp. 1-25). Oxford University Press. https://doi.org/10.1093/oxfordhb/9780197600047.013.58

Santilli, S., Marcionetti, J., Rochat, S., Rossier, J., & Nota, L. (2017). Career adaptability, hope, optimism, and life satisfaction in Italian and Swiss adolescents. *Journal of Career Development, 44*(1), 62–76. https://doi.org/10.1177/0894845316633793

Santuzzi, A. M., Waltz, P. R., Finkelstein, L. M., & Rupp, D. E. (2014). Invisible disabilities: Unique challenges for employees and organizations. *Industrial and Organizational Psychology, 7*(2), 204–219. https://doi.org/10.1111/iops.12134

Savickas, M. L., & Porfeli, E. J. (2012). Career Adapt-Abilities Scale: Construction, reliability, and measurement equivalence across 13 countries. *Journal of Vocational Behavior, 80*(3), 661–673. https://doi.org/10.1016/j.jvb.2012.01.011

Schur, L., & Adya, M. (2013). Sidelined or mainstreamed? Political participation and attitudes of people with disabilities in the United States. *Social Science Quarterly, 94*(3), 811–839. https://doi.org/10.1111/j.1540-6237.2012.00885.x

Schwartz, S. J., Zamboanga, B. L., Luyckx, K., Meca, A., & Ritchie, R. A. (2013). Identity in emerging adulthood: Reviewing the field and looking forward. *Emerging Adulthood, 1*(2), 96–113. https://doi.org/10.1177/2167696813479781

Scott, M., Falkmer, M., Girdler, S., & Falkmer, T. (2015). Viewpoints on factors for successful employment for adults with autism spectrum disorder. *PLoS ONE, 10*(10), Article e0139281. https://doi.org/10.1371/journal.pone.0139281

Shakespeare, T., & Watson, N. (2010). Beyond models: Understanding the complexity of disabled people's lives. In G. Scambler & S. Scambler (Eds.), *New directions in the sociology of chronic and disabling conditions: Assaults on the lifeworld* (pp. 57–76). Palgrave Macmillan UK. https://doi.org/10.1057/9780230297432_4

Sheehan, R., & Ali, A. (2016). Self-stigma in people with intellectual disabilities. In K. Scior & S. Werner (Eds.), *Intellectual disability and stigma: Stepping out from the margins* (pp. 91–109). Palgrave Macmillan UK. https://doi.org/10.1057/978-1-137-52499-7_7

Shogren, K. A., Wehmeyer, M. L., Palmer, S. B., Forber-Pratt, A. J., Little, T. J., & Lopez, S. (2015). Causal agency theory: Reconceptualizing a functional model of self-determination. *Education and Training in Autism and Developmental Disabilities, 50*(3), 251–263.

Sinclair, J., Gilson, C. B., & Dulas, H. (2024). "I'm going to be a working person": Self-determination in employment settings for adults with intellectual and developmental disabilities. *Career Development and Transition for Exceptional Individuals, 47*(3), 159–171. https://doi.org/10.1177/21651434231186136

Sloam, J. (2014). New voice, less equal: The civic and political engagement of young people in the United States and Europe. *Comparative Political Studies, 47*(5), 663–688. https://doi.org/10.1177/0010414012453441

Swain, J., & French, S. (2000). Towards an affirmation model of disability. *Disability & Society, 15*(4), 569–582. https://doi.org/10.1080/09687590050058189

Taber, B. J., & Blankemeyer, M. (2015). Future work self and career adaptability in the prediction of proactive career behaviors. *Journal of Vocational Behavior, 86*, 20–27. https://doi.org/10.1016/j.jvb.2014.10.005

Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. G. Austin & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33–47). Brooks/Cole.

Test, D. W., Fowler, C. H., Richter, S. M., White, J., Mazzotti, V., Walker, A. R., Kohler, P., & Kortering, L. (2009). Evidence-based practices in secondary transition. *Career Development for Exceptional Individuals, 32*(2), 115–128. https://doi.org/10.1177/0885728809336859

Teti, M., Cheak-Zamora, N., Lolli, B., & Maurer-Batjer, A. (2016). Reframing autism: Young adults with autism share their strengths through photo-stories. *Journal of Pediatric Nursing, 31*(6), 619–629. https://doi.org/10.1016/j.pedn.2016.07.002

Tomlinson, M., & Jackson, D. (2021). Professional identity formation in contemporary higher education students. *Studies in Higher Education, 46*(4), 885–900. https://doi.org/10.1080/03075079.2019.1659763

van ’t Hof, M., Tisseur, C., van Berckelear-Onnes, I., van Nieuwenhuyzen, A., Daniels, A. M., Deen, M., Hoek, H. W., & Ester, W. A. (2021). Age at autism spectrum disorder diagnosis: A systematic review and meta-analysis from 2012 to 2019. *Autism, 25*(4), 862–873. https://doi.org/10.1177/1362361320971107

Varadaraj, V., Deal, J. A., Campanile, J., Reed, N. S., & Swenor, B. K. (2021). National prevalence of disability and disability types among adults in the US, 2019. *JAMA Network Open, 4*(10), Article e2130358. https://doi.org/10.1001/jamanetworkopen.2021.30358

Volmer, J., Spurk, D., Orth, M., & Göritz, A. (2023). Reciprocal effects of career adaptability and occupational self-efficacy: A three-wave longitudinal study with varying time lags. *Journal of Career Assessment, 31*(4), 665–685. https://doi.org/10.1177/10690727221140050

Watts, P., Kwiatkowska, G., & Minnion, A. (2023). Using multimedia technology to enhance self-advocacy of people with intellectual disabilities: Introducing a theoretical framework for 'multimedia advocacy.' *Journal of Applied Research in Intellectual Disabilities, 36*(4), 739–749. https://doi.org/10.1111/jar.13107

Wehmeyer, M. L. (2004). Beyond self-determination: Causal agency theory. *Journal of Developmental and Physical Disabilities, 16*(4), 337–359. https://doi.org/10.1007/s10882-004-0691-x

Wehmeyer, M. L. (2020). Self-determination in adolescents and adults with intellectual and developmental disabilities. *Current Opinion in Psychiatry, 33*(2), 81-86. https://doi.org/10.1097/YCO.0000000000000576

Wehmeyer, M. L., & Palmer, S. B. (2000). Promoting causal agency: The self-determined learning model of instruction. *Exceptional Children, 66*(4), 439-453. https://doi.org/10.1177/001440290006600401

Wehmeyer, M. L., & Palmer, S. B. (2003). Adult outcomes for students with cognitive disabilities three-years after high school: The impact of self-determination. *Education and Training in Developmental Disabilities, 38*(2), 131–144.

Wei, X., Wagner, M., Hudson, L., Yu, J. W., & Javitz, H. (2016). The effect of transition planning participation and goal-setting on college enrollment among youth with autism spectrum disorders. *Remedial and Special Education, 37*(1), 3–14. https://doi.org/10.1177/0741932515581495

Welch, C., Cameron, D., Fitch, M., & Polatajko, H. (2022). From "since" to "if": Using blogs to explore an insider-informed framing of autism. *Disability & Society, 37*(4), 638–661. https://doi.org/10.1080/09687599.2020.1836479

Wilcox, R. R. (2017). *Introduction to robust estimation and hypothesis testing* (4th ed.). Academic Press.

Wolfenden, L., Foy, R., Presseau, J., Grimshaw, J. M., Ivers, N. M., Powell, B. J., Taljaard, M., Wiggers, J., Sutherland, R., Nathan, N., Williams, C. M., Kingsland, M., Milat, A., Hodder, R. K., & Yoong, S. L. (2021). Designing and undertaking randomised implementation trials: Guide for researchers. *BMJ, 372*, Article m3721. https://doi.org/10.1136/bmj.m3721

Wood, W. M., Fowler, C. H., Uphold, N., & Test, D. W. (2005). A review of self-determination interventions with individuals with severe disabilities. *Research and Practice for Persons with Severe Disabilities, 30*(3), 121–146. https://doi.org/10.2511/rpsd.30.3.121

Wu, K., & Szafir, D. A. (2023). *Empowering people with intellectual and developmental disabilities through cognitively accessible visualizations* (arXiv:2309.12194). arXiv. https://doi.org/10.48550/arXiv.2309.12194

Yanchak, K. V., Lease, S. H., & Strauser, D. R. (2005). Relation of disability type and career thoughts to vocational identity. *Rehabilitation Counseling Bulletin, 48*(3), 130–138. https://doi.org/10.1177/00343552050480030101

Yanos, P. T., Roe, D., & Lysaker, P. H. (2011). Narrative enhancement and cognitive therapy: A new group-based treatment for internalized stigma among persons with severe mental illness. *International Journal of Group Psychotherapy, 61*(4), 576–595. https://doi.org/10.1521/ijgp.2011.61.4.576

Yohai, V. J. (1987). High breakdown-point and high efficiency robust estimates for regression. *The Annals of Statistics, 15*(2), 642–656. https://doi.org/10.1214/aos/1176350366

Zapata, M. A., & Worrell, F. C. (2023). Disability self-worth and personal meaning relate to psychosocial functioning among employed U.S. adults with LD and ADHD. *Rehabilitation Psychology, 68*(2), 184-194. https://doi.org/10.1037/rep0000484

Zhang, D., Roberts, E., Landmark, L., & Ju, S. (2019). Effect of self-advocacy training on students with disabilities: Adult outcomes and advocacy involvement after participation. *Journal of Vocational Rehabilitation, 50*(2), 207–218. https://doi.org/10.3233/JVR-181001

Zhou, K. (2023). *The role of autism acceptance in psychosocial adaptation: The relationship between acceptance, coping, psychosocial factors, and quality of life among transition-age youths with autism spectrum disorder.* [Doctoral dissertation, University of Wisconsin - Madison]. ProQuest Dissertations & Theses Global.

APPENDICES

Appendix A. Baseline Survey Questionnaire

Section 1: Demographic Information

1. What is your age? ________

2. What is your gender?
   ☐ Male
   ☐ Female
   ☐ Other: ________________________
   ☐ Prefer not to answer

3. Please specify your race/ethnicity.
   ☐ Hispanic/Latinx
   ☐ Black
   ☐ White
   ☐ Asian
   ☐ Native American, Native Hawaiian, or Other Pacific Islander
   ☐ Other: ______________________
   ☐ Prefer not to answer

4. What is your education status?
   ☐ Left high school before completing a degree
   ☐ Currently enrolled in high school
   ☐ High school graduate
   ☐ Currently enrolled in college. Specify year: __________
   ☐ Associate degree
   ☐ Bachelor's Degree
   ☐ Graduate Degree
   ☐ Other: ___________________

5. What is your current employment status?
   ☐ Employed full-time
   ☐ Employed part-time
   ☐ Not employed, seeking work
   ☐ Not employed, not seeking work
   ☐ Student
   ☐ Other: ___________________

6. What is your living situation?
   ☐ Live with parents or family
   ☐ Live on my own, independently
   ☐ Live with a significant other/spouse
   ☐ Live with roommates
   ☐ Group home
   ☐ Institution
   ☐ Homeless

7. At what age were you first diagnosed with Autism? ____________

8. Do you have a co-occurring or secondary disability?
   ☐ Yes. Specify: ______________________
   ☐ No.

Section 2: Disability Identity Development Scale (DIDS)

Instructions: Choose the answer that best reflects your answer to the following statements and mark the box that corresponds to your answer (Not like me at all—A little bit like me—Somewhat like me—A lot like me—Very much like me).

	Not like me at all	A little bit like me	Somewhat like me	A lot like me	Very much like me
1. If I witness someone else facing discrimination on the basis of ANY disability, I do something about it.	1	2	3	4	5
2. I am proud to identify as a person with a disability.	1	2	3	4	5
3. I serve on disability-related panels, Boards or committees.	1	2	3	4	5
4. I organize events for the disability community (i.e., support group meetings, sporting events, advocacy events, lectures).	1	2	3	4	5
5. I have a strong sense of belonging to people with disabilities.	1	2	3	4	5
6. I learn about disability culture by reading books/articles/blogs/websites.	1	2	3	4	5
7. I believe there is a disability community.	1	2	3	4	5
8. I am a mentor to other people with disabilities.	1	2	3	4	5
9. I identify with disability culture.	1	2	3	4	5

10. I give advice to other people with disabilities.	1	2	3	4	5
11. I am a mentor to other people with Autism.	1	2	3	4	5
12. I advocate for accessibility.	1	2	3	4	5
13. I identify as a person with a disability.	1	2	3	4	5
14. I advocate for inclusion.	1	2	3	4	5
15. I wish that I was not disabled.	1	2	3	4	5
16. I like (or would like) attending disability community events.	1	2	3	4	5
17. I embrace the core values of disability culture as my own.	1	2	3	4	5
18. I view myself as a disability expert.	1	2	3	4	5
19. There are some days that I wish I did not have a disability.	1	2	3	4	5
20. I believe there is a disability culture.	1	2	3	4	5
21. I connect people with disabilities to the disability community.	1	2	3	4	5
22. I fundraise for disability-related causes.	1	2	3	4	5
23. I seek out friends who have disabilities.	1	2	3	4	5
24. I identify with a disability community.	1	2	3	4	5
25. I speak publicly about disability (in person or online).	1	2	3	4	5
26. Being a disability advocate is an important reflection of me.	1	2	3	4	5
27. I am able to contribute to the disability community.	1	2	3	4	5
28. I engage with the disability community.	1	2	3	4	5
29. Individuals with disabilities see their disability as a core part of who they are.	1	2	3	4	5
30. I like (or would like to) attending disability-related advocacy events (i.e., rallys, protests, policy town halls).	1	2	3	4	5
31. If it is possible to make a "magic pill" that would take away disability with no side effects, I would take it.	1	2	3	4	5
32. I like (or would like) attending events hosted by disability-related organizations.	1	2	3	4	5
33. I have a strong sense of belonging to the disability community.	1	2	3	4	5
34. If I witness someone else facing an access barrier, I do something about it.	1	2	3	4	5

35. I like attending disability-related talks or lectures.	1	2	3	4	5

Section 3: Collective Self-Esteem Scale (CSES)

Instructions: You are asked to answer the following questions because you said “yes” to having an Autism diagnosis. We would like you to consider your membership in the Autism community and respond to the following statements based on how you feel about this community and your membership in it. There are no right or wrong answers to any of these statements; we are interested in your honest reactions and opinions. Please read each statement carefully, and respond by using the following scale from 1 to 5:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I am a worthy member of the social groups I belong to.	1	2	3	4	5
2. I often regret that I belong to some of the social groups I do.	1	2	3	4	5
3. Overall, my social groups are considered good by others.	1	2	3	4	5
4. Overall, my group memberships have very little to do with how I feel about myself.	1	2	3	4	5
5. I feel I don't have much to offer to the social groups I belong to.	1	2	3	4	5
6. In general, I'm glad to be a member of the social groups I belong to.	1	2	3	4	5
7. Most people consider my social groups, on average, to be more ineffective than other social groups.	1	2	3	4	5
8. The social groups I belong to are an important reflection of who I am.	1	2	3	4	5
9. I am a cooperative participant in the social groups I belong to.	1	2	3	4	5

10. Overall, I often feel that the social groups of which I am a member are not worthwhile.	1	2	3	4	5
11. In general, others respect the social groups that I am a member of.	1	2	3	4	5
12. The social groups I belong to are unimportant to my sense of what kind of person I am.	1	2	3	4	5
13. I often feel I'm a useless member of my social groups.	1	2	3	4	5
14. I feel good about the social groups I belong to.	1	2	3	4	5
15. In general, others think the social groups I am a member of are unworthy.	1	2	3	4	5
16. In general, belonging to social groups is an important part of my self-image.	1	2	3	4	5

Section 4: Social Issues Advocacy Scale (SIAS)

Instructions: Choose the answer that best reflects your answer to the following statements followed by "I feel confident …" and mark the box that corresponds to your answer.

"I feel confident …"

	No Confidence at all	A little confident	Somewhat confident	A lot confident	Complete confidence
1. Participating in demonstrations or rallies about social issues that are important to my profession.	1	2	3	4	5
2. Contacting policy makers to voice my opinion on issues that affect my profession.	1	2	3	4	5
3. Volunteering for political causes and candidates I believe in.	1	2	3	4	5
4. Participating in demonstrations or rallies about social issues that are important to me.	1	2	3	4	5
5. Meeting with policy makers (e.g., city council, state and federal legislators, local elected officials) to advocate for social issues that I personally believe in.	1	2	3	4	5
6. Volunteering for political causes and candidates that support the values of my profession.	1	2	3	4	5

7. Making financial contributions to political causes or candidates who support the values of my profession.	1	2	3	4	5
8. Writing letters or e-mail to influence others through the media regarding issues that affect my profession.	1	2	3	4	5
9. Deeping track of important bills/legislative issues that are being debated in Congress that affect my profession.	1	2	3	4	5
10. Keeping track of important bills/legislative issues that are being debated in Congress that I am personally interested in.	1	2	3	4	5
11. Discussing bills/legislative issues that are important to my profession with friends and family.	1	2	3	4	5
12. Working to elect policy makers who support the views of my professional organization on important social issues.	1	2	3	4	5
13. Discussing bills/legislative issues that are important to my profession with coworkers and acquaintances.	1	2	3	4	5
14. Voting in most local elections.	1	2	3	4	5
15. Discussing the societal forces (e.g., public policies, resource allocation, human rights) that affect individuals' health and well-being.	1	2	3	4	5
16. Discussing how State and federal policies affect individuals' access to quality education and resources.	1	2	3	4	5
17. Discussing how State and federal policies affect individuals' access to social services.	1	2	3	4	5
18. Discussing the societal forces (e.g., public policies, resource allocation, human rights) that affect individuals' educational performance.	1	2	3	4	5
19. Carrying out my responsibility to confront colleagues who display signs of discrimination toward the elderly.	1	2	3	4	5
20. Carrying out my responsibility to confront colleagues who display signs of discrimination toward disabled individuals.	1	2	3	4	5

21. Carrying out my responsibility to confront colleagues who I think display signs of discrimination toward culturally/ethnically different people or groups.	1	2	3	4	5

Section 5: Self-Assertive Efficacy at Workplace Advocacy (SAE-W)

Instructions: Choose the answer that best reflects your answer to the following statements followed by "How much confidence to you have in your ability to …"and mark the box that corresponds to your answer.

"How much confidence to you have in your ability to …"

	No Confidence at all	A little confident	Somewhat confident	A lot confident	Complete confidence
1. Ask for help with job tasks from your co-workers when you feel you could use it.	1	2	3	4	5
2. Let a co-worker know if you feel they are treating you in an unfair or discriminatory way.	1	2	3	4	5
3. Ask for a personal (e.g., health) leave when you feel you need one.	1	2	3	4	5
4. Express your concerns about job assignments that you feel are unethical.	1	2	3	4	5
5. Let your supervisor know if you are having difficulty with a work assignment.	1	2	3	4	5
6. Speak up against discrimination or bias that you feel is directed toward you (e.g., based on your age, appearance, gender, race, or religion).	1	2	3	4	5
7. Speak up if you feel you are being asked to work too many hours	1	2	3	4	5
8. Ask to leave early from work on occasion to take care of non-work issues	1	2	3	4	5
9. Request that your supervisor provide training to assist your professional development	1	2	3	4	5
10. Request resources (e.g., equipment) you need to do your job better	1	2	3	4	5
11. Ask for a pay raise	1	2	3	4	5

12. Nominate yourself for awards in your workplace	1	2	3	4	5
13. Negotiate for better benefits for yourself, apart from pay	1	2	3	4	5
14. Ask for a promotion that you want	1	2	3	4	5
15. Advocate for changes in company policies you feel are unfair to you	1	2	3	4	5
16. Point out your accomplishments to your supervisor	1	2	3	4	5
17. Volunteer for new projects that can benefit your career advancement	1	2	3	4	5
18. Request a flexible work schedule from your supervisor	1	2	3	4	5

Section 6: Career Adaptability Scale (CAAS)

Instructions: Different people use different strengths to build their careers. No one is good at everything; each of us emphasizes some strengths more than others. Please rate how strongly you have developed each of the following abilities using the scale below.

	Not Strong	Somewhat Strong	Strong	Very Strong	Strongest
1. Thinking about what my future will be like	1	2	3	4	5
2. Realizing that today's choices shape my future	1	2	3	4	5
3. Preparing for the future	1	2	3	4	5
4. Becoming aware of the educational and	1	2	3	4	5
vocational choices that I must make	1	2	3	4	5
5. Planning how to achieve my goals	1	2	3	4	5
6. Concerned about my career	1	2	3	4	5
7. Keeping upbeat	1	2	3	4	5
8. Making decisions by myself	1	2	3	4	5
9. Taking responsibility for my actions	1	2	3	4	5
10. Sticking up for my beliefs	1	2	3	4	5
11. Counting on myself	1	2	3	4	5
12. Doing what's right for me	1	2	3	4	5
13. Exploring my surroundings	1	2	3	4	5
14. Looking for opportunities to grow	1	2	3	4	5

15. Investigating options before making a choice	1	2	3	4	5
16. Observing different ways of doing things	1	2	3	4	5
17. Probing deeply into questions that I have	1	2	3	4	5
18. Becoming curious about new opportunities	1	2	3	4	5
19. Performing tasks efficiently	1	2	3	4	5
20. Taking care to do things well	1	2	3	4	5
21. Learning new skills	1	2	3	4	5
22. Working up to my ability	1	2	3	4	5
23. Overcoming obstacles	1	2	3	4	5
24. Solving problems	1	2	3	4	5

Appendix B. End-of-Module Feedback Survey

Please use the scale (from strongly disagree to strongly agree) below to rate your experience with Module X of the ADAPT program.

1. The module was easy to navigate (user-friendly).
2. The module contents were easy to follow.
3. The activities were clear.
4. The content offered a balance of instruction and activity.
5. I was able to comfortably cover the module materials in the allotted time frame (2-3 hours).
6. The information presented in this module will help me be a better advocate.
7. The module kept me engaged.

Please answer the following open-ended questions.

8. What did you like best about this module? Why?
9. What did you like least about this module? Why?
10. What would you add or change to this module?
11. Is there anything else you would like us to know?

Appendix C. Minimal Risk IRB Certification

Minimal Risk Research IRB
9/9/2024

Submission ID number: 2024-1214

Title: Fostering Disability Pride to Promote Self-advocacy and Career Adaptability in Young Adults with Autism: A Randomized Controlled Trial of Internet-based Intervention

Principal Investigator: Timothy N Tansey

Point-of-contact: Sara Park

IRB Staff Reviewer: Olyvia Kuchta

The IRB determined that the proposed activity is not research involving human subjects as defined by DHHS and FDA regulations.
You have identified the following financial sources to support the activities in this IRB application:

None.

IRB review and approval by this organization is not required. This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these activities are research involving human subjects, please submit a new request to the IRB for a determination.

ARROW will permanently delete this certified application in 3 years. If you need a copy of the materials associated with this application, please log into your ARROW account and use the "Export Applications to PDF" activity found under the 'Activities' section in the submission's worskspace. Also, be sure to save a copy of this notification which can be found under the correspondence tab in the submission's workspace.

If you have general questions, please contact the Minimal Risk Research IRB at 608-263-2362. For questions related to this submission, contact the assigned staff reviewer.

Appendix D. Participant Information Sheet

UNIVERSITY OF WISCONSIN-MADISON
Participant Information Sheet

Project Title: Fostering Disability Pride to Promote Self-advocacy and Career Adaptability in Young Adults with Autism: A Randomized Controlled Trial of Internet-based Intervention

Principal Investigator: Timothy N. Tansey (email: tntansey@wisc.edu)

Student Researcher: Sara Park (e-mail: spark247@wisc.edu)

DESCRIPTION OF THE PROJECT

You are invited to participate in an Internet-based disability and autism Pride intervention project for young adults with autism. You have been asked to participate because you are a young adult between the ages of 18 and 26 years and have a primary diagnosis of autism spectrum disorder (ASD).

The purpose of the project is to evaluate the effectiveness of a month-long (8 to 12 hours of work in total) Internet-based intervention for improving political and work self-advocacy among young adults with ASD.

The location of this project will be conducted at a location of your choosing, such as home, library, or office. Internet access will be necessary, and a quiet, private location is suggested.

WHAT WILL MY PARTICIPATION INVOLVE?

If you decide to participate in this program, you will be randomly assigned to one of two groups.

- **Group 1** will be asked to take a survey online and answer questions about yourself. Next, group 1 participants will be asked to complete an online program over a 4-week period. Each week, participants will be asked to complete one module. There are four modules. After completing the program, you will be asked to take a final survey answering questions about yourself. *If assigned to Group 1, you will be asked to complete 2 surveys and a 4-modules of the Autism Pride training program, which will take approximately 8 to 12 hours.*
- **Group 2** will be asked to take a survey online and answer some questions about yourself today and once more after 4-weeks. You will receive a reminder email about participation two weeks before the final survey. *If assigned to Group 2, you will be asked to complete 2 surveys. Each survey will require approximately 30 minutes (1 hour in total).* Participants in Group 2 will be able to take the training program after the study is completed, if you so choose.

If you agree to participate, we will ask some preliminary questions to see if you are eligible to participate before taking the first survey today. If you are found not to be eligible, you will be notified immediately after answering the preliminary questions.
If you are eligible to participate, you will be notified by e-mail which group you are assigned.

ARE THERE ANY RISKS TO ME?

There are minimal risks for participating in this study. The surveys will ask for personal information about your attitude, behavior, and confidence toward disability and disability advocacy. There is a minimal risk that participants may feel uncomfortable with some of the questions. Participants may become fatigued or tired while taking the survey or the 4-modules of the online program. We ask that you share your e-mail address so we can share information about this project. There is a minimal risk to confidentiality. Careful steps will be taken to ensure your privacy and confidentiality.

ARE THERE ANY BENEFITS TO ME?

There are no direct benefits. However, a potential benefit of this project is that your self-advocacy skills may improve, and you may feel more positive and confident about yourself and your ability to advocate in the community and work.

WILL I BE COMPENSATED FOR MY PARTICIPATION?

All eligible participants can receive $30 for completing the two surveys. Those randomly assigned to **Group 1** can receive an additional $80 (total of $110) in a digital gift card of their choice for participating in this study.

If you do not complete the study, you will receive compensation only for the surveys and/or online program sessions fully completed.

HOW WILL MY CONFIDENTIALITY BE PROTECTED?

While there will probably be publications from this study, any private or identifying information will not be included. Only group characteristics will be published. Your data will be stored securely. Once data has been collected in its entirety, all identifying information will be removed.

ARE THERE ANY LIMITATIONS TO CONFIDENTIALITY?

The researchers for this study are mandated reporters and are legally obligated to report certain information to authorities, including (1) abuse or neglect of a child or elderly person and (2) potential harm to oneself or others when such information is disclosed to us during the project participation.

WHOM SHOULD I CONTACT IF I HAVE QUESTIONS?

You may ask any questions about the project at any time. If you have questions about the project after today, contact the student researcher, Sara Park, at spark247@wisc.edu. You may also contact the Principal Investigator Timothy Tansey at tntansey@wisc.edu.

If you are dissatisfied with the project team's response, have more questions, or want to talk with someone about your rights as a project participant, you should contact the Education and Social/Behavioral Science IRB Office at 608-263-2320.

Your participation is completely voluntary. If you decide not to participate or withdraw from the study, it will not affect any services or treatment you are receiving.

By clicking next, you confirm you have read this consent information sheet and voluntarily consent/agree to participate.

If you would like a copy of this form for your records, please print it now.