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# Servant Leadership Oriented Leadership Development for Leaders on the Autism Spectrum : An Exploratory Study

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## Abstract

As autistic individuals are increasingly joining the workforce, there is a need to better understand leadership development in autistic individuals as they progress through organizational hierarchies. This thesis introduces a servant leadership component to a traditional leadership development model and conducts a needs assessment for tailoring this model to a neurodiverse population. The servant leadership oriented assessment challenge support (SLO-ACS) is a model of leadership development that utilizes the popular Assessment Challenge Support model of leadership development with a focus on developing another individual and practicing servant leadership. Qualitative interviews were conducted with autism SMEs in leadership roles, a majority of whom identified as autistic. Interviews focused on common challenges and strengths experienced amongst a working autistic population, initial impressions of the SLO-ACS principles, and design considerations for designing an LD model for autistic leaders.

*Keywords:* autism, employment, disability inclusion, leadership development, servant leadership, psychology

## MONTCLAIR STATE UNIVERSITY

Servant Leadership Oriented Leadership Development for Leaders on the Autism Spectrum: An

**Exploratory Study** 

by

Nikita Williams

A Master's Thesis Submitted to the Faculty of

Montclair State University

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# SERVANT LEADERSHIP ORIENTED LEADERSHIP DEVELOPMENT FOR LEADERS ON THE AUTISM SPECTRUM: AN EXPLORATORY STUDY

A THESIS

Submitted in partial fulfillment of the requirements

For the degree of Master of Arts

by Nikita Elizabeth Williams Montclair State University

Montclair, NJ

2022

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#### A Note on Language

The author aims to listen and defer to autistic individuals in identifying themselves. The Autism Self-Advocacy Network promotes identity-first language over person-first language, as they wish to emphasize that autism is an important part of their identity and they cannot separate their autism from themselves (Brown, n.d.). Further, the term "allistic" is used in autism self-advocacy spaces to refer to nonautistic individuals (Huges, 2015). Therefore, this thesis will use this language.

#### Introduction

What do Satoshi Tajiri, the creator of the Pokémon media franchise; comedian Dan Akroyd; and environmental activist Greta Thunberg have in common? They are all individuals on the spectrum who credit their autism to their success in their respective fields (BBC, 2019; Miller, 2013; Gambacurta, 2020). While there is an increasing business case for hiring employees on the spectrum due to traits like detail-orientation, extensive knowledge qualifications, and increased organizational loyalty (Austin & Pisano, 2017), there are demonstrated difficulties that autistic individuals experience in the workplace, such as communication misunderstandings and social anxiety.

Adults on the spectrum are, in general, significantly under-employed or unemployed (Nicholas et al., 2019). Furthermore, symptoms and behaviors typical in autistic individuals can make achieving leadership roles in organizations difficult without proper accommodations. These symptoms include social anxiety, which can worsen relational social behaviors (Bejerot et al., 2014); restrictive interests (Gunn & Delafield-Butt, 2016); rumination (Gotham et al., 2014); and communication difficulties (Müller et al., 2008). While traditional leadership development programs may aid autistic developing leaders, many of these programs focus the attention of the developing leader on themselves (Van Velsor et al., 2010), which may aggravate rumination and social anxiety tendencies in those on the spectrum. In addition, many traditional leadership development (LD) programs focus on increasing self-regulation and task achievement (Van Velsor et al., 2010), skill sets that those with ASD have often already mastered (Ortiz, 2020). While there is fertile ground for leadership development in those with ASD, focus on these particular areas, may lead to aggravated anxiety, self-focus, and rumination. Therefore, an otheroriented leadership development model may be particularly beneficial to those on the spectrum. It is the purpose of this thesis to conduct a needs assessment to be used in the development of a leadership development program specifically targeted for individuals on the spectrum. While the majority of this needs assessment will involve interviewing leaders who are on the spectrum and individuals who work those on the spectrum, a second study will collect data on theory of mind and self report of leadership behaviors and skills from a leadership development program for dyslexic students (as dyslexia is often comorbid with ASD).

#### **Autism Spectrum Disorder**

#### **Overview and Genetic Research**

Autism spectrum disorder (ASD) is defined as a neurodevelopmental disorder that includes difficulties in social behavior and communication, as well as repetitive behaviors and narrow, focused interests (Hodges et al., 2020). While there are currently no population-based estimates of adults with ASD in the United States, Bayesian models estimate that 2.21% of individuals in the United States aged 18-84 have autism (Dietz et al., 2020). The search to find an "autism gene" has found many genes connected to autism. While there have been links between subsets of genes and autism, there has yet to be a single gene found to diagnose autism. This understanding has led to the DSM-V classification of "autism spectrum disorder," as opposed to classifying autism with multiple subtypes. This acknowledges that the autism spectrum is a complicated set of behaviors with unclear neurobiological indicators (Lord & Jones, 2012). The "spectrum" classification also has several implications.

## Societal Understanding of Autism Spectrum Disorder

To elaborate, autism is considered an "invisible disability." This refers to a disability with no visible features that are easy to identify and connect with the disability (Santuzzi et al., 2014). As autistic people are not visually identifiable, this may lead to the media becoming a prominent educator of autism as opposed to interactions with known autistic individuals. However, prominent media tropes of autism have reinforced harmful stereotypes, including the "fragmentation trope," which suggests that autism leaves an individual "incomplete." This stereotypical image suggests the autistic individual is incomplete due to their diagnosis as if autism leaves "gaps" in personality, community relations, and family relations. Another harmful trope is that autism intrinsically includes a complete lack of self-awareness, a stereotype of ASD that is often not true and always more complex than suggested in the media (Sarrett, 2011).

Indeed, in a case study of consumer-run organizations by autistic individuals and for autistic individuals, participant interviews illustrated several common themes, including the variation of the autism spectrum and the need to understand that two autistic individuals will not have identical symptoms or manifestations. Further, many participants were frustrated by the lack of attention given to autistic adults, especially autistic adults with lower support needs, who may have a more "invisible" manifestation of autism as opposed to adults with high support needs. Further, autistic individuals are often denied leadership training or experiences, or are improperly supported when they take on a leadership role (van den Bosch et al., 2019).

## Current Classification of Autism Spectrum Disorder

Research- and personal-based evidence regarding those on the autism spectrum is moving away from the DSM-IV subtype model by emphasizing the heterogeneity of the spectrum (Lai et al., 2013). The previous category, pervasive developmental disorder, had been criticized as inadequate in diagnosing "milder" forms of autism (Tanguay et al., 1998). Thus, understanding of autism has shifted from a subset model to an acknowledgment of the diversity of individuals on the spectrum in terms of behavior and needs. The current DSM classification of "autism spectrum disorder" indicates the diversity of symptom presentation among the autistic population (Lai et al., 2013). This includes the increased understanding that autistic females are less likely to receive an autism diagnosis, likely because they present symptoms differently.

While current estimates of autism indicate that males are more likely to be diagnosed with autism than females, increasing research suggests that this ratio is far lower than previously thought. This may be because of the development of autism measurements and diagnostic criteria favoring male samples (Lai et al., 2015). Clinical and anecdotal evidence indicates that females may present autism symptoms differently than males, suggesting there is a "female phenotype" of autism (Gould & Ashton-Smith, 2011). This phenotype may include an increased likelihood of integrating both verbal and nonverbal behavior, an increased likelihood to engage in a two-way conversation, and an increased likelihood of initiating friendships. Autistic females may also present different restricted interests than males, such as relational interests over mechanical interests (such as fictional characters over vehicles like trains), or be overall less likely to display restrictive interests. Females may be more likely to "camouflage" their autistic behaviors, minimizing them in social settings and mimicking more neurotypical behavior (Hull et al., 2020).

Thus, the classification of autism as a spectrum reflects the increased understanding that autistic individuals may present symptoms in significantly different ways.

Second, the spectrum classification highlights the prevalence of autistic traits throughout the whole population. For instance, questionnaires that report autistic traits may include items such as "I tend to notice details that others do not," which may be reported in allistic individuals (Lai et al., 2013). This argues that autism-like traits and behaviors are not contained only to those on the spectrum, but rather that the *degree* of these traits and behaviors differentiates between individuals who qualify for an autism diagnosis and individuals who do not. There have been observations of autism-like traits in relatives of autistic individuals, especially in siblings or parents. The shift towards defining autism as a spectrum presents a concept of autism as dimensional, as opposed to previous subtypes of pervasive developmental disorder, of which autism was included (Frazier et al., 2012). However, while there are a variety of presentations and behaviors associated with autism, there are still core symptoms that qualify one for a diagnosis.

## Autism Symptoms and Comorbid Conditions

While autism is ultimately a spectrum, in which two individuals can present very differently, autism does have core symptoms that qualify one for a diagnosis. Individuals who qualify for an autism diagnosis display difficulties in the social/communication domain as well as "restricted, repetitive behaviors, interests, or activities" (McPartland et al., 2012). Repetitive behavior may refer to repetitive movement or speech. Individuals may also exhibit resistance to a change in routine or patterns, fixated interests, or atypical reactivity to sensory stimuli (Centers for Disease Control and Prevention, 2020). There are also social behaviors that autistic

individuals experience at rates above an allistic population. Further, there are also additional diagnoses that autistic individuals are more likely to receive than allistic individuals.

To elaborate, autistic individuals have higher levels of social anxiety and social avoidance than allistic people. It is thought that a number of factors could contribute to social anxiety in an autistic person, such as sensory hypersensitivity, low tolerance for socializing with others, and difficulties in perspective-taking (Bejerot et al., 2014). Research has also noted an overlap between ASD symptoms and obsessive-compulsive disorder symptoms, such as similar levels of anxiety, distressing obsessions and compulsions, and similar difficulties in social interactions (Cath et al., 2008). Further, repeated rejection in childhood may also result in increased social anxiety and social avoidance (Bejerot et al., 2014).

Autistic individuals may also score lower on theory of mind (ToM) measures. Theory of mind refers to the understanding of the mental states of others (Tager-Flusberg, 2007). Research suggests that autistic individuals may also experience difficulty with the instantaneous processing of ToM information from facial expression, vocal tone, or body movements (Klin et al., 2003). Autistic individuals have been shown to struggle with nonverbal communication on other measures as well, including identifying information from facial expressions, tone of voice, and hand gestures (Müller et al., 2008). However, nonverbal communication is a significant part of the workplace, with functions including establishing a social hierarchy, fostering quality relationships, and displaying one's personal attributes and emotions (Bonaccio et al., 2016). This difficulty in understanding mental states may also contribute to high social anxiety and restricted behavior.

Restricted behavior may manifest as rigid thinking patterns (Centers for Disease Control and Prevention, 2020). This manifestation, combined with social anxiety, social avoidance (Bejerot et al., 2014), distressing obsessive behavior (Cath et al., 2008), and difficulties in perspective-taking (Bejerot et al., 2014) may help explain difficulties in the highly interpersonal leadership process. High anxiety may lead to a distorted perception of how an individual looks in the eyes of others (Iancu et al., 2015), anticipating others to be far more self-critical than they actually are. This may damage leadership emergence and confidence, leading to qualified would-be leaders never realizing their full potential.

While autistic individuals with high support needs should be represented in academic literature, identifying the needs of individuals in all areas of the spectrum should also be a priority. Research on the intersection between autism and employment has largely focused on obtaining employment; there is demonstrably less research regarding what happens once autistic individuals are employed (Hurley-Hanson et al., 2020). While there is no hierarchy of which research is more important, it is imperative that organizations are aware of the needs of their autistic members to fully appreciate their contributions. Due to a narrow focus (Centers for Disease Control and Prevention, 2020), high social anxiety (Bejerot et al., 2014), or distressing compulsions (Cath et al., 2008), autistic organization members may not be able to offer insightful contributions or knowledge without proper accommodations or a supportive environment, resulting in missed individual or organizational opportunities. Furthermore, it is unclear how to best support autistic individuals who are in formal leadership roles or who aspire to leadership positions. As leadership is a process of social influence (Northouse, 2021), autistic individuals may struggle in the leadership process due to social difficulties (McPartland et al., 2012). Better understanding the relationship between autism and leadership can help organizations better support their autistic members in achieving their potential.

## Leadership

Leadership is defined as a process in which one individual influences a group to reach a shared goal (Northouse, 2021). As more autistic individuals enter the workplace and potentially exhibit positive employee characteristics such as detail-orientation, increased organizational loyalty, or enhanced knowledge qualifications (Austin & Pisano, 2017), more autistic individuals may be asked or given opportunities to lead projects, teams, departments, or organizations. As organizations have observed an increasing business case to hire neurodivergent employees (Ortiz, 2020), they may observe an increasing case to hire or promote neurodivergent leaders. As common media tropes regarding autism are harmful (Sarrett, 2011), autistic leaders may provide strong role models and challenge negative perceptions around autism.

#### Leadership Competencies

The skills approach of leadership development challenges the idea that leaders are "born, not made." It questions the idea that only a select few people can become leaders, and posits that while personality traits or inherent characteristics may play a role in leadership emergence, other areas like knowledge and abilities are central to developing effective leadership. (Northouse, 2021). Capability models of leadership development emphasize a relationship between leadership knowledge and skills and their performance. In the original and enduring skills model of leadership, Mumford and colleagues break leadership into three components: individual attributes, competencies, and outcomes. Attributes, which are defined in the model as more inherent or traitlike, include personality, cognitive ability, and motivation. The model also identifies three core competencies of leadership: problem-solving, social judgment, and knowledge. These components manifest into the outcomes of performance and effective problem-solving (Mumford et al., 2000). Other models of leadership break down leadership into

similar meta-categories of skills. For instance, Katz's model of leadership identified technical skills (proficiency of a particular area), human skills (the ability to form and foster relationships) and conceptual skills (the ability to work with concepts) (Katz, 1955) that were necessary for effective leadership. In this way, one can conceptualize leadership using three core abilities.

**Knowledge/Technical Skills.** Competencies that fall under Katz's conceptualization of technical skills and Mumford's conceptualization of "knowledge" include analytical thinking, the ability to utilize appropriate equipment and methods, and specialized knowledge (Katz, 1955; Mumford et al., 2000). This can include, for example, knowledge of software languages if one is a leader in a software development company. This could also include an understanding of concepts such as wellbeing or psychological safety. Technical skills can be thought to involve a hands-on understanding of organizational processes or products. These skills are particularly important if one directly supervises technical workers, and may decrease as one moves through an organization's hierarchy (Northouse, 2021).

**Human Skills.** Human skills can be interpreted as being knowledgeable of one's perspective while also being aware of the perspective of others. This can involve identifying others' needs and motivations and being able to account for them in decision making (Northouse, 2021) and in forming and maintaining relationships. This can include concepts such as emotional intelligence and theory of mind. Emotional intelligence involves the ability to perceive and identify others' emotions, which has been linked as particularly important in leadership (Ferguson & Austin, 2010; Kerr et al., 2006). Emotional intelligence is a core component of theory of mind (Morin, 2011). Theory of mind has also been identified as related to effective group performance (Engel et al., 2014) and leading others (Van Vugt, 2009). Charismatic leadership can be thought of as a representative of human skills. Charismatic leadership requires

## SERVANT LEADERSHIP IN AUTISTIC LEADERS

follower-centered consideration behavior in its early stages, as the leader begins to evaluate the environment and its followers. The leader then formulates an inspiring goal. Actions like taking personal risks and displaying unconventional behavior further emphasize the importance of the goal (Rowold & Laukamp, 2009). Charismatic leadership has been found to be positively correlated with follower trust, follower satisfaction, and perceptions of group performance (Conger et al., 2000).

**Conceptual Skills.** Conceptual skills involve the ability to work with ideas. This can include abstract or hypothetical notions. These skills are essential in topics such as crafting a strategic plan or an organizational vision (Northouse, 2021). This can be referred to as strategic perspective, an essential skill for organizational leaders. A similar phrase includes "big picture" thinking. An individual who has strong strategic perspective skills can integrate complex and seemingly unrelated details into a clear narrative (Keelin & Arnold, 2002).

## Leadership and ASD

Research has found that the hiring and recruitment of neurodivergent individuals are a competitive advantage for organizations. Common themes of neurodiversity hiring strategies include increased employee loyalty of the neurodivergent individual, impressive skill sets involving detail-orientation and analytical ability, productivity gains, enhanced company culture, and consumer preference of buying goods from employers who employ neurodivergent candidates (Ortiz, 2020). In terms of skills models, many autistic individuals may be especially proficient at the technical skills involved in leadership. However, these proficiencies may be restricted to a core interest, with less motivation to venture into other interests. However, if a role includes a core interest, an autistic individual may be more motivated to learn due to that interest (Gunn & Delafield-Butt, 2016). For instance, comedian and actor Dan Akroyd credits his ASD

for giving him the focus and detail orientation to write screenplays around his interests, including apparitions and police forces. These screenplays became the timeless movies *Blues Brothers* and *Ghostbusters* (Child Mind Institute, 2021).

Despite these advantages, research has shown that up to half of autistic youth in the United States did not obtain employment or postsecondary education within two years of graduating high school (Nicholas et al., 2019). A meta-analysis of work participation found that variables that predict poor employment outcomes include a perceived lack of social skills and perceived low empathy (Holwerda et al., 2012). In terms of Katz' model, autistic individuals may struggle with relational skills due to lower ToM scores (Tager-Flusberg, 2007) and difficulties with instantaneous processing of nonverbal information (Klin et al., 2003). As nonverbal communication has a myriad of organizational functions (Müller et al., 2008), this can also lead to difficulties with thriving in an organization. Self-confidence is also thought to be an important antecedent of charisma, as well as a factor of leadership effectiveness in charismatic leadership (De Cremer & Van Knippenberg, 2004). Therefore, social anxiety and social avoidance may also negatively affect leader emergence, especially in a population with higherthan-average levels of both (Bejerot et al., 2014).

However, as more autistic individuals enter organizations, autistic leaders can serve as role models and positive representations of the capabilities of autistic individuals. They can also be uniquely positioned to mentor other autistic individuals (van den Bosch et al., 2019). Conceptual skills may differ more strongly among the spectrum. While neurodivergent employees have been reported to have strong analytical ability and detail orientation (Ortiz, 2020), some authors have suggested that autistic individuals may provide context in different ways than allistic individuals do. In a narrative task, autistic individuals provided less explanation for characters' mental states, suggesting that they may process this information differently (Beaumont & Newcombe, 2006). This could be useful in leadership dyads where both individuals are autistic, as they may understand each other in a unique way. This relationship has potential to be further explored.

There is also limited information about how autism may affect leadership styles or capabilities. For instance, leadership research that discusses autism largely is mainly focused on autistic followers and neurotypical leaders (Parr et al., 2013; Parr & Hunter, 2014). A chapter on leadership and autism also discusses the lack of research on autistic leaders. The authors suggest that the research that has been conducted on this topic has been limited or problematic in that it has involved very small samples and has been confounded by whether or not the leaders have been formally diagnosed with ASD. Further, it is anticipated that more autistic adults will enter the workforce in the upcoming decade, but due to their entry-level career status, will likely not be given organizational leadership positions for some time (Hurley-Hanson et al., 2020). With this in mind, at the current time period, suggesting implications of the leadership abilities of autistic individuals can be determined by looking at leadership abilities in similar populations.

Despite a lack of research, some inferences can be drawn regarding challenges with ASD and leadership development. Those who have been officially diagnosed on the autism spectrum have not often ascended to recognized leadership positions, and if they have, it may be because they are able to hide their autistic traits, also known as masking (Corscadden & Casserly, 2021). While some leaders may absolutely have ASD, this underrepresentation indicates that there may be some issues regarding leadership ascension that might relate to negative stereotypes about neurodivergent employees. Further, essential leadership skills overlap with recognized challenges that individuals on the spectrum possess, such as relational and communication skills (Ortiz, 2020), decisiveness (Luke et al. 2012), and self-confidence (De Cremer & Van Knippenberg, 2004). Data from the current research can aid in developing inferences on the possible experiences of autistic leaders.

LMX and ASD. While there is little empirical research on autistic leaders, existing research has found that autistic employees and neurotypical supervisors are less likely to develop high-trust leader-member exchange (LMX) relationships. When both members of the relationship are neurotypical or non-disabled, they are more likely to develop a high LMX relationship. Further, when both members of the dyad are neurodivergent or disabled, they are more likely to develop a high LMX relationship (Patton, 2019). Autistic followers may be more likely to prefer a one-on-one leadership approach and due to social anxiety may also benefit more from such an approach. Further, autistic leaders may find one-on-one leadership to be more comfortable and efficient for them (Bragger et. al., 2022). Therefore, autistic leaders in an organization may be primed to develop autistic followers and to set them on a path to leadership in a unique way. This cycle of empowerment can lead to increased autistic leaders and more favorable perceptions of autistic leaders (including, simply, the perception that they exist).

**Neurodiversity and leadership.** There is slightly more research examining the intersection of learning disabilities (another type of neurodiversity) and leadership. Learning disabilities and autism are often comorbid conditions, and autism can be misdiagnosed as a learning disability, lending to the theoretical relevance of this research. In a study on leadership emergence in military leaders with learning disabilities, learning disability was demonstrated to be negatively correlated to formal leadership positions and the emergence of leadership, implying that these individuals were less likely to be perceived as leaders or given leadership positions. When individuals with learning disabilities were given leadership positions, however,

they were shown to be just as effective as leaders who did not have learning disabilities. However, this study did not include individuals with support systems or leadership training, which may have changed its outcomes (Hurley-Hanson et al., 2020).

## Competency Related Areas of Focus for Leadership on the Spectrum

A leadership development program for a specific population may require specific considerations. While autism has variability in behavioral and neurodevelopmental traits (Wozniak et al., 2017), common autism symptoms and experiences may indicate key considerations in designing and developing a leadership development program for this population. Such a program could amplify the strengths of these experiences while reducing negative outcomes. Furthermore, these anticipated considerations can better refine piloting the program.

**Restricted Interests.** Restricted interests (RI) can allow autistic individuals to become subject matter experts in core areas. There is evidence that incorporating RI into the learning curriculum can increase positive outcomes in autistic school-aged children. As the pursuit of a core interest is often intrinsically motivating, outcomes have included increased motivation, task engagement, and task performance. Social interaction skills can also be bolstered if the RI is incorporated into social activities (Gunn & Delafield-Butt, 2016). If the RI is incorporated into the developing leader's career, the individual can quickly become a technical expert in the area and may be interested in teaching it to others, bolstering the mentorship aspect of leadership development interventions. Indeed, common interests have been identified in qualitative interviews as a factor that can bolster communication ease for adults on the spectrum (Cummins et al., 2020). However, there is the potential for the RI to overly-dominate the mentorship, in which case, the autistic developing leader can challenge themselves to expand their interests or

to actively listen to another's, especially if the follower does not share the same interest as the leader. Even if the follower does share the same interest, this could also lead to a narrow focus into the topic, leading to less integration with other subjects.

**Communication.** Human-oriented leadership and relational-oriented leadership are associated with effective communication skills (De Vries et al., 2010; Mikkelson et al., 2015). Meanwhile, more task-oriented leadership is regarded as less communicative (De Vries et al., 2010). Communication difficulties are a documented symptom of autism (Kuzminskaite et al., 2020). Stress and anxiety can also exacerbate communication difficulties in autistic adults (Cummins et al., 2020). While autistic individuals do struggle with communication, organizations that employ autistic individuals have reported increased communication quality in their workplace. As organizations aim to make communication more direct to accommodate autistic individuals, that could aid in improving overall clarity of communication among allistic organizational members (Austin & Pisano, 2017). A dyad-based leadership development model can also make communication easier to achieve as there is only one other individual that the leader needs to focus on. Furthermore, as communication is essential to leadership, an intervention that bolsters communication will be particularly useful.

**Social Anxiety.** Social anxiety is a common comorbidity of autism spectrum disorder. In particular, social anxiety and autism may be associated with specific socio-communication difficulties and decreased social motivation (Spain et al., 2018). Anxiety can specifically exacerbate communication difficulties (Cummins et al., 2020), potentially creating a vicious cycle that worsens communication, and then worsens anxiety. A dyad-focused leadership development intervention may alleviate symptoms of anxiety, as there is only one other individual involved in the social setting, resulting in fewer opportunities for stressors. This

individual, especially if they do or have suffered from social anxiety themselves, may also provide suggestions and support in dealing with the anxiety. Individuals have reported that they would think less of a leader's abilities if they exhibited anxiety, as well as thinking less of the individual's strength of character (Purdon et al., 2001). Therefore, an intervention that alleviates social anxiety and allows the opportunity to practice leadership in spite of anxiety may be particularly beneficial. Social anxiety may also lead to a greater understanding and accuracy of when others experience social pain (Auyeung & Alden, 2016). This could lead to austic leaders being especially aware of followers who experience negative social outcomes, and may assist them in more effectively empathizing with and leading them.

**Ruminating Thinking Patterns.** Rumination is particularly associated with ASD. Furthermore, higher depressive symptoms have been correlated with increased rumination (Gotham et al., 2014). Previous leadership development programs may exacerbate rumination patterns by resulting in leaders who are overly self-regulated (Alonso et al., 2019). As those on the spectrum are particularly prone to rumination, it is increasingly important to protect against this "side effect" of LD programs. Therefore, an other-focused LD intervention may be particularly useful in alleviating rumination patterns. While rumination is inherently maladaptive, redirecting rumination towards self-reflection can alleviate symptoms of depression and serve as an adaptive function (Takano & Tanno, 2009). While rumination has more of a chronic, cyclical thinking pattern, self-reflection could allow developing leaders to analyze situations and then move on from the thought pattern after a conclusion has been drawn. Further, teaching developing leaders to reflect instead of ruminate can lead to a more solutions-based thinking style, strengthening leadership skills and better preparing them for challenges.

## Servant Leadership-Oriented Assessment Challenge Support Model of LD

A servant leadership-oriented assessment challenge support (SLO-ACS) model of leadership development has the potential to combine strengths of servant leadership and the ACS model of leadership development respectively, while alleviating potential side effects each are prone to. The ACS model involves assessing the developing leader through surveys, discussion, or other methods (assess), designing a challenging developmental plan to encourage leadership growth (challenge), and supporting the leader throughout the process (support) (Van Velsor et al., 2010). An SLO-ACS model would build upon this model by adding a one-on-one element, where the leader is encouraged to apply the ACS process *with a follower* in conjunction to having the model applied to their own developmental process, constructing a development plan for the individual and coaching them throughout the process. This development model would therefore develop leadership competencies in two individuals at different levels as well as encourage a one-on-one orientation to leadership.

## Servant Leadership-Oriented Additions to ACS Model

Servant leadership may be a strong leadership development model for autistic developing leaders. This approach centers around a core belief that one-on-one relationships with followers is the most effective way to build a relationship with them so followers can be influenced in the future (Uhl-Bien et al., 2014). Servant leadership prioritizes the needs of followers, allowing them to attain their personal goals (Eva et al., 2019). Servant leadership can increase positive organizational outcomes by enabling followers to achieve both their personal goals and common goals of the group. As a result, followers are more likely to feel satisfied with their roles, more committed to their organization, and less likely to quit (Vancouver & Schmitt, 1991). By utilizing a one-on-one, follower-oriented model of leadership development, developing leaders

can focus on fulfilling their follower's needs, which may provide them internal satisfaction as well.

Additionally, a core dimension of servant leadership is the ability to empower followers. This empowerment therefore cultivates confidence in the follower, as well as a proactive attitude. As such, empowerment can be viewed as "helping others to help themselves" (van Dierendonck, 2011). This provides followers a sense of both affiliation as well as autonomy in reaching their goals (Bragger et al., 2021). As autonomy is thought to be a basic psychological need (Deci & Ryan, 2008), the dimension of empowerment is particularly salient in fulfilling follower needs.

Another way in which servant leaders fill needs of followers is through "standing back" and allowing their followers the control and influence needed to achieve individual goals. Standing back allows followers to face the consequences of their own actions, and navigate their environments autonomously, ready to to assist if consequences become overwhelming. Both of these dimensions require identifying the follower's motivation and development level. Further, servant leaders help followers choose the appropriate challenges to aid them in reaching goals, providing self-efficacy in followers, which can develop them both vertically and horizontally (Bragger et al., 2021). To elaborate, as followers develop in their organization, they may be given leadership responsibilities and emerge as leaders in their own right. Thus, servant leadership can be cyclical in nature, where a servant leader is able to develop another servant leader, mentoring them in the early stages of leadership identity emergence (Bragger et al., 2022). This can create a chain of servant leadership in organizations.

A servant leadership-oriented ACS model of leadership development (SLO-ACS) can be especially useful in developing autistic leaders. In this variation, the developing autistic leader would develop a follower, starting by completing the assessment portion of the ACS model. This can increase relational skills (Bragger et al., 2022). Furthermore, this can increase self awareness in both the follower being developed (Van Velsor et al., 2010) and the leader who is developing the follower. Research on neural correlates of self-awareness posit that theory of mind may be correlated with self-awareness (Guise et al., 2007). The developing leader can also practice empowering their followers through developmentally-appropriate challenges and practicing the skill of "standing back." Empowerment can be useful in building trust in a mentoring relationship (as the mentor demonstrates trust of the mentee to face challenges and the mentee can trust the mentor to allow them to develop and grow). Furthermore, standing back may be useful in mentoring those with autism as challenges with cognitive flexibility can result in fixed patterns. Thus, standing back can allow the autistic mentee to face developmental consequences of their patterns and encourage them to develop new strategies. This can also aid in utilizing big picture and strategic thinking, which are part of conceptual leadership skills (Northouse, 2021). Finally, as servant leadership emphasizes developing one-on-one relationships with followers (Uhl-Bien et al., 2014), the support aspect of the model would be tailored to the specific needs of each person. If this model was incorporated for multiple years at an organization, there is also an increased possibility that a former follower would be required to develop someone else. Their understanding of both sides of the SLO-ACS relationship would also make them increasingly able to support the followers they are developing, as they have gone through the process themselves.

## The Importance of a Needs Assessment

While this model has promise in aiding autistic leaders, it may have challenges that would be obvious to autism experts. It is the intention to have pilot participants directly benefit from the model, and benefit as best as can be provided. Therefore, by working with subject matter experts (SMEs) who have served many autistic individuals or are autistic themselves, this model can be adjusted to best serve its pilot participants. The needs assessment involved contacting autism-serving organizations and autistic self-advocates and asking them about their thoughts on the model, as well as common themes amongst autistic individuals and interpersonal relationship dynamics.

## **Overall Purpose**

This research contains a needs assessment for the SLO-ACS model of leadership development in an autistic population. First, after conducting interviews with ASD subject matter experts (SMEs), qualitative analysis was used to pinpoint particular strengths and developmental challenges to consider when designing a SLO-ACS leadership development program for this population. Questions focused on SMEs impressions of common challenges faced by autistic individuals in formal organizations, as well as common strengths. Further questions introduced the SLO-ACS model and a summary of its theoretical basis and asked SMEs for initial thoughts. SMEs also were asked to identify common considerations when working with an autistic population (e.g., common accommodations) and leadership-related skills that this population may benefit from instruction in. The aim of the needs assessments was to answer two questions. First, what challenges and strengths might autistic leaders experience? Second, if the SLO-ACS is feasible, what design considerations can make a more beneficial pilot study for this population?

#### Method

This research utilized descriptive analysis to guide qualitative analysis. Descriptive analysis is utilized as a "comprehensive summarization" of specific events (Lambert & Lambert, 2012). In this case, those events included eleven structured interviews with autism subject matter experts. Descriptive analysis is a recommended method when describing undocumented phenomena or identifying real-world intervention needs. Descriptive analysis is especially informative when establishing a basic understanding of a subject (Loeb et al., 2017), in this case, autism and leadership. Participants were given a commonly-accepted definition of leadership and asked to identify where they suspected autistic individuals may commonly experience challenges and strengths. Further, themes in this research can be utilized as a guide to develop LD interventions for autistic potential leaders, as a subset of questions focused on considerations needed to be taken into account when designing such a program. This analysis method functioned similarly to a needs assessment - describing the phenomenon and identifying considerations in developing interventions.

In this study's analysis methods, a literature review was crafted to understand the potential theories that may resonate with the found data. This is in line with Loeb et al. 's first recommended step of qualitative descriptive analysis - to identify the phenomenon, in this case, autism and leadership (2017). Researchers then consider which components of a phenomenon are most important. In this case, research focused on the components of leadership *development* and the utilization of a suggested development method (SLO-ACS). As a third step, the decision was made to utilize structured interviews to more fully illustrate perspectives on autism and leadership development in SMEs, as well as impressions and considerations of implementing the SLO-ACS model in this population.

## **Researcher Profiles**

It is suggested to disclose information on the researcher in qualitative study. This is because the researcher can be a source of bias, intentional or unintentional, based on their background and relevant experience. While there are no set list of questions that must be answered, the aim is to establish investigator credibility. It is recommended to report personal and professional experience and information that may affect data collection and analysis (Patton, 1999). The following section outlines the three researchers most involved in this project.

The lead researcher on this project and the author of this manuscript, Ms. Nikita Williams, is a M.A. student in the Industrial-Organizational Psychology program at Montclair State University. She also holds a B.A. in Psychology from the same university. She does not have an autism diagnosis, and does not have close family members or loved ones who identify as autistic. Her knowledge of autism in the workplace has largely been sourced by consuming content made by autistic self-advocates and examining literature on the subject. She does not possess clinical training or clinical experience in studying or diagnosing autism. However, she does hold training in applying psychological theories to organizations and organizational topics, such as Diversity, Equity, and Inclusion (DEI). Therefore, the lens in which she studies autism is as a marginalized group in the workplace. Continuing education will include a Ph.D. in Organizational Science at the University of North Carolina at Charlotte, where she will continue to research disability inclusion and neurodiversity inclusion principles in the workplace.

The second coder for this project is Ms. Zuzanna Myszko. Ms. Myszko holds a bachelor's degree in Psychology from the Ramapo College of New Jersey, and is a current research assistant at the Kessler Foundation with expertise in assisting those on the spectrum improve their ability to interview for employment. She currently works in both the Center for Neuropsychology and Neuroscience Research and the Center for Autism Research. She is additionally an incoming student to Montclair State University's Clinical Psychology Ph.D. program.

The SLO-ACS model was originally developed by Dr. Jennifer Bragger, who serves as the advisor to this research. Dr. Bragger also has personal connections within the autism community and the greater neurodivergent community, as she has several personal connections with individuals who possess neurodivergent diagnoses (such as dyslexia, autism, and ADHD). She holds a Ph.D. in Social-Organizational Psychology from Temple University and is a tenured professor at Montclair State University. Her research experience includes domains such as leadership development, servant leadership, stereotype threat, work-family conflict, and personorganization fit. She does not possess clinical psychology training, but has submitted grant proposals to utilize the ACS model of leadership development in emerging adults with ADHD and she is currently funded by NSF to complete research on servant leadership. Therefore, she has expertise in leadership development and servant leadership and has immersed herself in neurodiversity principles at work for several years, and has several clinical psychology and cognitive psychology contacts that have collaborated with her.

## **Participants**

Multiple perspectives are essential to needs assessments, as they can more easily identify gaps in understanding (Moore et al., 2011). Therefore, researchers encouraged both autistic and allistic individuals to participate. Researchers used a combination of snowball sampling and recruiting on online listservs and social networking groups related to autism. Interview participants included subject matter experts who had experience working with multiple autistic individuals. SMEs were split into two groups - those who identified as autistic and worked with multiple autistic individuals as part of their occupation, and those who did not identify as autistic and worked with multiple autistic individuals as part of their occupation. Of all eleven SMEs interviewed and analyzed, seven identified themselves as autistic and four did not identify as autistic. Leadership roles these participants worked included positions in nonprofit organizations, for-profit organizations, and educational organizations.

## Materials

SMEs were interviewed utilizing structured questions, with the researcher asking followup questions or requesting elaboration at their discretion. Questions were centered around common experiences of autism, initial reactions of the SLO-ACS model, and considerations should the SLO-ACS be implemented in their organization. As questions were related to potential difficulties and challenges in servant leadership development in autism, the research utilized a deductive approach in crafting interview questions (Burnard et al., 2008). Participants were also presented with leadership information presented in the SLO-ACS model to help them better contextualize the literature surrounding the model. The questions are included in Appendix A. The table listing the demographics of participants is listed below as Table 1.

## Table 1

## Participant Breakdown

Participant Code	Gender	Autistic or Allistic	Occupation
Participant 1	Woman	Autistic	Nonprofit Vendor and Sales Associate
Participant 2	Woman	Allistic	Ph.D Candidate
Participant 3	Man	Allistic	Autism Spectrum Program Coordinator
Participant 4	Man	Autistic	Autism Center

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			Associate Director
Participant 5	Man	Allistic	Nonprofit Co- Founder and CEO
Participant 6	Woman	Autistic	Autism Center Receptionist and Autism Peer Advocate
Participant 7	Man	Autistic	Senior Technology Trainer
Participant 8	Woman	Autistic	Nonprofit Founder and Managing Director
Participant 9	Woman	Autistic	Coding Center Director
Participant 10	Woman	Allistic	Elementary Teacher for Autistic Children
Participant 11	Man	Autistic	Nonprofit Teen and Adults Coordinator

## Procedure

All interviews were conducted via Zoom. One exception was made in an autistic SME who requested to type their answers as an accommodation. In that case, questions were sent to the SME, and answers were submitted. All interviews were transcribed utilizing online, AI-generated transcription services. Interviews were then quality-checked for transcription accuracy and edits were made to correct typos in the AI-generated transcript. Grammar errors that were audibly made by the speaker were kept to ensure accuracy. Audio files of each interview were kept to be referenced in quality-checking transcription. Data analysis strategies involved descriptive coding. Qualitative descriptive analysis does not call for a predetermined rule set. Data collection and data analysis are often commenced simultaneously, with researchers

developing codes from the data itself over the course of the study. Information is then coded in a logical, organized matter (Lambert & Lambert, 2012). However, a codebook was only created after interviews were completed. A first draft of initial codes was developed based on observations from the existing transcripts of interviews. From there, codes were condensed and refined into the final codebook, located in Appendix B. Patterns in the data were then identified and this manuscript was written to appropriately communicate findings to the relevant audience, as in line with recommendations from Loeb et al. (2017).

Two coders were utilized to conduct analyst triangulation, a common strategy to enhance analysis quality and credibility (Patton, 1999). After both coders reviewed the codebook and agreed upon any edits, they separated to code the same interview on their own. After coding a first interview, coders met again to resolve disagreements and ensure they had a thorough understanding of the codebook. Codes were then added into the qualitative data software NVivo under two separate researcher profiles. A Kappa value was then calculated using the Coder Comparison Query function in NVivo, an established software in qualitative research (Ishak & Bakar, 2012). When coders established a Kappa coefficient of 0.82 for three out of eleven interviews, they then split up the remaining eight interviews and coded separately. After each interview coded, coders were instructed to write a memo summarizing major findings in the interview and their initial reactions. Coders were also instructed to keep a journal of their observations and emotions during the process.

## Results

The analysis produced five themes: difficulties associated with autism, strengths associated with autism, program considerations for autistic leaders, skills to teach, and "if you've met one person with autism," a quote by Dr. Stephen Shore (Flannery &

Wisner-Carlson, 2020). Sub themes associated with each theme are discussed under the theme. Sample quotes were used to illustrate themes and subthemes. Subthemes were coded as both the theme and its respective subtheme, leading to a greater number of references under themes. The frequency of all themes and subthemes are listed below as Table 2. Further, a comparison between autistic and allistic frequencies are listed below as Table 3.

## Table 2

Theme or Subtheme	Number of References	Percentage of References
Difficulties Associated with Autism	167	19.02%
Social Interactions	58	6.61%
Cognitive Flexibility	31	3.53%
Communication Misunderstandings	29	3.30%
Sensory Processing	14	1.59%
Rumination	10	1.14%
Disclosure	9	1.03%
Social Anxiety	8	9.11%
Strengths Associated with Autism	45	18.05%
Task Orientation and Logical Thinking	16	1.82%
Detail Orientation	12	1.37%
Mentoring Other Neurodivergents	6	0.68%
Program Considerations	152	17.31%
Accommodations	41	4.67%
Flexible Formatting to Tailor	19	2.16%

# Frequency of Themes and Subthemes

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Program		
Scaffolding	19	2.16%
Use of Multiple Learning Formats	17	1.94%
Incorporating Interests	11	1.25%
Building an Organic Mentorship	10	1.14%
Nothing About Us, Without Us	7	0.80%
Skills to Teach	79	9.00%
Emotional Regulation	33	3.76
Perspective-Taking	15	1.71%
Adjusting to Unexpected Events	11	1.25%
Self-Advocacy	11	1.25%
If You've Met One Person With Autism	43	4.90%
Autism in Women	5	0.57%

# Table 3

Frequency of Themes and Subthemes by Participant Category

Theme or Subtheme	Autistic Participant Frequency and Percentage	Autistic Participant Average	Allistic Participant Frequency and Percentage	Allistic Participant Average
Difficulties Associated with Autism	120 (71.86%)	10.91	47 (28.14%)	11.75
Social Interactions	41 (70.69%)	3.72	17 (29.31%)	4.25
Cognitive Flexibility	18 (58.06%)	1.64	13 (41.94%)	3.25

Communication Misunderstandin gs	26 (89.66%)	2.36	3 (10.34%)	0.75
Sensory Processing	10 (71.43%)	0.91	4 (28.57%)	1.00
Rumination	9 (90%)	0.82	1 (10%)	0.25
Disclosure	3 (33%)	0.82	6 (66%)	0.25
Social Anxiety	6 (75%)	0.55	2 (25%)	0.5
Strengths Associated with Autism	32 (71.11%)	2.91	13 (28.89%)	3.25
Task Orientation and Logical Thinking	11 (68.75%)	1.00	5 (31.25%)	1.25
Detail Orientation	7 (58.33%)	0.64	5 (41.67%)	1.25
Mentoring Other Neurodivergents	6 (100%)	0.55	0 (0%)	0.00
Program Considerations	102 (67.11%)	9.27	50 (32.89%)	12.50
Accommodation s	26 (63.41%)	2.36	15 (36.59%)	3.75
Flexible Formatting to Tailor Program	13 (68.42%)	1.18	6 (31.58%)	1.50
Scaffolding	12 (63.16%)	1.09	7 (36.84%)	1.75
Use of Multiple Learning Formats	15 (88.24%)	1.37	2 (11.76%)	0.50
Incorporating Interests	4 (36.36%)	0.36	7 (63.63%)	1.75
Building an Organic Membership	2 (20%)	0.18	8 (80%)	2.00

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Nothing About Us, Without Us	12 (63.16%)	0.64	0 (0.00%)	0.00
Skills to Teach	58 (73.42%)	5.27	21 (26.58%)	5.25
Emotional Regulation	24 (72.73%)	2.18	9 (27.27%)	2.25
Perspective- Taking	9 (60%)	0.82	6 (40%)	1.50
Adjusting to Unexpected Events	10 (90.91%)	1.00	1 (9.09%)	0.25
Self-Advocacy	7 (63.64%)	0.64	4 (36.34%)	1.00
If You've Met One Person with Autism	38 (88.37%)	3.45	5 (11.63%)	1.25
Autism in Women	5 (100%)	0.45	0.00 (0%)	0.00

Allistic participants referenced difficulties with social interactions and cognitive flexibility at a higher average than autistic participants, as well as detail orientation and task orientation strengths. Allistic participants mentioned program considerations of incorporating interests and building an organic membership at a higher average, as well as building selfadvocacy and perspective-taking skills. Autistic participants referenced communication misunderstandings, rumination, and disclosure at much higher averages. Further, only autistic participants referenced the ability to mentor other neurodivergent individuals as a strength. Another subtheme seen only in autistic participants were the differences in autism in women, as well as the need to incorporate autistic individuals in the research and design process. Further, autistic participants referenced the heterogeneity of the autism spectrum at a far higher rate than allistic participants. Similarities in average frequencies between both groups included teaching the skill of emotional regulation in a leadership context, issues with social anxiety, and issues with sensory processing.

#### **Difficulties Associated with Autism**

An autism diagnosis requires difficulties in several domains, including socialization and communication (McPartland et al., 2012). Autistic participants highlighted difficulties that they associated with their autism, and allistic participants described difficulties they had witnessed other autistic individuals commonly experience. Participants also discussed how these difficulties could influence leadership emergence or challenge autistic leaders. Common highlights are discussed as subthemes.

#### **Communication Misunderstandings**

Participants described breakdowns in communication between autistic and allistic individuals. For instance, several autistic participants highlighted instances where they had been perceived as rude, despite having altruistic or benevolent intentions.

Participants highlighted the differences in language use between autistic and neurotypical populations. For instance, many participants emphasized that autistic individuals tend to use literal, direct communication, while neurotypical individuals often relied on subtext and nonverbal communication to relay similar information. Several autistic participants highlighted how confusing and frustrating they found neurotypical communication to be. Participant 11 compared this feeling to hearing a foreign language and being expected to respond. Participant 8 described this effect on the workplace by stating, "And I think a big issue going into a workplace is more than anything, interpersonal things, not in the sense of having poor social skills, but that the way that we communicate is different and can be very easily misunderstood."

## Disclosure

Several participants emphasized that because autism is an invisible disability, autistic individuals must weigh the risks and benefits of disclosing their disability status. Participant 3 described the dilemma as such:

"...one thing that...we've done with students, and then some people may not like this, but...students have had to really be very comfortable disclosing from, from the beginning. And...so identifying as autistic and...being able to talk about their needs as an autistic worker. And where someone has been comfortable doing that and open about that. I think we've found, you know, in our very controlled way a fair amount of openness to...meeting needs and working with someone. I'm also aware of situations where someone was very uncomfortable about that...he wasn't comfortable asking for assistance...And so he came across, I think, as being rather incompetent and disinterested and...that is not true in his case, but I think that's what the...internship site kind of felt."

## Social Anxiety

Participants reported observing social anxiety in autistic individuals or experiencing social anxiety themselves. In particular, autistic participants discussed worrying about unintentionally offending or harming others, as well as perceptions of social incompetence.

To highlight the experiences of social anxiety and how it could affect leadership, Participant 1 stated:

"I would say the challenge that a person on the spectrum could face with this definition of leadership is, I would say communication. Because you know, I, for myself, I get concerned. Like, if something needs to be communicated, I won't always communicate it because I'm worried about how I'm perceived socially. And I try not to overstep any sort of boundaries. And I get concerned about coming off as socially inept and, but I have to keep in mind that if some, if the matter is important, and, and what have you, I, you know, that me needing to interrupt my boss for a second to clarify something takes precedent just to make sure that everything's being run smoothly.

# **Rumination**

Participants reported significant challenges associated with rumination in autistic individuals. Further, several highlighted the negative mental health implications of rumination, such as trauma responses, increased feelings of depression, and increased feelings of anxiety. Participant 9 exemplified this by stating:

"...I hate rumination so much sometimes. Mainly because it's a focus on the negative, of not meeting goals, of this could have done better. I could have communicated this differently. Did I communicate the right way? Oh, was I, was I too awkward? Oh, was I, was I allowed to say that? So yeah, rumination is, is a beast."

Participants described the ability to engage in intense focus as either a strength or a weakness, dependent on context. Several participants utilized redirection as a rumination coping strategy.

In particular, Participant 4 reported the following coping strategy:

"My hyper focus is a two-edged sword...but I've always recognized that my...hyper focus, as long as I continue to think about these things, then I just keep getting retraumatized and I recognize that's not useful and it's not helpful. So I intentionally put my hyper focus on something else."

## Social Interactions

Many participants reported difficulty with social interactions. Participant 11 highlighted a core issue with social interactions being a lack of understanding of neurotypical mannerisms and feelings of disconnect with others, stating, "So like, I don't understand the neurotypical world. I don't understand why people communicate the way they do and why I can't be part of it and why it's so difficult for me to connect." Other individuals cited issues with perspective-taking and theory of mind, such as Participant 2, who stated, "So sort of theory of mine, right. Understanding different people's perspectives and different ability. I think that can be really challenging."

## **Cognitive Flexibility**

Several autistic participants described themselves as cognitively inflexible or as someone who frequently struggles with cognitive flexibility. Allistic participants also highlighted difficulties adapting to changes as a common experience among autistic individuals. Participants highlighted difficulties adjusting to sudden changes, shifts in plans, or changes in mindset. For instance, Participant 9 stated, "So sometimes it, it can be very difficult for me to take on a more flexible mindset. Not saying it's impossible, but it, it, it can become quite difficult. Especially if it's not a well thought out change or if I'm not given enough time to process said change."

# Sensory Processing

Several participants highlighted sensory sensitivity as an issue that many autistic individuals struggle with and may need accommodations for. Environmental barriers such as bright lights, loud sounds, and overwhelming sensory stimuli were cited as frequent frustrations. Sensory overload was described as distressing, overwhelming, and a contributing factor of burnout. Participant 9 described the mental health implications by stating, "Just because the brain really takes in sensory, like sensory processing stuff. Like, *Ooh, there's a lot of overload there.*" However, one participant did note that there are autistic individuals who experience sensory hyposensitivity, or notice less sensory stimulation than is typical.

#### **Strengths Associated with Autism**

Participants highlighted positive attributes of common autism symptoms, tendencies, or experiences that may aid autistic leaders. While this theme is by no means an exhaustive list of strengths associated with autism, frequently cited strengths were coded as subthemes.

#### **Detail Orientation**

Several participants cited pattern recognition and high attention to detail as common strengths that many (though not all) autistic individuals possess. They also highlighted this strength's importance in the workplace and leadership roles. For instance, Participant 2 noted that "if it involves a job that looks at a whole bunch of data and numbers then they might be able to capture...mistakes that other people might miss."

#### Task Orientation and Logical Thinking

Several participants cited rational thinking and task orientation as strengths that many autistic individuals possessed. This is especially salient for leadership roles that may require removing emotions from difficult decisions, de-escalating tension, and keeping other individuals accountable for their respective assigned tasks. For instance, Participant 4 noted that:

"But I definitely feel like one of the strengths that we bring as, as an employer, as a supervisor, as a boss, is that, you know, it's the, the other side of that coin. If someone is being...antagonistic or something...we're...better able to handle it. You...can't so easily...play on our emotions and stuff. So we're much more likely to be calm, dispassionate, logical about things. And I think that's a strength."

# Mentoring Other Neurodivergent Individuals

As more autistic and neurodivergent individuals enter organizations, autistic individuals may be especially equipped to mentor other neurodivergent members. Participant 1 speculated that autistic individuals may "have an easier time with empathy and be able to pick up on that individual's quirks..." Participant 4 highlighted that in conversations with two autistic individuals:

"the communication problem...isn't a problem because you've got two people who think alike and use the same language in the same way. So they can have a very frank, dense, honest discussion with each other and be quickly imparting perspectives...ideas back and forth and vetting those. That for us is a gold mine. If we can find someone who speaks our language to kind of help us with that."

However, the above quote notwithstanding, individuals should not *expect* two autistic or neurodivergent individuals to have a strong relationship. As autism encompasses a constellation of symptoms and differing expressions, it is also likely that two individuals with autism may have conflicting symptoms or traits, as some participants described. However, two autistic individuals may have especially strong understanding of each other due to shared similarities, which may bolster relationship and mentorship quality.

## **Program Considerations for Autistic Leaders**

#### **Accommodations**

Participants emphasized the importance of accommodating the specific needs of autistic individuals. Several accommodations cited were suggested to aid with hypersensitivity or sensory processing difficulties, including noise-blocking devices (such as earplugs or noise-canceling headphones), light-filtering devices (specifically with fluorescent light), closed captions in online video meetings (for audio processing difficulties). Other accommodations were more related to the language differences between autistic and allistic individuals - for example, highly detailed instructions were suggested, as well as additional information on how to utilize organizational resources to navigate interpersonal difficulties as a result of misunderstanding how autistic individuals use language. Other accommodations suggested included prompting devices or software (to aid in executive functioning), the use of fidget accessories (to provide the benefits of stimming). Other accommodations listed were suggested to help with overwhelming emotions, such as providing a job coach or other supportive mentor and the ability to walk away when emotionally dysregulated.

It is important to note that accommodations for autistic individuals will vary greatly. This is due to individual differences in terms of autism expression. Participants stressed that what some autistic individuals find difficult may not be what all autistic individuals (or even the majority) find difficult. For instance, Participant 6 stressed that, "For autism there is no blanket accommodation that is going to just work for everyone. Autism is too individualized for that. It's more so assessing the individual needs of the person on site." Leadership development programs should expect to make disability accommodations for autistic individuals. Further, programs

should be prepared for common accommodations, but also should be prepared to make unexpected accommodations.

## **Incorporating Interests**

Several participants referenced the usefulness of incorporating interests into leadership development programs. This can further contextualize leadership. Many autistic individuals may not desire to move into formal leadership positions. However, autistic individuals may take on increasing responsibilities in organizations centered around their interests (which may or may not relate to their occupation). An autistic leader in a computer science organization may require a different context for leadership than an autistic leader in a hobby-related group, such as a painting club. Further, autistic individuals may formally or informally mentor others on the autism spectrum. Participant 10 stated that a leadership development program would benefit from, "Having them [autistic individuals] show off what they're very good at in order to be a leader. So if they're really good at one thing, maybe help influencing others and helping others with what their strength is. So knowing what they like, what they don't like, and then putting that into whatever they're working with while being a leader."

An important caveat to note is that there is a risk for the interest to dominate leadership dyads. Participant 11 explained a situation where a singular interest obstructed the potential for a friendship by stating:

"This guy would go up to a classmate and I'm sure you've heard of this phenomena and he'll, he'll talk about his singular interest, which a lot of times is video games. And he talked to her incessantly about how much he enjoyed playing video games. And he came by thinking that he just was making a new friend, but really he didn't. So I would say so the, so the barrier, so the, the struggles would be knowing how to develop rapport in those who are following you, that would be one struggle."

A leadership development program should be careful to negotiate between incorporating interests while checking that all dyad members are sufficiently engaged.

# **Building an Organic Mentorship**

Similar to incorporating interests without having them dominate the conversation, participants also stressed the importance of building a strong and "natural" mentoring relationship. Suggestions included tying initial meetings around an activity that both parties enjoy or entering a low-stakes meeting without any set goals. Participant 10 described this by stating, "And I feel like in order for this to work with any age, being a leader, you have to build a strong relationship. So before you get into the actual, like, leadership role, having like a joining of them, just getting to meet each other."

## Scaffolding

Interview participants suggested allowing facilitators to temporarily support developing leaders in tasks they could not complete on their own, gradually increasing responsibility after leaders master a new skill or competency. This is also known as scaffolding (Van de Pol et al., 2010). In particular, participants suggested developing a plan or guide with autistic developing leaders to address certain common leadership challenges. Participant 3 stated, "But also really I, I think, you know, I know, I know that we want this to be as natural as possible, but maybe some processes that would help kind of scaffold certain areas of this for, for perspective, autistic leaders that would give them a plan or a format to follow, to implement some things that are perhaps harder and maybe get overlooked in general with leadership."

Participant 4 explained the benefits of strategy from the perspective of an autistic

individual, stated, "...I had to learn all this stuff myself, but if I was younger and someone gave a list with like, here's a step by step guide for having a conversation, a particular type of conversation or something like that, you know, with these, if thens, you know, you say this and then, you know, something like that would be very, very, very, very useful for me because then I've got a script. Then I go into a conversation with some idea about how it will flow and the directions that it could go in. And that calms my anxiety. I've got a plan. I have a plan for when the plan, you know, goes up in flames."

Participant 11 described a situation in which they gradually gave a teaching assistant more responsibilities. Responsibilities progressed from technological troubleshooting, to alerting the instructor to students' questions, until eventually, the assistant was able to facilitate classes. The assistant had another, more experienced instructor in the room in case the teaching assistant needed additional help. In a leadership development program, scaffolding could also look like gradually increasing responsibilities. In a mentorship model, this could progress from originally have instructors develop agendas for initial meetings, until developing leaders are able to fully structure meeting agendas.

## Use of Multiple Learning Formats

Participants emphasized that autistic individuals may learn in unique ways or need accommodations in the format information is delivered. For instance, Participant 4 referenced Dr. Temple Grandin, an animal husbandry expert, who is a completely visual thinker. In this example, Dr. Grandin would require learning formats that accommodate her high visualization. Participant 4 emphasized the benefits of multiple formats even in less extreme examples, stating that:

"And so those of us who are able to think in more than one way, appreciate that, because

we can compare and contrast them and, and have a more fuller understanding. But for the people who can only think in one specific way, you you've, you've given them what they want most, which is instruction that speak to their learning strengths."

Some examples of multiple formats included visual instructions, verbal instructions, and written instructions to ensure more comprehensive understanding. Participant 3 also suggested the ability to revisit learning materials, such as accessing recordings or learning materials. Participants did not give a cohesive answer to which formatting would best fit autistic individuals. Again, participants highlighted the differences in autistic individuals.

#### Flexible Formatting to Tailor Program

Similarly, participants highlighted the need for a flexible formatting to pivot to individual interests, strengths, and needs. This could increase the transfer of knowledge in the program and allow individuals to better contextualize material to their own lives. Participant 5 elaborated on this by stating:

"So I guess that would be the biggest thing is like, you know, a lot of programs are missing that, that level of flexibility that if a participant says, 'No, I don't want to do this' or 'I'd rather do this,' you go, 'Okay. You know, let's accommodate, let's pivot our strategy to do it the way that you wanna do it. And still get something out of it.""

## Nothing About Us, Without Us

The phrase, "Nothing about us, without us" has been adopted by many disability rights organizations and activists to signify that disabled individuals should be centered in decisions that affect them or their livelihoods (Franits, 2005). Similarly, participants highlighted the need to include autistic individuals in the design and facilitation of the leadership development

program, for reasons of both practicality and inclusion. Participants emphasized that autistic individuals would be able to better communicate ideas and instructions, as well as better anticipate what wording autistic individuals would find clear. For instance, Participant 4 stated that:

"That just sort of, kind of like speaks to the power of if you've got some folks on your staff whose brains work the way that you're aiming for, they can't help, but naturally spot the flaws or spot the things that, that people like them would struggle with. And that's so much better than, than a clever person trying to figure that out on their own."

Participant 9 also stated the importance of including autistic individuals for the sake of inclusivity, stating, "But definitely having...someone on the spectrum...creating [a] curriculum is, is important to have that inclusion, especially if the organization is trying to move towards a more diverse and inclusive one."

# **Skills to Teach**

Participants were asked to identify skills that may be useful for autistic developing leaders to learn. Participant 6 made the important contribution that the example skill provided (adjusting to unexpected events) is likely also taught in other transitional programs and thus would be repetitious to teach again. However, by placing those skills in the context of leadership events and experiences, this program could enrich and build upon important skills in a salient environment. Some skills suggested included organizational skills, conflict resolution skills, and communication skills.

## **Emotional Regulation**

Participants recognized that leadership can encompass navigating difficult and emotionally-charged situations. Therefore, several emphasized the teaching of emotional regulation strategies to combat overwhelming emotions or rumination. Participant 7 discussed the correlation between autism and mental health conditions such as depression or anxiety. In order to teach emotional regulation, Participant 7 advised that," first off would be how to selfmanage, or at least self-awareness and regulation when those are the challenges you're dealing with. The challenge isn't really the situation. The challenge is you are not in the right frame of mind to handle it right now." Participant 7 described a strategy for an individual overwhelmed before an important meeting, stating:

"I don't care if it's a minute before - cancel it. Wise advice. Don't go into a meeting where you know it's gonna be a disaster...There's sometimes that just not showing up and saying, 'Hey, something came up, sorry' is going to be a far stronger thing than showing up and trying to pretend that you're really with it when you're truthfully not."

## Adjusting to Unexpected Events

Participants acknowledged that autistic individuals tend to become more distressed by unexpected events than allistic individuals. In a leadership role, it is logical to assume that unexpected challenges will arise, and this might especially distress an autistic leader. Participant 1 described the importance of learning the "ebbs and flows of potential crisis management" and discussing strategies for keeping calm in the moment. Participant 8 made the important distinction that as this distress is common in autistic individuals, they saw this distress as something that needed to be accommodated, instead of encouraging the individual to "toughen up" or "power through." They stated that, once they learned "my brain works this way and these are the support needs I have for my brain to work well...And I do things this way to...accomplish this task, I've had so many projects I've been able to fulfill and relationships I've made..."

An autistic leader would need to address unexpected changes or challenges. Participant 8 described models or therapies that would involve one to "force...[themselves], to be okay and stop." These models were described as more fear-based and compliance-based than effective. Leadership strategies should not involve forcing oneselves to go past their boundaries. However, strategies can focus on ways to access accommodations, i.e., communicating with followers that the individual needs to exit a space in order to self-regulate. Participant 7's advice to cancel meetings if the individual feels too overwhelmed to attend is reminiscent of this strategy of understanding when one cannot perform at the level they need to and creating a way to exit the situation.

## Self-Advocacy

Participants described a need for individuals to learn to advocate themselves, through disclosing a disability diagnosis, setting boundaries, or asking for assistance. Participant 5 elaborated this by saying:

"I think that advocacy and leadership go hand-in-hand. You can't really be a good leader without being a good advocate. Because if you're not a good advocate, then who are you leading? And I think that's something that a lot of programs miss is that, you know, you can talk about leadership or you can give someone an experience to lead a project and that is practicing leadership. But did you equip them with the skills to advocate conflict resolution, did you equip them with the skills to say that they weren't comfortable or okay with something, and all that good stuff?" Participant 5 also suggested that participants be informed of historical disability rights movements, stating, "We have come a long way, but it's important for our self-advocates to understand why we're still fighting for more, why, you know, this isn't enough. So I think disability history is something that's good that could always be included."

# **Perspective-Taking**

Participants described a need to incorporate perspective-taking skills into a leadership context. Participant 4 described neurotypical leaders who have, "never stopped to consider that people might have different perspectives," as well as stating that this skill may be especially important for autistic leaders, as:

"autism in part is a social disability. And the elephant in the room in that social disability is that it is physically and mentally difficult for me to see your perspective and to imagine myself in your position... I would say like in the workplace and stuff, when you look at that 80% plus unemployment rate, I think that's a huge factor in that."

Participant 4 described strategies to compensate for their difficulties in perspective-taking, such as asking followers to be honest about their opinions and emotions and not rely on nonverbal cues. Participant 2 suggested on ways to teach perspective-taking in a leadership context, such as:

"vignettes or case studies, so pose like a, in an organization, like a scenario and then give four or five different answers or perspectives that people can have. You know, here's a problem in this organization. Person A thinks this way, Person B also thinks this way, Person C, however, thinks the other way.

#### If You've Met One Person With Autism, You've Met One Person With Autism

Many participants stressed that autism does not have a singular presentation and cannot be stereotyped into categories. For instance, several autistic individuals started their answers with the phrase, "I can only speak for myself." Other individuals referenced the statement, "If you know one person with autism, you know one person with autism." This statement may be a reference to autistic self-advocate and autism expert Dr. Stephen Shore's quote, "If you've met one person with autism, you've met one person with autism." This quote highlights the variability present in autistic individuals (Flannery & Wisner-Carlson, 2020). Participant 8 described this by stating:

"I've seen all different types of autistic adults on the spectrum and all different variances of it. That's very difficult, to give a generalization of what all of them are, 'cause they vary so drastically. Like there are certain traits that are in common for certain subsegments, like, 'Oh yeah, these three or four have this in common,' but then differ on all these other things. And then these three or four have all these, the other things, in common, but differ on these other things. So it's kind of like, it's very difficult to apply." Participant 6 frequently referenced the variability of autistic individuals. They elaborated on some of these differences by stating:

"It's extremely difficult to generalize something that by nature is so unique. Some of us are extremely organized, some aren't. Some are very detailed oriented, some aren't.

Some

of us work better under pressure, some of us need a relaxed environment."

Autistic participants emphasized that strategies that work for themselves might not work for other autistic individuals. Therefore, certain leadership strategies or materials should not be expected to be useful for a majority of autistic individuals. This theme, as well as the subtheme of creating a flexible formatting, emphasize the need for a customizable leadership development program.

#### Autism in Women

Several participants discussed the differences between autism in men and autism in women. Participant 4 emphasized the need to seek out autistic women's perspectives and input. Participant 9 discussed their personal struggle with receiving an autism diagnosis, stating, "Cause sometimes there's like me growing up, I didn't have any role models. Getting an autism diagnosis was more geared towards men or males. And it was, you know, seen as a male-only kind of an issue..." Participant 4 also stated that autistic women are often "more sociable than...male counterparts" and more likely to answer flyers or join groups. Thus, examining gender and voluntary participation in this leadership development program may be an interesting future line of research.

# Discussion

#### **Summary of Findings**

The thematic analysis resulted in five major themes related to autism and leadership: difficulties associated with autism, strengths associated with autism, program considerations, skills to teach, and the idea of "if you know one person with autism, you know one person with autism." The first research question concerned difficulties and strengths associated with autistic individuals in organizations, and how that may impact leadership. Difficulties that may impact leadership included social challenges, such as communication misunderstandings and social

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anxiety; navigating disability disclosure; cognitive flexibility, and sensory processing issues. Difficulties were referenced in the context of leadership and joining formal organizations, such as a place of employment. Strengths that may impact leadership included detail orientation, task orientation and logical thinking, and the ability to mentor other neurodivergent individuals. It is important to note that autistic individuals will not display the same strengths and challenges, and these two themes are by no means exhaustive or definitive, especially as research examining leadership in autistic leaders is in its early development.

The next research question addressed whether the SLO-ACS would be feasible in this population, and if so, what design considerations developers should be aware of. The next two descriptive themes then centered around design considerations for the SLO-ACS leadership development program. Information about the purpose of the SLO-ACS was presented to the participant, namely in question five of the interview questions, in which the interviewer explains the ACS model and adds, "We've discussed that we want to add an other-oriented component to this model where the leader is able to mentor someone else, taking the focus off of themselves and onto a follower's growth. Do you believe that could realistically work in your organization?" Participants were therefore prompted to explain how the model would or would not fit in their organization, which all had some connection to autistic clients or consumers. The SLO-ACS model was considered to be beneficial by SMEs. SMEs were then asked questions that prompted them to elaborate on considerations in developing servant leadership in an autistic sample.

These considerations were specific to autistic developing leaders, and thus, considerations included subthemes such as accommodations, incorporation of interests, and the inclusion of autistic individuals in the design and facilitation process. Skills that may be especially useful in a leadership context included adjusting to unexpected events, emotional regulation, perspective-taking, and self-advocacy. It is important to note that many of these skills may be covered by other transitional programs, and thus should be covered in a leadership development context. For example, adjusting to unexpected events would be tailored to what unexpected events a developing leader is likely to face. The last theme exemplified the variation observed among autistic individuals by utilizing the common quote, "If you have met one person with autism, you have met one person with autism." Participants emphasized that generalizations about autism were harmful and ineffective, and that strategies that address the needs of one individual may not address the needs of another. Participants also discussed common genderbased differences between autistic women and autistic men, such as increased masking in autistic women and lower diagnosis rates.

## **Practical Implications**

This research provides insights about factors that should influence the curricular design of servant leadership development programs for those on the spectrum by gathering the perspectives of individuals who care for those on the spectrum as well as leaders on the spectrum. The inclusion of both autistic and allistic participants allows for more balanced and nuanced perspectives of how a leadership development program may best develop autistic individuals to lead. For instance, allistic participants may focus more on externally observed symptoms and events, while autistic participants may focus more on the internal reasoning behind symptoms, as allistic participants do not have firsthand experience with autism symptoms. Further, autistic individuals were shown to emphasize the heterogeneity of the spectrum more than allistic participants, while allistic participants were more likely to reference practical program considerations. Information collected from this needs assessment can help those designing LD programs avoid mistakes that may be easy for individuals more experienced in working with autistic clients (and those who are also autistic themselves) to spot.

The results of this study suggest that servant leadership may be a particularly efficient leadership style for autistic leaders and followers due to its one-on-one nature (Eva et al., 2019), allowing it to balance flexibility with the need to structure challenges and support systems in the SLO-ACS model that develop autistic followers through meeting their baseline needs for competence and autonomy (Deci & Ryan, 2008). In this model, leaders are able to develop servant leadership competencies through mentoring their followers, learning the crucial skills of empowerment and standing back (Van Dierendonck, 2011). Through their development, followers are able to move into a more collective understanding of leadership (Day & Harrison, 2007). As both leader and follower develop, the abilities to direct, align, and commit others (core components of leadership) become easier (Drath, 2008).

Some program considerations also indicated how facilitators themselves could engage in servant leadership as framed as a 'need based theory of leadership development' (Bragger et. al. 2022). For instance, multiple participants described scaffolding as a strong strategy for empowering others. Participant 11 described gradually increasing responsibilities for an autistic teaching assistant, until they were able to lead lessons entirely on their own. This is reminiscent of the domains of "empowerment" and "standing back" in servant leadership (van Dierendonck, 2011). By providing the teaching assistant with the ability to lead lessons by themselves, Participant 11 was able to give the assistant a sense of autonomy and control, a core component of servant leadership (Bragger et al., 2021). Furthermore, Participant 11 was able to "stand back" and allow their teaching assistant to navigate teaching on their own, with the ability to assist if circumstances called for it. By doing so, Participant 11 needed to assess their assistant's developmental level and provide appropriate challenges to develop their teaching assistant. This is a process somewhat analogous to the cascade of engaging the ACS model of Leadership Development from the developing leader to a less developed future potential leader (Van Velsor et al., 2011; Bragger et. al., 2022), which our needs assessment suggests is likely to balance self and other focus on the developers and developing as well encourage perspective taking. This has the potential to develop a follower both vertically and horizontally (Bragger et al., 2021). By utilizing techniques such as scaffolding, SLO-ACS facilitators are able to themselves engage in servant leadership.

This research is able to enrich pilot programming by providing initial, outsider impressions of the SLO-ACS model and its potential in autistic developing leaders. It also discussed important considerations that further research must be mindful of, such as the inclusion of autistic individuals in program design and execution and the common stereotypes associated with autistic individuals to avoid. This research is able to provide the beginning of a foundation for other academics interested in examining leadership development in autistic individuals. Further, this research predominantly features autistic individuals, amplifying their voices and perspectives.

## **Theoretical Contributions**

This research contributes to the small quantity of literature concerning leadership in autistic individuals (Hurley-Hanson et al., 2020). By utilizing both autistic and allistic subject matter experts, this research was able to collect experiences from individuals with differing perspectives on autism. This is also the first research that conceptualizes leadership development programs specifically for autistic developing leaders. Interviews often discussed commonalities in what many autistic individuals experience based on their symptoms of social anxiety and social avoidance (Bejerot et al., 2014), difficulty with nonverbal communication (Müller et al., 2008), difficulties in perspective taking (Bejerot et al., 2014), and restricted and repetitive behavior (McPartland et al., 2012). This added support that common difficulties for autistic individuals could be common difficulties for autistic leaders.

For instance, both allistic and autistic participants described communication misunderstandings, such an autistic interviewee perceived as unenthusiastic in an interview because they did not explicitly express enthusiasm for the organization. This is an example of the "double empathy problem" in communication between autistic and allistic individuals. While autistic individuals often struggle to understand perceptions and culture in allistic people, it is also the case that allistic people struggle to understand the perceptions and culture of autistic individuals. Due to autistic individuals' status as a minority, allistic people have no urgent requirements to understand common autistic traits and perceptions. However, autistic people may need to learn more about allistic social norms in order to survive in their current society (Milton, 2012). SMEs also identified disability disclosure as a common concern for autistic individuals, and the consequences of both disclosing and not disclosing. Social interactions, social anxiety, and rumination were listed as other difficulties. SMEs also identified common strengths associated with autistic individuals. These strengths included task orientation and logical thinking, detail orientation, and the ability to mentor other neurodivergent individuals. Pattern recognition, detail awareness, and task orientation have previously been identified as advantages for hiring neurodivergent talent (Austin & Pisano, 2017).

Further, studies on autism and leadership have indicated that autistic followers do not significantly benefit from transformational leadership over authentic leadership, or vice versa. However, certain leadership dimensions were particularly impactful (Parr & Hunter, 2014).

Thus, servant leadership has the potential to be uniquely beneficial due to its one-on-one nature (Eva et al., 2019). This can allow for consideration of individual accommodation needs, as SMEs emphasized that autistic individuals need personalized accommodations. Servant leadership may also be able to circumvent challenges associated with transformational leadership in autistic followers. Transformational leadership's dimension of inspirational motivation has been found to increase anxiety in autistic followers. Meanwhile individualized consideration was found to decrease anxiety and increase organizational performance (Parr et al., 2013). While these studies do not directly reference autistic *leaders*, they do give insight into impactful leadership behaviors for autistic followers. As the SLO-ACS has a cyclical nature, best practices to support autistic followers may support their leader emergence.

To elaborate, autistic employees and allistic supervisors are less likely to develop hightrust LMX relationships. When both dyad members identify as disabled, however, they are more likely to experience a high-trust relationship (Patton, 2019). Interview participants identified the ability to mentor other autistic and neurodivergent employees as a strength that autistic individuals possess. While not every autistic individual may be capable of or interested in mentoring others, their lived experiences and shared identities make them uniquely posed for such a relationship.

Participants also emphasized the importance of including autistic individuals in the research process, from development of materials to facilitation of a leadership development program. Benefits cited included increased diversity of the research group and the ability to create easy-to-understand and comprehensive materials and instructions. Increasing research conceptualizes autism as a sociolinguistic group with its own communication patterns (McCracken, 2021; Morrison et al., 2020; Davidson, 2008) and within which members are able

to sufficiently transfer information via verbal communication (Crompton et al., 2020). Therefore, including autistic individuals in the development of written materials can be expected to result in higher information transfer and communication quality for autistic developing leaders. Further, past research into autism has not included autistic individuals in the decision-making process, leading researchers to call for more intentional and ethically-informed approaches in autism research (Pellicano & Stears, 2011). Some partnerships between researchers and autistic self-advocates have already been formed, such as the Academic Autistic Spectrum Partnership in Research and Education (AASPIRE) (Nicolaidis et al., 2011). As research that conceptualizes autistic individuals as leaders is in its early development (Roberson et al., 2021), researchers who are interested in autism and leadership should look to lessons learned from other autism researchers and make steps to include the community being studied.

## Limitations

While attempts were made to counterbalance participants with and without autism, more autistic participants moved forward with interviews than allistic individuals. Thus, the sample is not evenly counterbalanced. Furthermore, the small sample size means that conclusions cannot be drawn about common difficulties, strengths, or considerations in the autism community. All autistic participants were speaking to some extent, with one participant preferring written communication.

Furthermore, qualitative research has no consensus regarding how qualitative methods should be judged and which should be used. Therefore, qualitative methods are frequently criticized and viewed as lacking scientific rigor. There is also the view that findings reported in qualitative research are largely the researcher's personal opinions, subject to researcher bias (Noble & Smith, 2015). Further, as recruitment consisted of snowball sampling and recruiting from targeted online communities and listservs, these views should not be taken as the definitive opinions and perspectives of the entire autism community and those who work with autistic clients. This research additionally did not compare or contrast differing perspectives, a strategy suggested to combat researcher bias (Morse et al., 2002; Slevin & Sines, 1999). Therefore, while this research provides a general overview, it does not account for minority opinions expressed by participants.

Further, while analyst triangulation strategies were incorporated, a strong limitation involved the use of one interviewer conducting all eleven interviews, which is a strong source of potential bias (Patton, 1999). While one individual collected all data (the author), this was due to practical limitations of the research project. The researcher used a structured interview process to ask the same questions and use the same wording, but follow-up questions were asked at their discretion. It is also recommended that researchers allow participants who were studied to review findings, which could not be accomplished due to time constraints associated with the project. Participants interviewed during the recruitment timeline also may indicate a temporal sampling bias - simply a bias from the time period that observations took place (Patton, 1999)>

Lastly, no autistic participants identified as primarily nonspeaking or utilized alternative communication such as sign language or augmentative and alternative communication (AAC) devices. Approximately 25% to 50% of children diagnosed with autism do not develop typical verbal communication (Baghdadli et al., 2012; Lord et al., 2004; Sigman & McGovern, 2005). It is important to note that not every autistic individual receives a diagnosis in childhood. For instance, females with autism are often diagnosed later than males, especially if they are judged as possessing average or above-average intelligence (Leedham, 2020). Therefore, it is less clear how many autistic adults are nonspeaking. However, based on childhood data, it is reasonable to

note that a significant population of autistic individuals were not represented by this research. Lastly, interviews ranged from around ten minutes to over two hours. Thus, some participants were able to elaborate on their perspectives and experiences more than others.

## **Future Directions**

Future research can examine the effects of implementing the SLO-ACS leadership development model in an autistic population. Further, based on LMX information in disabled and non-disabled populations (Patton, 2019), future research can examine whether the SLO-ACS model is more effective when both members of the dyad are the same neurotype. Gender is another variable that may be examined in leadership and autism. For instance, Gemma (2021) suggests that autistic women may have higher expectations than autistic men to perform emotional labor and engage in relational activities. The impacts of gender and leadership in autistic adults have yet to be extensively studied, and further research may examine this.

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## Appendix A

#### **Qualitative Interview Questions**

- We're interested in adults with ASD who are either looking for work, working, or transitioning into the workplace. We anticipate they'll be verbal (or have some communication strategy like a communication device or ASL) and of average cognitive ability or higher. What can you tell us about the characteristics of these types of clients? A generalization of the characteristics of your clients with ASD, specifically with the following characteristics of 18+; verbal; of average cognitive ability or higher; and either looking for work, working, or transitioning in the workplace.
- 2. Can you talk about any challenges this population may face when entering the workforce?
- 3. Leadership has been defined as "a process whereby an individual influences a group of individuals to achieve a common goal." Leaders can influence others by setting a direction (to reach the goal), creating and maintaining commitment (to reach the goal), and aligning and re-aligning (the plans to reach the goal). Leadership also has "task" related components (e.g. organizing processes, smoothing barriers to reaching goals, directing individuals as to their roles in reaching them) and "relational" components (collaborating with peers and followers, positively reinforcing behavior with praise, etc.).

Given the definition and information regarding leadership, what struggles could those with ASD face to reach this?

- a. What do you anticipate they'll succeed in?
- b. What can we include in a leadership development program to assist those with ASD in overcoming these difficulties?
- c. What can we include in a leadership development program assist those with ASD in enhancing other abilities to compensate for these difficulties?
- 4. In your experience, what kind of learners are those on the spectrum? (Ex: visual, auditory, etc.). Given the ways that those on the spectrum best learn what particular "learning aids" (technology, visuals, activities, etc.) do you think would be useful in their development?
- 5. Most leadership development focuses on the growth of the leader. A popular strategy is the ACS model - Assessment, Challenge, and Support. According to such a model, after establishing a "benchmark" of an individual's existing leadership abilities (through surveys or discussion), a plan is then created to challenge them to acquire new skills or to expand on their existing leadership abilities in a new way. Finally, support and feedback are given as their progress is noted, obstacles are worked through, and resources are provided. We've discussed that we want to add an other-oriented component to this model where the leader is able to mentor someone else, taking the focus off of themselves and onto a follower's growth. Do you believe that could realistically work in your organization?
  - a. How would you design such a model to best work in your organization?

- 6. Other than the leadership development component of it, what other leadership-related skills might be included in such a program (for example: adjusting to unexpected events)?
- 7. What other considerations might be important to add to the curricula given the needs of those with ASD?
- 8. Do any stories of transition students going into the workplace come to mind, and what organization settings have advanced their growth in the workplace? What have been barriers?
- 9. Are there any other employees in your organization that we might be able to talk to in the future?
- 10. Are there any graduates of the program/organization that we might be able to talk to?
- 11. It has been brought to our attention that rumination might be an area of concern for people with ASD. Traditional leadership models are very self-focused and goal-focused. What are your thoughts about this, considering who you work with? Have you observed this firsthand?
  - a. What should we add to the training to combat this?

#### **Appendix B**

## **Qualitative Codebook**

## **General Guidelines**

- NVivo uses the phrase "parent node" to refer to themes and "child node" to refer to subthemes. This codebook will use the same terminology for consistency.
- Coders should continuously reference the codebook throughout the entire coding process. Even as the nodes become more familiar, coders should continuously reference the definition of nodes whenever they are coding.
- All units are to be coded into sentences. If there are sequential sentences that fit into a particular node, they shall be highlighted together. Only sentences that fit should be highlighted. If there is a sentence that does not fit in between two sentences that do fit, there should be two separate highlights.
- If the participant has been interrupted by the interviewer, but their next sentence is relevant to their previous second, the dialogue between the participant and the interview should be highlighted as one section. However, only the participant's statement will be examined.
- A complete sentence ends with a period (.), an exclamation mark (!), or a question mark (?). Any other punctuation, such as commas (,), hyphens (-), or ellipses (...) should be

treated as a continuation of the same sentence, even if both parts of the sentence can be read separately.

- Highlight starting at the first letter of the sentence and ending at the punctuation of the sentence. Do not highlight spaces between sentences NVivo will count this as a disagreement between coders.
- Some participants tend to heavily elaborate on their ideas. Do not highlight elaborative text (for instance, a personal story), only highlight the main ideas.
- If a passage can be coded as both a parent node (ex: difficulties associated with autism) and a child node (ex: social anxiety), code for both the parent and child node.

## Parent Node: Difficulties Associated with Autism

Question prompt: Q1, Q2, Q3, and Q11

The general theme of challenges associated with autism. If a participant then specifies what exactly is difficult, highlight the entire section to go under this parent node. If the participant uses a personal story or example to elaborate, do not highlight that section.

# Example:

# "Being autistic means a lot of things are really hard for me. I've struggled considerably. *I get really anxious in social situations*."

#### Explanation:

The entire section should be coded in the parent node "difficulties associated with autism." That is in bold. The last sentence, "I get really anxious in social situations," should be additionally coded in the child node "social anxiety."

Child Node: Social Anxiety

Social anxiety is a common comorbidity of autism spectrum disorder. In particular, social anxiety and autism may be associated with specific socio-communication difficulties and decreased social motivation (Spain et al., 2018). Anxiety can specifically exacerbate communication difficulties (Cummins et al., 2020), potentially creating a vicious cycle that worsens communication, and then worsens anxiety. Code this node when participants mention feelings of anxiety, worry, apprehension, uneasiness, or stress *associated with socialization*.

Do not code if participants mention anxiety without mentioning interacting with others. Example:

Code: "I really hate meeting new people. I never know what they're going to think of me and that can make me really uneasy."

Don't code: "I really hate going to new places. There's so much planning that I have to do and it just makes my anxiety worse."

#### Child Node: Rumination

Rumination is particularly associated with ASD. Furthermore, higher depressive symptoms have been correlated with increased rumination (Gotham et al., 2014). Previous leadership development programs may exacerbate rumination patterns by resulting in leaders who are overly self-regulated (Alonso et al., 2019). As those on the spectrum are particularly prone to rumination, it is increasingly important to protect against this "side effect" of LD programs. Therefore, an other-focused LD intervention may be particularly useful in alleviating rumination patterns.

Code mentions of repetitive thoughts, negative thought loops, perseveration, etc. Example:

"Whenever I do something wrong, I can't stop thinking about it. It keeps me up at night."

## Child Node: Communication Misunderstandings

Code whenever there is a mention of a participant who is misunderstood, particularly if by someone who is not autistic. Additionally, code whenever participants mention language differences between autistic individuals and neurotypical individuals. Examples include when a participant was perceived as rude despite intending to do well, unintentionally offending others, etc.

#### Example:

"Neurotypical communication is hard. They expect you to read between the lines a lot, and I just don't do that. So I've been told a lot that I'm rude and blunt, and I don't see it."

"They say weird things and sort of not being able to understand that that's his disability." *Child Node: Socialization* 

Code whenever there is a mention of difficulties with collaborative work, working with groups, or social difficulties that do not include social anxiety or communication misunderstandings.

## Example:

"A lot of my autistic students don't like to work in groups. They prefer to work alone."

"I don't tend to keep friends around for very long. It just doesn't seem to work out."

"I would definitely say one of the difficulties that they would have is relational components. So collaborating with peers and followers, and I think you sort of mentioned understanding that people need different things, right. If I remember correctly, so that might be really hard for them. So sort of theory of mine, right. Understanding different people's perspectives and different ability. I think that can be really challenging. And especially if that individual with autism is very excelling in this one thing."

## Child Node: Difficulties with Change

Code whenever there is a mention of difficulties associated with changes - new schedules, new jobs, unexpected events. Further, code whenever there is a mention of rigid, "stuck" thinking.

# Example:

"My students tend to break down if something doesn't go according to plan. They seem to struggle a lot with that."

## Child Node: Disclosure

Code whenever there is mention of an autistic individual considering whether they should or should not disclose their autism, or any difficulties associated with disclosure.

## Example:

"There are pros and cons to both, but it can be really hard to be open about your autism."

## Child Node: Sensory Sensitivity

Code whenever there is a mention of sensory sensitivities - difficulties with bright lights, loud sounds, etc.

#### Example:

"And sometimes there could be another person in the room just like tapping and it would throw them off."

## Parent Node: Strengths Associated with Autism

Code when there is mention of positive traits or abilities associated with autism.

Highlight the entire section that is relevant, including if a participant specifies. If there is a child

node associated with a part of the text, highlight that part again for a child node.

## Example:

## "My autism makes me great at a lot of things. I'm a really good organizer."

## **Explanation**:

The entire section should be coded in the parent node "strengths associated with autism." That is in bold. The last sentence, "I'm a really good organizer," should be additionally coded in the child node "organization."

## Child Node: Detail Orientation

Code when there is a mention of high skill sets in detailed focus, organization, or spotting patterns.

#### Example:

"They have really strong pattern-recognition and they're really good at noticing small details."

"Oh I think sticking to the schedule and being on time because for my kids, I think if they're leaders and the meeting is supposed to start at 12:30, I know that like, they'll make it on time and it's gonna start for most of them and also very outside the box thinking and very creative and also attention to, so if it's, if it involves a job that looks at whole bunch of data and numbers then they might be able to capture like mistakes that other people might miss."

## Child Node: Task Orientation and Logical Thinking

Code when there is a mention of taking actionable steps, goal setting, aligning goals, or accomplishing tasks. Additionally, code when there is a mention of analytical thinking or logical thinking.

#### Example:

"I'm really good at coming up with plans. I know what I have to do, and I know how to get there."

"A lot of managers are super emotional, and I don't think that's professional. Being neurodivergent means I'm a lot more straightforward and my decisions are based on the facts, not my feelings."

## Child Node: Mentoring Other Neurodivergents

Code when there is a mention of forming strong relationships or leading other neurodivergent individuals.

## Example:

"I know what it's like to struggle in the workplace because I'm autistic, so I kind of watch out to see if there's someone else who may be neurodivergent as well. I try to take them under my wing."

## **Parent Node: Program Considerations**

Code whenever the participant answers specific ways to structure or tailor the pilot study/leadership development program. Common answers will be located under these questions, but not necessarily exclusive to them:

- What can we include in a leadership development program to assist those with ASD in overcoming these difficulties? Or assist them in enhancing other abilities to compensate for these difficulties?
- Given the ways that those on the spectrum best learn what particular "learning aids" (technology, visuals, activities, etc.) do you think would be useful in their development?
- Do you believe that could realistically work in your organization? How would you design such a model to best work in your organization?

- Other than the leadership development component of it, what other leadership-related skills might be included in such a program (for example: adjusting to unexpected events)?
- What other considerations might be important to add to the curricula given the needs of those with ASD?
- What should we add to the training to combat this [rumination]?

## Child Node: Accommodations

Code whenever a need for creating or being aware of accommodations *for the leadership development program* is mentioned.

## Example:

"I think the biggest thing to stress is accommodation. For autism there is no blanket accommodation that is going to just work for everyone. Autism is too individualized for that. It's more so assessing the individual needs of the person on site. Best practice is to just be prepared to be as flexible as possible."

"A lot of people with autism are hypersensitive, so you may have to allow for accommodations with that." (Note, this can and will likely overlap with Difficulties With Autism/Sensory Processing."

Child Node: Incorporating Interests

Code whenever there is a mention of including interests in the *leadership development program*. Example:

"You know, instead of doing that tied around like an activity that they like and I don't know. It can be like making, I'm just making this up, like a making clay session or computer programming session or drawing session and have that relationship or have that training skills naturally come up."

"I think you have to let people tell you what they're interested in and what they want to focus on. If they're into computers, for example, design the program so they can be leaders in the computer science field. If they're into art, tailor the program so they can be leaders in those organizations."

#### Child Node: Scaffolding

Code when there is a mention of someone aiding an autistic individual in navigating skills. For instance, coming up with scripts for common leadership-related social interactions and then helping the autistic person adapt the script.

Scaffolding definition: In education, **scaffolding** refers to a variety of instructional techniques used to move students progressively toward stronger understanding and, ultimately, greater independence in the learning process. The term itself offers the relevant descriptive metaphor: teachers provide successive levels of temporary <u>support</u> that help students reach higher levels of comprehension and skill acquisition that they would not be able to achieve without assistance. Like physical scaffolding, the supportive strategies are incrementally removed when they are no longer needed, and the teacher gradually shifts more responsibility over the learning process to the student. (Text at: <u>https://www.edglossary.org/scaffolding/</u>)

#### Example:

"So if I'm doing a thrive class and I'm doing it through Zoom, it'll be, there's this guy that's really good with technology. He's on the spectrum, but he's, he, he knows computers a lot better than I do. So a good place for him to start is like, okay, Daniel, you're the guy that I'm

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gonna go to if I'm having troubles with the computer and he can probably fix it. And then he does that for a while and say, Daniel, that was great. And then, and the next step would be, you notice anybody who has a question, Daniel, let me know. And so I step by step, teach him how to actually facilitate a class. And then ultimately I would do for him what was done for me. And that's where I actually sit in the class with him. So I'm right there if he needs help. So that's the kind of scaffolding I would suggest."

"My point being is that, you know, I had to learn all this stuff myself, but if I was younger and someone gave a list with like, here's a step by step guide for having a conversation, a particular type of conversation or something like that, you know, with these, if thens, you know, you say this and then, you know, something like that would be very, very, very, very useful for me because then I've got a script. Then I go into a conversation with some idea about how it will flow and the directions that it could go in. And that calms my anxiety. I've got a plan. I have a plan for when the plan, you know, goes up in flames. I have a plan when the conversation goes off the rails or goes sideways and stuff. You know, having, having that is very useful for us and then interacting with somebody now, we're kind of like following the script and stuff. And ideally that script is gonna be something that regular people do naturally. But yeah, that would be very useful for us."

#### Child Node: Building an Organic Relationship

Code when there is a mention of allowing mentors and mentees to socialize without goals or a plan in place - to develop rapport and build a bond before any set goals.

#### Example:

"And in doing so I think the person was helping the peers acquire more programming skills for them naturally. So it's kind of similar to that, right. Like walking somebody else and teaching them and then you're learning yourself and that sort of works organically. So I think it's, it's a really good strategy, but but I think that making that sort of relationship with the training model seem organic can also be beneficial, but yeah, I think that's a good model."

"And I feel like in order for this to work with any age, being a leader, you have to build a strong relationship. So before you get into the actual like leadership role, having like a joining of them, just getting to meet each other."

## Child Node: Use of Multiple Learning Formats

Code when there is a mention of utilizing multiple learning strategies, methods, or styles. This will likely be coded after the following question:

- In your experience, what kind of learners are those on the spectrum? (Ex: visual, auditory, etc.).
- Given the ways that those on the spectrum best learn, what particular "learning aids" (technology, visuals, activities, etc.) do you think would be useful in their development?

#### Example:

"Hmm. Well, I can only speak to a lot of my experience with cuz I see it, I see it in, in the students who come in, who are on the spectrum, but in regards to adults on the spectrum I think it all kind of really, really depends."

"All autistic people do not learn the same way. Again, we are all individual. The way I learn the best may not be the best way another autistic person with learn."

"That's, that is a, a testament to how much the autistic mind is capable of at times. But because of the way she learns and the way she thinks, obviously anything other than a heavily visual based sort of thing is, is something that she's gonna struggle with. But, and you also have aspies who are very good at mathematics, mathematics and logic and critical thinking and, and think geometrically or, or algebraically. You know, you have people who can dig through like complex, dense texts and stuff like, like myself. Do, do you see what, like I'm autistic and Temple Grandin is autistic. And yet we're very different when it comes to our learning styles and our learning strategies and stuff."

## Child Node: Flexible Formatting to Tailor Program

Code when there is a mention of tailoring the program in some way to individual needs. These codes may overlap with other codes, such as utilizing multiple learning formats, incorporating interests, or accommodations. They may also not overlap with any other codes. Codes will be commonly utilized after these questions, but not necessarily exclusively:

- Other than the leadership development component of it, what other leadership-related skills might be included in such a program (for example: adjusting to unexpected events)?
- What other considerations might be important to add to the curricula given the needs of those with ASD?

#### Example:

"I feel like, and this is gonna make me sound like I'm talking out of both sides of my mouth, but like I said, structure was really important for people with disabilities, but, or ASD, but so is flexibility. And oftentimes flexibility is what is missing. You can have structure, but still be flexible program at the same time. So I guess that would be the biggest thing is like, you know, a lot of programs are missing that, that level of flexibility that if a participant says, no, I don't want to do this, or I'd rather do this, that you go, okay. You know, let's accommodate, let's pivot our strategy to do it the way that you wanna do it. And still get something out of it." Note: The italics stands for "incorporating interests."

## Child Node: Nothing for Us, Without Us

Code when there is a mention of creating the leadership development program *with autistic individuals* in any part of the process - in design, in developing materials, in facilitating, etc. <u>Examples:</u>

"Not that I can think of off the top of my head, but again, it kind of comes back to what I was before. If you're trying to build something, you know, I, I know you've probably heard me say this before we adapted this from the blind and deaf communities, nothing for us, without us. Anything that you build to help neurodivergent folks, you're really doing yourself a disservice. If you don't get a few neurodivergent folks involved in that process, even if it's just a, Hey, could you take a look at this and tell me what you think? So this is what we're going for. How well do you think this worked? They don't even have to be experts on building a thing."

"That just sort of, kind of like speaks to the power of if you've got some folks on your staff whose brains work the way that you're aiming for, they can't help, but naturally spot the flaws or spot the things that, that people like them would struggle with. And that's so much better than, than a clever person trying to figure that out on their own."

"Having someone who is autistic help develop the program. There are there are components that can really only be expressed by someone who is autistic in a way that would relate to other, other autistic folks."

"But definitely having, having someone on the spectrum, creating, creating curriculum is is important to have that inclusion, especially if the organization is trying to move towards a more diverse and inclusive one."

"Yeah, I think it's just, I believe it'd be highly important that whoever is running these leadership development program, that there are people either that there are people who are actually on the spectrum, who are the people running these development programs or at least the people who are running it are working with people who are on the spectrum. Because I believe there's just a huge understanding and communication barrier for that. So if at all possible that would be ideal."

#### Parent Node: Skills to teach

Code whenever there is a mention of life or leadership skills that would be helpful to teach *in the leadership development program*.

## Child Node: Emotional Regulation

Code when there is mention of processing, regulating, or soothing difficult emotions, such as stress, anxiety, anger, or sadness. This may be commonly seen after the following question:

• Other than the leadership development component of it, what other leadership-related skills might be included in such a program (for example: adjusting to unexpected events)?

#### Example:

"But also something that's not talked about, it's still considered taboo is the mental health of, of neurodivergent employees. Just because the brain really takes in sensory, like sensory processing stuff. Like, Ooh, there's a lot of overload there. So I think cons- adding a mental health component to the training development, leadership development would be quite beneficial because you know, if, if our mental health is good, theoretically, everything else should be kind of fall into place, you know?"

"The needs of I think that stress management steps, protocols, or steps that they can follow when there's stress. Yeah, sort of what I used to do with my kids, you know take a break, walk around the block, breathe five times. Or before writing that angry email before yelling at somebody, give it half an hour and then write you know, those skills that would prepare them to manage different stressful situations."

Child Node: Adjusting to Unexpected Events

Code when there is mention of *teaching* someone how to adjust to unexpected situations and the distress as a result. This will be most common after this question:

• Other than the leadership development component of it, what other leadership-related skills might be included in such a program (for example: adjusting to unexpected events)?

**Note:** If the individual says a response related to unexpected events after the above question, even if they do not *directly* mention teaching, it is understood to be in the *context* of teaching someone that skill.

#### Example:

"Yes. I would say yeah, definitely. Yeah, of course. Adjusting to unexpected events is, is a good one. I would also say. If I, if I, like with, with unexpected events, that's a really good one."

"Learning to go with the flow and coping skills of the like are usually being taught in tangential programs that the individuals you are looking for are typically in anyway. I would integrated how to use those coping skills in maybe mock situations that pertain to leadership but having out right teach those skills is unlikely."

"Right. I would say another leadership skill would would be I guess it goes along with what you just said a, you know, know in adjusting to things on the fly, but basically I guess learning the ebbs and flows of potential crisis management, like like if something unexpected happens, like it, it, it rains, you know, heavily at a street fair and we were only expecting like a drizzle or something like that. And I guess, you know, basically just learn how to think on your feet."

"That is very important. It, what do you do if the computer doesn't work, if you can't get the PowerPoint working? So what you do is you have a printed copy to PowerPoint. You just read it off. So I think playing, what if does help in certain circumstances, if you're asking someone to fulfill a certain role, you know, what do you do if you are doing a class and I'm pretty good at recognizing the contingencies, right. Of what could happen."

"Hmm. Yeah, that's actually a really good, like, you almost want like a mini class just kind of focused on, especially if you're targeting this towards like autistic supervisors and stuff. And you could even get like a small panel of, of psychologists and experts who, who specialize in autism by nature well here, let me, let me do this."

## Child Node: Self-Advocacy

Code when there is mention of the autistic individual advocating for themself, such as in setting boundaries, communicating distress, or asking for accommodations.

## Example:

"Another one that you might not think of is advocacy. I think that advocacy and leadership go hand in hand you can't really be a good leader without being a good advocate. Because if you're not a good advocate, then who are you leading? And I think that that's something that a lot of programs miss is that, you know, you can talk about leadership or you can give someone an experience to lead a project and that is practicing leadership, but did you equip them with the skills to advocate conflict resolution, did you equip them with the skills to say that they weren't comfortable or okay with something and all of that good stuff?"

Child Node: Perspective-Taking

Code when there is a mention of *teaching* the autistic individual to think about, understand, or consider the viewpoints of others.

## Example:

"Specifically I would do like if it's like a training I would do vignettes or case studies, so pose like a, in an organization, like a scenario and then give four or five different answers or perspectives that people can have. You know, here's a problem in this organization Person A thinks this way, Person B also thinks this way, Person C however thinks the other way. So training them in that way. So they understand that, you know, people think differently and people have different ways of approaching the problem."

## Parent Node: If You Know One Person With Autism...

Code when there is mention of different symptoms or manifestations in individuals with autism, how autism is uniquely experienced and individually experienced, and how one should not generalize autism. This will be especially common after the following questions:

- We're interested in adults with ASD who are either looking for work, working, or transitioning into the workplace. We anticipate they'll be verbal (or have some communication strategy like a communication device or ASL) and of average cognitive ability or higher. What can you tell us about the characteristics of these types of clients? A generalization of the characteristics of your clients with ASD, specifically with the following characteristics of 18+; verbal; of average cognitive ability or higher; and either looking for work, working, or transitioning in the workplace.
- In your experience, what kind of learners are those on the spectrum? (Ex: visual, auditory, etc.). Given the ways that those on the spectrum best learn what particular

"learning aids" (technology, visuals, activities, etc.) do you think would be useful in their development?

• What other considerations might be important to add to the curricula given the needs of those with ASD?

The adage, "If you know one person with autism, you know one person with autism" will frequently occur.

## Example:

"Yeah. So you're touching on, you're touching on, you know, what, what brings that, that famous adage, if you know, one person on the spectrum, you know, one person on the spectrum. And that comes from the part that it is a multi-variable spectrum."

"That's right. And if that, if that, if you're right. So I I've seen people on the spectrum who really struggle with making eye contact. That's not an issue for me. I know a friend of mine, she says almost nothing, but when she finally says something it's right on target socially, like it's exactly the exact social thing to say."

#### Child Node: Autism in Women

Code whenever there is a mention of autism specifically in females - girls, women, etc or when gender is discussed in the context of autism

#### Example:

"So and being a female I did a lot of masking and I still do some masking, which can be quite exhausting."

"Cuz sometimes there's like me growing up, I didn't have any role models. Getting an

autism diagnosis was more geared towards men or males. And it was, you know, seen as a male only kind of an issue, but those are just some of the yeah, things kind of coming to mind, but I was going off in a tangent."

"And the other one I think is probably different than me, but so you would get two perspectives and, and more importantly, I think it's very important to get a, a female perspective. It drove me nuts around 2015 or so when people started talking, like there are no such thing is as a gender difference and a male brain and a female brain are exactly alike. And I was like, no, all the evidence, all the scientific evidences that no, that's not true. I do agree that we shouldn't talk about one is lesser or greater."

"You know, my daughter and I are so alike in so many ways that at times it's scary but our biggest differences are, are largely gender based. And we recognize, oh, you might feel this way because of the levels of estrogen you have in your brain. Maybe if I had less testosterone and more estrogen, like, I, I would, I would think more that way, but I don't, I think this way. So I always, when I'm always talking about autism advocacy and stuff, I always try to get a, a, a woman to come in and, and speak on that because they always say things I would never have thought of."