

2-8-2024

## Strategies Managers Use to Integrate Autistic Employees into a Diverse Workforce

Eloise Victoria Chambers  
*Walden University*

Follow this and additional works at: <https://scholarworks.waldenu.edu/dissertations>

---

This Dissertation is brought to you for free and open access by the Walden Dissertations and Doctoral Studies Collection at ScholarWorks. It has been accepted for inclusion in Walden Dissertations and Doctoral Studies by an authorized administrator of ScholarWorks. For more information, please contact [ScholarWorks@waldenu.edu](mailto:ScholarWorks@waldenu.edu).

# Walden University

College of Management and Human Potential

This is to certify that the doctoral study by

Eloise V. Chambers

has been found to be complete and satisfactory in all respects,  
and that any and all revisions required by  
the review committee have been made.

Review Committee

Dr. Ronald Black, Committee Chairperson, Doctor of Business Administration Faculty

Dr. Erica Gamble, Committee Member, Doctor of Business Administration Faculty

Chief Academic Officer and Provost  
Sue Subocz, Ph.D.

Walden University  
2024

Abstract

Strategies Managers Use to Integrate Autistic Employees into a Diverse Workforce

by

Eloise V. Chambers

MS, Austin Peay State University, 2014

MPS, Austin Peay State University, 2010

BBA, University of Texas at Arlington, 1990

Doctoral Study Submitted in Partial Fulfillment  
of the Requirements for the Degree of  
Doctor of Business Administration--Leadership

Walden University

February 2024

## Abstract

Some managers lack strategies to integrate autistic employees into a diverse workforce. A manager's poor integration strategies prevent autistic employees from successfully entering the workforce leaving positions unfilled, services unprovided, and qualified employees unemployed. Grounded in the attribution theory, the purpose of this qualitative multiple-case study was to explore strategies managers use to integrate persons with autism spectrum disorder into a diverse workforce successfully. The participants comprised five managers from Southern California who successfully integrated autism spectrum disorder employees into the workforce. Data were collected from semi-structured interviews, videos, and publicly sourced documents. Six themes emerged from the thematic analysis: supported employment strategies, integration and organizational strategic plan, assessing strategy effectiveness, key obstacles to integration, addressing obstacles to integration, and other useful information to aid integration. A key recommendation is that organizational managers develop an inclusion plan that includes redesigning jobs to meet the needs of employees with disabilities. The implication for positive social change includes the potential to lower the unemployment and underemployment rate of persons with autism spectrum disorder, leading to less reliability on public systems and funding for sustainment and adding to the economic base and growth of the local community.

Strategies Managers Use to Integrate Autistic Employees into a Diverse Workforce

by

Eloise V. Chambers

MS, Austin Peay State University, 2014

MPS, Austin Peay State University, 2010

BS, University of Texas at Arlington, 1990

Doctoral Study Submitted in Partial Fulfillment  
of the Requirements for the Degree of  
Doctor of Business Administration--Leadership

Walden University

February 2024

## Dedication

This study is dedicated to my spouse, Mr. Kendall Chambers, whose constant support enabled me to fulfill my desire to complete my education. This study is dedicated to my two grandchildren who have autism and for their success. I dedicate this study to all people involved in supporting people with neurological differences and working toward their independence.

## Acknowledgments

I would like to express my deepest appreciation to Dr. G. Washington, Dr. G. Uche, Dr. R. Black, Dr. K. Simmons, and Dr. E. Gamble for their support during my doctoral study.

## Table of Contents

List of Tables .....	iv
List of Figures .....	v
Section 1: Foundation of the Study.....	1
Background of the Problem .....	1
Problem Statement .....	2
Purpose Statement.....	3
Nature of the Study .....	3
Research Question .....	4
Interview Questions .....	5
Conceptual Framework.....	5
Operational Definitions.....	6
Assumptions, Limitations, and Delimitations.....	7
Assumptions.....	7
Limitations .....	8
Delimitations.....	8
Significance of the Study .....	9
Contribution to Business Practice.....	9
Implications for Social Change.....	10
A Review of the Professional and Academic Literature.....	11
Attribution Theory .....	12
Theory of Mind.....	16



Self-efficacy Theory .....	17
Autism Spectrum Disorder .....	18
ASD Diagnosis, Education, and Intervention .....	19
Asperger’s Syndrome.....	27
Typical Development.....	28
Technologies to Assist in Education and Training .....	29
Gaps in Literature .....	44
Transition .....	45
Section 2: The Project.....	47
Purpose Statement.....	47
Role of the Researcher .....	47
Participants.....	49
Research Method and Design .....	51
Research Method .....	51
Research Design.....	52
Population and Sampling .....	53
Data Collection Instruments .....	55
Data Collection Technique .....	56
Data Organization Technique .....	58
Data Analysis .....	59
Reliability and Validity.....	60
Reliability.....	61

Validity .....	61
Transition and Summary.....	63
Section 3: Application to Professional Practice and Implications for Change .....	65
Introduction.....	65
Presentation of the Findings.....	65
Theme 1: Supported Employment Strategies .....	67
Theme 2: Integration and Organizational Strategic Plan .....	70
Theme 3: Assessing Strategy Effectiveness .....	74
Theme 4: Key Obstacles to Integration .....	77
Theme 5: Addressing Obstacles to Integration.....	79
Theme 6: Other Information to Aid in Integration .....	82
Applications to Professional Practice .....	83
Implications for Social Change.....	86
Recommendations for Action .....	87
Recommendations for Further Research.....	89
Reflections .....	91
Conclusion .....	92
References.....	94
Appendix A: Interview Questions .....	113
Appendix B: Interview Protocol.....	114

## List of Tables

Table 1. CE (Customized Employment) Process Elements and Descriptions.....	35
Table 2. Participant Demographics.....	66
Table 3. Theme Overview.....	67
Table 4. Barriers to Employment.....	79
Table 5. Planning your Pilot .....	89

## List of Figures

Figure 1. Example of Range of Symptoms.....	26
Figure 2. Key Social Reward Circuit in the Brain Impaired in Kids with Autism.....	29
Figure 3. Word Cloud of Common Terms.....	67
<a href="http://access-it.ischool.uw.edu/wordpress/">Figure 4. Person-Centered Strategy (http://access-it.ischool.uw.edu/wordpress/)</a> .....	71

## Section 1: Foundation of the Study

This study addressed various supported employment methods used to integrate autism spectrum disorder (ASD) employees into a diverse workforce. Organizations seeking to add value and sustainability should develop human resource strategies designed to hire neurodiverse employees (Rao & Polepeddi, 2019). Managers of neurodiverse employees, including persons diagnosed with autism, must understand how to interact, and relate to the unique special needs of such employees. Managers may use this study to decide if their employment strategies effectively integrate ASD employees into the workforce.

### **Background of the Problem**

Communication, teamwork, stress management, conflict management, and adaptability are soft skills and combined skills, abilities, and functionality that make good compatible employees. Some people diagnosed with autism cannot function within expected societal norms (Hayward et al., 2019). Baker-Ericzén et al. (2018) discussed the deficits in executive functioning and social skills associated with ASD diagnosis. Notably, Baker-Ericzén et al. (2018) conducted studies that found adults with ASD who demonstrated poor executive functioning and social skills struggle to find and maintain meaningful employment. Various methods exist, allowing employers to help autistic employees in gaining and keeping meaningful employment. One method used to obtain and support employment for autistic people is supported employment (Keel et al., 1997). Two strategies of supported employment are Achieving Competitive, Customized Employment through Specialized Services (ACCESS) and Treatment and Education of

Autistic and related Communication Handicapped Children and Adults (TEACCH; Keel et al., 1997; Smith et al., 2019). Both ACCESS and TEACCH teach contextual social skills, including social knowledge, reasoning, and competence with reading social cues, emotion recognition, management, and perspective-taking. Developmental, communication, and educational intervention, specifically early intervention, may hold the key to autistic persons gaining meaningful employment and must go beyond technological advances. Intervention must include professional development, clear expectations, cognitive enhancement, building social relationships, and participant monitoring (Dydia et al., 2020). Diagnosis, education, and intervention play critical roles in the success of people dealing with autism.

### **Problem Statement**

According to Hayward et al., (2019), despite proof that ASD people are productive workers in a variety of industries, the modern workforce is still not equipped to work with the growing population of individuals with autism spectrum disorder (ASD). Ditchman et al., (2018) discussed that of ASD people ages 21 through 25, only 37.2% are employed versus their counterparts at approximately 60% employment. The general business problem is that the ineffective integration of autistic employees into the workforce may lead to decreased productivity and increased safety risk. The specific business problem is that some managers lack strategies to integrate autistic employees into a diverse workforce.

### **Purpose Statement**

This qualitative multiple case study explored the strategies managers use to integrate autistic employees into a diverse workforce. The targeted population consisted of hiring managers from four separate Southern California organizations specializing in hiring people with disabilities in the region who have successfully integrated persons with ASD into their workforce. The implications for positive social change include better integration strategies that may lead to lower costs to communities to support persons with ASD.

### **Nature of the Study**

The three research methods are qualitative, quantitative, and mixed (Saunders et al., 2019). Qualitative research is the interpretive meaning of expressed subjective constructs of a phenomenon (Bansal et al., 2018). Searching for patterns in a phenomenon within certain boundaries makes the qualitative method appropriate for the study. Quantitative research and quantitative tools are methods of inquiry into how people focus, understand, or interpret situations and experiences in their world (Yilmaz, 2020). I did not select the quantitative method since the research did not test a theory about variables' characteristics or relationships. The mixed-method is a combination of both the quantitative and qualitative methods (Rendle-Short, 2019). The mixed method is not right for addressing the proposed study's purpose since reviewing supported employment strategies does not require developing statistical inferences about variables' characteristics or relationships.

Ethnographic, narrative, and case studies are principal qualitative designs (Saunders et al., 2019). Ethnographic design is one approach researchers use to describe and interpret the inner workings (culture) of an organization or group such as its values and beliefs (Kassan et al., 2020). Exploring an organization's culture is not the focus of my study. Therefore, I did not use ethnographic design for this study. The narrative design uses the participants' storytelling of historical events (George & Selimos, 2018). This study focuses on the strategies used by organizations to integrate ASD employees into the workforce and does not require the participants' personal stories. Thus, I rejected the narrative design.

Researchers use a case study design to systematically explore real-life phenomena using multiple data types, collection methods, and analyses (Bansal et al., 2018; Duchatelet & Donche, 2022). According to Yin (2018), a researcher uses a multiple case study to choose among several cases with similar related and predetermined outcomes. Using a multiple case study also accomplishes a review of supported employment methods in numerous organizations helpful in assisting ASD employees in maintaining employment and reducing reliance on support funds for sustainment. A single case study provides the results from a single viewpoint, limiting the researcher's ability for analytical comparisons available from two or more cases.

### **Research Question**

What strategies do managers use to integrate autistic employees into a diverse workforce?



### **Interview Questions**

1. What supported employment strategies do you use to integrate persons with ASD into the workforce?

2. How does integrating persons with ASD into the workforce fit into the organization's strategic plan?

3. How did you assess the effectiveness of the strategies for integrating ASD employees into the workforce?

4. What key obstacles have you addressed to integrating ASD employees into your organization's workforce successfully?

5. How did your organization address the key obstacles to integrating ASD employees into its workforce?

6. What other information can you provide on your organization's strategies for integrating autistic employees into your organization's workforce?

### **Conceptual Framework**

The conceptual framework for this study is the attribution theory. Weiner (1972) proposed attribution theory as a person's belief of their behavior, or the behavior of others stemming from internal factors (effort and ability) or external factors (chance). There are two major tenets and three constructs to attribution theory. One tenet of attribution theory is that over time, a person's behavior becomes consistent, building confidence in given attributes such as skills, knowledge, and abilities. Theorists, researchers, doctors, and other specialists such as educators believe that ability is a stable attribute that increases over time (Stuer et al., 2019). The three constructs that form

attribution theory include stability (stable and unstable), locus of causality (internal and external), and control (controllable and uncontrollable). The constructs are the basis on which a person centers the significance of an event, further based on the need to find a cause associated with an understanding of the current conditions (Weiner, 1972).

Attribution theorists contend that individual predispositions, social norms, prior success or failure experiences, level of performance, and time spent at the task are a few cues people use to determine or infer what caused a behavior, action, or event (Hewett et al., 2018). The inability to act or react as expected in social settings such as the workplace is one reason adults diagnosed with ASD are underemployed, unemployed, or fail to maintain employment (Patton, 2019). Another tenet of the attribution theory is the mistreatment of employees with ASD, who are often misunderstood, and misjudged solely based on assumptions, attributes, and judgments by coworkers (Hewett et al., 2018). Therefore, attribution theory is suitable for understanding the strategies that leaders use to integrate ASD employees into the workplace.

### **Operational Definitions**

*Asperger's Disorder/Syndrome:* Asperger's disorder/syndrome refers to a subsumed diagnosis of persons with typically above average intelligence but with similar atypical communication and social interaction behaviors attributed to persons with autism spectrum disorder (Howlin, 2021).

*Autism Spectrum Disorder:* Autism spectrum disorder is a neurological disorder characterized by difficulties with social interactions, limited interest, and other atypical behaviors expected from people (Olcay et al., 2019).

*Functional Consciousness:* Functional consciousness is the deliberate processing of information intended to select, construct, regulate, and evaluate solely to decide a course of action based on the information processed. Consciousness creates a meaningful life and self-identity (Bandura, 2001).

*Learned Helplessness:* Learned helplessness is a conditioning procedure that teaches effort or self-responsibility has not affected the outcome. The learned response is that all outcomes are externally controlled by environmental factors, thus hindering later performances.

*Supported Employment:* Supported employment provides supervision, training, and transportation as needed to help sustain employment (Keel et al., 1997).

*Typical Development:* Typical development includes the processing and integrating information from several modalities to include auditory and visual cues or stimuli (Feldman et al., 2018).

### **Assumptions, Limitations, and Delimitations**

Research parameters are fixed limits upon how something must or could happen. The parameters of this study include assumptions, limitations, and delimitations. The following discussion identifies the assumptions, limitations, and delimitations specific to my study.

#### **Assumptions**

Assumptions in research are ideas, concepts, or positions accepted in the research project as true but cannot be proven true (Theofanidis & Fountouki, 2018). For example, one assumption is that protected persons are not needed to take part in the study. Another

assumption is that enough companies that use supported employment strategies will participate.

### **Limitations**

Research studies cannot cover every eventuality or potential outcome; therefore, any shortcoming of the study is a limitation (Theofanidis & Fountouki, 2018). One limitation of the study is the participant's reluctance to prevent revealing intellectual property or other trade secrets. A second limitation is the potentiality of interview questions creating a conflict of interest for participants. A third limitation falls into the aspect of companies not taking part to protect employees. Neuro-diverse persons are a protected class of persons, thus mandating particular care and caution, along with attention to anti-discrimination laws.

### **Delimitations**

Unlike limitations, delimitations are things that the researcher can control. Delimitations are the boundaries that narrow the study and make it more manageable (Theofanidis & Fountouki, 2018). The study focused on companies that specifically hire people with ASD. Yin (2018) discusses there is no sample size formula for qualitative studies. Due to both time constraints and funding, the sample size was limited to a small group of respondents selected for their knowledge and expertise related to my study. Additionally, the study includes only companies with proven successful supported employment strategies.

### **Significance of the Study**

This study may offer strategies that can be used by other organizations to recruit, hire, and train people with autism. Further, the study findings may provide organizations with strategic plans to increase their workforce and gain a strategic advantage in their respective markets. Lastly, the study may inspire organizations to actively seek or expand their workforce through the hiring of neurodiverse persons.

### **Contribution to Business Practice**

Employees with ASD can offer a new perspective, which could create added value. Persons with ASD or other neurological disorders can contribute to workforce performance (Patton, 2019). Leading organizations are actively seeking out diverse groups (i.e., neurodiverse) for inclusion opportunities into areas such as decision-making and positional power with the purpose of allowing all employees to fully take part and contribute to the organization's competitive advantage (Ortiz, 2020). This competitive advantage may come forth in innovation because, unlike neurotypical employees, ASD employees think differently, bring concepts or ideas, and offer longevity crucial for companies to be competitive (Gartsu & Stefani, 2019; Ortiz, 2020). Another potential competitive advantage for organizations is recognition for their corporate and community citizenship because of hiring a diverse workforce. Dr. Scott has posited that employees' ASD attributes are the same attributes that make autistic employee's good employees (Scott et al., 2019). For one, persons with ASD are detail-oriented, excel at routine or repetitive work, and develop expertise in specialized areas (Patton, 2019). Organizations that have diversified their workforce with ASD employees have noted increases in

creativity and innovation among personnel, products, and services (Gartsu & Stefani, 2019). These skills afford any organization the ability to increase productivity and quality.

### **Implications for Social Change**

The study results could contribute to positive social change through the potential improvement of quality of life for persons with ASD. Previous studies show people who obtain gainful, meaningful, and fulfilling work have higher self-esteem and improved quality of life (Baker-Ericzen et al., 2018). When provided with supported employment, persons with ASD or other disabilities gained meaningful long-term employment, saw a marked increase in well-being, lifestyles, social interaction, personal relationships, activities, roles and functionality, and overall life satisfaction (Stuer et al., 2019).

Supported employment persons with ASD and other disabilities obtained meaningful long-term employment, earned higher wages, improved mental health, and decreased hospitalization. In addition, employment reduces reliance on community, local, state, or federal institutions or financial aid for the support, thus freeing up help and funds for others who cannot be employed (Garcia-Villamisar et al., 2002; Pillay et al., 2022).

Organizations and industries that actively change recruiting, hiring, and training practices related to persons with disabilities across all spectrums to include mental, learning, and physical, reduced biases toward disabled employees, thus leading to increased hiring and retention and reducing labor shortages (Schloemer-Jarvis et al., 2022). However, employers must take caution when hiring persons with ASD or other neurological differences, as some may work at a much lower level of functionality.

## **A Review of the Professional and Academic Literature**

I conducted a literature review to explore the strategies managers use to integrate autistic employees into a diverse workforce. The first section of the literature review covers attribution theory, theory of mind, and self-efficacy theory. In the second section of the review, I discussed several aspects of autism spectrum disorder, including diagnosis, education, early intervention, ASD attributes, and Asperger's Syndrome. In the third section of the review, I discussed the available technologies to educate persons with ASD, such as AI and video self-modeling. The fourth section covers a discussion of varying employment assistance techniques such as ACCESS, TEACCH, SUCCESS, and Neurodiverse HR Strategy-Inclusion. Lastly, in the concluding section, I discussed the workforce, typical employees, neuro-diverse employees, barriers to employment and countermeasures, and the gaps in the literature.

My study focuses on identifying the conceptual framework of ASD and other developmental disorders, particularly how diagnosis, intervention, education, and removal of employment barriers allow for full integration into society, self-reliance, and less reliance on governmental subsidies. The project's conceptual framework depends on critical analysis, research, and data synthesis gathered from literature and participant responses. Finding standards of diagnosis, education, and intervention are the beginning point to determine and leverage strategies best suited for the study.

This project used various peer-reviewed journals, dissertations, books, government, and ASD websites. The databases searched include Business Source Complete, Walden University, Emerald Management, EBSCO, Sage Premier, ProQuest

Central, and Academic Search Complete. Other sources of information were Google Scholar, Center for Disease Control, Research Autism, Industrial and Organizational Psychology, and the Directory of Open Access Journals. Keywords used for searches were *management, autism, autistic, Asperger Syndrome, video self-modeling, neurodiversity, training interventions, typical development, ASD diagnosis, early interventions, barriers to employment, employment, employment accommodations, and competitive advantages*. The review covered four books, four dissertations, four company provided documents, and 102 journal articles, for a total of 114 sources, with 88% published between 2018 and 2023; of the total resources, 92% were peer-reviewed.

### **Attribution Theory**

Attribution theory is the study of causality of why things occur in a specific manner (Weiner, 1972). People assign causes to their actions or reaction to a situation or circumstance. Attribution theorists believe that current actions and reactions to an event determine future behavior and expectations to similar events (Weiner, 1972). Heider's common-sense psychology theory, Kelley's covariation theory, and Weiner's attributional theory are all three attribution theories. This discussion covers the tenets of Heider and Kelley, only as contributors to Weiner's theory. Fritz Heider was among the first to theorize about human attributions.

Considered as the founder of attribution theory, Fritz Heider (1958) based his theory on the human need to make sense of the surrounding world, the environment in which they live, to control or predict outcomes, events, and situations. One tenet of Heider's theory suggests that people make attributions dependent upon the causality



internal (personal) or external (environment), or both. Internal causation centers on a person's motivation or ability, while external causation involves what is in the immediate, outside surrounding environment. Using this first tenet, a manager would try to make sense of an event surrounding an employee based on both internal and external factors of motivation, ability, and environmental impact. Heider based his second tenet on fundamental attribution error. This second tenet focuses on attribution errors; these errors can be a fundamental error or an actor-observer error. A fundamental error occurs when using internal factors versus external factors to explain an individual's behaviors.

In contrast, the actor-observer error occurs when the actor bases their actions on external forces of the observer, where the observer bases their actions on the internal factors of the actor (Hewett et al., 2018). The final tenet of Heider's theory is the self-serving bias. The self-serving bias is when people base their success on their internal attributes but view failures due to external forces beyond their control.

Kelley's (1967) theory discussed how people determine the cause or causes of another person's behavior, events, or situations (Hewett et al., 2018), specifically that people use a covariation principle to determine the cause behind another person's actions based on previous behavior in similar situations. Kelly noted three factors that influence how an observer attributes a person's behavior or reaction to either internal forces or external forces. Kelley's first factor is distinctiveness, a person's behavioral pattern given a set of similar situations. The second factor is consensus, which occurs when multiple observers agree or form a consensus that a person's behavior given similar situations will always be the same; thus, the observers attribute the person's behavior to internal factors.

The final factor in Kelley's theory is consistency, which develops when a person acts or reacts to a situation in the same manner over time; thus, an internal factor reacts regardless of the external environment. Weiner (1972) applied attribution to the educational process.

The two factors of achievement motivation are "can" and "try." Expanding on Heider's (1958) two factors of "can" and "try," Weiner (1972) demonstrated that achievement motivation is directly proportional to and dependent upon the person's ability to learn cognitive constructs representing the value of effort. Weiner's research proved that effort or intention develops alongside and in conjunction with achievement motivation. In other words, learned helplessness is synonymous with low achievement motivation and assumes that effort does not affect the outcome. Weiner hypothesized a parallel relationship between achievement motivation and growth of intention of moral judgments, bottom line intentionality versus ability or can versus try. Organizations, managers, supervisors, and trainers must decide whether the ASD employee did not perform to expectations because of a lack of desire (try) or inability (can). Managers must also learn to mitigate attributional conflict among ASD employees effectively.

Attributional conflict arises when two or more vested entities or parties have varying views or opinions on the cause of a specific event. Weiner (1972) attributed the attributional conflict to environmental factors that influence achievement outcomes concerning ability versus effort. Attributional conflict potentially arises from experiences in the following areas: (a) the number of prior successes and failures, (b) pattern of performances and maximized performance levels, (c) current social norms, (d) time on

task, and (e) other environmental cues such as personal predispositions. Attributional conflict may arise between learner and educator. Supervisors, trainers, educators, and others in a teaching or training position must be mindful of placing expectancy upon ASD employees. False expectancies might lead to the assumption that the ASD employee did not “try” to put forth the effort, versus “can” and the underlying factor of the employee’s lack of ability. Persons with high achievement motivation must not ascribe achievement failure to motivational deficits, but instead, must address ability deficits.

Personal behavior attributional conflict arises when people perceive their actions or inactions influenced by the external and surrounding environment instead of their traits. The belief of inner personal behaviors versus the personal behaviors of others is another attributional factor discussed by Weiner (1972). Managers and others who work with ASD employees should be mindful of self-predictions with ASD persons. With self-predictions or self-ascriptions, an ASD employee or any employee may ascribe certain attributes to others and themselves that can be a self-fulfilling prophecy. Some attributes include deficient performance or failure, which are expected, realized, and attributed to lack of motivation instead of lack of ability.

Two final attributional conflicts both concern observation conflicts. Observation from the educator’s point of view may well be completely different from that of the participant when referencing and making inferences to achievement. Trainers, educators, and others must not falsely ascribe and take on the responsibility of a student’s or employee’s achievement success or failure as their success or failure (Weiner, 1972).

Finally, it is crucial to understand and realize that simply because a person spends an excessive amount of time on a given task, this may not show a causal relationship to ability, success or failure, or motivation. The attribution process has the potential to explain the role motivation “try” and ability “can” play in performance and learning in ASD employees (Heider, 1958).

### **Theory of Mind**

Using Theory of Mind (ToM), doctors, educators, clinicians better understand how and why ASD people do not act or react in the expected or predicted manner when confronted with typical stimuli, stressors, or situations. Premack and Woodruff developed ToM in 1978, describing it as the developmental concept that other people have different and varying views, thoughts, and beliefs that influence behavior (Premack & Woodruff, 1978). ToM delves into unobservable mental states and includes the cognitive ability of people to view their or others’ mental states, which encompasses thoughts, beliefs, intentions, and desires, and making observed behaviors make sense (Arioli et al., 2018; Roark et al., 2022). ToM develops from infancy through adulthood, allowing the individual to understand that others have emotions, feelings, and thoughts, and that it is crucial in social relationships to accept others’ emotions, feelings, and thoughts (Premack & Woodruff, 1978). ToM and social cognitive impairments encompass the core lack of understanding of social cues and norms in adults with ASD and several neurological disorders such as ADHD, schizophrenia, and bipolar disorder (Arioli et al., 2018; Lawson et al., 2018; Premack & Woodruff, 1978). The inability to act or react expectedly in a

social setting such as the workplace is one of many reasons adults diagnosed with ASD are underemployed.

### **Self-efficacy Theory**

Belief in one's abilities goes a long way in deciding self-confidence to complete a task. Student employment includes skills, knowledge, and the ability to meet market demands for talent developed through formal or informal education (Liu et al., 2020). Teachers and educators are needed to provide students with the knowledge needed to obtain and maintain gainful employment. The curriculum design has the intent and purpose of instilling students with the information, knowledge, skills, and ability to understand, follow, and fulfill the trends, ethical values, career outlooks, and work requirements for employment.

A person's belief in themselves is crucial regardless of their neurological development. As defined by Bandura (2012), self-efficacy is a person's belief in their abilities and capabilities developed across and through varied situations and activities instead of being symmetrical across all situations and activities. Bandura discussed four areas in which self-efficacy develops: (a) skill mastery, (b) social modeling, (c) social persuasion, and (d) resolve. Persons with ASD/AS/ADHD or other neurological disorders provided with proper educational and vocational interventions (depending upon the severity of the disorder) can succeed in their daily life, socially, and at work. Self-efficacy is improved in persons with ASD/ADHD with increased personal performances or skill mastery, viewing persons like themselves succeed in a task or social modeling through encouragement to believe in themselves or social persuasion and boost self-

improvement or resolve (Harris, 2020). Clinicians, educators, and other professionals use self-efficacy and other theories to help persons with ASD or other neurological disorders develop advanced education skills or enter the workforce.

### **Autism Spectrum Disorder**

Autism is not a single defined disorder with a specified set of symptoms. Rather, ASD manifests in behavioral challenges and learning abilities with many attributes (Christensen et al., 2019). According to the Centers for Disease Control and Prevention (CDC; 2020), ASD is a neurological developmental disability showing ranges from mild to severe. ASD affects a person's ability to interact and communicate socially (Flower et al., 2019; McDonnell et al., 2019). As ASD persons age, particularly those diagnosed with Asperger Syndrome (mild autism), they have been reported to show reduced autistic related symptoms with improvement in social skills, decreased ritualistic behaviors, and less sensory overload (Howlin, 2021). ASD attributes include avoidance of eye contact, being alone, difficulty understanding others' feelings, or expressing personal feelings (Sakarneh et al., 2019). Additional ASD attributes include lack of need or desire to be touched or "cuddled," failure to respond to voices but will respond to noises, not play, or pretend, and difficulty adapting to routine changes (Flower et al., 2019). With an early and proper diagnosis, education, and intervention, potentially considerable progress is possible for persons with ASD to achieve advanced education and gain and keep competitive employment. (Dynia et al., 2020). Detecting autism in a person as early as possible may hold the key to their future success.

## **ASD Diagnosis, Education, and Intervention**

Diagnosis, education, and intervention are elements used to aid parents, teachers, doctors, clinicians, and researchers in understanding and helping patients cope with the effects of autism. There is no set medical test such as a blood test to diagnose autism; therefore, doctors review a person's behavior and developmental history to decide if a person falls on the autism spectrum. Education is essential for personal knowledge and growth and typically occurs during the school-age years and sets the foundation for the rest of the person's life. There are numerous intervention methods used to treat autism and tailored to meet the patient's needs.

### ***ASD Diagnosis***

Having a specific diagnostic test would aid all stakeholders with an early and complete diagnosis that may provide opportunities for early educational interventions. Families typically search for years for a diagnosis, intervention, and resources before receiving the help and aid needed to adequately support their children with neurological disorders such as ASD. McDonnell et al. (2019) discussed the concerns and issues that clinicians, educators, doctors, and other professionals face when diagnosing and prescribing early intervention for persons with ASD. In comparison, Croteau et al. (2019) researched how late diagnosis and intervention potentially lead to added financial expenses and stress for families as they seek resources and providers. Early diagnosis and intervention are the keys to obtaining the services needed to aid persons with ASD in regulating behaviors, obtaining advanced education, and working within the society or

environment in which they live and work. Education, either formal or informal, is key to a successful, productive, and financially stable life.

### *Education*

The skills needed throughout life come from transitioning from early education to higher education to work. Persons with ASD, ADHD, or other neurological disorders struggle with the necessary skills to obtain and keep practical and sustainable employment. Many skills employers look for include assignment completion, timeliness, and regular attendance. Neurologically challenged persons lack a quality education depriving them of the knowledge, skills, and abilities needed to support themselves, leading to unemployment or underemployment and a greater dependency on local and federal funds (Gordan & Fabiano, 2019). Gordan and Fabiano discussed the correlation between poor school performance and poor executive functions in persons with ASD. As in school, incomplete assignments, increased tardiness, and higher absenteeism make completing courses and advanced education opportunities difficult. Poor executive functions such as tardiness, inattention, restlessness, unsociability, and difficulty with the interview process, contributing to lower status jobs, inconsistent employment, and lower wages for persons with ASD. Various training methods are available for usage by professionals to help ASD persons learn educational and job marketable skills.

Targeted training in education and employment may hold the key to aiding persons with ASD to improve their educational opportunities and employment prospects. Gordan and Fabiano (2019) discussed how ASD/ADHD persons might receive help from training to provide educational and employment aid. Training in interviewing, conflict



resolution, and job placement, using job coaches or liaisons, are methods considered when transitioning ASD/ADHD youths and adults through the education system and obtaining a job that will allow self-sustainment. One method of training is occupational therapy. Transition programs both private and public offer persons with AD/AS, ASD, ADD and other neurological disabilities the opportunity to develop the skills necessary for independent living to include social communication, employment support, basic and higher education guidance all skills needed while transitioning from early education settings to higher education and eventually into the workforce (Solomon, 2020). Language and sensory interventions are just two methods used in educational and work intervention.

### ***Intervention-Language***

Sociability is a critical part in securing employment. Language intervention is a crucial part to aiding persons with ASD to acquire the ability to interact within society. According to Sandbank et al. (2020), the main predictor among autistic children is developing and acquiring language skills. The language skills among persons with ASD range from extreme language impairments to average language skills to above-average language skills (Brignell et al., 2018; Sandbank et al., 2020). Language intervention is administered through the home or a clinic and is as simple as speech-generating devices, activity schedules, or video modeling of targeted skills. Successful language intervention depends on several factors.

The effectiveness of language intervention depends upon the individual, the language outcome measured, and the aspects or attributes of the specific intervention.

Two types of language intervention are behavioral and naturalistic development.

Behavioral intervention (BI) is the most often used early intensive intervention. The Picture Exchange Communication System (PECS) is an adult-led BI used with children struggling with language or communication issues. PECS allows the person with ASD to start communication (Brignell et al., 2018; Sandbank et al., 2020). PECS requires the patient to take a picture of what they want to another person and exchange the image for the desired item. Naturalist developmental behavioral interventions (NDBI) require that the individual actively participates in learning the taught skill. NDBIs are typically undertaken in a natural setting like a playgroup therapy versus a structured classroom and significantly affect improving language by encouraging patient initiations rather than introducing prompts that require specific or expected responses (Sandbank et al., 2020; Tiede & Walton, 2019). Another concern for ASD persons is their struggle with sensory overload addressed using sensory intervention methods.

### ***Intervention-Sensory***

Targeted senses in a sensory-based intervention are auditory, visual, and tactile. However, prior research has shown that sensory interventions are less effective in language and other associated skills improvement. Treatment and Education of Autistic and Related Communication Handicapped Children (TEACCH), an interactive intervention method, will be discussed later in the paper. Suffice it to mention that TEACCH is one intervention that requires visual cues within a specifically designed system designed for a particular outcome (Brignell et al., 2018). Other sensory interventions include technology-based approaches incorporating video modeling, video

games, computers, robots, and even small hand-held devices such as mobile phones or personal digital assistants. Technology-based interventions or assistive technology (AT) such as picture cards or speech-generating devices aid ASD patients in functioning independently (Pham et al., 2019). AT's improve skills needed for social communication by promoting obtained communication skills through synthesizing speech reproduced from ASD person interaction with speech-generating devices. Using AT benefits reducing the exposure of ASD persons to external and extraneous sensory stimuli. Employers and coworkers must understand ASD and address required work skills with ASD employees. Understanding ASD and addressing work-required skills will allow employers and coworkers to provide interventions in work modifications such as a reduction in lighting, smaller workgroups, or simply providing quiet rooms (Scott et al., 2019). The characteristics, attributes, and symptoms of ASD are as varied as those diagnosed with ASD.

### ***Characteristics, Attributes, and Symptoms of ASD***

ASD, unlike many other illnesses, diseases, or impairments, does not present with consistent characteristics, attributes, or symptoms. According to Morales-Hidalgo et al. (2018), the wide range of ASD attributes ranges from mild and capable of functioning within society to severe presenting with low cognitive or language abilities. Note, the presented symptoms and severity change over the person's lifespan creating difficulty in successfully functioning in various settings and delaying diagnosis (Morales-Hidalgo et al., 2018). There is a myriad of attributes, symptoms, and characteristics that manifest in ASD persons.

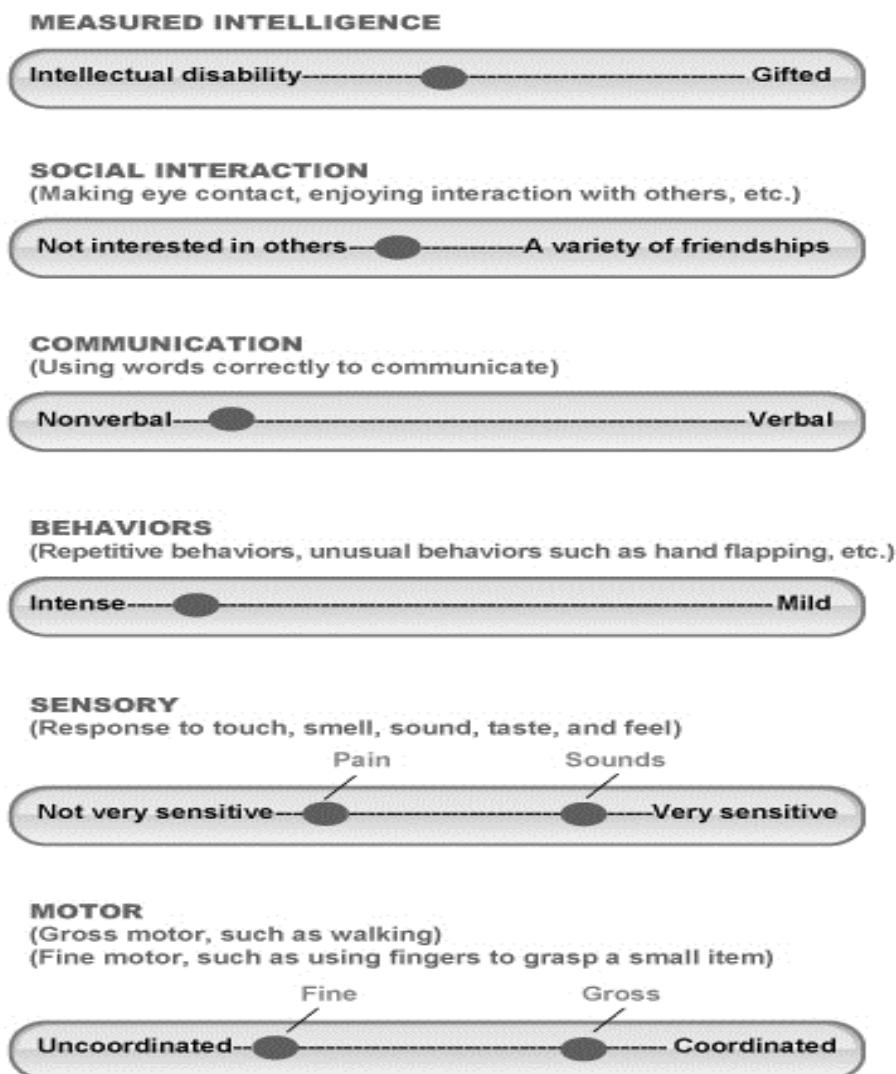
There are core symptoms that manifest in most people with ASD. The core symptoms (cognitive and social skills) discussed about persons with ASD include difficulty with interactions and communication in social, educational, and familial encounters often characterized by repetitious or restricted behaviors and selective actions or activities (Eylen et al., 2018; Flower et al., 2019; Sandbank et al., 2020; Tiede & Walton, 2019). The core symptoms are atypical of average growth, behavior, and development in children, adolescents, and adults. ASD patients place different psychological complexes on the reality of a situation called atypical perception. ASD patients show extreme emotions with an inability to identify their emotional cues called abnormal emotional response; experience times when sensory information does not process into an organized response once inside the brain and is labeled sensory processing disorder (Sakarneh et al., 2019). The core characteristics of ASD include comorbid impairments associated with issues faced when seeking employment, reasons they struggle with interviews, and difficulty “fitting in” with coworkers (Gordan & Fabiano, 2019).

There are three central impairments associated with ASD. Tiede and Walton (2019) discussed how the three central comorbid impairments of cognitive development, adaptive behavior, and communication (verbal and non-verbal) are key to social inclusion, including being gainfully employed. Core characteristics manifest in a lack of sharing, little to no interest in others, atypical preoccupation, noticeable restricted interest, precise repetition or echoing of words or sounds, sensory and movement preoccupation, nonfunctional routines, and insistence on sameness (Christensen et al.,

2019). Besides sensory overload experienced by some persons with ASD, there are stereotypic sensory behaviors exhibited by persons with ASD such as blinking, hand-flapping (visual), snapping fingers, tapping ears (auditory), rubbing of the skin with a hand or object (tactile), rocking back and forth or side-to-side (sense of balance), licking objects or placing things in the mouth (taste), and smelling objects or sniffing people (smell). Regarding characteristics, attributes, and symptoms of ASD, the CDC (2020) shows autistic people can exhibit average intelligence, have limited language skills, be self-stimulating such as scratching, under reacting to pain, or overreacting to sounds or smells. Some autistic people have underdeveloped fine motor skills, such as the inability to grasp a small object, and vary from person to person (see Figure 1). The most common association of ASD people with the highest end of cognitive and social functioning capable of working within the expected parameters of society is Asperger's Syndrome.

**Figure 1**

*Example of Range of Symptoms*



*Note:* Center for Disease Control and Prevention (<https://www.cdc.gov/ncbddd/autism/signs.html>)

## **Asperger's Syndrome**

Once considered a separate neurological condition, Asperger's disorder (AD) or syndrome (AS) classified highly functioning ASD persons. ASD is a heterogeneous condition encompassing a wide range of cognitive and linguistic skills and abilities, to include AD/AS (Howlin, 2021). AD/AS persons have normal developed intelligence above average and do not differ from other typically neurologically developed persons. AD/AS persons have the same abilities to achieve success and rise to positions of eminence as normally developed employees (Howlin, 2021). Persons with AD/AS can often simulate normal conversation and social skills for short periods, but if the situation requires extensive interaction or the context of the interaction changes, the AD/AS person will often become overwhelmed and do not adapt to the unfamiliar environment (Eylen et al., 2018). Clinicians understand persons with AD/AS or ASD have difficulties with executive functions (planning, scheduling, analyzing, organizing) which appear in the critical developmental stages of a person's life increasing the difficulty to function in society, pursue further education, and integrate into the workforce (Bailey, 2018). The difficulty in performing executive functions presents a barrier to employment and further education. It is that barrier that employers must mitigate to equip ASD employees for sustained employment better. The AD/AS person has more difficulty transitioning from one stage of life to another, such as transitioning from secondary school to post-secondary education or into the workforce. Solomon (2020) discussed how employment provides ASD persons with the opportunity to hone skills gained in transition programs. Problems arise with the time needed to transition and the need for transitioning programs

versus the availability of resources (Nicholas et al., 2018). In comparison, the typically developed brain functions more as one cohesive unit.

### **Typical Development**

During typical development (TD), people learn how to act, react, and interact within their surrounding environment and society. The human brain morphs and develops during several distinctive periods of growth and development from gestation through childhood through adolescence and finally adulthood (Morgan et al., 2018; Supekar et al., 2018). The mapping of the human brain, called the connectome, allows clinicians, doctors, therapists, neurologists, and others to distinguish the functioning of a typical brain versus the atypical brain. In the typical brain, the connectome distinctiveness (the expected development of the brain) allows for the classification or attribution of expected behavior. Functional connectome appears in early infancy and stabilizes even during the rapid development of the brain (Hu et al., 2022). A critical development for all people interpreting facial expressions allowing for mutual understanding of others and showing proper behavior (Jaliawala & Khan, 2020).

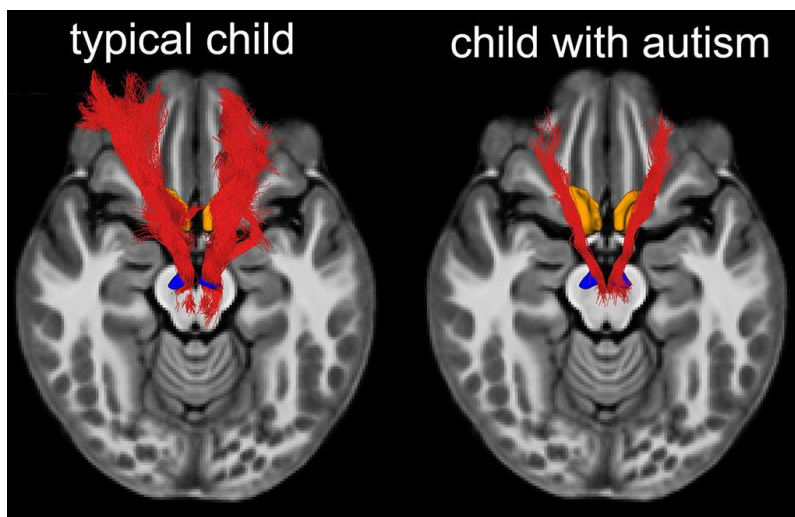
Typical development (TD) begins at birth, where newborn infants connect faces with voices and noises to objects (Segers et al., 2020). Any decrease in a person's ability to integrate the association of sight and sound dramatically affects their ability for interpersonal interaction and interrupts the processing of speech, language learning, and social communication exponentially (Jaliawala & Khan, 2020; Segers et al., 2020). TD persons have a physiological response to social stimuli seen as a pupillary response. The pupils physically change shape (dilates) in response to social stimulation, indicating the



integration of multisensory information conducted at the higher levels of social abilities (Segers et al., 2020). The pupil changes in persons with ASD diminish dramatically, thus vastly affecting ASD person's ability to successfully assimilate social stimuli and integrate into society with normal expected and typical behaviors and responses (Segers et al., 2020). Pupil dilation is just one manifestation of the physiological differences in neurotypical and atypical brain function.

### **Figure 2**

*Key Social Reward Circuit in the Brain Impaired in Kids with Autism*



ATs designed to improve education and training are imperative in aiding ASD persons with increasing cognitive reasoning, social adaptability, and language improvement.

### **Technologies to Assist in Education and Training**

There are several technological advances currently in use when working with autistic children, adolescents, and adults. These technologies aid with communication, decision making, social networking, and even vocational training. The purpose of

technology usage with ASD is to aid autistic persons to gain independence and work on their challenges.

### *Video Self-modeling*

One method used to teach and train ASD persons to act or react appropriately to a social stimulus or simple self-care is video self-modeling (VSM). Williamson et al. (2013) discussed using VSM as an intervention method that uses images of skills children with autism spectrum disorder have not mastered. The study showed that some prerequisite skills might enhance the usability of VSM intervention in teaching persons with ASD practical skills that would increase their chances of gaining and maintaining meaningful employment. Likewise, Aspiranti et al. (2018) point out that computer-based interventions are remarkably effective for improving sight-word recognition. The quality delivery of intervention depends upon going beyond technology to include professional development and clear expectations and monitoring.

For VSM to be effective in the workplace, managers must understand the use of VSM in teaching functional job skills and understand how to interact with adult employees diagnosed with ASD. VSM or video-based instruction (VBI) is a practical intervention tool to teach marketable job skills, proper social interactions, social communications, following signs and direction, and successful integration into the workplace (Olcay et al., 2019; Pham et al., 2019). Stauch et al. (2018) expanded on earlier research about usage of VSM models to evaluate behavior of ASD persons in various social situations, including job interviews, conflict resolution, and workplace interactions, to expressly improve a person's social skills, nonverbal communication

skills such as eye contact and facial expressions. Visual learning is one learning style that uses aids to teach and train people.

VSM, VBI, or other computer-based interventions are visual aids. Clinicians, doctors, educators, and other professionals realize that ASD persons are typically visual learners and respond better to visual interventions (Parson, 2006). Parson found a digital video camera a practical and positive method for teaching social skills to secondary students. Instructors and job coaches use videotaped role-play that allows the students or employees to view themselves, offer positive feedback to peers while providing opportunities to rehearse social skills in a supported and safe environment. Parson allowed conflict and arguments to occur during the sessions over sports equipment usage or seating on a school bus. Even verbal disputes over the rules of a board game were all used in the session to allow the students to realize acceptable behavior and respond to a social situation. By the end of the study, students showed a definite increase in viewing themselves and reinforce positive social skills. Parents reported their students spent less and less time alone and showed a marked increase in social participation and decreased anxiety when faced with social situations. Reciprocal conversations noticeably increased, and students dealt better with changes and unfamiliar situations. Parson's study showed that using VSM produced a positive outcome in persons with ASD by providing the training required to improve the prerequisite social skills expected in a workplace setting and increasing the opportunity and potential for advanced education (Parson, 2006). Among current research for adaptive intervention techniques is artificial intelligence.

### *Artificial Intelligence*

Artificial intelligence (AI) may prove to be an effective intervention method. AI is when automated equipment performs behaviors associated with humans (Anagnostopoulou et al., 2020). Some human attributes of these machines include learning, adjusting, problem-solving, facial recognition, environmental adaptations, and the execution of a complicated task. The complexities of ASD, the atypical motor movements, the social and communication problems require that the professionals designing AI's that diagnose or treat persons with ASD know of autism and adaptive technology (Anagnostopoulou et al., 2020). Current studies of AI focus on improving the accuracy of the scales used to diagnose ASD. Researchers are conducting comparison studies between the atypical ASD brain and the typical average brain focus on the natural language of humans by collecting, correlating, and saving responses to questions seeking patterns in speech, syntax, semantics, and inflections. This brain comparison allows the clinician to determine the severity of the patient's symptoms and therefore determine the best treatment or progress over time with a particular treatment (Anagnostopoulou et al., 2020). AI allows for faster and more exact diagnosis, treatment, and access to service leading to early diagnosis and intervention, the keys to helping ASD persons improve their quality of life, ensuring a future of self-reliance through education and meaningful employment.

Digital interventions such as computers, tablets, and other devices are used to teach and train persons with ASD in communication and educational skills as well as social interaction and emotional development (Sandgreen et al., 2021). One AI gaining

momentum in ASD treatment is computer-aided systems (CAS) (Jaliawala & Khan, 2020). CAS provides a machine with the ability to see the world. If an autistic child focuses on a particular event or area not part of the learning process, the computer learns from the child. The next session begins with removing all distractions allowing the child to refocus on the topic. CAS is automated and relatively correct in diagnosis; the system has a greater outreach to rural locations allowing for early interventions, readily accessible and inexpensive treatment, education, and other resources. CAS, AI, VBI, VSM, and other adaptive interventions hold the potential to aid ASD adolescences and adults gain and maintain meaningful employment. Various employee assistance programs are available for clinicians, educators, and employment assistance agencies to help ASD persons gain and maintain employment.

### ***Employment Assistance***

This study discussed and reviewed the following three methods used in assisting autistic employees with teaching and training: a) Achieving Competitive, Customized Employment through Specialized Services (ACCESS), b) Supported Employment, Comprehensive Cognitive Enhancement, and Social Skills (SUCCESS), c) Treatment and Education of Autistic and Related Communication Handicapped Children and Adults (TEACCH). The study includes a discussion on neurodiverse human resource strategy and inclusion. Some employers recognize that neurodiversity in the workforce may provide a more competitive advantage in the market while providing autistic employees the ability to gain independence.

*Achieving Competitive, Customized Employment through Specialized Services**(ACCESS)*

Employment is necessary for providing a quality of life, and the ability to live independently employed autistic person averages between 4 to 11 percent (Smith et al., 2019). Competitive employment plays a role in the lives of all persons, not just persons with ASD benefiting employment includes all persons within a community performing the same job earning the same wage that grants the person the ability to sustain an economic position benefitting the local area with taxes and reducing reliance on government funding (Nicholas et al., 2018; Parr & Hunter, 2014; Smith et al., 2019). ACCESS is a program designed to aid persons with ASD to obtain the skills and abilities needed to obtain and keep competitive employment.

Coupling ACCESS and customized employment (CE) is adequate for employing autistic persons. CE seeks employers to match potential autistic employees for mutual benefits to the employee and the employer (Smith et al., 2019). Table 1 provides one methodology of the CE process. ACCESS sets the procedures to be followed during a course of action, making the application of the process consistent with each usage (Smith et al., 2019). ACCESS is critical to the practical and consistent implementation of CE programs across all areas and avenues. It affects servicing agencies, practitioners, and their clients to manage caseloads and other issues that require the active participation of all stakeholders to create and design training, intervention sustainability, employment, and other support services (Smith et al., 2019). Supported Employment, Comprehensive

Cognitive Enhancement, and Social Skills (SUCCESS) is another employment assistance program that provides ASD persons the employment opportunity.

**Table 1**

*CE (Customized Employment) Process Elements and Descriptions*

Process Element	Description
Discovery Process	Qualitative assessment of interests, skills, and conditions for employment.
Vocational Profile	Robust, strengths-based narrative snapshot of the job seeker and translation of “discovered” interest and skills to potential employment.
CE Planning	Person-centered team approach (job seeker, family, friends, VR counselor, other service/and support providers) to develop a blueprint for employment.
Visual Resume	Video/photo resume illustrating job seeker’s ability to complete essential elements of a job. Included in a career portfolio.
Job Development and Negotiation	Working with employers to identify unmet needs and to customize job opportunities to benefit from job seeker skills and talents.
Accommodations and Employee Supports	Environmental restructuring, training, and customization to enhance job seeker success and employment retention.

***Supported Employment, Comprehensive Cognitive Enhancement, and Social Skills (SUCCESS)***

Supported employment provides supervision, training, and transportation as needed to help sustain employment. The SUCCESS curriculum is a vocational program designed to improve the cognitive and social skills of persons with ASD. Baker-Ericzén et al. (2018), like Majid et al. (2019) and Scott et al. (2019), discussed how poor cognitive and social skills collectively termed executive functioning is a hindrance to successful employment due to the inability to problem-solve, organize, regulate behavior, or manage the task. Researchers and clinicians have found that poorly developed cognitive and social skills dramatically affected an adult’s life. Thus, the need for

evidence-based methods to provide practical support to enter the workforce is dire.

Cognitive skills encompass executive functioning and social adaptiveness that employers consider soft skills, make for good employees, and enhance compatibility with coworkers. ASD/AS/ADHD have similar deficits in executive functioning (flexibility, problem-solving, planning) and are predictors of decreased living and employment skills (Baker-Ericzén et al.; Majid et al., 2019).

SUCCESS was developed in Southern California via a research community (Active Collaborative Hub for Individual with AS to Enhance Vocation and Education—ACHIEVE). ACHIEVE consisted of multiple stakeholders, including investigators, educators, mental health and developmental disability services, caregivers, and other community leaders. Using a participatory research process approach, ACHIEVE developed and tested interventions created and designed to improve vocational and educational outcomes of youth transitioning through school and into the workforce (Baker-Ericzén et al., 2018). The core SUCCESS curriculum focuses on fostering the improvement of neurocognitive skills directly connected to executive functioning skills progressing to social cognition and social skills. The curriculum provides small groups within a vocational agency, training staff with support strategies for vocational training or employment, matching executive functioning with social skills, job search or work activities, and daily functional activities. A final employment assistance program is Treatment and Education of Autistic and related Communication Handicapped Children and Adults (TEACCH).



*Treatment and Education of Autistic and Related Communication Handicapped  
Children and Adults (TEACCH)*

Any fundamental study for the discussion and research on a person with ASD must include employment services and support. The purpose of supported employment is to help persons with developmental disabilities gain and keep competitive employment at or above minimum wage while providing them with the needed intensive support in the workplace (Keel et al., 1997). Division TEACCH is one such supported employment service and has provided services since 1960 (Sanz-Cervera et al., 2018). The services provided include diagnosis, assessment, individualized treatment, training, and consultation to parents, professionals, schools, and other agencies (Keel et al., 1997; Sui et al., 2019). TEACCH is more effective in furthering social skills and decreasing maladaptive behavior (Sanz-Cervera et al., 2018; Sui et al., 2019). TEACCH has various models used in teaching and training a person with the knowledge, skills, and abilities needed to gain and keep employment.

One TEACCH model uses a job coach who provides on-the-job training to clients. People using this model typically function more independently, and once employed, the coach fades out. A second model is the dispersed enclave model and assigns a job coach to a group of less independent ASD persons employed as individual employees and employed through varying jobs with a business and receive daily supervision, training, and support. The mobile crew model has a job coach providing community service to less independent ASD employees and provides the daily needed supervision with the end goal of moving them to an enclave model. The outcome of

supported employment is the training and placement of persons with ASD with a success rate of 89 percent (Keel et al., 1997). Once a proper diagnosis, treatment, and training plan are determined, companies must rethink how they recruit, hire, and train neurodiverse persons.

### ***Neurodiverse HR Strategy-Inclusion***

Competitive advantage is the real opportunity for any organization to support sustainability in the chosen market. Organizations must look for and prepare to launch or defend against transforming technological advances or disruptive innovations (Pierce, 2018). Autistic employees provide employers with a different avenue to gaining a competitive advantage in the marketplace. An organization must first acknowledge that neurological diversity is an asset and incorporate it into the business strategy (Rao & Polepeddi, 2019). Autistic employees offer many advantages to employers.

A few advantages autistic employees provide are attention to detail, pattern recognition, tolerance for repetitious tasks, and simply viewing things in a different approach to value creation (Bury et al., 2019). Employers, recruiters, coaches, managers, and even autistic employees must be mindful that not all autistic persons will be that exceptional, unexpected find. Organizations who seek to hire neurodiverse persons must supply the necessary items for accessibility needed for success at work, to include but not limited to information and communication, a change in organizational values and attitudes, ethical and moral care of these employees (Ortiz, 2020). Organizational HRs must consider the work environment, organizational practices, processes, and policies. Organizations have reported that neurodiverse employees tend to show more stability and

longevity along with bringing process improvements due to their logical, detailed, and inferential thinking and reasoning (Ortiz, 2020). The organization must adapt its recruitment, hiring, interviewing, and employee development to meet and accommodate the neurodiverse employee's needs, skills, and abilities (Bury et al., 2019; Ortiz, 2020). Changes in manager interactions, clear communications, supporting the needs of neurodiverse employees will spill over to all employees, thus improving the organization's ability to tap into the skills of all its employees, organizing innovative thinkers, and increasing its competitive advantage by keeping the talent in the house (Bury et al., 2019). The various theories used by researchers, theorists, clinicians, and educators to decide how to best service ASD persons by understanding how and why they act and react to the environment and various stimuli.

### ***Workforce***

Employment of persons with ASD/AD or other neurological disorders can organize a sustainable workforce and competitive advantage. A sustainable workforce is key to an organization staying relevant in its chosen industry, takes long-range strategic planning, and can organize a means to gain a competitive advantage (Acikgoz, 2019; Lee & Ha-Brookshire, 2020; Rao & Polepeddi, 2019). Maintaining a sustainable workforce requires a company to concentrate on employees as assets, considering their hiring practices and other policies that limit the creation of a diverse workforce by not fostering a climate of inclusion of all potential employees. Creativity and innovation can come from employees that think and view things differently because their brains function differently (Patton, 2019; Rao & Polepeddi, 2019). Company leaders find their initiatives

to meet the needs of their neuro-diverse employees, they meet the needs of all employees thus leveraging talent across the entire company and developing better managers, increasing employee engagement, and are more situationally aware and sensitive to individual needs (Ortiz, 2020). Scott et al. (2019) and Brooke et al. (2018) agree with Ortiz (2020) that (1) streamlining communications that are clear for ASD employees improved overall communication within the organization, (2) employee engagement across the organization increased increasing employee morale, and (3) ASD employees have shown greater loyalty factor, and lower turnover rates out of gratitude for being hired are factors affecting employment and creating long-term employment for ASD employees. ASD persons are not typical employees, and organizations must adapt to the special and uniqueness of neurologically different employees.

### ***Typical Employee***

There are two skill sets employers seek when hiring workers. Worker's skills fall into either soft skills or hard skills (Majid et al., 2019). Soft skills are typically those abilities that an employee possesses, such as critical thinking, decision-making, adaptability, teamwork, self-direction, communications, empathy, and challenging to measure. Hard skills are usually technical and are gained through education or profession, measurable, testable, and monitored and produced. Soft skills allow a person to feel job satisfaction and loyalty through interacting and communicating with other employees, clients, or business partners (Majid et al., 2019). Soft skills are emotional and cognitive and require reading and interpreting these things in other people, using facial expressions (Costescu et al., 2019; Majid et al., 2019). Soft skills develop during a person's early

formative years and through to adulthood (Hartley et al., 2020). Soft skills are vital to the competency of employers and managers (Majid et al., 2019). Employers of employees with neurological disorders face implementing plans and programs that teach and train both the required hard skills for the job but the more challenging task of teaching and improving soft skills.

### ***Neuro-diverse Employee: Autism Spectrum Disorder Employees***

Employers who tap into other types of skills possessed by neurologically atypical persons can exchange those skills for untapped soft skills. Although ASD employees have difficulty reading facial expressions, social communications, and even sensory overload or sensitivity, they have other skills and abilities invaluable to an employer (Sakarneh et al., 2019). Howlin (2021) discussed that higher functioning ASD persons become self-aware of their neurodiversity and use those unique skills, abilities, and interest to their advantage to improve their social inclusion which paved the way for long-term success academically and in seeking and keeping employment. ASD employees have excellent attention to detail and visual skills. Neurologically atypical persons think different, are highly intelligent, bring new perspectives, and excel in positions with tendencies toward repetition, information processing, or jobs that require accuracy, pattern recognition, and precision (Hayward et al., 2019; Rao & Polepeddi, 2019; Scott et al., 2019). One theory related to ASD persons is the hyper-systemizing theory. Hyper-systemizing theory is a method to explain why ASD persons have an increased ability to process a greater amount of information than usual and be able to piecemeal the information to a system of understanding; however, ASD persons still must

cope with overstimulation, anxiety, and poor time management (Eylen et al., 2018; Scott et al., 2019). Earlier discussions in this study discussed the limitations that ASD employees deal with daily that may inhibit successful employment. Limitations faced by ASD persons are poor social interaction, hyperactivity with all five senses, difficulty in determining the proper response to stimuli such as facial expressions, and poor eye contact and these limitations can often lead to feelings of isolation, higher than typical job failures, which can become frustrating and lead to low self-esteem (Howlin, 2021; Sakarneh et al., 2019). With supported employment, many ASD persons can overcome the barriers to employment, are afforded the opportunity to be included in mainstream society, decreased reliability on community support or other funding, and gain independent living (Parr & Hunter, 2014; Pham et al., 2019).

### ***Attention-Deficit/Hyperactivity Disorder Employee***

Research on ADHD college students showed that persons with ADHD have poorer organizational and time management skills, find task completion difficult, and making comparable grades to their peers more challenging, leading to higher tendencies to procrastinate (Goffer et al., 2019). Persons with ADHD, like persons with ASD, have difficulty with self-expression, supporting a social relationship, and struggle with anxiety, stress, and depression. Persons diagnosed with ADHD have work-related issues, functional impairments, socialization difficulties, and are underemployed or unemployed (Hayward et al., 2019). According to Goffer et al. (2019) work provides a keen sense of competence, satisfaction, and self-worth, and ADHD persons receive help from occupational therapy centered on intervention and support in daily living and therapeutic

activities such as sleep (Goffer et al., 2019). Like ASD, early diagnosis is essential for early intervention, a key to educational and employment success for ADHD. Executive function deficit is a similar core feature in ADHD as in ASD. It presents the same barriers to employment, including reduced self-regulation, productivity, social cognition, and adaptation of all skills and behaviors sought by employers when hiring (Hayward et al., 2019). Employers must figure out how to remove or at least reduce barriers to employment for persons with ASD.

### ***Barriers to Employment***

ASD people face multiple barriers to employment. Among the barriers to employment, many ASD employees find it difficult to find and keep employment that does not exceed their cognitive abilities (Solomon, 2020). Scott et al. (2019) reported similar findings as Solomon (2020) and consistent with Brooke et al. (2018) that barriers to employment include ASD severity, comorbidity, poor communications to include speech and language, maladaptive behaviors, and social ineptness. Recruitment of ASD employees are another barrier. Typical recruitment consists of interviews that can be intense, presenting a barrier to ASD people. The barriers are due to limited social interaction abilities, ineffective use, or misinterpretation of verbal (language) and non-verbal (body) communication skills, sensory overload leading to distraction, or simply unable to formulate how to respond to a question quickly (Flower et al., 2019). A barrier to keeping employment for ASD persons is sensory overload. Work accommodations can counter sensory overload. Nicholas et al. (2018) discussed how work accommodations made by employers and coworkers are beneficial for ASD employees. Harnett (2019)

expanded on Nicholas' concept of work accommodations in his study on open-concept offices. Open concept offices are a source of sensory overload for ASD persons because they allow too much lighting and noise, which present distractions to the ASD employee (Harnett, 2019).

There are countermeasures to help ASD persons in breaking past employment barriers. Organizations can create a quiet room or sanctuary for ASD employees to block out noises, smells, lights, and over socialization is key to providing them the opportunity to relax and take time to recharge allows the opportunity to destress and reduce meltdowns and anxiety (Harnett, 2019). Employment services provide ASD persons with getting through the interview process, workplace accommodations, coping skills for sensory overload or on-sight therapy or job coaching, job recruitment, and placement (Nicholas et al., 2018; Scott et al., 2019). Vocational training is another method available to aid ASD persons in overcoming employment barriers that improve social, work, and living skills and take the forms of internships, on-the-job training, or vocational training (Flower et al., 2019). Leadership also plays a role in helping ASD employees overcome barriers to keeping employment. The right leadership style that provides support, encouragement, work coordination and set tasking (job duties and expectations) to an ASD employee influences behavior, reduces anxiety, and garnishes favorable responses (Lee & Ha-Brookshire, 2020; Parr & Hunter, 2014).

### **Gaps in Literature**

There are many aspects to ASD and other neurological disorders that do not receive the attention of educators, therapists, or researchers. These areas include



cognitive, vocational, and mental health (Dydia et al., 2020). Additionally, research and studies are needed to determine educational and occupational interventions (Gordan & Fabiano, 2019). An area often overlooked in research is the potential treatment to improve executive functioning using cognitive-behavioral and social cognition (Baker-Ericzén et al., 2018). Although various research exists on student employees about workplace performance, more research on the curriculum cultivates the attributes sought by employers for successful employment (Liu et al., 2020). More research is needed to figure out how ADHD affects vital activities required for daily living, working, and leisure (Goffer et al., 2019).

### **Transition**

Section 1 focused on a qualitative multiple case study researching supported employment strategies for employees with ASD, integrating ASD employees into the workforce, the conceptual framework of attribution theory, and discussing which ASD attributes contribute to good employee attributes. Section 1 also covered the difficulty ASD employees face when getting hired and the complex nature managers face when hiring and working with the neuro-diverse person. Finally, the section synthesized the literature review.

Section 2 includes a discussion of the role of the researcher and the importance of conducting ethical research. Section 2 will cover an in-depth explanation of the research method and design, data collection, and analysis with a discussion on the study's reliability and validity. Section 3 will provide a detailed description of the study's findings as themes, including supporting evidence. I will also discuss the application to

professional practice, implications for social change, recommendations for action, and further research. I provided reflections, and the study concludes.

## Section 2: The Project

In Section 2, I restate the purpose of the study and discuss the role of the researcher, provide an expanded discussion of the research method, and present the study design. I describe participant and population selection, ethical research, data collection techniques, instruments, and data organization. Finally, I discuss the study's reliability and validity.

### **Purpose Statement**

In this qualitative multiple case study, I explored the strategies managers use to integrate autistic employees into a diverse workforce. The targeted population consisted of hiring managers from four Southern California organizations who have successfully integrated people with ASD into their workforce. This population is appropriate for this study because they understand the strategies used to help persons with ASD in integrating into the workforce successfully. An implication for positive social change is that better integration strategies may lead to improved quality of life for persons with ASD. Other implications for positive social change from better integration strategies are that they may lead to increased employment sustainability, thus supplying greater health care accessibility. Increased health care may improve overall health, leading to lower community health costs and decreased associated comorbidity disorders costs for persons with ASD.

### **Role of the Researcher**

The role of the qualitative researcher is to collect, process, interpret, synthesize, and analyze data (Yin, 2018). As the primary researcher, I served as the collector and

interpreter of the data. I used telephonic interviews, surveys, and both open source and organizational documents to develop themes. A key to a successful interview process includes considering the approach to conducting the interview that will allow for the interviewee adequate time to think and process the question and formulate a response (Braaten et al., 2020). Interview protocols are a contributing factor in qualitative research to improve data quality gathered from the interviews. Questions will be clear, concise, and formulated to elicit information I want to know (Farrugia, 2019; Oye et al., 2019). Following the interview protocol will also help maintain ethical research as required under ethical research guidelines (Ellis, 2019). For ethical reasons, I did not use incentives to solicit participants. I am not personally or professionally connected with any participants in the study. Maintaining all aspects of ethical research as outlined in the *Belmont Report* (National commission for the Protections of Human Subjects of Biomedical and Behavioral Research, 1979) protocol is my responsibility as a researcher. I will ensure risk reduction to participants, protect the confidentiality of all participants, and assure that any benefits or risks are equally distributed across all participants.

As the researcher for this project, I have no prior personal or professional relationship or connection to the participants. Participants were disqualified if any such relationship existed. It is essential for a researcher to set aside biases and prevent any prior knowledge from influencing the researcher and data. I have considered that I have a granddaughter and grandson with ASD, which could bias the study. To remediate this possibility, I will not interject or discuss my interest in the research topic but instead will focus on the responses from participants. I used the informed consent letter to inform all

participants about the purpose of the study. Besides using the same interview protocols for each participant, I used member checking, triangulation, and data saturation to minimize researcher bias.

### **Participants**

Participant selection is vital to successfully collect the data needed to perform an in-depth and well-informed study (Saunders & Townsend, 2018). I contacted four organizations that hire both people with ASD, and persons without ASD. Five managers from four Southern California companies versed in the companies hiring, training, and integrating strategies for persons with ASD were the targeted participants. Yin (2018) stated that a quality case study can be one that compares two or more cases to find common experiences. I also reviewed and analyzed company documents including but not limited to recruiting and hiring practices of persons with disabilities, training methods, and work accommodations.

Participants were managers selected based on their knowledge and ability to discuss new insight on successfully integrating ASD employees into an organization's diverse workforce. I sought out other participants and documents for review until sufficient data is obtained for data saturation. The size of the company and the number of employees does not affect this study and there are no eligibility requirements for participation. The company must have ASD employees for participation consideration. Selection criteria for manager participation are knowledge of (a) company employee status regarding disabilities, (b) a company providing work accommodations as required

by the American with Disabilities Act of 1990, and (c) company strategies for integrating ASD employees into the workforce.

Saunders and Townsend (2018) stated that failure to gain access and permission to collect the data makes selecting participants irrelevant. I researched how companies integrate ASD employees into their diverse workforce, as well as how to gain access to data, records, and participants, which may prove challenging. People diagnosed with ASD are classified as a protected class of people under the 1990 Americans with Disabilities Act for private sector employers, and by the Rehabilitation Act of 1973 for federal employment. Organizations will want to protect any proprietary data, information, and documents and to protect sensitive information about employees with disabilities. The documents I expected to obtain from participants include recruiting and hiring practices of persons with disabilities, training methods, and work accommodations. I contacted the following autism agencies such as Autism Speaks, Research Autism, and Exceptional Minds that help ASD persons with training, vocational rehabilitation, and job placement for organizations that hire autistic people. I contacted 10 to 15 organizations and selected the first four that met the eligibility criteria. Eligibility criteria were the baseline used to ensure the alignment of participants with the overarching research question.

As a researcher, I built trust and rapport with the participants. I shared with the participants the purpose of the research and the interview process, and I set up pre-interview sessions. The purpose of pre-interviews was to build rapport. In addition, confidentiality was key to my research. My research covers information vital to the

successful integration of ASD employees into an organization's workforce; therefore, keeping confidentiality for the organizations' most vulnerable employees was imperative.

### **Research Method and Design**

There are varying research methods and designs from which a researcher can select. For this study, I used the qualitative method and the multiple case study design to decide strategies managers use to integrate autistic employees into a diverse workforce. The following is a detailed description of both the research method and design.

#### **Research Method**

Research method selection is one of the most crucial factors under consideration by a researcher. The research method selected is based on the most effective way to gather data about the research topic. There are three basic methods available for researchers to conduct research (Olajide & Lawal, 2020). The methods available for researchers to choose from are (a) qualitative, (b) quantitative, and (c) mixed method (Saunders et al., 2019). The method chosen directly affects the analysis and interpretation of the results; therefore, it is imperative to select the right research method. A researcher uses a quantitative research method when testing hypotheses, collecting numerical data, and statistically inferring the results (Lo et al., 2020). I did not collect numerical data, test hypotheses, nor make statistical inferences; thus, the quantitative research method was not suitable for my research. Researchers use the qualitative method to allow the researcher to design and use varying interviewing techniques such as open-ended questions to gather information on a phenomenon (Pearse, 2019; Renjith et al., 2021). I collected data using open-ended questions in a semi structured interview making the

qualitative method most suitable for this study. The final method is mixed methods which is a combination of the quantitative and qualitative methods (Yin, 2018). I did not use a quantitative method, therefore using mixed methods was not right for this study.

### **Research Design**

A researcher has many designs to select from when conducting qualitative research including case study, narrative, and ethnography (Saunders et al., 2019; Yin, 2018). Researchers are bound to ensure that choices of design and research conducted are clear and explicit as to why the choices were made, how the choices appear in collection and analysis, and relationship to the research question (Howard-Grenville et al., 2021). With the case study, a researcher uses a small sampling to collect data that represents the larger target population in a controlled setting (Yin, 2018). In my study, I conducted five semi structured interviews using open-ended questions designed to collect data about the phenomenon making the multiple case study most suitable for the study. The multiple cases consisted of collecting data from three individual organizations providing me with varying perspectives on the topic.

Researchers use narrative design to capture real-life stories and experiences (Renjith et al., 2021). The ethnographic researcher's goal is to understand the culture through a systematic process to explain a cultural phenomenon of a group of people (Sharma & Sarkar, 2019). This study did not cover or discuss the lives, stories, experiences, or the culture of participants; therefore, neither the narrative nor ethnography design was right for this study.



## **Population and Sampling**

I selected a multiple case study design for this study. The population for this study came from organizations that actively recruit, hire, and train persons with disabilities. The sample population for the study included hiring managers from organizations who specialize in hiring persons with disabilities in Southern California who have successfully integrated persons with ASD into their workforce. The ideal participants are managers versed in the companies hiring, training, and integrating strategies for persons with ASD. The sample size was decided by data saturation and is not dependent upon a particular number of participants. Three areas will be reviewed when searching for data saturation points. The first area for data saturation is when other information does not produce a change in the coding system and thus does not produce any new themes. A second data saturation point is once reoccurring themes are derived from respondents' answers. When data has already been obtained and respondents begin to repeat other respondents with no prior knowledge of other interviews, it will mark the third data saturation point (Alam, 2020).

I chose the purposeful sampling method for selecting participants for the study based on pre-determined criteria, the small sample number sought, and the ability to for analytical generalizations (see Saunders & Townsend, 2018; Yin, 2018). Purposive sampling is not centered on generalizations or randomness. Rather, purposive sampling has at its core selecting a subset of participants with sufficient similar attributes or characteristics of the general population to maximize the chances to observe the phenomena of interest for the study (Lu & Franklin, 2018). Another sampling choice,

snowball sampling, is used when the researcher has difficulty deciding (a) who makes up the population, (b) who to interview in the population, or (c) how to gain access to the population for the study (Bakkalbasiouglu, 2020). Data saturation was decided when the data does not present new codes or themes.

### **Ethical Research**

As the researcher, I took great care ensuring that all research was conducted within the boundaries of ethics as set forth by the Walden University Institutional Review Board (IRB approval number 10-21-22-075833) using the four principles of the *Belmont Report* (National Commission for the Protections of Human Subjects of Biomedical and Behavioral Research, 1979). I did not offer incentives to any participant and participation will be strictly voluntary. All participants must read, sign, and return the Walden informed consent form (Appendix C). Participants had many opportunities to request clarification on all parts of the informed consent form, the interview questions, and the actual research being conducted before signing based on the protocols in the *Belmont Report* (National Commission for the Protections of Human Subjects of Biomedical and Behavioral Research, 1979). Participant confidentiality must be maintained with guaranteed anonymity. It is standard practice to have all consent forms signed and returned before a participant is allowed to participate in the research project (Farrugia, 2019; Oye et al., 2019). Any participant may withdraw consent and thus withdraw from the study without repercussion. Withdrawal can be requested verbally or written from the participant, or a third party authorized to request the withdrawal (Farrugia, 2019; Oye et al., 2019).

Persons with autism are a protected class of persons, and particular care is needed to protect their interest when conducting research on or about protected persons. Persons with autism were not directly contacted for this study. Any information about protected persons or persons with autism will be given a code and all organizations will be provided a pseudonym. Protected persons include persons physically, psychologically, and/or emotionally disabled, active or reserve military personnel, children, and elderly persons (Rehabilitation Act of 1973 and Americans with Disabilities Act of 1990). To assure confidentiality, all documents, records, and data created (hard copy or electronic) from the research will be locked in a secured cabinet and destroyed after 5 years. Electronic copies were stored on a removable storage system, kept in a separate and secured location from hard copy documents, and will be deleted after 5 years.

### **Data Collection Instruments**

I was the primary instrument of data collection and analysis. Data may be collected in a variety of methods including review of existing documents and literature, interviews, observation, focus groups, records and artifacts, surveys, or questionnaires (Olajide & Lawal, 2020). I used semi structured open-ended interview questions to elicit responses sufficient to answer the research question. I asked participants questions designed to help them recreate experiences of integrating ASD employees into the workforce.

Using an established interview protocol is necessary to execute procedural interviews. Based on an interviewing protocol, I asked specific questions to gather study-related information and within the time allotted for each interview session (Yeong et al.,

2018). All participants were interviewed using the same interview protocol and will receive the same informed consent form before the interview. One interview protocol strategy is to use a script that encompasses what is said before, during, and after the interview, includes reminder prompts for the interviewer, and gathers informed consent (Yeong et al., 2018). The interview protocol is in Appendix B.

Researchers use member checking to enhance reliability and validity. Member checking aids in mitigating bias. Member checking is an opportunity for participants to respond to a specified style of questioning as a part of the interview process ensuring accuracy of interpreted data and information, allowing them to adjust or add other information as well as aiding validity and reliability under the umbrella of accountability (Naidu & Prose, 2018).

### **Data Collection Technique**

Any researcher should aim to gather data and interpret the results and findings. In this study, data collection consisted of using the semi structured interview technique. Interview protocols were used to develop open-ended questions, record data, interpret results interpreted, and complete member checking.

According to Yin (2018), data is collected in a multitude of methods: a) observations, b) interviews, c) surveys, d) previous literature, e) archived documents, and provide any researcher rich data and a clear understanding of the research phenomenon. Interviews were my primary source of data. Requested organizational documents will provide other data to answer the central research question. The interview process will provide an opportunity to ask probing questions and to observe reactions, facial

expressions, body language, and other nonverbal cues to increase the quality of the data, telephonic interviews were conducted since face-to-face interviews were not possible (Yin, 2018). As part of the interview process, probing questions were asked to further understand a response or to gather more information, this was a potential disadvantage since it interrupted the speaker's natural and normal thought process. When it pertains to probing questions, the researcher must determine which is more important, consistency or answering specific questions (Wolcott & Lobczowski, 2021). Organizational documents provide specific methods on how an organization approaches and resolves challenges (Abdalla et al., 2018). Organizational documents may prove difficult to obtain and the researcher has no control over which documents will provide or the information they contain. Requested documents include recruiting, hiring, and training methods used with ASD employees.

Yin (2018) stated that in a qualitative study the researcher is the primary instrument for collecting data and the interview is the primary source of the data. Svanes and Andersson-Bakken (2023) discussed that open-ended questions create an environment that actively engages dialogue between the interviewer and interviewee. Open-ended questions in a semi structured interview are used in this study. Face-to-face interviews allow the researcher and the participant greater communication in an interpersonal setting with all the interactions from verbal and nonverbal communication lacking in surveys, emails, and even telephone conversations (Heath et al., 2018). This study will follow the interview protocol in Appendix A. A review of interview questions was completed ensuring data collection was effective and provided value. During the

interview, I took notes along with audio recordings, and used member checking to allow participants to confirm answers and to gather additional information or to expound on topics already covered.

### **Data Organization Technique**

I kept the data collected on a password-protected laptop. Reflexive journals were used to keep track of data. No personal information was outside of the study. I will store data for at least five years. All paper data collected is stored in a locked file cabinet drawer. After five years all documents, both paper and electronic, will be destroyed by shredding or deletion.

As the main researcher, I adhered to all standard interview and research protocols. Participant privacy is paramount, and participants will be provided pseudonyms to ensure privacy is maintained. I used computer software such as excel and NVivo (Alam, 2020) to assist with theme development, data organization, rigor, and for transcribing answers to interview questions. The basic process included using Microsoft software, Microsoft Word, to transcribe all audio recordings into a written format. I provided each participant a unique passcode protected file that includes their transcribed interview and a written approval form. As part of the data collection process, I used NVivo software to export transcripts to Microsoft Word.

NVivo is a more efficient method and analysis tool to organize data versus manual cataloging data. Some of the features of NVivo include organizing, storing, analyzing, and data presentation. For the purposes of confidentiality, each participant's interview was assigned a random number associated with their organization.

Randomization assures confidentiality (Surmiak, 2018). Procedures and methods used to ensure confidentiality was kept on my flash drive, hard drive, and safe. All data collected, storage mediums, interview transcripts, consent forms, and all items associated with this study will be destroyed ensuring required security for five years from the initial collection of data.

### **Data Analysis**

Qualitative research data analysis entails the examination, organization, and interpretation of data intent on the explanation of the study (Germanakos & Fichte, 2020). I used triangulation in data analysis for this study. I used triangulation to confirm the reliability and validity of interpreted data. Triangulation allows the researcher to review the data from multiple methods ensuring comprehensive analysis (Guha et al., 2021).

Data triangulation uses multiple sources of data. The four types of triangulations are a) data, theoretical, researcher, and methodological (Olajide & Lawal, 2020). Olajide and Lawal (2020) discussed the four types of triangulations. Methodological triangulation uses multiple research methods. Investigator triangulation uses more than one investigator to conduct interviews, complete coding, and conduct the research. Theoretical triangulation combines several theoretical perspectives while either conducting research or data interpretation. This research used interviews, documents, literature, and member data checking in its triangulation process. The following step-by-step sequence will be used for data analysis: a) data organization, b) discovering and organizing ideas, concepts, patterns, etc., c) creating and developing overarching themes,

d) ensure the reliability and validity in the analysis of the data and all relevant findings, e) determine possible and reasonable explanations of findings from data analysis, and f) implications of the findings (Yin, 2018).

In my research, I used pseudonyms for confidentiality and respondent protection. Organizations who agree to the study were randomly assigned one of the following pseudonyms ASD1, ASD2, and ASD3 etc. I used a coding system to categorize themes for analysis and interpretation using NVivo software used in other research for analytical purposes. For coding purposes, themes were categorized using inductive coding. Themes were assigned a code as they appear such as ASD1, ASD2, ASD3, and so forth. I recorded all interviews for accuracy, member data checking, and theme categorizing of collected data. Based on the conceptual framework, overarching themes were based on the two tenets and three constructs of attribution theory. Developed themes and codes were classified into one of three constructs and then the constructs classified into one of the two tenets.

### **Reliability and Validity**

Yin (2018) stated that reliability and validity are key components in determining the quality of a research project. Reliability is the ability of others to replicate the research and have the same results (Saunders et al., 2019). Validity is the accuracy of the assessment tool, analysis, and generalization of the study (Saunders et al., 2019). Reliability and validity are considered before, during, and after the collection and analyzing data, ensuring the quality of the study.



**Reliability**

Morse (2015) introduces the concepts of reliability and validity in qualitative research. Reliability equals dependability and is obtained using tools such as triangulation, splitting and duplicating data, and using an audit trail (Naidu & Prose, 2018). Dependability requires enough detail (audit trail) which allows future research on the topic. The audit trail preserves the research process needed for future researchers to decide the effectiveness of the research methods. The following is included in the final report: a) research design, b) planning, data collecting, and analysis process, and c) how the research was conducted (Stahl & King, 2020). An appraisal of the research is included. Triangulation using interviews and organizational documents is one method used by researchers in collecting data. According to Morse (2015), reliability adds to the research rigor while methodological triangulation adds to both reliability and validity. Dependability as discussed is the reliability of the study.

**Validity**

Validity encompasses credibility, transferability, and confirmability lending trustworthiness (Morse, 2015). Validity accounts for data accuracy and analysis. There are two areas of validity: a) internal—credibility, confirmability, and b) external—transferability.

***Credibility***

Research results are only as believable as the accuracy level. Credibility is based on the data being truthfully and comprehensively connected to the subject of the research (Guha et al., 2021). Credibility is one of two measures of internal validity (Morse, 2015).

Usage of member checking after data collection and analysis ensures research credibility.

Members are given the transcript of their interview for other information or data correction. Member checking meets ethical research requirements by allowing respondents to review and reply to the information about themselves. Meetings are scheduled for approximately 60 minutes and conducted telephonically. The validity measures were conducted to ensure credibility.

### ***Transferability***

Transferability is interchangeable with generalizability. Transferability is an external validity check and depicts if the results are easily and readily transferred or translated to context, situations, and settings (Saunders et al., 2019). It is left up to the individual reader to determine if the research and its results apply to their situation, condition, or environment. Interview questions mitigate non-transferability. Full disclosure of the interview questions, research design, research method, data collection methods, data analysis, and all study results are released in the study. As a part of the disclosure, I detailed the number of respondents, participant selection criteria, numbers of meetings to gather data, any limitations, or restrictions on who provided data, participant locations (Morse, 2015). I used the thick description as the means to ensure transferability. According to Stahl and King (2020), a thick description is the extensive depiction of the applications, situations, and circumstances used during research.

### ***Confirmability***

Confirmability is the second measure of internal validity and provides objectivity to research by the corroboration of other researchers (Saunders et al., 2019).

Confirmability is determined using an audit trail and triangulation. It assists with developing objectives that arise after data interpretation, reflects, and accurate data interpretation. The key to confirmability is to avoid researcher biases. The following was used to ensure confirmability, clarifying researcher bias, member checking, peer review, external audits, negative case analysis, persistent observation, and triangulation (Stahl & King, 2020). Unlike in the quantitative study where outliers are discarded, negative cases in a qualitative study are analyzed the same as the most common and frequently occurring case and reveal key differences critical to understanding the complete phenomenon and strengthens the development of validity (Morse, 2015). Any negative cases that affect themes or findings will be reported.

### ***Data Saturation***

Data saturation is the point where no new data or evidence is revealed from adding respondents (Saunders et al., 2019). Data saturation is determined through triangulation, selecting an adequate sample size from qualified participants, and asking open-ended questions and follow-up questions if further clarification is needed. I used data triangulation as well as protocols to ensure data saturation (Stahl & King, 2020).

### **Transition and Summary**

The purpose of this qualitative multiple case study was the exploration of strategies managers use to integrate autistic employees into a diverse workforce. Section 2 covered the role of the researcher, participant criteria, research method and design, data analysis to include reliability and validity, data collection and organization, and ethical research. Section 3 discusses the presentation of the study findings, professional

application, any potential implications for positive social change, proposed future research, and the study conclusion.

### Section 3: Application to Professional Practice and Implications for Change

#### **Introduction**

This qualitative multiple-case study explored the managers' strategies to integrate autistic employees into a diverse workforce. Five managers of organizations in Southern California who recruit, train, and hire persons with autism or other neurological disabilities were participants in this study. The research question for this study is as follows: What strategies do managers use to integrate autistic employees into a diverse workforce? Utilizing Jowsey et al.'s (2021) general-purpose thematic analysis: a qualitative method for anesthesia research, the following overarching themes developed from the study: (a) supported employment strategies, (b) integration and organizations strategic plan, (c) assessing strategy effectiveness, (d) key obstacles to integration, (e) addressing obstacles to integration, and (f) other useful information to aid in integration.

#### **Presentation of the Findings**

This section contains the presentation of the study findings. The data analysis led to six overarching themes and seven subthemes, along with providing insight into how organizations can successfully integrate persons with autism into a diverse workforce. Five organizational managers took part in individual structured interviews. One manager also provided written answers to the interview questions, and three other documents found on corporate domains proved relevant to show how organizations can successfully integrate autistic employees into the workforce. The interviews were conducted over the phone to mitigate and follow Covid-19 pandemic restrictions. I completed each interview

session within a 45-minute time limit. Table 2 provides the participants' basic demographics.

**Table 2**

*Participant Demographics*

Participant	Gender	Type of Organization	Organizational Role
ASD 1	M	Assistance Center	Employment Director
ASD 2	F	Restaurateur	Hiring Manager
ASD 3	F	Assistance Center	Center Director
ASD 4	F	Assistance Center	Employment Manager
ASD 5	M	Assistance Center	Employment Director

The data sources for this study consisted of 24 pages of interview transcripts, one written interview questionnaire, and three organizational domain documents. NVivo 14, a qualitative data analysis software, was used to analyze and compile each data resource. I reviewed the collected data and reduced it to smaller units for coding and reading one line item at a time. Then, I used NVivo to discern and code relevant and critical information and statements pertinent to the research question. Coded words were labeled using descriptive terminology. I used coded text to identify patterns within the data set. Grouping data into similar patterns was accomplished using the NVivo hierarchy feature. The research data were then developed into patterns, allowing for drawing conclusions and developing themes. This study used Jowsey et al.'s (2021) general-purpose thematic analysis, a useful qualitative method for anesthesia research, to derive the data steps. Table 3 provides an overview of the data sources and references. Figure 3 is a word cloud showing the most frequently used words discovered during the interviews and review of documents.



depend upon the services needed by the employee, the employer's willingness to grant job site access, and comorbid impairments (Gordan & Fabiano, 2019; Martin & Lanovaz, 2021). All five participants mentioned three main supported employment strategies: tailored day, individual supported, and group supported. ASD1 explained tailored day programs as, "tailored day services, we provide one-on-one support training with the individuals to work on whatever barriers are preventing them from being successful."

ASD4 stated that

individual-supported employment programs typically start between 50% to 70% of job coaching hours, meaning that the job coach will meet them at the job on their first day until they get more acclimated to what they are doing. The job coach supports them with becoming independent in their workplace environment.

ASD5 explained group-supported employment as

...a group setting where they have a job coach present with them the entire time they are on their shift, so the entire time they are working at their new jobs, they have their job coaches there with them, answering questions, providing guidance, and providing support 100% of the time.

Two other important aspects to support employment included job coaches and job developers. A significant element of the supported employment strategy is the position of the job coach. The job coaches provide a variety of on-site/off-site mentorship for employees with ASD. Some of the services provided include but are not limited to career counseling, interviewing techniques, job search strategies, interest surveys, work schedule negotiations, arranging workspaces and transportation, communication with co-



workers, work-related risk reduction, and job-related task completion (Kim, 2022). As the employee becomes more comfortable and proficient in the job, coaches reduce the frequency of being on the job site, thus allowing the employee to gain further independence. ASD4 stated

As they get more familiar and comfortable with their job, they start to feel more independent and can do more things independently. We do try to decrease the support. For our clients to work on that independence on the job and be able to do things on their own.

Another aspect of supported employment is job development. ASD1 stated that as a job developer, it is his responsibility to “go out and assist with finding either an internship, paid internship, or a direct hire opportunity.” ASD3 discussed the job developer position:

So, they will go out and meet those employers first if someone says I am interested in working. Here, they introduce who we are and discuss having someone who would like to work at that location and discuss the internship aspect of the program.

The job developer goes out into the community to discuss with the community employers the varying aspects of hiring persons with ASD or other disabilities and how both the employer and the employee can benefit. ASD2 is one community employer that stated job coaches/job developers: “They are like a company who hire disable individuals and assist them obtaining jobs throughout the community. So, it is easier for the employer because now we just let the company bring us the people looking for jobs.” Employees,

job coaches, job developers, employers, and other associated persons such as caregivers, parents, and health care professionals all play a crucial role in the success of supported employment programs and ASD persons finding, gaining, and keeping meaningful employment (Kim, 2022). This theme aligns with attribution theory by integrating the concepts of causality, both internal (personal) and external (environment). Supported employment strategies provide the vehicle that allows a person to use their motivation and develop abilities in a safe and secure environment that is controlled and predictable.

### **Theme 2: Integration and Organizational Strategic Plan**

Iwanaga et al. (2021) reported that smaller companies tended to use informal methods to seek and hire people with disabilities, and that family-owned companies are more supportive of disabled workers in the workforce and workplace. As the hiring manager for a family-owned business, ASD2 stated the organization's strategic plan is to keep expanding, and to do that, they must have the workforce in place. Moreover, when it comes to hiring a person with autism ASD2 stated:

So they are coming into the workforce, it is more like an asset for us and we are like, oh, you want a job, we want to work with you and of course, come on, let us go work together so that... we keep growing and always needing people who grow with us whether they have a disability or not, let us do it.

The remaining four participants had similar strategic plans indicative of centering on the employee and meeting their needs to gain independence and have competitive integrated employment (i.e., community integrated employment). ASD1 stated, "Part of our mission and our goal along with our strategic plan are to help people integrate into what- we call

(CIE) Community Integrated Employment, which is a fancy word for finding a job in the community.” ASD3 provided a written outline of their person-centered strategy Figure 4.

#### Figure 4

*Person-Centered Strategy* (<http://access-it.ischool.uw.edu/wordpress/>)

Discovery	Identify support needed	Work Readiness Evaluation & Training	Develop Individual Service Plan
<ul style="list-style-type: none"> <li>•What is important to and important for this person? Likes and dislikes? Talents and hobbies? Personal goals?</li> </ul>	<ul style="list-style-type: none"> <li>•Circle of Support: Identify supportive people in person’s life – family, friends, Direct Support Persons</li> </ul>	<ul style="list-style-type: none"> <li>•Spark</li> <li>•Visit worksites</li> </ul>	<ul style="list-style-type: none"> <li>•Support Plan with goals</li> </ul>

Additionally, part of the strategic planning is for potential ASD employees to experience the entire job search process. The job search process includes deciding what industry to work in, what location, whether in the community (CIE) or a workshop, choosing if they want to be in the individual-supported program, tailored day program, or group-supported program. The job seeker must also consider any comorbid impairments such as anxiety or cognitive reasoning during the interview(s) process. The Consortium for Citizens with Disabilities (CCD) Employment and Training Task Force Statement of Principles on Employment of People with Disabilities 2008 stated that individualized supported employment strategies are better suited for meeting the needs of both the job seeker and the employer since the job seeker’s strengths, interests, and identifiable needs and along with the needs of the employer. ASD2 discussed how they conduct the entire interview with the potential employee (and job coach if needed) and talk to them about what the job requirements are, but understandably, they do not place the same timing or speed requirements; they also adjust the training schedule to meet the needs of the

person. Finally, they allow the person to try varying positions within the company to make the best fit for the employee and the company. ASD1 mentioned that part of their strategic plan, "...our mission and part of our strategic plan is to assist people with IDD (intellectual and developmental disabilities) and achieving their goals and whatever their goals are in life and especially the goals of employment."

ASD5's stated their vision statement is "Each individual is valued and experiences a genuinely satisfying life. A job well done increases self-esteem and pride." All the participants had similarly related vision and mission statements that were the essential building blocks of their inclusion strategy. As a part of the company's strategies, Schall et al. (2020) detailed the varying strategies considered when hiring persons with autism or other disabilities, including alternative interviewing techniques, job site training, and natural environment intervention, among other intervention strategies. Regarding environmental intervention strategy, ASD2 and ASD3 mentioned how safety is vital for autistic persons. Work safety is vital, and having the job coach there at the beginning or during the entire shift is just as essential as maintaining safety standards. ASD5 suggested how to create the strategies used to improve the work lives of ASD employees:

...it is not like we are doing something special for one person; we are usually trying to make a good environment for every employee. Like all employees, people with autism want to know the work expectations. what is expected from them. It is important to explain work duties very literally and to be sure to be specific about the outcome. The more natural the support, the more successful

people are in their work. We all think differently. If someone does not understand the training, try another way.

ASD2 described their process during the training period:

We work in a slower paced method, more patient to see if they can catch on and grasp the training. Furthermore, if they are still unable to perform to full capability, then we will move them to a different position, we go from like, OK, this position is not good for you. Let us give you something else. You know, so we rotate them if they if they want to.

The strategies as outlined by ASD5 will be beneficial to all employees; clear communication, support, work expectations, and tailored training are what all employees desire and will make the work environment pleasant and build company loyalty, reducing turn-over, and increasing productivity leading to success for everyone.

This theme focuses on dispelling managers' biases concerning hiring people with disabilities. In assisting people with disabilities during the interview process, job coaches are key in reducing the second tenant of the attribution theory of actor-observer error. The job coach is the connector that helps the manager (observer) during the interview to not base their actions on the internal factors of the interviewee (actor). At the same time, the coach must assist the actors to not base their actions on the external forces of the observer. When the manager and the employee move past the actor-observer error and develop an understanding of each of their roles in the organization's strategic plan, integration becomes manageable.

### **Theme 3: Assessing Strategy Effectiveness**

All five participants had similar evaluation methods to determine the effectiveness of their implemented strategy for connecting ASD employees to employers, work performance, and job satisfaction. Job developers go out into the community to discuss with potential employers about hiring ASD employees and about internships paid by the state or city. Job coaches also work with ASD employees to discover an interest in working in the community and vacant positions. With the job interview and hiring completed, the job developer, job coach, employee, and immediate supervisor discuss job performance and fit within the first 30 days of employment. If desired, however, assessment can occur at any time by either the employer or the employee. The second assessment occurs during the sixth month, with the final assessment at the 12-month mark. When asked to describe how they assessed the effectiveness of the strategy for ASD employees, ASD5 responded:

So, we have a couple of different methods to use for that. So, when we first intake a client, we put them on a 30-day trial. So, they are not committed fully to the job site or anything through those 30 days, giving a kind of like a trial goal also, so their goal is just for them to show up to work, to follow directions, and then to really, know like take those 30 days to learn the job. After 30 days, our team will come together and do an assessment or review. After one month, we asked the client if they were still happy with the job placement. Now that they have learned what goes into the job, and if they are not happy, that is fine. We must try to find them a different place, so they are still on our radar regardless of whether they are

happy with the job placement or not; after 30 days, we developed goals for them to work on for the entire year. Then we use those goals as data to see if our actions are effective. If they are learning on the job, working on those goals, and working towards that independence, we really use case management documentation and data to see if our strategies are working.

ASD4 responded similarly to ASD5:

So, we meet with the clients at the 30-day mark, and we set a goal. So, it could be that they have various goals. I have clients who have said I get overwhelmed during busy times, which is perfectly normal and right, so I asked them is this something you want to work on? Is this a goal we can set? Because with the organization, we have a behavioral support team also who can come out and meet with the clients individually and work on coping strategies and work on just different tools and supports that they can use in their off time to try to set that tone prior to getting into work, and so we set a couple of goals. Some clients only have one goal, and others have about three or four, depending on their wants. Then, we set a goal, and every time the job coach meets with them, the job coach tracks data on those goals, and then we must check-in. At the six-month mark, if they love their job and there are no complaints, we let them know how they are doing with their goals. We ask if they want to revise or update now, six months, and the annual mark. We let them know this is how you are doing, and we get feedback from the employer and the feedback from the client and integrate everything all together during those meetings.

These assessments must include all the stakeholders so that all invested parties can obtain a clear and fair assessment.

Flower et al. (2019) designed and implemented a training and assessment case study for job development that included an extensive selection and training process for potential autistic employees and the selected employer. The case concluded that having the autistic employee's input ensured they could voice their opinion and feedback to the hiring company. Job coaches first conducted an extensive job analysis, worksite tour, and shadowed current employees to understand the work environment and the roles of the employees. From these observations, the job coach determined the skill level needed to perform the task, tailor recruitment, selection, and training processes for potential autistic employees. The job analysis gave the job coach the time to figure out workplace support for candidates. The training sessions and assessments exposed management to the autistic employee in a controlled and safe environment. The ability to meet and work with the autistic employee prior to hiring reduced biases while increasing and improving interactions. Management was allowed to listen to and respond to feedback from the job coaches and the employees. The integration and immersion of management into the training and assessment with the job coaches and autistic employees allowed for asking specific questions about the candidates and support needs, leading to a greater familiarization with ASD and the potential employees. The conclusion to the study demonstrated that the strategy of inclusion of all stakeholders at all stages was invaluable to the success of determining job skills needed, work accommodations, reducing stigmatism, and providing a feeling of integration, independence (financial and



personal), decrease in some comorbidities (such as anxiety) by increasing both mental and physical wellbeing, and providing professional development, experiences, and social relationships. This theme aligns with the self-serving bias of attribution theory. With self-serving bias, a person views their success solely on internal attributes, while failures are due to external factors beyond their control. This theme uses several assessment and training techniques for the employer and the employee to view successes and failures as inclusive of internal and external factors and not exclusive to either factor alone.

#### **Theme 4: Key Obstacles to Integration**

During the interviews, the discussion included several obstacles facing ASD persons with gaining and keeping meaningful employment. ASD1 discussed how often he must get the parent or caregiver who tends to be overprotective to allow the autistic employee to express their concerns and allow their thoughts on things and advocate for themselves. Many persons with ASD or other neurological differences withdraw because, according to ASD5, by the time these persons are out of school, they have been bullied, and made fun of because of their developmental delays and they are more comfortable in their environment and have difficulties in completing task outside of their standard construct and context. ASD1 and ASD2 discussed transportation as an issue in getting to and from places. They mentioned that most of them rely on family members to get them to work or other appointments and that sometimes that person(s) is unreliable, or they have matters that they need to attend to and therefore may not be available to take the ASD person to and from places. ASD3 talked about emotional delays in persons with ASD and how it affects their responses and reactions to an emotional situation. For

example, she had a client who had a parent die, and it was six months later, the person had an emotional response to the parent's death. She had to explain that to the person's employer and got the employer to provide grief counseling. Another obstacle is employers who are entirely closed to hiring persons who are disabled. ASD2 did state that in the past, they may have fired someone with autism, but since disclosure of a disability is not required, it is difficult to know who or who does not have a qualifying reason for working slower or not understanding the job requirements. Lopez et al. (2021) listed among employment barriers for ASD employees a 1) lack of employer understanding, 2) lack of appropriate accommodations at the workplace, 3) current recruiting processes, 4) lack of support, and 5) lack of social, communication, confidence, and coping skills on the part of the employee and strategies on the part of the employer. CCD Report (2008) Table 4 lists barriers to ASD employment by percentages. This theme aligns with Kelley's three factors of attribution. The factors include 1) a person's behavior patterns given a set of similar situations (distinctiveness), 2) when a group of observers comes to the same conclusion about a person's behavior in similar situations (consensus), and 3) when a person reacts the same regardless of external environment and the action is attributed to internal factors (consistency) if not adequately addressed by all invested parties, all three factors are contributors to ASD employee integration barriers.

**Table 4***Barriers to Employment*

Percentage	Barrier Type
56%	No career counseling
51%	No career assessment
64%	No job readiness training
86%	No job skills training
64%	No job search instruction

*Note:* The Consortium for Citizens with Disabilities Employment and Training Task Force Statement of Principles on Employment of People with Disabilities 2008

**Theme 5: Addressing Obstacles to Integration**

In addressing the obstacles to integration, the participants discussed two major subthemes: partnership with community employers and education of autistic and non-autistic employees and employers. Partnership and education work hand in hand. All the participants discussed educating ASD employees on how to interview and write a resume or how to communicate the need for time to isolate when overstimulated. ASD3 discussed how they use technology and community outreach programs to overcome the barrier of bullying and ignorance,

We also have an advocacy program called Project R, and its people write their stories of being bullied and then talk about who they are today. Moreover, the group of like three or four students will go to a high school, and they will tell their stories.

Regarding educating employers while helping employees with on-the-job training, ASD1 and ASD5 utilize CIE. ASD5 stated

We use competitive integrated employment; it is not like we are looking for part-time jobs. California has a paid internship program, and a few employers allow us

to run interns through their businesses. That helps us get an idea if the person really likes to do the work and for that employer to decide whether to hire them. Employers will hire people who love their jobs and do an excellent job. Other employees come in and say they want to try something else. We have that internship right now. The internship program is not guaranteed forever, but it is successful, so hopefully, the state will retain it. We have employers who love that because they get to try people out without paying them since the state is paying the wages, but when they are ready, they hire. So that is great.

ASD1, ASD3, and ASD5 go out in the community for job development and community engagement. ASD1 explained community engagement:

I go out and educate employers on this daily; that is my job to go and educate employers and partner with companies. We have several candidates who would be amazing at this job, so we would love to partner with this company or this agency. Regarding the partnership (job development) side of things, when we partner with people and businesses, we want to ensure they are open to supported employment where we can help the individuals as needed. So, by going in and educating employers, because many times when employers hear or see someone has a physical disability or they hear the individuals share that they have a disability because they want to inform the employer that they have a disability, sometimes that shuts things down, but the employee will not clearly say it. Our job is to paint a clearer picture for the employer and say that the people that we support can do

the job just as anybody else can. They will interview, just like anybody else; they will provide a resume, and the employer makes that determination.

ASD2 hires ASD persons using an organization specializing in supported employment, and as the hiring manager said:

The best part is that they pay our employees. So, if they are a part of the program, like our workers, their payroll comes from them. So, we work a lot with our management not to expose why the person is disabled, but it is the manager's responsibility that everybody gets fair and equal treatment.

Internships, education, and training are key components for employers engaging with hiring people with autism or other neurological disabilities. ASD5 agrees with ASD2 that internships which an outside agency pays are the best strategy in that the potential employer does not have to pay the salary of the intern, they get to see firsthand how the employee learns the job and interacts with co-workers, and they get a ready to hire employee because the training has already occurred. The employee benefits because they receive a living wage, learn a valuable job skill, have a job coach if needed, add usable information to their resume, and most get hired on the spot after completing the training. Iwanaga et al. (2021) concluded that larger companies with upper management with knowledge and experience of with ADA and resources to provide accommodations are more willing to hire persons with autism or other disabilities. ASD3, as her final statement on strategies to overcome integration barriers, "Provided co-worker education. Make sure the supervisor is aware of the person's employment goals. Job Coaches for extra support." This theme is in aligns with the "try" versus "can" aspect of motivation in

the attribution theory. Employers must recognize that people with ASD are willing and capable of learning new skills and effectively using those skills in the job setting if given the opportunity and time to learn the required skills for the position. All vested participants (manager, supervisor, employee, job coach, trainer) must allow the ASD or neurologically different employee ample time and accommodations to learn and often relearn a particular set of job skills. It is often not a lack of “try” motivation but a “can” motivation or the ability to learn cognitive constructs that represent the value of effort.

### **Theme 6: Other Information to Aid in Integration**

Other information that can help persons with autism in gaining employment is to advertise to them and the public what opportunities are available for employees and employers. Marketing paid internships, educating the public on the benefits of hiring persons with disabilities, and understanding that people with autism are not looking for a handout but a hand-up are a few examples of aiding the integration of ASD persons into a diverse workforce. ASD1 mentioned that reliable transportation is necessary in helping integration. ASD5 stated, “Whatever our clients want, we will try our best to get them those services whether it is employment, residential services, day program services, independent living services, so it is not always about employment.” With paid internships, the employer is not responsible for the workman’s compensation and liability costs. Employers should use the varying public and private transition programs already in place to help in finding, hiring, and training persons with ASD (Solomon, 2020). This theme connects to attribution theory in that attributional conflict can arise when the perception is that a person’s actions or inactions are externally influenced by the

environment versus traits, for example, a shortage of meaningful jobs and job training for persons with ASD. Those employers, managers, and interviewers must be cognizant of self-predictions or self-ascriptions among persons with ASD. They must try to prevent these from becoming self-fulfilling prophecies, leading to failure of the integration based on lack of motivation instead of ability. In addition, it is vital to understand that excessive time spent on a task does not confer a causal relationship to ability, success, failure, or motivation. Finally, employers, managers, trainers, job coaches, family members, educators, counselors, doctors, and others involved in the ASD employee must be mindful not to assume responsibility for failure or success.

### **Applications to Professional Practice**

The collected and analyzed data gave insight into successful strategies for integrating persons with autism into a diverse workforce. The study's findings may provide employers with strategies to recruit, hire, and train ASD employees to increase their diverse workforce. From this qualitative analysis, six themes central to the research question emerged: a) supported employment strategies, b) integration and organizational strategic plan, c) assessing strategy effectiveness, d) key obstacles to integration, e) addressing obstacles to integration, and f) other information to aid in integration. Employers may use these strategies to improve business processes through alternative recruiting, interviewing, training practices, and improved communication through a managerial understanding of working with neurologically different and typical employees, providing an adaptive workplace. Using these strategies, such as paid internships (essentially, this provides the organization with free labor), will reduce the

cost of on-the-job training for autistic employees, thus freeing funds that can be channeled or redirected to other areas of the business that support economic growth, social change, and gain a competitive advantage.

This study may supply employers with valuable strategies that support the integration of ASD employees into a diverse workforce. Weiner (1972) used his attribution theory to explain how previous behavior directly influences current behavior. Iwanaga et al. (2021) discussed that employers with successful past experiences hiring persons with disabilities are more favorable toward continuing to hire them. Employers and managers who apply attribution theory should consider incorporating the six themes from the collected data. Managers could use attribution theory to increase internal factors of effort and ability while decreasing the external factor of chance among ASD employees and working with and educating non-neurodiverse employees to change their perceptions of autism (Patton, 2019). Employers and managers should use time to their advantage when working with neurodiverse employees, allowing them to build confidence in their skills, knowledge, and ability while providing stability, locus of causality, and control over their workplace and conditions. Another positive outcome of using attribution theory with autistic employees is the translation of using the themes in this study to increase the same attributes with non-neurodiverse employees, creating a productive workforce and cost-effectiveness on both sides of the issue.

I noted several robust integration strategies for employers and employees. Iwanaga et al. (2021) noted that the National Organization on Disability indicated that one of the most influential strategies used to promote increased employment participation



of people with autism or other disabilities is through a commitment to the recruiting, training, and promoting of people with disabilities in the workplace, this must be a top-down commitment. Strategically planning to integrate neurodiverse employees into the workplace creates an environment conducive to open communication for all employees. A workplace that accepts and meets all employees' needs allows them to apply their strengths enhanced task structure for projects; all employees feel valued and included in core decision-making processes. Bruyère and Colella (2022) stated that in creating a work environment designed for supporting neurodiverse employees, and maintaining a sense of equality for all employees it would behoove the employer to consider diversity, inclusion, and ethical climates within the organization to ensure that no one single group of employees feels excluded thus creating an all-inclusive and diverse workforce. Employees who feel valued tend to be more loyal, thus reducing employee turn-over and saving the organization funds by not having to recruit, hire, and train new employees and a reducing in production and productivity waiting for new employees to get “up to speed.”

During the discussions with the participants, all of them discussed how community involvement was a key to aiding and securing autistic person employment. Following the themes outlined in this study could lead to a competitive advantage for organizations that actively engage in the inclusion of neurodiverse employees into the workforce. These discussions fall in line with Ortiz (2020) and Patton (2019), who contend that the “different” thinking and approach to task completion by neurodiverse persons support the fundamental core of creating and capturing a competitive advantage

and transforming practices and processes to a proactive business approach. The findings of this study indicated that employers and managers need to understand the business value of including neurodiverse employees, caregivers, job developers, job coaches, and healthcare professionals as stakeholders in recruitment, hiring, and training strategies when working with autistic and other neurodiverse employees.

### **Implications for Social Change**

The results of this study have implications for positive social change by providing proven diversity inclusion strategies for autistic employees and employers. The potential exists to aid autistic employees in navigating the landscape of gainful employment, thus leading them to self-reliance and independence, allowing them to rely less on public assistance such as social security payments and Medicare/Medicaid. Suppose fewer ASD people rely on city, county, state, and federal aid; this will free up funding for those whose disability is so severe that they will permanently be on assistance or institutionalized. The employment of autistic employees reduces unemployment and underemployment among neurodiverse people while increasing economic development for the local community (Patton, 2019).

All five participants noted the importance of community education and the significance of the community buying into creating a safe and secure environment for ASD persons on and off work. The findings of this study showed that there are still too few managers and employers with the knowledge and understanding of autism and are still unwilling to provide ASD persons with the opportunity to gain experience a skill and make a living. The results of this study can potentially impact social change if employers

and managers apply the six strategies for inclusion (recruiting, hiring, training, educating, and assessing) of disabled persons (neurological, physical, emotional, or mental) and take advantage of programs such as paid internships and provide employment opportunities for those people who are marginalized in society and reduce stigmatism and rewrite social interaction and social identity norms.

The benefits to that society are unbounded when there is a healthy community, a safe environment, and many opportunities for meaningful employment. In addition, the members of that society will view those employers with active and successful inclusion strategies favorably, building long-lasting relationships with vendors, clients, and other stakeholders. You (2023) reported that under prevailing social norms, consumers and the public will push firms to conform to and meet their expected social responsibility (corporate social responsibility) and that those organizations that adhere to CSR find themselves benefiting from modifying their behavior to meet social norms while those organizations that appear to not adhere to CSR and social norms find themselves facing sanctions such as boycotts. Therefore, the inclusion of ASD and other neurologically diverse persons into the workforce has great positive potential for everyone.

### **Recommendations for Action**

This study aimed to explore what strategies managers use to integrate autistic employees into a diverse workforce successfully. The study findings support strategies used by managers to recruit, hire, and train persons with autism and to include them in the workforce. From the six strategies that emerged from the study, a) supported employment strategies, b) integration and organizational strategic plan, c) assessing

strategy effectiveness, d) key obstacles to integration, e) addressing obstacles to integration, and f) other information to aid in integration the recommendation is that employers and managers apply these strategies to create processes and practices that bring ASD persons into the workforce, that they use these developed processes and practices to aid non-ASD person in the workplace, and they address barriers and biases in the workplace that distract from inclusion.

A second recommendation is that managers develop partnerships with transition centers, departments of rehabilitation, schools, and job centers that will aid and guide them on how to successfully create an environment conducive to the support of ASD employees. For example, transition centers can help with designing interview methods that reduce the stress and anxiety ASD people typically experience in unfamiliar situations and locations or provide on-site job coaches. Employers can also attend job fairs, vendor fairs, trade fairs, or transition fairs held throughout many areas and seek out organizations that cater to servicing the disabled people, such as Autism@work, The Consortium for Citizens with Disabilities, or the California State Council on Developmental Disabilities. Another recommendation is to reach out to other companies who have successfully created inclusion programs, such as Microsoft, SAP, EY, or JP Morgan Chase & Co. Having open communications with those involved in aiding persons with autism and companies that have already laid a foundation in autism inclusion will prevent some of the pitfalls when investing in such an endeavor as creating a business plan, model, or program. A final recommendation is that employers and

managers create and execute an inclusion program as outlined in Table 5 (Annabi et al., 2019).

**Table 5**

*Planning your Pilot*

Be explicit and specific	Be flexible and expect to iterate	Hope for the best, prepare for the worst
Be explicit about what you expect from managers and teams.	Understand that there is no “one size fits all.”	Be proactive instead of reactive.
Be specific about the time commitment and all logistics. Do not take things for granted.	To improve collaboration and commitment, involve hiring managers in iterating the program.	Envision and plan for best-case and worst-case scenarios ahead of time to have the appropriate response and avoid being caught off-guard.
Be explicit and clarify the type of role available and the skill set needed for each role and team. Success is contingent on the right person being placed in the right role	Don’t be afraid to fail – there will be things you don’t get right initially. Be prepared for trial and error.	Candidates and managers will have different needs and reactions to decisions. You are more likely to respond productively if you are prepared for multiple scenarios. Game plan scenarios, run fire drills, and make sure your team practices these.

Findings in this study support these recommendations, and managers might think these findings beneficial to the organization. The results of this study will be published in the literature so employers, managers, and employees can receive help from the findings. Also, the findings might be available to share as a resource at professional conferences or community events where disability inclusion is one of the topics discussed. Finally, the study will be in the ProQuest dissertation database for publication.

### **Recommendations for Further Research**

Section 1 of this study noted several limitations of this study. Limitations are factors beyond the researcher’s control and could negatively affect the study and its

outcomes (Theofanidis & Fountouki, 2018). The following limitations include a) the participant's reluctance to prevent revealing intellectual property or other trade secrets, b) the potentiality of interview questions creating a conflict of interest for participants, and c) the aspect of companies not taking part in protecting employees. Future research using a different method or design may reveal other results and findings.

Researchers in the future might use a broader geographical area, interviewing actual persons with autism or other neurological differences, adding caregivers, or discussing the issue with federal agencies such as the local state department of rehabilitation. A mixed-method or quantitative research would show how many neurologically different persons have competitive integrated employment. The mixed-method research would allow for additional qualitative awareness of the lived experiences of managers, employers, and employees while providing numerical information on how many ASD persons are gainfully employed. A mixed-method or quantitative method would enable the researcher to run employment level numbers and percentages to compare between neurologically typical persons and neurologically different persons. An anonymous online quantitative study would allow for a larger sample size. For example, future research could figure out how many ASD employees have meaningful employment in the community and state and federal government versus the number of employees without ASD or other neurological disabilities. Finally, future research can begin with a cross-sectional study to determine the link between employer lack of education concerning the unique needs of hiring an ASD employee and jobs created and designed to accommodate the needs of the ASD employee and follow that

with a longitudinal study to determine how employment of ASD persons change over time.

### **Reflections**

This DBA doctoral study has expanded the knowledge about the unemployment and underemployment of ASD persons and the strategies organizations use to improve the employment status of persons with neurological differences. By completing the DBA doctoral study, I acknowledged my biases, reactions to participants, and increased information that arose during the research process. I began my DBA as the grandmother of two children diagnosed with autism. As an active-duty service member, I realized that even in the service, there are personnel with “minor” neurological differences and that I must be creative when tasking them. As a former in- classroom educator, I felt secure working with these service members. However, as time went on, I began to question if these service members were to separate from the service, where would they find meaningful and gainful employment that would allow them to continue to grow and support themselves. Another question I asked myself was where these service members would go for employment support, which led me back to my two grandchildren and to whether they could find employment and support when it came time for them to enter the workforce.

In my leadership role in the service, I had to create time to complete assignments, conduct research, and make myself available to use the resources provided by Walden. I had to allocate personal time and sacrifice family time to work on my dissertation and conduct the research. Working with my grandchildren helped me to realize the

importance of reducing bias in my study. I found it difficult not to interject and be influenced by having two grandchildren with autism and that my concern for the study grew out of a real-time and personal need for my two neurologically different grandchildren to have afforded them the same opportunities for growth, social interaction, understanding, compassion, and employment as my other grandchildren who are neuro-typical in development. After completing the research, I realized how many services are available to ASD employees to obtain, secure, and maintain meaningful and satisfying employment through competitive integrated employment programs provided by agencies that assist with such employment and employers willing to provide the necessary accommodations.

This study taught me how to become a better independent scholar. This process also enhanced my critical thinking skills by effectively using the abundant resources available at Walden. Using these resources, I delivered a doctoral view of successful strategies managers use to integrate autistic employees into a diverse workforce. Upon completion, I gained a greater appreciation of how agencies, employers, caregivers, managers, and employees are essential to decreasing the employment gap between neurologically different and typical employees. Furthermore, I appreciate the five managers who created time to talk with me, shared their answers and experiences, and directed me to publicly available documents for this study.

### **Conclusion**

Becoming aware of the strategies managers use to integrate autistic employees into a diverse workforce can help other employers and managers in successfully



integrating autistic persons into the workforce. The findings of this study may aid in reducing the disparity of autistic persons being unemployed and underemployed compared to their non-autistic counterparts in their peer group. Six emergent themes developed in this qualitative study: (a) supported employment strategies, (b) integration and organizations strategic plan, (c) assessing strategy effectiveness, (d) key obstacles to integration, (e) addressing obstacles to integration, and (f) other useful information to aid in integration. The study aimed to explore the strategies managers use to integrate autistic employees into a diverse workforce.

The result of the study implies best practices, processes, and programs since managers and employers should strive to include available labor in the workforce to increase business sustainability and create a competitive advantage over competitors (Acikgoz, 2019; Lee & Ha-Brookshire, 2020; Rao & Polepeddi, 2019). The implications for positive social change is revealed by: a) reducing unemployment and underemployment of ASD person, b) leading to the financial means of autistic employees to add to the economic growth of the local community, c) reducing comorbidity is often associated with person with disabilities, d) resulting in lower costs to communities to support persons with ASD, and finally d) increasing consumer trust that the company is community conscientious will create consumer loyalty thus adding to the economic base of the organization these strategies can be successfully implemented across all segments of employment and allow ASD person to thrive within the society they reside.

## References

- Abdalla, M. M., Oliveira, L. G. L., Azevedo, C. E. F., & Gonzalez, R. K. (2018). Quality in qualitative organizational research: Types of triangulation as a methodological alternative. *Administração: Ensino E Pesquisa*, 19(1), 66–98. <https://doi.org/10.13058/raep.2018.v19n1.578>
- Acikgoz, Y. (2019). Employee recruitment and job search: Towards a multi-level integration. *Human Resource Management Review*, 29(1), 1–13. <https://doi.org/10.1016/j.hrmr.2018.02.009>
- Alam, K. (2020). A systematic qualitative case study: Questions, data collection, NVivo analysis and saturation. *Qualitative Research in Organizations and Management*, 16(1), 1–31. <https://doi.org/10.1108/QROM-09-2019-1825>
- American Disability Act, 1990. [www.ada.gov](http://www.ada.gov).
- Annabi, H., Crooks, E. W., Barnett, N., Guadagno, J., Mahoney, J. R., Michelle, J., Pacilio, A., Shukla, H., & Velasco, J. (2019). *Autism @ Work Playbook: Finding talent and creating meaningful employment opportunities for people with autism*. Seattle, WA: ACCESS-IT, The Information School, University of Washington.
- Anagnostopoulou, P., Alexandropoulou, V., Lorentzou, G., Lykothanasi, A., Ntaountaki, P., & Drigas, A. (2020). Artificial intelligence in autism assessment. *International Journal of Emerging Technologies in Learning*, 15(6), 95–107. <https://doi.org/10.3991.ijet.v15i0611231>
- Arioli, M., Crespi, C., & Canessa, N. (2018). Social cognition through the lens of cognitive and clinical neuroscience. *BioMed Research International*, 2018, 1–18.

<https://doi.org/10.1155/2018/4283427>

- Aspiranti, K. B., Larwi, K. H., & Schade, B. P. (2018). iPads/tablets and students with autism. A meta-analysis of academic effects. *Assistive Technology, 31*(1), 23–30. <https://doi.org/10.1080/10400435.2018.1463575>.
- Braaten, B., Kramer, A., Henderson, E., Kajfez, R., & Dringenberg, E. (2020). Accessing complex constructs: Refining an interview protocol. *2020 IEEE Frontiers in Education Conference (FIE), Frontiers in Education Conference (FIE), 2020 IEEE*, 1–3. <https://doi.org/10.1109/FIE44824.2020.9274260>
- Bailey, S. (2018). Asperger’s syndrome in African American children. [Doctoral dissertation, Walden University]. Scholar Works. <https://scholarworks.waldenu.edu/dissertations/4834/>
- Baker-Ericzen, M. J., Fitch, M. A., Kinnear, M., Jenkins, M. M., Twamley, E. W., Smith, L., & Leon, J. (2018). Development of the supported employment, comprehensive cognitive enhancement, and social skills program for adults on the autism spectrum: Results of initial study. *Autism, 22*(1), 6–19. <https://doi.org/10.1177/1362361317724294>
- Bakkalbasiouglu, E. (2020). How to access elites when textbook methods fail: Challenges of purposive sampling and advantages of using interviewees as “fixers.” *The Qualitative Report, 25*(3), 688–699. <https://doi.org/10.46743/2160-3715/2020.3976>
- Bandura, A. (2001). Social cognitive theory: A agentic perspective. *Annual Review of Psychology, 52*(1), 1–26. <https://doi.org/10.1146/annurev.psych.52.1.1>

- Bandura, A. (2012). On the functional properties of perceived self-efficacy revisited. *Journal of Management*, 38(1), 9–44. <https://doi.org/10.1177/0149206311410606>
- Bansal, P., Smith, W. K., & Vaara, E. (2018). New ways of seeing through qualitative research. *Academy of Management Journal*, 61(4), 1189–1195. <https://doi.org/10.5465/amj.2018.4004>
- Brignell, A., Chenausky, K. V., Song, H., Zhu, J., Suo, C., & Morgan, A. T. (2018). Communication interventions for autism spectrum disorder in minimally verbal children. *Cochrane Database of Systemic Reviews*, 11(11), 1–75. <https://doi.org/10.1002/14651858.CD012324.pub.2>
- Brooke, V., Brooke, A. M., Schall, C., Wehman, P., McDonough, J., Thompson, K., & Smith, J. (2018). Employees with autism spectrum disorder achieving long-term employment success: A retrospective review of employment retention and intervention. *Research and Practice for Persons with Severe Disabilities*, 43(3), 181–193. <https://doi.org/10.1177/1540796918783202>
- Bruyere, S. M., & Colella, A. (2022). Neurodiversity in the workplace: Interests, issues, and opportunities (1st ed.). Routledge. <https://doi.org/10.4324/9781003023616>
- Bury, S. M., Hedley, D., Uljarevic, M., Dissanayake, C., & Gal, E. (2019). If you've employed one person with autism: An individual difference approach to the autism advantage at work. *Autism*, 23(6), 1607–1608. <https://doi.org/10.1177/1362361318794937>
- Centers for Disease Control and Prevention. (2020). *Autism spectrum disorder: Signs and symptoms*. <https://www.cdc.gov/ncbddd/autism/signs.html>

- Christensen, D. L., Maenner, M. J., Bilder, D., Constantino, J. N., Daniels, J., Durkin, M. S., Fitzgerald, R. T., Kurzius-Spencer, M., Pettygrove, S. D., Robinson, C., Shenouda, J., White, T., Zahorodny, W., Pazol, K., & Dietz, P. (2019). Prevalence and characteristics of autism spectrum disorder among children aged 4 years-early autism and developmental disabilities monitoring network, seven sites, United States, 2010, 2012, and 2014. *Morbidity and Mortality Weekly Report Surveillance Summary* 68(2), 1–19. <https://doi.org/10.15585/mmwr.ss6802a1>
- Consortium for Citizens with Disabilities (2008). <https://www.c-c-d.org/fichiers/CCD-Employment-TF-Statement-of-Principles.pdf>
- Costescu, C., Rosan, A., Brigitta, N., Hathazi, A., Kovari, A., Katona, J., Heldal, I., Helgesen, C., Thill, S., & Demeter, R. (2019). Emotions recognition in typical and atypical development-a technology-based paradigm. *10<sup>th</sup> Annual IEEE International Conference on Cognitive Infocommunications-Cog InfoCom 2019*, 349–352. <https://doi.org/10.1109/CogInfoCom47531.2019.9089970>
- Croteau, C., Mottron, L., Dorais, M., Taride, J-E., & Perreault, S. (2019). Use, costs, and predictors of psychiatric healthcare services following an autism spectrum diagnosis: Population-based cohort study. *Autism*, 23(8), 2020–2030. <https://doi.org/10.1177/1362361319840229>
- Ditchman, N. M., Miller, J. L., & Easton, A. B. (2018). Vocational rehabilitation service patterns: An application of social network analysis to examine employment outcomes of transition age individuals with autism. *Rehabilitation Counseling Bulletin*, 61(3), 143–153. <https://doi.org/10.1177/0034355217709455>

- Duchatelet, D., & Donche, V. (2022). Assessing student learning during simulations in education: Methodological opportunities and challenges when applying a longitudinal case study design. *Studies in Educational Evaluation*, 72. <https://doi.org/10.1016/j.stueduc.2022.101129>
- Dynia, J. M., Walton, K. M., Brock, M. E., & Tiede, G. (2020). Early childhood special education teachers' use of evidence-based practices with children with autism spectrum disorder. *Research in Autism Disorders*, 77, 1–12. <https://doi.org/10.1016/j.rasd.2020.101606>
- Ellis, P. (2019). Ethical aspects of research. *Wounds UK*, 15(3), 87–88. <https://www.wounds-uk.com/journal.shtml>
- Eylen, L. V., Boets, B., Steyaert, J., Wagemans, J., & Noens, I. (2018). Local and global visual processing in autism spectrum disorders: Influence of task and sample characteristics and relation to symptom severity. *Journal of Autism and Developmental Disorders* 48(4), 1359–1381. <https://doi.org/10.1077/s10803-015-2526-2>
- Farrugia, L. (2019). WASP (Write a Scientific Paper): The ongoing process of ethical decision-making in qualitative research: Ethical principles and their application to the research process. *Early Human Development*, 133, 48–51. <https://doi.org/10.1016/j.earlhumdev.2019.03.011>
- Feldman, J. I., Dunham, K., Cassidy, M., Wallace, M. T., Liu, Y., & Woynaroski, T. G. (2018). Audiovisual multisensory integration in individuals with autism spectrum disorder: A systematic review and meta-analysis. *Neuroscience and*

*Biobehavioral Reviews*, 95, 220–234.

<https://doi.org/10.1016/j.neubiorev.2018.09.020>

Flower, R. L., Hedley, D., Spoor, J. R., & Dissanayake, D. (2019). An alternative pathway to employment for autistic jobseekers: A case study of a training and assessment program targeted to autistic job candidates. *Journal of Vocational Education & Training*, 71(3), 407–428.

<https://doi.org/10.1080/13636820.2019.1636846>

Garcia-Villamizar, D., Wehman, P., & Navarro, M. D. (2002). Changes in the quality of autistic people's life that work in supported and sheltered employment. A 5-year follow-up study *Journal of Vocational Rehabilitation*, 17(4), 309–312.

<https://www.journals.elsevier.com/journal-of-vocational-behavior>

Gartsu, G. N., & Stefani, M. (2019). Tapping into people with autism spectrum disorder: 'Moving towards an inclusive and neurodiverse workspace' (Dissertation).

<https://urn.kb.se/resolve?urn=urn:nbn:se:kth:diva-254195>

George, G., & Selimos, E. D. (2018). Using narrative research to explore the welcoming of newcomer immigrants: A methodological reflection on a community-based research project. *Forum: Qualitative Social Research*, 19(2), 119–138.

<https://doi.org/10.17169/fqs-19.2.2907>

Germanakos, P., & Fichte, L. (2020). EUREKATAX: A taxonomy for the representation and analysis of qualitative usability test data. *Multimodal Technologies and Interaction*, 4(22), 2–22. <https://doi.org/10.3390/mti4020022>

Goffer, A., Cohen, M., Berger, I., & Maeir, A. (2019). Beyond academic outcomes:

- Occupational profile and quality of life among college students with and without attention deficit hyperactivity disorder. *British Journal of Occupational Therapy*, 82(3), 170–178. <https://doi.org/10.1177/0308022618782809>
- Gordan, C. T., & Fabiano, G. A. (2019). The transition of youth with ADGH into the workforce: Review and future directions. *Clinical Child and Family Psychology Review*, 22(3), 316–347. <https://10.1007/s10567-019-00274-4>
- Guha, C., Vieceili, A. K., Wong, G., Manera, K., & Tong, A. (2021). Qualitative research methods and its application in nephrology. *Nephrology (Carlton, Vic.)*, 26(10), 755–762. <https://doi.org/10.1111/nep.13888>
- Harnett, T. (2019). Issues in employment for autistic adults: Open plan offices. *Good Autism Practice*, 20(2), 41–47. <https://www.bild.org.uk>
- Harris, J. L. (2020). The experience of adults with attention-deficit/hyperactivity disorder in the workplace. (Dissertation). <https://scholarworks.waldenu.edu/dissertations>
- Hartley, C., Bird, L-A., & Monaghan, P. (2020). Comparing cross-situational word learning, retention, and generalization in children with autism and typical development. *Cognition*, 200, 1–20. <https://doi.org/10.1016/j.cognition.2020.104265>
- Hayward, S. M., McVilly, K. R., & Stokes, M. A. (2019). Autism and employment: What works. *Research in Autism Spectrum Disorders*, 60, 48–58. <https://doi.org/10.106/j/rasd.2019.01.006>
- Heath, J., Williamson, H., Williams, L., & Harcourt, D. (2018). “It’s just more personal”: Using multiple methods of qualitative data collection to facilitate participation in



research focusing on sensitive subjects. *Applied Nursing Research*, 43,30–35.

<https://doi.org/10.1016/j.apnr.2018.06.015>

Heider, F. (1958). *The Psychology of Interpersonal Relations*. New York: John Wiley & Sons. <https://dx.doi.org/10.1037/10628-000>

Hewett, R., Shantz, A., Mundy, J., & Alfes, K. (2018). Attribution theories in human resource management research: A review and research agenda. *The International Journal of Human Resource Management*, 29(1), 87–126. <https://doi.org/10.1080/09585192.2017.1380062>

Howard-Grenville, J., Nelson, A., Vough, H., & Zilber, T. B. (2021). From the Editors: Achieving Fit and Avoiding Misfit in Qualitative Research. *Academy of Management Journal*, 64(5), 1313–1323. <https://doi.org/10.5465/amj.2021.4005>

Howlin, P. (2021). Adults with Autism: Changes in Understanding Since DSM-111. *Journal of Autism and Developmental Disorders*, 51(12), 4291. <https://doi.org/10.1007/s10803-020-04847-z>

Hu, D., Wang, F., Zhang, H., Wu, Z., Zhou, Z., Li, G., Wang, L., Lin, W., Li, G., & UNC/UMN Baby Connectome Project Consortium (2022). Existence of Functional Connectome Fingerprint during Infancy and Its Stability over Months. *The Journal of neuroscience : the official journal of the Society for Neuroscience*, 42(3), 377–389. <https://doi.org/10.1523/JNEUROSCI.0480-21.2021>

Iwanaga, K., Chen, X., Grenawalt, T. A., Mpofo, N., Chan, F., Lee, B., Wu, J. R., & Tansey, T. N. (2021). Employer Attitudes and Practices Affecting the

Recruitment and Hiring of People with Disabilities: A Scoping Review. *The Journal of Rehabilitation*, 87(2), 4. <https://doi.org/10.3233/WOR-162265>

Jaliawala, M. S., & Khan, R. A. (2020). Can autism be catered with artificial intelligence-assisted intervention technology? A comprehensive survey. *Artificial Intelligence Review* 53(2), 1039–1069. <https://doi.org/10.1007/s10462-019-09686-8>

Jowsey, T., Deng, C., & Weller, J. (2021). General-purpose thematic analysis: A useful qualitative method for anesthesia research. *BJA Education*, 21(12), 472–478. <https://doi.org/10.1016/j.bjae.2021.07.006>

Kassan, A., Goopy, S., Green, A., Arthur, N., Nutter, S., Russell-Mayhew, S., Vazquez, M. S., & Silversides, H. (2020). Becoming new together: making meaning with newcomers through an arts-based ethnographic research design. *Qualitative Research in Psychology*, 17(2), 294–311. <https://doi.org/10.1080/14780887.2018.1442769>

Keel, J. H., Mesibov, G. B., & Woods, A. V. (1997). TEACCH-supported employment program. *Journal of Autism and Developmental Disorders*, 27(1), 3–6. <https://doi.org/10.1023/a:1025813020229>

Kelley, H. H. (1967). Attribution theory in social psychology. In *Nebraska symposium on motivation*. University of Nebraska Press.

Kim, S. Y. (2022). Understanding Perspectives of Job Coaches of Supported Employment Programs Working with Adults with Autism. *International Journal of Disability, Development & Education*, 1–18. <https://doi.org/10.1080/1034912x.2022.2134557>

- Lawson, R. P., Aylward, J., Roiser, J. P., & Rees, G. (2018). Adaptation of social and non-social cues to direction in adults with autism spectrum disorder and neurotypical adults with autistic traits. *Developmental cognitive neuroscience, 29*, 108–116. <https://doi.org/10.1016/j.dcn.2017.05.001>
- Lo, F-Y., Rey-Marti, & Botella-Carrubi, D. (2020). Research methods in business: Quantitative and qualitative comparative analysis. *Journal of Business Research, 115*, 221–224. <https://doi.org/10.1016/j.fusres.2020.05.003>
- Lopez, B., Kargas, N., Udell, J., Rubín, T., Burgess, L., Dew, D., McDonald, I., O, B. A., & Templeton-Mepstead, K. (2021). Evaluation of the ACE employment programme: helping employers to make tailored adjustments for their autistic employees. *Advances in Autism, 7*(1), 3–15. <https://doi.org/10.1108/AIA-11-2019-0038>
- Lee, S. H., & Ha-Brookshire, J. E. (2020). In pursuit of corporate sustainability: Factors contributing to employees' workplace behavior. *Journal of Fashion Marketing and Management: An International Journal, 24*(2), 235–249. <https://doi.org/10/1108/JFMM-09-2019-0203>
- Liu, X., Peng, M. Y-P., Anser, M. K., Chong, W-L., & Lin, B. (2020). Key teacher attitudes for sustainable development of student employability by social cognitive career theory: The mediating roles of self-efficacy and problem-based learning. *Frontiers in Psychology, 11*, 1–12. <https://doi.org/10.103389/fpsyg.2020.01945>
- Lu, T., & Franklin, A. L. (2018). A protocol for identifying and sampling from proxy populations. *Social Science Quarterly, 99*(4), 1535–1546.

<https://doi.org/10.1111/ssqu.12519>

- Majid, S., Eapen, C. M., Aung, E. M., & Oo, K. T. (2019). The importance of soft skills for employability and career development: Students and employees' perspectives. *The IUP Journal of Soft Skills*, XIII (4), 7–39. <https://www.proquest.com>
- Martin, V., & Lanovaz, M. J. (2021). Program evaluation of a community organization offering supported employment services for adults with autism. *Research in Autism Spectrum Disorders*, 82. <https://doi.org/10.1016/j.rasd.2021.101741>
- McDonnell, C. G., Bradley, C. C., Kanne, S. M., Lajonchere, C., Warren, Z., & Carpenter, L. A. (2019). When are we sure? Predictors of clinician certainty in the diagnosis of autism spectrum disorder. *Journal of Autism and Developmental Disorders* 49, 1391–1401. <https://doi.org/10.1007/s10803-018-3831-3>
- Morales-Hidalgo, P., Roige-Castellvi, J., Hernandez-Martinez, C., Voltas, N., & Canals, J. (2018). Prevalence and characteristics of autism spectrum disorder among Spanish school-age children. *Journal of Autism and Developmental Disorders*, 48(9), 3176-3190. <https://doi.org/10.1006/s10803-018-3581-2>
- Morgan, S. E., White, S. R., Bullmore, E. T., & Vertes, P. E. (2018). A network neuroscience approach to typical and atypical brain development. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging* 3(9), 754–766. <https://doi.org/10.1016/j.bpsc.2018.03.003>
- Morse, J. M. (2015). Critical analysis of strategies for determining rigor in qualitative inquiry. *Qualitative Health Research*, 25(9), 1212–1222. <https://10.1177/1049732315588501>

- Naidu, T., & Prose, N. (2018). Re-envisioning member checking and communicating results as accountability practice in qualitative research: A South African community-based organization example. *Forum: Qualitative Social Research, 19*(3), 783–797. <https://doi.org/10.17169/fqs-19.3.3153>
- National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research. (1979). The Belmont report: Ethical principles and guidelines for the protection of human subjects of research. U.S. Department of Health and Human Services.
- Nicholas, D. B., Mitchell, W., Dudley, C., Clarke, M., & Zulla, R. (2018). An ecosystem approach to employment and autism spectrum disorder. *Journal of Autism and Developmental Disorders 48*(1), 264–275. <https://10.1007/s10803-017-3351-6>
- Olajide, O. T., & Lawal, O. R. (2020). Triangulation method in management sciences research. *Annals of the University of Craiova: Economic Sciences Series, 1*(48), 141–154. <https://www.feaa.ucv.ro.annals.index.html>
- Olcay, S., Vuran, S., Gönen, A., Uslucan, G., & Kayhan, H. C. (2019). Effectiveness of video modeling in teaching following public direction signs for students with autism spectrum disorders. *Hacettepe University Journal of Education, 34*(2), 487–504. <https://www.efdergi.hacettepe.edu.tr/>
- Ortiz, L. A. (2020). Reframing Neurodiversity as Competitive Advantage: Opportunities, Challenges, and Resources for Business and Professional Communication Educators. *Business and Professional Communication Quarterly, 83*(3), 261–284. <https://doi.org/10.1177/2329490620944456>

- Oye, C., Sorensen, N. O., Dah., H., & Glasdam, S. (2019). Tight ties in collaborative health research puts research ethics on trial? A discussion on autonomy, confidentiality, and integrity in qualitative research. *Qualitative Health Research*, 29(8), 127–1235. <https://doi.org/10.1177/10497323188222294>
- Parson, L. D. (2006). Using video to teach social skills to secondary students with autism. *Teaching Exceptional Children*, 39(2), 32–39. <https://doi.org.10.1177/004005990603900206>
- Parr, A. D., & Hunter, S. T. (2014). Enhancing work outcomes of employees with autism spectrum disorder through leadership: Leadership for employees with autism spectrum disorder. *Autism*, 18(5), 545–554. <https://doi.org/10.1122/1362361313483020>
- Patton, E. (2019). Autism, attributions, and accommodations: Overcoming barriers and integrating a neurodiverse workforce. *Personnel Review*, 48(4), 915–934. <https://doi.org/10.1108/PR-04-2018-0116>
- Pearse, N. (2019). An illustration of a deductive pattern matching procedure in qualitative leadership research. *Electronic Journal of Business Research Methods*, 17(3), 143–154. <https://doi.org/10.34190/JBRM.17.3.004>
- Pham, A. V., Bennett, K. D., & Zetina, H. (2019). Technology-aided interventions for individuals with autism: Implications for policy and practice. *Behavioral and Brain Sciences*, 6(21), or 202–209. <https://doi.org/10.1177/23727322198557750>
- Pierce, J. (2018). Leaders' strategies to support and accommodate employees with high-functioning autism (Dissertation). <https://scholarworks.waldenu.edu/dissertations>

- Pillay, Y., Brownlow, C., & March, S. (2022). Transition approaches for autistic young adults: A case series study. *PLoS ONE*, 17(5), 1–20.  
<https://doi.org/10.1371/journal.pone.0267942>
- Premack, D., & Woodruff, G. (1978). Does the chimpanzee have a theory of mind? *The Behavioral and Brain Sciences* 4, 515–526.  
<https://doi.org/10.1017/S0140525X00076512>
- Rao, B., & Polepeddi, J. (2019). Neurodiverse workforce: Inclusive employment as an HR strategy. *Strategic HR Review*, 18(5), 204–209. <https://doi.org/10.1108/SHR-02-2019-0007>
- Rehabilitation Act of 1973. [www.eeoc.gov/rehabilitation-act-1973-original-text](http://www.eeoc.gov/rehabilitation-act-1973-original-text).
- Renjith, V., Yesodharan, R., Noronha, J. A., Ladd, E., & George, A. (2021). Qualitative Methods in Health Care Research. *International Journal of Preventive Medicine*, 12(2), 1–7. [https://doi.org/10.4103/ijpvm.IJPVM\\_321\\_19](https://doi.org/10.4103/ijpvm.IJPVM_321_19)
- Rendle-Short, J. (2019). Analyzing atypical interaction: Reflections on the intersection between quantitative and qualitative research. *Journal of Pragmatics*, 143, 267–278. <https://doi.org/10.1016/j.pragma.2018.04.009>
- Roark, C. L., Lehet, M. I., Dick, F., & Holt, L. L. (2022). The representational glue for incidental category learning is alignment with task-relevant behavior. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 48(6), 769–784.  
<https://doi.org/10.1037/xlm0001078>
- Sakarneh, M. A., Sabayleh, O. A., & Alramamneh, A. L. K. (2019). The sensory characteristics of children with autism spectrum disorder: Teachers' observation.

*International Journal of Early Childhood Special Education*, 11(2), 105–115.

<https://doi.org.10.20489/intjecse.670459>

- Sandbank, M., Bottema-Beutel, K., Crowley, S., Cassidy, M., Feldman, J. I., Canihuante, M., & Woynaroski, T. (2020). Intervention effects on language in children with autism: A project AIM meta-analysis. *Journal of Speech, Language, and Hearing Research* 63, 1537–1560. [https://doi.org/10.1044/2020\\_JSLHR-19-00167](https://doi.org/10.1044/2020_JSLHR-19-00167)
- Sandgreen, H., Frederiksen, L. H., & Bilenberg, N. (2021). Digital interventions for autism spectrum disorder: A meta-analysis. *Journal of Autism and Developmental Disorders*, 51(9), 3138–3152. <https://doi.org/10.1007/s10803-020-04778-9>
- Sanz-Cervera, P., Fernandez-Andres, M. I., Pastor-Cerezuela, G., & Tarraga-Mínguez, R. (2018). *Psychologist Papers*, 39(1) 40-50. <https://doi.org/10/23923/pap.psicol2018.2851>
- Saunders, M. N. K., & Townsend, K. (2018). ‘Choosing participants’ In Cassell, C, Cunliffe, A, and Grandy, G (eds) *Sage Handbook of Qualitative Business and Management Research Methods*, 480–494. Sage.
- Saunders, M. N. K., Lewis, P., & Thornhill, A. (2019). *Research methods for business students* (8th ed.). Pearson Education Limited.
- Schall, C., Wehman, P., Avellone, L., & Taylor, J. P. (2020). Competitive Integrated Employment for Youth and Adults with Autism: Findings from a Scoping Review. *Child and Adolescent Psychiatric Clinics of North America*, 29(2), 373–397. <https://doi.org/10.1016/j.chc.2019.12.001>
- Schloemer-Jarvis, A., Bader, B., & Böhm, S. A. (2022). The role of human resource



practices for including persons with disabilities in the workforce: a systematic literature review. *International Journal of Human Resource Management*, 33(1), 45–98. <https://doi.org/10.1080/09585192.2021.1996433>

Scott, M., Milbourn, B., Falkmer, M., Black, M., Bölte, S., Halladay, A., Lerner, M., Taylor, J. L., & Girdler, S. (2019). Factors affecting employment for people with autism spectrum disorder: A scoping review. *Autism*, 23(4), 869–901. <https://doi.org/10.1177/1362361318787789>

Segers, M., Bebko, J. M., Zapparoli, B. L., & Stevenson, R. A. (2020). A pupillometry study of multisensory social and linguistic processing in autism and typical development. *Development Psychology*. No Pagination Specified. <https://doi.org/10.1037/dev0001090>

Sharma, H., & Sarkar, C. (2019). Ethnography research: An overview. *International Journal of Advance and Innovative Research*, 6(2), 1–5. <https://www.iaraedu.com/pdf/ijair-volume-6-issue-2-viii-april-june-2019-part-6.pdf>

Smith, T. J., Ching, D., Weston, A., & Dilahunt-Aspillaga, D. J. (2019). Achieving competitive, customized employment through specialized services (ACCESS). *Journal of Vocational Rehabilitation*, 50(3), 249–258. <https://doi.org/10.3233/JVR-191004>

Solomon, C. (2020). Autism and Employment: Implications for Employers and Adults with ASD. *Journal of Autism and Developmental Disorders*, 50(11), 4209–4217. <https://doi.org/10.1007/s10803-020-04537-w>

- Stahl, N. A., & King, J. R. (2020). Expanding approaches for research: Understanding and using trustworthiness in qualitative research. *Journal of Developmental Education, 44*(1), 26–28. <https://www.ncde.appstate.edu/>
- Stauch, T. A., Plavnick, J. B., Sankar, S., & Gallagher, A. C. (2018). Teaching Social Perception Skills to Adolescents with Autism and Intellectual Disabilities Using Video-Based Group Instruction. *Journal of Applied Behavior Analysis, 51*(3), 647–666. <https://doi.org/10.1002/jaba.473>
- Stuer, D., De Vos, A., Van der Heijden, B. I. J. M., & Akkermans, J. (2019). A Sustainable Career Perspective of Work Ability: The Importance of Resources across the Lifespan. *International Journal of Environmental Research and Public Health, 16*(14). <https://doi.org/10.3390/ijerph16142572>
- Sui, A. M. H., Lin, Z., & Chung, J. (2019). An evaluation of the TEACCH approach for teaching functional skills to adults with autism spectrum disorders and intellectual disabilities. *Research in Developmental Disabilities 90*(x), 14–21. <https://doi.org/10.1016/j.ridd.2019.04.006>
- Supekar, K., Kochalka, J., Schaer, M., Wakeman, H., Qin, S., Padmanabhan, A., & Menon, V. (2018). Deficits in mesolimbic reward pathway underlie social interaction impairments in children with autism. *BRAIN, 141*, 2795–2805. <https://doi.org/10.1093/brain/awy191>
- Surmiak, A. (2018). Confidentiality in qualitative research involving vulnerable participants: Researchers' perspectives. *Forum: Qualitative Social Research*

19(3), 1–27. <https://doi.org/10.17169/fqs-19.3.3099>

Svanes, I. K., & Andersson-Bakken, E. (2023). Teachers' use of open questions: investigating the various functions of open questions as a mediating tool in early literacy education. *Education Inquiry*, 14(2), 231–250.

<https://doi.org/10.1080/20004508.2021.1985247>

Tiede, G., & Walton, K. M. (2019). Meta-analysis of naturalistic developmental behavioral interventions for young children with autism spectrum disorder.

*Autism* 23(8), 2080–2095. <https://doi.org/10.1177/1362361319836371>

Theofanidis, D., & Fountouki, A. (2018). Limitations and delimitations in the research process. *Perioperative Nursing*, 7(3), 155–163. <https://doi->

[org./10.5281/zenodo.2552022](https://doi.org/10.5281/zenodo.2552022)

Weiner, B. (1972). Attribution theory, achievement motivation, and the educational process. *Review of Educational Research*, 42(2), 203–215.

<https://doi.org/10.3102/00346543042002203>

Williamson, R. L., Casey, L. B., Royston, J. S., & Buggey, T. (2013). Video self-modeling in children with autism: A pilot study validating prerequisite skills and extending the utilization of VSM across skill sets. *Assistive Technology*, 25(2),

63–71. <https://doi.org/10.1080/10400435.2012.712604>

Wolcott, M. D., & Lobczowski, N. G. (2021). Using cognitive interviews and think-aloud protocols to understand thought processes. *Currents in Pharmacy Teaching and Learning*, 13(2), 181–188. <https://doi.org/10.1016/j.cptl.2020.09.005>

<https://doi.org/10.1016/j.cptl.2020.09.005>

Yeong, M. L., Ismail, R., Ismail, N. H., & Hamzah, M. I. (2018). Interview protocol

refinement: Fine-tuning qualitative research interview questions for multi-racial populations in Malaysia. *The Qualitative Report*, 23(11), 2700–2713.

<https://nsuworks.nova.edu/tqu/vol23/iss11/7>

Yilmaz, I. (2020). Adaptation of quantitative measurement tools to quantitative measurement of possibility. *Educational Research and Reviews*, 15(5), 225–232.

<https://doi.org/10.5897/ERR2020.39709>

Yin, R. K. (2018). *Case study research and applications: Design and methods* (6th ed.).

SAGE Publications, Inc.

You, L. (2023). The impact of social norms of responsibility on corporate social responsibility short title: The impact of social norms of responsibility on corporate social responsibility. *Journal of Business Ethics*.

<https://doi.org/10.1007/s10551-023-05417-w>

## Appendix A: Interview Questions

1. What supported employment strategies do you use to integrate persons with ASD into the workforce?
2. How does integrating persons with ASD into the workforce fit into the organization's strategic plan?
3. How did you assess the effectiveness of the strategies for integrating ASD employees into the workforce?
4. What key obstacles have you addressed for the successful integration of ASD employees into your organization's workforce?
5. How did your organization address the key obstacles to the strategies for integrating ASD employees into its workforce?
6. What other information can you provide on your organization's strategies for integrating autistic employees into your organization's workforce?

## Appendix B: Interview Protocol

A script will be used to conduct the interview

Welcome to interviewee

Introduction of interviewer and the purpose of the study

Request permission to tape-record the session

Provide Consent Form

Allow time for the interviewee to ask questions about the study

Assure that any proprietary information will be held confidential and not divulged

Begin interview on time, provide a quiet place for the interview, and stop interview after 60 minutes

Ask open-ended questions and allow the possibility to deviate

Ask probing questions if necessary

Observe and note nonverbal cues from the interviewee

A coding system will be utilized to develop themes