EMPLOYER CONFIDENCE IN SELF-CAPACITY TO SUPPORT EMPLOYEES WITH AUTISM SPECTRUM DISORDERS: PARTNERSHIPS WITH COMMUNITY AGENCIES

BY

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Abstract

Community employment prospects for people with autism spectrum disorders (ASD) have improved as a result of decades of federal legislation as well as a growing body of research and employment service delivery options. However, employment outcomes among this population continue to lag behind general employment figures. While employer partnerships with school- and community-based work-based learning (WBL) and pre-/employment service providers have shown promise, research from the perspective of employers in hiring, retaining, and supporting workers with ASD has been limited. This pilot study explored the extent to which partnerships with school- and community-based WBL, pre-employment, and employment service providers impacted employers' confidence in their own capacity to support employees with ASD. An online survey questionnaire was distributed to employers in a mid-sized, midwestern university city. Results of the survey indicated that (a) partnerships are occurring at a low rate, and (b) partnerships and employer confidence in self-capacity are not closely associated. Limitations that necessitate caution when interpreting the results are discussed. Directions for future research that build upon these findings are presented, including refining the survey instrument and distribution methods, targeted interviews, focus groups, and comparative studies.

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Chapter 1. Introduction

Background

For most adults, work is an essential part of life and a crucial component of physical and psychological well-being (Alsaman & Lee, 2017). These benefits, however, have continued to elude many adults with disabilities nearly five decades following the passage of the Rehabilitation Act of 1973 (PL 93-112), which first authorized funding to state vocational rehabilitation (VR) agencies (Alsaman & Lee, 2017). Although nearly 30 years have passed since the initial authorization of the Individuals with Disabilities Education Act (IDEA, 1990; PL-94-142) transition mandates – which includes transition planning for post-secondary education, employment, and independent living as a key component – most adults with intellectual/developmental disabilities have traditionally been served in either segregated workshops or community-based programs without a work component (Migliore, Timmons, Butterworth, & Lugas, 2012). For those few who do work in integrated, community jobs, employment typically consists of part-time, entry-level positions with limited income and benefits (Migliore et al., 2012a). The Workforce Innovation and Opportunity Act of 2014 (WIOA; PL 113-128), however, places a distinct emphasis on competitive employment in the community along with additional limits on eligibility for sheltered workshops (Schall et al., 2015).

Young adults with autism spectrum disorders (ASD) may be at a particular disadvantage regarding postsecondary outcomes, including employment (Migliore et al., 2012a; Howlin, Goode, Hutton, & Rutter, 2004). When compared to similar disability groups, unemployment and underemployment rates may be even higher among young people with ASD, and there are concerns about the availability of future community job opportunities for this population

(Nicholas, Mitchell, Dudley, Clarke, & Zulla, 2018; Wehman et al., 2017). At the same time, the prevalence of autism diagnoses has continued to rise, as have the number of individuals with ASD seeking Vocational Rehabilitation services (Centers for Disease Control, 2018a; Kaya, Maxwell, Chan, & Tansey, 2018; Migliore et al., 2012a). While many young adults with ASD continue to have unique support needs, the majority of ASD research regarding supports and interventions has typically targeted younger populations (Schall et al., 2015; Standifer, 2009).

Research involving the RSA911 data set – developed by the Rehabilitation Services Administration to monitor state-level VR services administration and outcomes – from relatively recent years has illuminated potential predictors of successful employment outcomes for individuals with ASD and other disabilities (Migliore et al., 2012a). Alsaman & Lee (2017), for instance, have suggested that job search and job placement services are associated with improved employment outcomes for young workers with disabilities, including ASD. Migliore et al. (2012a) noted that a minority of young workers with ASD received job placement services. These two studies, however, are hindered by missing characteristics that may influence individual variables (secondary/multiple disabilities in addition to primary disability, self-determination, family income, living arrangements, etc.), relatively small effect sizes, and do not consider long-term employment maintenance. The supported employment (SE) model – one that typically features on-the-job training following placement based on person-centered planning practices and job matching – is supported by evidence dating from the 1980s (Migliore, Butterworth, Nord, Cox, & Gelb, 2012). More recently, customized employment strategies have extended this model through a negotiation process that considers both the needs of the employer and potential employee in crafting a job that may or may not currently exist in defined fashion. The latter approach better reflects the evidence in the literature that suggests employers first

consider personal and professional networks when seeking to fill a job opening (Migliore et al., 2012b). While promising, the customized employment strategies examined by Migliore et al. are based upon theoretical research, establishing the need for further experimental study and implementation with improved fidelity.

Competitive employment research with regard to particular interventions that benefit individuals with ASD in the workplace is less robust than the early intervention and educational programming literature (Schall et al., 2015). Most examples represent literature reviews, case studies, or observations of outcomes without mention of particular strategies or supports (Schall et al., 2015). A handful of employment training programs for youth with ASD have shown successful outcomes, though the specific components that lead to successful job placement and maintenance are less understood (Nicholas et al., 2018a). In one recent, replicable, experimental study, Wehman et al. (2017) modified the Project SEARCH model, which features rotating internships in community workplaces, by incorporating the use of applied behavior analysis (ABA). Compared to the control group who only received high school special education services, the treatment group fared substantially better over time in job acquisition and maintenance. In addition to benefitting from ABA techniques – provided by an autism employment specialist – for developing skills and behavior management, the treatment group seemed to benefit from the opportunities for repeated practice and the relationships with employers developed through the internships themselves.

Rationale and Statement of the Problem

Despite a significant body of literature that documents effective practices such as work-based learning, supported and customized employment models, and agency supports, little research exists regarding the perspective of employers, and especially what specific supports

they provide for employees with ASD (Karpur, VanLooy, & Bruyère, 2014). Those few that will be discussed in Chapter 2 and beyond are typically qualitative, with small sample sizes and a limited scope. The need for further research regarding employer capacity in this area is crucial, given that employers – and employer attitudes – are central in either impeding or facilitating employment for workers with ASD. (Scott, Falkmer, Falkmer, & Girdler, 2018). Employer capacity, including knowledge and confidence in their ability to support employees with ASD, may also impact employment outcomes (Rashid, Hodgetts, & Nicholas, 2017). Job satisfaction is a substantial component of job retention, and satisfaction may be positively impacted by supportive, knowledgeable co-workers and supervisors as well as appropriate accommodation strategies. (Nicholas et al., 2018a). From a financial perspective, adults with ASD may be among the most expensive individuals being served through Vocational Rehabilitation services (Cimera & Cowan, 2009). Therefore, the purpose of this study is to better understand the extent to which partnerships with school- and community-based work experience, pre-employment, and employment service providers impact employers' confidence levels in their own capacity to support employees with ASD in competitive jobs. The following research questions were proposed:

> Research Question 1: How do employers who partner with work experience, pre-employment, and/or employment service providers differ in their confidence levels from employers who have not partnered with providers?
>
> Research Question 2: Which types of school-based and/or community-based providers are partnering with employers?
>
> Research Question 3: Do partnerships include employer capacity-building initiatives as part of the collaboration process?

Operational Definitions of Terms

The following operational definitions of terms will aid in the understanding of this study:

- Autism spectrum disorders (ASD): A group of developmental disorders caused by differences in the brain that impact cognition, attention, communication, social skills, and behavior. (Centers for Disease Control and Prevention, 2018b; Standifer, 2009). Please note that this study does not differentiate between the different types of ASD, such as autism, high-functioning autism, Asperger's Disorder, or Pervasive Developmental Disorder-Not Otherwise Specified.
- Customized employment (CE): Processes and strategies that focus on utilizing strengths and preferences of the individual job seeker matched with the needs of a specific employer in a mutually beneficial fashion (Smith, Dillahunt-Aspillaga, & Kenney, 2017).
- Employer: Business owners, managers, and other job providers who are primarily and directly involved in hiring, monitoring and evaluating job performance, and making the determination to retain or dismiss individual employees.
- Employment service providers: Also known as community rehabilitation providers; community agencies that provide a continuum of employment services, such as vocational assessment, job counseling, job placement, and on-the-job training (Kaya et al., 2018; Moon, Simonsen, & Neubert, 2011).
- Pre-employment service providers: School- or community-based programs that provide work-based learning experiences to high school or transition-age students who qualify for special education services.

- Segregated employment: Employment in a facility-based program or sheltered workshop that offers group or individual work, often for below the minimum wage, along with skill training, prevocational services, and recreation/leisure activities (Cimera, Wehman, West, & Burgess, 2012).
- Supported employment (SE): Full- or part-time employment in an integrated setting for at least the minimum wage that involves job placement, on-the-job training, and access to job maintenance supports. (Migliore et al., 2012b; Alsaman & Lee, 2017).
- Transition services: A set of outcome-focused, academic and functional activities across the education, employment, and independent living domains that facilitate the transition from school to adult life for students with disabilities (Harvey, 2001; Kohler & Field 2003).
- Vocational Rehabilitation (VR): A program of employment services offered to eligible individuals with disabilities through federally-funded state agencies (Kaya et al., 2018; Luecking, 2009).
- Work-based learning (WBL): Planned programs of employment training and unpaid or paid work experiences that occur in real-world places of work (Hamilton & Hamilton, 1997; Luecking, 2009).

Chapter 2. Literature Review

Introduction: ASD and Barriers to Employment

According to the Centers for Disease Control and Prevention (CDC; 2018a), the prevalence rate of autism spectrum disorders (ASD) was around 1 out of every 59 individuals in 2014, up from 1 in 150 in 2000. In 2006-2007, approximately 3.9% of students ages 3-21 in the public schools had ASD, which increased to 7.1% in 2011-2012, and further increased to 9.2% in 2015-16 (Kaya et al., 2018; National Center for Education Statistics, 2019). Whatever the reason for these increases, a substantial number of young people on the autism spectrum are currently or will soon be entering the labor force (Kaya et al., 2018).

Depending on the individual, characteristics of ASD may range from mild impairment in social skills and communication to substantial cognitive and/or communication deficits, with the potential for severe problem behaviors. Individuals with ASD may also have average, above average, or below average intelligence. Although symptoms may improve over time, ASD is usually diagnosed prior to age 3 and lasts throughout the lifespan (CDC, 2018b; Standifer, 2009). Selected characteristics of ASD that may impede successful employment outcomes are listed in Table 2.1 on the following page. It should be noted, however, that not every individual will demonstrate all of these features, and some characteristics of ASD may in part lead to successful vocational outcomes, such as attention to detail, sorting and organizational skills, and adherence to routines. It should also be noted that these characteristics are not exclusive to ASD, and people who do not have ASD may certainly demonstrate one or more across any number of settings (Standifer, 2009).

Due in part to the legislative initiatives discussed below, the segregated employment models that served workers with intellectual and developmental disabilities in the past have

Table 2.1. Common features of ASD that may impact employment prospects.

Characteristic	Possible Features
Impaired communication	Tend to process visually better than verbally
	May have expressive language deficits; some exhibit echolalia (repeating words or phrases)
	May not initiate verbal communication; may give unrelated answers to questions
	Literal interpretations of everyday idioms and metaphors
Social Skills	May avoid eye contact
	May not demonstrate recognition of personal space, boundaries (e.g. standing too close or engaging in uninvited touch)
	May have trouble reading both verbal and non-verbal (e.g. body language) social cues
	Contextually inappropriate emotional responses
	May narrowly focus on topics of personal interest
	May demonstrate a rigid worldview or perspective
Unorthodox interests/behaviors	Ritualistic behaviors & routines (e.g. lining up objects)
	Difficulty dealing with changes in routine
	Rocking back and forth, making repetitive noises, gestures, hand-flapping, etc.
	Aggressive or challenging behaviors (e.g. self-injurious behaviors, property destruction)
Cognition and processing	Difficulty following long sequences or steps of a task
	May need additional time to process instructions; may have difficulty following complex or lengthy verbal directions
Sensory	Hyper- or hyposensitivity to sounds, odors, lights, textures, etc.
Other	Gross, fine motor skill deficits

Note. Adapted from CDC, 2018; Standifer, 2009.

begun to be replaced by community-based employment services that foster participation in the general labor market (Hagner & Cooney, 2003). As of 2017, however, the participation rate in the labor force for people with disabilities was only 20.6%, compared to 68.6% of people without disabilities. These numbers remained relatively unchanged in 2019, with a participation rate of 20.8% for people with disabilities and 69.2% for those without (Alverson & Yamamoto, 2018; U.S. Department of Labor office of Disability Employment Policy, 2019). Though autism-

specific employment figures are unavailable from the U.S. Department of Labor, other studies suggest that merely 58% of young adults with ASD have worked outside their home compared to 74% and 91% of individuals with intellectual disabilities and emotional disorders, respectively (Alverson & Yamamoto, 2018; Nicholas et al., 2018a; Nicholas et al., 2018b; Roux, Shattuck, Rast, Rava, & Anderson, 2015). Compared to households without adults with disabilities, households which include an adult with a disability have been associated with reduced income and assets (Parish, Grinstein-Weiss, Yeo, Rose, &. Rimmerman, 2010). According to the National Longitudinal Transition Study-2 (NTLS-2, 2009) – a primary source which measured post-school outcomes for youth with disabilities – the majority of people with ASD earn less than the minimum wage (Schall et al., 2015). Fortunately, though not specific to ASD alone, characteristics of employers open to hiring workers with disabilities have been identified, and school- and community-based resources and practices associated with improved employment outcomes have been reported (Gilbride, Stensrud, Vandergoot, & Golden, 2003; Nicholas et al. 2018a; Simonsen, Fabian, & Luecking, 2015).

Legislative Initiatives

Education. The roots of contemporary special education law date to the Education of All Handicapped Children Act of 1975 (EAHCA; PL 94-412), which codified a nationwide guarantee of a free and appropriate public education (FAPE) for students with disabilities ages 3-21. The 1983 (PL 98-199) and 1986 (PL 99-497) amendments, as well as the 1984 Carl D. Perkins Act (PL 98-524), established funding for transition services and improved access to vocational programs (Harvey, 2001). Unfortunately, post-school outcomes – including employment – remained poor for young adults with disabilities (Hasazi, Furney, & Destefano, 1999; Johnson, Stodden, Emanuel, Luecking, & Mack, 2002; Kohler & Field, 2003). As a partial

result, the Individuals with Disabilities Education Act (IDEA) of 1990 mandated for the first time transition services – including a written transition plan – as part of the Individualized Education Program (IEP) process, beginning at age 16 (age 14 when appropriate; Harvey, 2001; Hasazi, Furney, & Destefano, 1999). The 1997 reauthorization of IDEA (PL 105-17) added the individual course of study to the IEP, and the Individuals with Disabilities Education Improvement Act of 2004 (IDEA 2004; PL 108-446) updated the definition of the term "transition services" to mean a coordinated set of activities for a child with a disability that:

- Is designed to be within a results-oriented process, that is focused on improving the academic and functional achievement of the child with a disability to facilitate the child's movement from school to post-school activities, including postsecondary education, vocational education, integrated employment (including supported employment); continuing and adult education, adult services, independent living, or community participation;
- Is based on the individual child's needs, taking into account the child's strengths, preferences, and interests; and
- Includes instruction, related services, community experiences, the development of employment and other post-school adult living objectives, and, if appropriate, acquisition of daily living skills and functional vocational evaluation; also,
- Transition services for children with disabilities may be special education, if provided as specially designed instruction, or a related service, if required to assist a child with a disability to benefit from special education [34 CFR § 300.43 (a)] [20 U.S.C. 1401(34)].

Employment. While the Smith-Fess Act of 1920 (Civilian Rehabilitation Act, Ch. 219, 41 Stat. 735, 1920) created the Vocational Rehabilitation (VR) program, major policy initiatives surrounding disability in the workplace began in earnest the 1970s with the Occupational Safety and Health Act (OSHA, PL 91-5961; Unger, 2002). Funding for the VR program was later established by the Rehabilitation Act of 1973, which was later amended as the Workforce Investment Act of 1998 (PL 105-220; Fleming, Del Valle, Kim, & Leahy, 2013; Smith, et al., 2017). Through this program, coordinated by the Rehabilitation Services Administration (RSA), Office for Special Education and Rehabilitative Services, U.S. Department of Education, state VR agencies are provided with federal funding to help people with disabilities secure and maintain community employment (Alsaman & Lee, 2017; Migliore, Butterworth, & Zalewska, 2014). The VR process itself is outcome-oriented in the sense that it is designed to lead to some sort of case closure and consists of three phases that involve referral, assessment and evaluation, and provision of services (Bolton, Bellini, & Brookings, 2000). Interested individuals must apply and be deemed eligible before receiving services. The list of services that VR provides is extensive and varies state-by-state. (Kansas Vocational Rehabilitation Handbook of Services, 2012; Kaya et al., 2018). Given the increasing costs of services rendered, some state VR agencies utilize an order-of-selection process through which individuals with the most severe disabilities are given the highest priority (Kansas Vocational Rehabilitation Handbook of Services, 2012). See Table 2.2 on the next page for a detailed – but not exhaustive – list of common VR services.

Most recently, the Workforce Innovations and Opportunity Act of 2014 (WIOA) was enacted to replace the 1998 law. Among the many important changes in this law are the expansion of the VR program to work with employers and an emphasis on competitive

Table 2.2. Common VR services.

Service	Description
Vocational assessment	Determine eligibility & priority category
	Determine which services are included in Individual Plan for Employment (IPE)
	Job trials and community assessment
Counseling and guidance	Assistance in learning about disability
	Identify and plan to reach goals
	Vocational counseling and family, medical, social, education, and community program counseling
Job readiness training	General preparation for the world of work (e.g. work behaviors, hygiene and dress, getting to work on time)
Diagnostics and treatment	Nursing and dental services, mental health services, speech, physical, and occupational therapy
Job search assistance	Assist in identifying and searching for appropriate jobs, preparing resumes, interview skills, make business contacts
Job placement assistance	Referral and assistance with filling out applications, interview skills, and lessening barriers to employment
On-the-job support	Services such as job coaching and follow-up services to aid in stabilization and job retention.
Transportation services	Travel and related expenses
	May include public transportation travel training
Information and referral	Information from and referral to other agencies
Supported employment	Training to learn a job and long-term supports to keep a job
Other services	Physical and mental restoration services
	Daily living skills training
	Augmentative skills training
	College or university training
	Technical assistance
	Occupational training
	On-the-job training
	Rehabilitation technology
	Maintenance
	Readers, interpreters, tutors, personal assistants

Note. Adapted from Kansas VR Handbook of Services, 2012; Kaya et al., 2018.

employment as an optimal outcome by the federal government (Smith, Dillahunt-Aspillaga, & Kenney, 2017). WIOA also mandates that young adults with disabilities will no longer be permitted to work for less than the federal minimum wage in segregated work settings unless

they first receive pre-employment transition services, access vocational rehabilitation services, and at least attempt community employment (Schall et al., 2015). Under WIOA, "pre-employment transition services" may include job exploration counseling, workplace readiness training, WBL experiences, postsecondary enrollment counseling, and self-advocacy instruction (Miller, Sevac, & Honeycutt, 2018). In obtaining competitive, community employment, WIOA places an increased focus on customized employment (CE), defined as

> Competitive, integrated employment, for an individual with a significant disability, that is based on an individualized determination of the strengths, needs, and interests of the individual with a significant disability, designed to meet the specific abilities of the individual with a significant disability and the business needs of the employer, and carried out through flexible strategies [34 CFR 361.5(c)(11)] (Smith et al., 2017).

Access and accommodations: The ADA. The Americans with Disabilities Act (ADA; PL 101-336) – a federal civil rights law passed in 1990 and amended as the ADA Amendments Act in 2008 (ADAAA; PL 110-325) – protects people with disabilities from discrimination on the job and when accessing goods and services. Title I of the law specifically covers the rights and responsibilities of both employees and employers. Typically, if an employee with a disability can perform the "essential," or fundamental functions of the job with or without accommodation, and works for a business or organization with 15 or more employees, he or she can ask for a reasonable accommodation in order to address a workplace barrier that is preventing equal access to some aspect or benefit of employment (Job Accommodation Network, 2019). Employers may deny a request, however, if they prove that providing the requested accommodation would present undue hardship (JAN, 2019).

Promising Trends and Effective Practices

Research generally shows improved postsecondary outcomes for youth who have

participated in experiences such as paid employment, career & technical education (CTE), instruction in self-determination skills, and transition assessment and planning strategies that focus on family participation and linkages with adult service agencies (Moon, et al., 2011). Youth with high-incidence disabilities (e.g. specific learning disabilities, ADHD), though, tend to fare better than those with low-incidence abilities – including autism – who often finish school on an alternative track and require specialized, ongoing supports to participate in community work as adults (Moon et al., 2011).

Though special education legislation requires instructional practices and interventions that are evidence-based, the literature is relatively sparse in terms of teaching employment skills to youth with ASD (Bennett & Dukes, 2013). Additionally, as the majority of the educational intervention research has been conducted with young children, different approaches to instruction may be needed in order to generalize skills to community settings and to provide vocational instruction in those settings with potentially less support than youth might receive in the classroom (Bennett & Dukes, 2013; Schall et al., 2015). Despite these gaps in the research, educational interventions that have demonstrated emerging applicability to the workplace include but are not limited to the following:

- TEACCH (Training and Education of Autistic and Related Communication Handicapped Children): a widely-used educational intervention program for children with ASD. Components that may translate to the workplace include structured environments, physical marking and specific arrangement of environmental features, visual communication, clear and regular sequence and routine, and minimization of sensory distractions (Standifer, 2009).

- PECS (Picture Exchange Communication System): A specific, graduated system in which picture cards are used to facilitate communication between an individual with ASD or another disability and a communication partner. (Standifer, 2009).
- Social stories, comic book strips, and scripts: Narrative and/or visual descriptions of social situations and activities that serve to clarify what is happening or to establish contextual expectations. Scripts combine social stories and comic book strips into play-like scripts of specific situations. (Standifer, 2009).
- Video modeling and video self-modeling: Audiovisual recordings of another person or the individual being served performing a task (Bennett & Dukes, 2013).
- Self-monitoring and self-management: Systems that distinguish between expected and inappropriate behaviors while allowing the individual to record, monitor, and reward themselves for demonstrating expected behaviors (Bennett & Dukes, 2013).
- Intervention packages involving the above strategies or other high- and low-tech systems of video, audio, and picture prompts (Bennett & Dukes, 2013).

From school to work: Transition program models. The 1997 and 2004 IDEA reauthorizations included language and funding directives that allowed for the development of transition programs at the state level (Chappel & Somers, 2010). These programs provide community-based instruction and linkages for young adults with disabilities transitioning to adult life across multiple domains, including work. Program models that have led to successful outcomes include the following:

- TEACCH Supported Employment Program: Developed by the TEACCH program in partnership with the Autism Society of North Carolina and North Carolina Vocational Rehabilitation Services, provides supported employment services and job

coaching through individual (1:1 job coaching support), dispersed enclave (one job coach supports several individuals who work with one business), and mobile crew (job coach supports 2-3 individuals who provide a community service) models (Hedley et al., 2016; Keel, Mesibov, & Woods, 1997; Nicholas et al., 2018a).

- Project SEARCH: A business-led, nine-month internship program for students with developmental disabilities in their final year of school (Hedley et al., 2016; Nicholas et al., 2018a).
- National Autistic Society (NAS) Prospects Program: A supported employment program based in the United Kingdom that provides job placement and support services for adults with autism or Asperger's syndrome (Howlin, Alcock, & Burkin, 2005; Nicholas et al., 2018a).
- Bridges from School to Work: Developed by the Marriott Foundation for People with Disabilities (MFPD) across several U.S. metropolitan areas, provides career counseling and job search services, paid job placement and supports, and follow-up support and tracking (Luecking, 2009; Simonsen et al., 2015).
- Start on Success (SOS): Developed by the National Organization on Disability (NOD), provides paid internships with large employers including universities, hospitals, and corporations (Luecking, 2009).
- Transition Services Integration Model (TSIM): Provides person-centered planning, job development, customized jobs with shared support by school and employment agency staff, and pre-exit planning for students receiving special education services up to age 21 (Luecking, 2009).

- High School/High Tech (HS/HT): Developed by the President's Committee for Employment of People with Disabilities, offers high school students job exposure, job shadowing, and paid and unpaid internship opportunities with high-tech companies and organizations (Luecking, 2009).
- Career Transition Program: Developed in Maryland and replicated across the country, this program focuses on mental health and emotional disorders and offers person-centered planning, case management, paid work experiences, and family support activities. (Luecking, 2009).

From school to work: Job placement and job training. Work-based learning (WBL) experiences are one element of transition training and instruction that occur on the job in real-world settings (Hamilton & Hamilton, 1997). The James Irvine Foundation in California (Darche, Nayar, & Bracco, 2009) describes minimum characteristics of WBL programs, including (a) direct, systematic employer and/or community input, (b) depth of experience – such as the differences between an internship versus a classroom field trip, and (c) connection to the academic and/or CTE curricula. Both the Foundation as well as Tilson & Diaz Solutions (Tilson, 2015) present quality WBL experiences as part of a continuum of work-related experiences - including career exploration, WBL, and career development – that span the elementary, middle, high school, and transition experiences. Specific types of WBL experiences are outlined below in Table 2.3. Potential student benefits of these WBL experiences include identification of preferences, strengths and needed supports, development of employability skills, goal setting, improved understanding of workplace culture, and better understanding of the connection between classroom instruction and workplace expectations (Cease-Cook, Fowler, & Test, 2015; Luecking, 2009; Tilson, 2015).

Table 2.3. Types of work-based learning experiences.

Type of Experience	Description
Career exploration	Visits to workplaces to learn about jobs and the skills needed for them. May include employer interviews and follow-up discussions
Career-related student competitions	Students demonstrate mastery of career-related skills through judged presentations or competitions
Job shadowing	Accompanying an employee in the workplace while observing job duties
Work sampling	On-the-job skills and work behaviors training in an authentic workplace for the educational benefit of the student, not materially for the employer
Service learning	Volunteer service to the school or community that places as much emphasis on student learning and course objectives as community service
Internships	Formal, paid or unpaid arrangements where interns are assigned certain job tasks to be performed in a workplace over a predetermined period of time
School-based enterprises	Students produce goods or services for sale or use by others in the school or community
Simulated workplace experiences	Simulate the working environment in any field. May be useful when labor laws or logistics make access to authentic experiences difficult, but still provide collaboration with and feedback from employers
Apprenticeships	Formal work experiences where an apprentice learns skills particular to a trade. May be paid or unpaid
Paid employment	May include existing jobs or customized arrangements negotiated with an employer for paid wages.

Note. Adapted from Cease-Cook et al., 2015; Darche, et al., 2009; Luecking, 2009.

Certain predictors of successful competitive employment outcomes for youth with ASD include VR services such job placement and on-the job training and support (Kaya et al., 2018; Migliore et al., 2012a). Typically, these services have been provided as part of the supported employment (SE) model, an evidence-based practice which represents a "place-then-train," "supply-side" approach to employment services (Buys & Rennie, 2001; Migliore et al., 2012a; Schall et al., 2015; Wehman et al, 2012). Under this market-based model, employment service providers

attempt to pair prospective employees with jobs from an available supply through more traditional job development means such as advertising, cold calls, and sending resumes to employers (Buys & Rennie, 2001; Migliore et al., 2012b). Other steps of the SE process include the development of a job seeker profile, on-the-job training, and long-term supports (Schall et al. 2015; Wehman et al., 2012).

More recently, agencies and employers have increasingly implemented customized employment (CE) models that build upon the SE approach by involving the following steps:

- The Discovery process, which involves authentic assessment,
- Vocational profile development
- A CE planning meeting, which is person-centered and involves multiple stakeholders,
- A visual (pictures, videos) resume,
- Customized job development and negotiation, and
- Accommodations and post-employment support (Smith et al., 2017).

The CE job development and negotiation feature in particular represents more of a "demand-side" approach in which service providers and employers attempt to carve out and reorganize job duties that may not necessarily exist in a defined position in such a way to both complement the strengths of the employee as well as benefit the needs of the employer (Migliore et al., 2012b; Smith et al., 2017).

Community partnerships and relationships. Successful outcomes for job development, training, and placement activities are dependent on the development and maintenance of community partnerships. Buys & Rennie (2001) identified several themes of successful partnerships between VR and employers, including community responsibility on the employer side, competency in service delivery and a business-oriented focus on the agency side, and

reciprocal benefits and trust among both parties developed over time. Students with disabilities, though, are much more likely to obtain employment after school when provided with meaningful career development instruction and WBL opportunities prior to leaving school (Carter et al., 2009). The Project SEARCH program is one example of a business-led, pre-employment partnership with schools or other community agencies through which interns are supported by an instructor/facilitator and job coach in learning the skills needed to succeed in certain jobs (Project SEARCH, 2019). The SEARCH program is also a successful example of interagency collaboration – also a best practice of VR service delivery – among multiple stakeholders including businesses, schools, VR, community rehabilitation providers, and the interns themselves (Fleming et al., 2013). The Bridges from School to Work program is a successful example of a public-private partnership through which interns developed employment skills that led to jobs within the Marriott Corporation (Simonsen et al., 2015; Unger, 2007). While these and other corporate and individual business partnerships have proved fruitful, accessing employer networks has also been recommended in order to maximize employment opportunities for prospective employees. Local chambers of commerce, for example, exist in large and small communities throughout the country and represent natural opportunities for the development school-employer or public-private partnerships through networking on a larger scale (Carter et al., 2009).

Employer Capacity

In spite of promising trends, research examining specific employer practices and strategies in supporting employees with ASD is limited. Service providers and disability advocates comprise the target audience for much of the existing literature – rather than employers themselves – which is typically focused on workplace culture, attitudes, and

perceptions toward disabilities (Karpur et al., 2014). Rashid, Hodgetts, & Nicholas (2017) developed a grounded theory design to explore strategies suggested by employment support workers to build employer capacity in supporting workers with developmental disabilities (DD). Employers themselves, though, did not participate. Hagner & Cooney (2005) observed and interviewed supervisors of 14 employed individuals with ASD, finding both (a) a set of effective accommodation strategies within the areas of job modification, supervision, co-worker relationships/social interactions, and support services, and (b) that partnerships with local employment service providers were paramount in successful employment maintenance. However, results cannot be accurately generalized due to the limitations imposed by the small sample size, reliance on self-reporting in place of additional observations and exit interviews, and uncontrolled variables specific to the study participants. In Australia, a randomized control trial was conducted to evaluate the effectiveness of the Integrated Employment Success Tool (IEST™; Scott et al., 2018). The IEST™ is an autism-specific manual meant to assist employers in hiring supporting, and retaining employees with ASD. Results, however, showed little difference between the treatment and control groups in terms of self-efficacy in both implementing on-the-job modifications and attitudes concerning disability on the job site. Nicholas et al. (2018a) tested an ecosystem framework through the implementation of Employment*Works* Canada (EWC), a job readiness program that blends structured learning, on-the-job training, and capacity-building initiatives for workers with ASD, co-workers, and employers. Results reflected other studies by underscoring the efficacy of support networks composed of multiple personal and professional stakeholders. This single case study example involved a small number of participants from one program, so more extensive sampling across diverse demographics is needed.

Summary and the Need for Ongoing Research

Thanks in part to over four decades of federal legislative initiatives and a growing body of research and service delivery options, prospects for community employment have improved for workers with ASD. Promising practices have emerged, including work-based learning (WBL) experiences, person-centered transition services, community partnerships and collaboration among stakeholders, supported and customized models of employment, and employment services, including assessment, training, and maintenance strategies and supports. Lindsay et al. (2012) found that employers felt well-prepared for supporting young workers with disabilities as part of an employment training program. Others have shown that businesses have experienced increases in productivity and profitability from employing workers with disabilities (Hartnett, Stuart, Thurman, Loy, & Batiste, 2011; Unger & Kregel, 2003). However, additional research has discovered that concerns persist among employers regarding lack of knowledge about accommodations, the perceived cost of implementing accommodations, and general disability stereotypes among supervisors and other employees (Karpur et al., 2014). This is compounded by the possibility of stigmatization of employees who receive on-the-job supports from job coaches through employment services agencies (Hagner & Cooney, 2003). Unfortunately, the majority of the extant literature has focused on the needs and perspectives of service providers, rather than those of business owners, managers, and other job providers. Likewise, not all workers with ASD have received the benefits of services provided by state VR agencies and community-based employment service providers. From 2002 through 2012, Cimera, Burgess, Novak, and Avellone (2014) found that an average of 1.7% of VR applicants were denied services as a result of being deemed "too disabled to benefit." While this general figure declined from 1.9% to 1.5% over this time period, the majority of individuals denied

services had some sort of cognitive impairment, and their specific numbers actually increased over the same span. Even for those employees with ASD who do receive services, the providers themselves may perceive those services to be of higher quality than the individuals served and their families, suggesting a need for capacity-building for agency professionals (Nicholas et al., 2018b). Also, though youth with ASD receiving VR services have been more likely to secure employment, their overall employment outcomes have not been as favorable as those of young people with other disabilities (Kaya et al., 2018). The present study, then, was designed with job providers in mind in order to encourage them to reflect on their confidence in providing supports and accommodations, what those supports and accommodations look like, and the role(s) of outside agencies in facilitating strategies and processes that benefit workers with ASD.

Chapter 3. Methods

Participants

Participants in this pilot study were recruited from a database of businesses – developed by the researcher between July 9 and August 21, 2019 – in a mid-sized, midwestern university city. Three resources were consulted to compile the database: (a) the local Chamber of Commerce online membership directory, (b) the online partner directory of the largest employment services provider for adults with disabilities within the city, and (c) a brochure for the local public school district WBL program. These resources were selected since local Chambers of Commerce provide natural opportunities for networking and developing partnerships between schools and/or employment service providers and community business. These partnerships can foster advocacy and the creation/implementation of WBL experiences, job training, and job acquisition and maintenance for youth and young adults with disabilities (Carter et al., 2009; Noonan, Morningstar, & Erickson, 2008). In order to participate in this study, respondents were required to be primarily involved in personnel decisions as defined in Chapter 1 at businesses with a city address. Respondents and/or the businesses they represented were also required to (a) have an email address listed on their business website, social media page, or have a representative or business contact form available on the Chamber website; and (b) represent paid providers of goods or services – including non-profits – rather than organizations with elected and/or voluntary memberships, such as the local school board, city/county commissions or councils, and professional organizations or unions. Businesses who could not be contacted through any of these means were excluded. Also, while different branches or franchises of chain businesses were contacted – such as grocery stores, banks, restaurants, and insurance providers – different individuals within the same business office were not – such as

law offices or realties with several individual Chamber members listed in the directory. Additionally, individual members of the Chamber were not contacted for this study.

Total respondents in this study were $n = 14$ employers. Two potential participants withdrew by email due to the self-reported small size of their organizations. Another potential participant reported forwarding the survey and Statement of Informed Consent to another company representative with primary hiring responsibilities, but that representative did not follow up prior to the end of the data collection period. A fourth potential participant responded with what appeared to be a standard company email response with no further follow-up. Of those respondents who disclosed gender identity, ($n = 9$), the majority identified as "male" ($n = 6$). Respondents who disclosed industry type ($n = 9$) represented a diverse array of professions across service, planning, information, manufacturing, and non-profit sectors, and each respondent who disclosed level of education ($n = 9$) reported at least some level of college education, with nearly half possessing at least a bachelor's degree ($n = 4$). Those respondents who disclosed such information ($n = 9$) represented a combined 93 years of experience in a hiring capacity in their respective industries (range = 1 to 30 years; mean = 10.3 years). A complete outline of respondent demographics is displayed in Table 3.1 on the following page.

Materials

An original, cross-sectional survey questionnaire was developed as the data collection instrument for this study through Qualtrics, a free, web-based survey platform. In educational research, cross-sectional surveys are often used as tools to capture attitudes and practices as they exist at a point in time (Creswell, 2018). For purposes of the present study, then, a 30-item questionnaire was developed to gather information to explore (a) respondents' self-confidence in

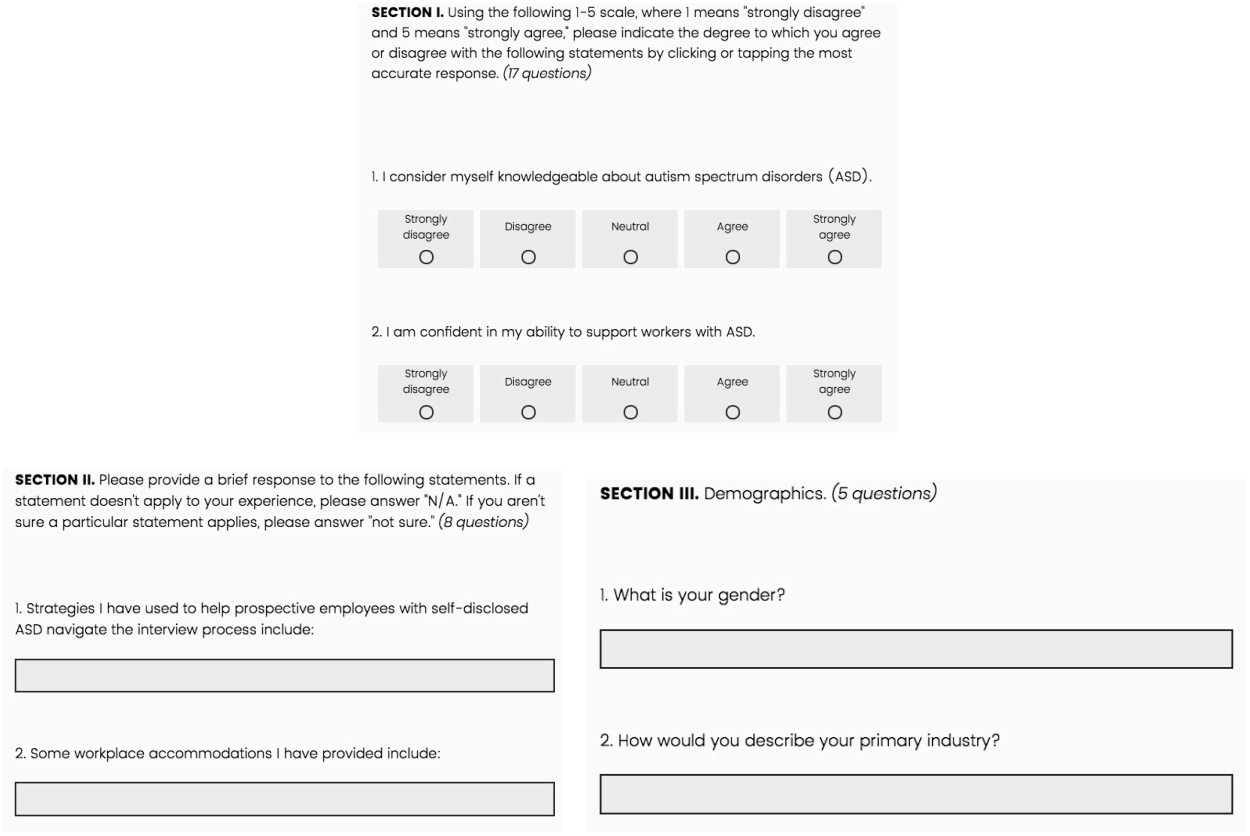
Table 3.1. Demographic results of respondents.

Variables	*n*	%
Gender Identity		
Male	6	66.7%
Female	2	22.2%
Non-binary	1	11.1%
Years of Experience in Industry		
1-10	3	37.5%
11-20	2	25%
21-30	1	12.5%
30 or more	2	25%
Years in Hiring Capacity in Industry		
1-10	6	66.7%
11-20	2	22.2%
21-30	0	0%
30 or more	1	11.1%
Highest Level of Education		
Less than high school diploma	0	0%
High school degree or equivalent (e.g. GED)	0	0%
Some college, no degree	1	11.1%
Associate degree (e.g. AA, AS)	1	11.1%
Bachelor's degree (e.g. BA, BS)	4	44.4%
Master's degree (e.g. MA, MS, MEd)	2	22.2%
Professional degree (e.g. MD, DDS, DVM)	0	0%
Doctorate (e.g. PhD, EdD)	1	11.1%

their abilities to support employees with self-disclosed autism spectrum disorders throughout the processes of obtaining and maintaining competitive employment, (b) what impact partnerships with employment service/school-based might have confidence levels, and (c) if any sort of capacity-building component exists within these partnerships. The questionnaire was divided into quantitative, qualitative, and demographic sections. In the quantitative section, respondents were prompted to select the answer that best corresponded to their agreement with each item based on a 5-point, Likert-type scale, where a 1 meant "strongly disagree" and a 5 meant

"strongly agree," for each of 17 items. The qualitative section included eight open-ended items that prompted respondents to describe knowledge and practices related to the first section in greater detail. The final section included five demographic questions. The first four were open-ended and prompted respondents to best describe their gender identity, primary industry, and years of experience in that industry as well as in a hiring capacity. The final question asked respondents to select their highest level of education. Figure 3.1 below displays the three sections of the questionnaire, along with sample questions (see Appendix A for the full survey instrument).

Figure 3.1. Examples of survey questions from each section as they appeared online.



Note. Respondents scrolled vertically from the top to the bottom of each section to complete items.

While inherently a mixed methods study, the quantitative portion was of primary importance, while the qualitative and demographic portions were designed with the intention of capturing potential themes that further explained and enhanced both the descriptive and inferential data. Though not explicitly outlined in the online survey instrument, items on the questionnaire were organized according to specific domains. Of the 17 Likert-type items, items 1 and 2 – measures of self-reported knowledge of and self-confidence in supporting workers with ASD – represented the primary domain of this study. Item 1 was designed to prompt respondents to think about their overall knowledge of ASD, while item 2 – the primary research purpose of the study as a whole – prompted respondents to think about their overall confidence in their own capacity to support employees with ASD within their specific workplaces. Each of the following domains, then, were designed with the intention to relate to the primary domain. For instance, measures of workplace accommodations and supports, comprised of items 3 through 8, were designed to assess respondents' awareness and implementation of proactive and reactive strategies, adaptations, and supports provided during the employment acquisition and maintenance processes. For these items, it was initially assumed that those who were more confident would be more likely to have implemented on-the-job supports and accommodations. Items 9 through 15 were designed as measures of community partnerships and collaborations. The items in this third domain, when compared to the measure of confidence in self-capacity, were intended to address the three research questions outlined in Chapter 1. For items 16 and 17, respondents were prompted to self-assess their awareness of available resources within as well as outside of the community that either have helped or could help them learn more about supporting employees with ASD. Table 3.2 on the next page shows the organization of each survey item by domain.

Table 3.2. Domain organization of quantitative survey items.

Domain	Corresponding Survey Items
Knowledge and self-confidence (primary domain)	1. I consider myself knowledgeable about autism spectrum disorders (ASD). **2. I am confident in my ability to support workers with ASD.**
Workplace accommodations and supports	3. I know what to do if an interviewee with self-disclosed ASD gives an unconventional or unexpected response. 4. I provide reasonable accommodation strategies that help employees with ASD perform essential tasks. 5. I consider the strengths and needs of individual employees when arranging the work environment. 6. I feel comfortable adapting the work environment to meet individual needs. 7. I am aware of assistive technology (AT) that may be helpful in supporting employees with ASD. 8. I know what to do when an employee with ASD appears to be overwhelmed.
Community partnerships and collaboration	9. I have partnered with community-based employment service providers to hire workers with ASD. 10. I have partnered with local school district work experience programs to provide work-based learning (WBL) experiences for students with ASD. 11. I have partnered with community-based pre-employment service providers to provide work-based learning (WBL) experiences for students/young adults with ASD. 12. I have learned effective support strategies through collaborating with pre-employment program providers for students/young adults with ASD. 13. I have learned effective support strategies through collaborating with external employment program providers for workers with ASD. 14. I have participated in formal trainings provided by pre-employment service providers. 15. I have participated in formal trainings provided by employment service providers.
Awareness of resources	16. I am aware of community resources that can help me learn more about supporting employees with ASD. 17. I am aware of resources outside the local community that can help me learn more about supporting employees with ASD.

Note. The primary measure – confidence in self-capacity – is highlighted in bold.

Validity and reliability. For purposes of content validity, two qualified individuals reviewed the survey questionnaire and provided feedback. The first reviewer was a university associate professor specializing in inclusive education methods and practices. The second reviewer was an autism and behavior consultant for a relatively large midwestern school district who is also a Board Certified Behavior Analyst (BCBA). The reviewers held a Ph. D. and master's degree, respectively.

In order to estimate internal consistency reliability, inter-item correlations between individual items and the average inter-item correlation of confidence in self-capacity compared to each other survey item were calculated using an Excel spreadsheet. The ideal range for inter-item correlations as well as the average was established as 0.15 to 0.5, meaning that items falling within this range were well-correlated in the sense that they measured the same construct, but not so close as to be redundant (Clark & Watson, 1995). Since item 2 – confidence in self-capacity to support employees with ASD – was the primary measure for this study, each of the other 16 survey items were correlated with this item one at a time. Next, the average inter-item correlation was calculated from all 17 of these pairings, yielding a total average of 0.19, which fell within the above range. The total average inter-item correlation for all survey items was 0.26. Individual inter-item correlations will be discussed in greater detail in the following chapter.

Procedure

Prior to distributing the questionnaire and collecting data, this study was first submitted for approval by the Institutional Review Board (IRB) at the University of Kansas, which was granted on July 2, 2019. Following the completion of this process, potential participants were sent an introductory email that introduced the researcher and provided a brief overview of the purpose of the study (Appendix B). Participants were then directed to an attached Statement of

Informed Consent, which further detailed the purpose of the study, including the purpose statement and research questions. Both the email and statement made clear that those employers directly involved in personnel decisions should complete the questionnaire. Participants were also assured that there were no known risks associated with this study beyond any discomfort one may typically experience in a given day. Participants were informed that no direct identifiers would be collected beyond email addresses, which would be destroyed following the conclusion of the study. Completion of the study indicated that participants had read and understood the Statement of Informed Consent and were willing to complete the study. However, consent could be withdrawn at any time by contacting the researcher directly (see Appendix C). Interested respondents then clicked or tapped a link to begin the questionnaire, which typically took 20 or fewer minutes to complete. Survey questions could be completed in any order, and participants were free to leave any item blank for any reason.

Data collection. The data collection period lasted for a total of four weeks. For data collection purposes, potential participants were organized into two groups. Businesses with an email contact listed on their website and/or social media profile were compiled into a contact list through Qualtrics and were sent the email invitation and survey link at the same time. Two reminders were sent following the initial survey distribution, each at a different time on a different day of the week. Businesses who could only be contacted through an online form were contacted individually one time with no follow-up for feasibility reasons. Once the questionnaire was completed, respondents were thanked for their time and were provided an email address to contact the researcher directly for a copy of the data, if desired, with indirect identifiers removed. Parameters were set within the Qualtrics platform that prevented respondents from taking the survey more than once.

Data analysis. Data recorded in Section I – the quantitative portion of the study – was first analyzed and summarized descriptively by calculating the count and percentage for each of the five Likert-type response categories, as well as range, mean (*m*), standard deviation (*sd*), and variance for each survey item. Next, a chi-square test was conducted through the Qualtrics platform to test for statistically significant relationships between item 2 and each of the 16 other quantitative survey items. The qualitative responses in Section II were analyzed and categorized according to major themes, which were then compared to the responses in Section I to check for specific information that may have further explained the quantitative results. Finally, the open-ended, demographic responses to the gender identity, industry type, years of industry experience, and hiring experience items were organized into categories or ranges of years, respectively. Then, these items as well as levels of education were cross-tabulated with item 2 to check for possible associations between gender, experience, or education and the likelihood of agreeing or disagreeing with the confidence in self-capacity prompt.

Chapter 4. Results

The results from each Likert-type response item are described independently according to domain. Respondents who answered at least one survey item had their responses recorded, while those who opened the survey without responding to any items were not included. All 14 respondents answered survey items 1 through 9, while 12 of the 14 total respondents answered items 10 through 17. Next, statistically significant relationships and inter-item correlations between response items as well as average inter-item correlations are discussed. The results from item 2 that were cross-tabulated with demographic characteristics including gender identity, level of education, years in industry, and years in hiring capacity are then presented. Finally, the qualitative, open-ended responses are discussed both independently and as they relate to the quantitative findings. For a full report of the results of each quantitative survey item, see Appendix D.

Quantitative Results: Descriptive

Domain 1: Knowledge and self-confidence. Domain 1 consisted of two survey items: (a) Item 1 (I1) – "I consider myself knowledgeable about autism spectrum disorders (ASD)" – and (b) item 2 (I2) – "I am confident in my ability to support workers with ASD." For item 1, 50% of respondents agreed and 7.1% strongly agreed that they felt knowledgeable about ASD, compared to 21% who were neutral and an additional 21% who disagreed (n = 14; m = 3.43, sd = 0.90). The majority of those same respondents, however, were either neutral (50%) or disagreed (35.71%) in feeling confident supporting workers with ASD, compared to only 14% who agreed (m = 2.79, sd = 0.67; see Table 4.1 on the following page for the results for each item).

Domain 2: Workplace accommodations and supports. The second domain consisted of six survey items. For item 3 (I3), although 42.86% agreed that they knew what to do if an

Table 4.1. Survey results for Domain 1, survey items 1 and 2**.**

	I1 (n = 14)	**I2** (n = 14)
Range	2-5	2-4
m	3.43	2.79
sd	0.90	0.67

interviewee with ASD gave an unconventional or unexpected response, a combined total of 57.14% of respondents were neutral or disagreed (n = 14; m = 3.21, sd = 0.77). Item 4 (I4) prompted respondents to consider reasonable accommodations they have provided specifically for workers with ASD to help them perform the essential tasks of the job. While most respondents were neutral or disagreed – 35.71% and 21.43%, respectively – a significant portion of respondents agreed – 28.57% – or strongly agreed – 14.29% (n = 14; m = 3.36, sd = 0.97). Items 5 and 6 (I5, I6) prompted respondents to consider their overall practices of arranging the working environment according to individual employee needs as well as making adaptations to meet those needs. For item 5, a substantial, combined majority of respondents – 92.86% – agreed or strongly agreed that they considered the strengths and needs of each employee (n = 14; m = 4.36, sd = 0.61). For item 6, a combined majority of respondents – 71.43% – also agreed or strongly agreed that they felt comfortable making environmental adaptations, though a combined 28.57% were neutral or disagreed (n = 14; m = 3.86, sd = 0.83). Responses to item 7 (I7) – awareness of assistive technology (AT) that may help support employees with ASD – were varied (n = 14; m = 2.50, sd = 1.24). While most respondents disagreed or strongly disagreed – 42.86% and 21.43%, respectively – 21.43% agreed, and 7.14% strongly agreed. 7.14% of respondents were neutral. Item 8 (I8) prompted respondents to consider reactive strategies, rather than proactive adaptations and supports. A combined 64.28% of respondents disagreed that they

knew what to do when an employee with ASD appeared to be overwhelmed, while only a combined 14.28% agreed or strongly agreed (n = 14; m = 2.50, sd = 0.98). Neutral responses were recorded for 21.43% of respondents.

Table 4.2. Survey results for items 3 through 8.

	I3 (n = 14)	**I4** (n = 14)	**I5** (n = 14)	**I6** (n = 14)	**I7** (n = 14)	**I8** (n = 14)
Range	2-4	2-5	3-5	2-5	1-5	1-5
m	3.21	3.36	4.36	3.86	2.50	2.50
sd	0.77	0.97	0.61	0.83	1.24	0.98

Domain 3: Community partnerships and collaboration. The third domain consisted of seven total survey items. Items 9, 10, and 11 (I9, I10, I11) asked respondents whether or not they have partnered with community-based employment service providers, school-based work-based learning (WBL) experience providers, and/or community-based, pre-employment service providers. Items 12 and 13 (I12, I13) prompted respondents to consider any support strategies they might have learned through these collaborations, while items 14 and 15 (I14, I15) asked respondents to consider any formal trainings that may have been offered by either community- or school-based providers. For item 9, a combined 71.42% disagreed or strongly disagreed with the statement "I have partnered with community-based employment service provider to hire workers with ASD." Only 14.29% agreed, and an additional 14.29% were neutral (n = *14*; m = 2.07, sd = 1.03). For items 10 and 11, respectively, 83.33% of respondents disagreed with having participated in school-based, WBL partnerships (n = 12; m = 2.08, sd = 0.95), and the same percentage of respondents disagreed with having participated in partnerships with community-based pre-employment service providers (n = 12; m = 2.00, sd = 0.82). This is compared to only

16.67% and 8.33% who agreed with these respective statements. For item 12, a combined 66.67% of respondents disagreed to having learned effective ASD support strategies through collaboration with pre-employment service providers (n = 12; m = 2.08, sd = 0.76), while 75% of respondents disagreed with learning support strategies through partnerships with employment service providers (n = 12; m = 2.00, sd = 0.71) for item 13. A respective 33.33% and 25% were neutral, while none agreed. For items 14 and 15, 91.67% and 100% of respondents, respectively, disagreed to having participated in formal trainings provided by pre-employment service providers (n = 12; m = 1.83, sd = 0.55) or employment service providers (n = 12; m = 1.75, sd = 0.43). For item 14, 8.33% answered neutrally.

Table 4.3. Survey results for items 9 through 15.

	I9 (n = 14)	**I10** (n = 12)	**I11** (n = 12)	**I12** (n = 12)	**I13** (n = 12)	**I14** (n = 12)	**I15** (n = 12)
Range	1-4	1-4	1-4	1-3	1-3	1-3	1-2
m	2.07	2.08	2.00	2.08	2.00	1.83	1.75
sd	1.03	0.95	0.82	0.76	0.71	0.55	0.43

Domain 4: Awareness of resources. Items 16 and 17 (I16, I17) comprised the fourth and final domain. The first item prompted respondents to consider community resources that can help them learn more about supporting employees with ASD, while the second prompted them to consider outside resources. Responses were somewhat varied for item 16 (n = 12; m = 2.50, sd = 1.04). Though none strongly agreed, 25% agreed, 16.67% were neutral, 41.67% disagreed, and 16.67% strongly disagreed. For item 17, 50% disagreed and 8.33% strongly disagreed, while 16.67% were neutral and 25% agreed (n = 12; m = 2.58, sd = 0.95; see Table 4.4 on the following page for the results for items 16 and 17).

Table 4.4. Survey results for items 16 and 17.

	I16 (n = 12)	**I17** (n = 12)
Range	1-4	1-4
m	2.50	2.58
sd	1.04	0.95

Inter-item correlations . As first discussed in Chapter 3, inter-item correlations were calculated between item 2 – "I am confident in my ability to support workers with ASD" – and each other survey item. The results of each inter-item correlation and the average inter-item correlation are listed in Table 4.5 on the following page, with well-correlated pairings highlighted in bold. Ten of the 16 item pairings fell within the established ideal range of 0.15 to 0.50, as did the average inter-item correlation for item 2 and the 16 other survey items and the total average inter-item correlation for all survey items. However, two items (*r* I2, I1 and *r* I2, I8) approached redundancy, and five items were not well-correlated, with I5 and I6 both negatively correlated with I2.

Quantitative Results: Statistically Significant Relationships

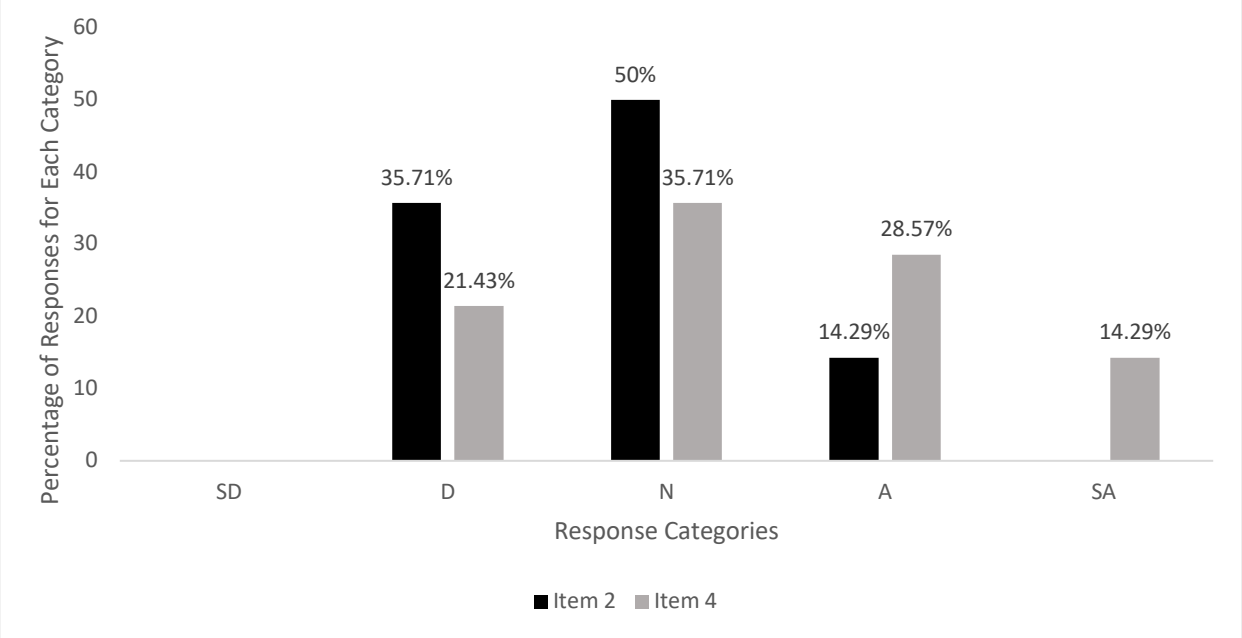
A chi square test was conducted through Qualtrics between item 2 and each of the other 16 survey items in order to test for statistically significant relationships. One such relationship was found between items 2 and 4, X^2 (2, n = 13) = 15.7, $p < .05$. In general, although the majority of respondents were neutral or disagreed with the statement "I feel confident in my abilities to support workers with ASD" (n = 14; m = 2.79, sd = 0.67), respondents seemed slightly more likely to agree that they implemented accommodations in the workplace (n = 14; m = 3.36, sd = 0.97). The response categories between item 2 and item 4 are compared on the next page in Figure 4.1.

Table 4.5. Inter-item and average inter-item correlations.

Inter-Item Correlation	*r*
***r* I2, I1**	**0.50**
r I2, I3	0.09
***r* I2, I4**	**0.44**
r I2, I5	-0.68
r I2, I6	-0.56
***r* I2, I7**	**0.47**
r I2, I8	0.59
***r* I2, I9**	**0.23**
***r* I2, I10**	**0.33**
***r* I2, I11**	**0.33**
***r* I2, I12**	**0.41**
***r* I2, I13**	**0.19**
r I2, I14	0.08
***r* I2, I15**	**0.31**
***r* I2, I16**	**0.26**
r I2, I17	0.05
Average for above pairings	**0.19**
Total average for all survey items	**0.26**

Note. Well-correlated items highlighted in bold.

Figure 4.1. Comparison of response categories for item 2 and item 4.



Note. SD = strongly disagree, D = disagree, N = neutral, A = agree, SA = strongly agree

Confidence in Self-Capacity by Demographic: Cross-Tabulations

Responses to item 2 were cross-tabulated with the demographic responses, including gender identity, years in current industry, years in current industry in a hiring capacity, and level of education. Responses by industry type were excluded since each of the respondents who disclosed this information answered differently ($n = 9$), yielding little in the way of relevant information. In terms of gender identity ($n = 9$; see Table 4.6 below), respondents identifying as "male" ($n = 6$; $m = 2.83$, $sd = 0.69$) were marginally more likely to agree with Item 2 than respondents identifying as "female" or "non-binary" ($n = 2$; $m = 2.33$, $sd = 0.47$).

Table 4.6. Confidence in self-capacity by gender identity ($m = 2.67$, $sd = 0.67$).

	Total	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Male	6 (66.7%)	-	2 (22.2%)	3 (33.3%)	1 (11.1%)	-
Female	2 (22.2%)	-	1 (11.1%)	1 (11.1%)	-	-
Non-binary	1 (11.1%)	-	1 (11.1%)	-	-	-
Total (*n*)	9	-	4 (44.4%)	4 (44.4%)	1 (11.1%)	-

For years in current industry, responses of those with 30 or more years of experience showed the most variation ($n = 2$; $m = 3.00$, $sd = 1.00$) when compared to those with 1-10 years ($n = 3$; $m = 2.33$, $sd = 0.47$) or 11-20 years ($n = 2$; $m = 2.50$, $sd = 0.50$). Only one respondent within 21-30 years of experience range answered, providing a "3" for neutral. 50% of respondents disagreed, however, regardless of experience. See Table 4.7 on the following page for the data from each category.

Table 4.7. Confidence in self-capacity by years in industry (*m* = 2.63, *sd* = 0.70).

	Total	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1-10	3 (37.5%)	-	2 (25%)	1 (12.5%)	-	-
11-20	2 (25%)	-	1 (12.5%)	1 (12.5%)	-	-
21-30	1 (12.5%)	-	-	1 (12.5%)	-	-
>30	2 (25%)	-	1 (12.5%)	-	1 (12.5%)	-
Total (*n*)	8	-	4 (50%)	3 (37.5%)	1 (12.5%)	-

A substantial majority of respondents – 66.7% – who disclosed such information had 1-10 years of experience in a hiring capacity in their industry (*n* = 6, *m* = 2.50, *sd* = 0.55). Only one respondent – who had 11-20 years of experience in a hiring capacity – of a total of nine answered "agree," while the group as a whole was largely neutral or disagreed (*n* = 9; *m* = 2.67, *sd* = 0.67; see Table 4.8 below).

Table 4.8. Confidence in self-capacity by years in hiring capacity (*m* = 2.67, *sd* = 0.67).

	Total	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1-10	6 (66.7%)	-	3 (33.3%)	3 (33.3%)	-	-
11-20	2 (22.2%)	-	-	1 (11.1%)	1 (11.1%)	-
21-30	-	-	-	-	-	-
>30	1 (11.1%)	-	1 (11.1%)	-	-	-
Total (*n*)	9	-	4 (44.4%)	4 (44.4%)	1 (11.1%)	-

Finally, all respondents had at least some college education or beyond (*n* = 9; *m* = 2.67, *sd* = 0.67; see Table 4.9 on the following page), with the vast majority holding a bachelor's degree or higher (*n* = 7, 78%). Only one of nine total respondents – representing the "some college" category – answered "agree" for item 2.

Table 4.9. Confidence in self-capacity by level of education ($m = 2.67$, $sd = 0.67$).

	Total	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<HS Diploma	-	-	-	-	-	-
High School	-	-	-	-	-	-
Some college	1 (11.1%)	-	-	-	1 (11.1%)	-
Associate	1 (11.1%)	-	1 (11.1%)	-	-	-
Bachelor's	4 (44.4%)	-	2 (22.2%)	2 (22.2%)	-	-
Master's	2 (22.2%)	-	-	2 (22.2%)	-	-
Professional	-	-	-	-	-	-
Doctorate	1 (11.1%)	-	1 (11.1%)	-	-	-
Total (*n*)	9	-	4 (44.4%)	4 (44.4%)	1 (11.1%)	-

Qualitative Responses

The open-ended survey items were created with the intention of (a) supporting the quantitative responses, and (b) providing more specific information leading to themes that might better explain the quantitative portion. However, given that only eight respondents answered the prompts – with the vast majority answering "N/A" or otherwise responding with no experience in these areas – little in the way of themes were uncovered. The responses that were provided are organized on the next page in Table 4.10, based on the following six themes:

- a. N/A or no experience
- b. Technology (low- and high-tech)
- c. Sensory considerations
- d. On-the-job (OTJ) training
- e. Adapted materials
- f. Partnerships with institutions of higher education
- g. Public school work-based learning (WBL) programs.

Table 4.10. Major themes related to the eight open-ended survey items**.**

Item	Themes	*n*
1. Strategies I have used to help prospective employees with self-disclosed ASD navigate the interview process include:	a. N/A or no experience	8
2. Some workplace accommodations I have provided include:	a. N/A or no experience b. Technology (low, high) c. Sensory d. OTJ training	6 2 2 1
3. An example of a workplace adaptation or support strategy I have provided includes:	a. N/A or no experience	8
4. Some examples of assistive technology (AT) I am familiar with include:	a. N/A or no experience b. Technology (low, high) e. Adapted materials	7 1 1
5. I have collaborated with the following community-based employment service providers:	a. N/A or no experience f. Higher education partnerships	7 1
6. I have collaborated with the following community-based pre-employment program providers:	a. N/A or no experience	8
7. I have collaborated with the following school district work experience programs:	a. N/A or no experience g. Public school WBL programs	7 1
8. Resources (e.g. formal/informal trainings, collaboration, conversations, books or scholarly journals, agencies, etc.) I have accessed to learn more about supporting workers with ASD include:	a. N/A or no experience g. Public school WBL programs	7 1

Note. *n* = number of answers. Individual participants occasionally provided responses for one item that fit within more than one theme.

Interestingly, none of the collaboration responses included community-based employment service providers that specifically serve individuals with disabilities.

Comparing the open-ended responses to the responses in Section I yielded limited information in the way of trends or explanation for the quantitative data. One respondent who accessed a higher education resource to learn more about supporting individuals with ASD disagreed with having engaged in any partnership, trainings, or having learned strategies through partnerships or collaboration. Two respondents volunteered specific workplace accommodations they had provided, and answered "strongly agree" for item 4 ("I provide reasonable accommodations…") in the quantitative portion. One of these respondents had also listed partnerships with higher education employment programs. However, neither respondent agreed to having participated in any partnerships, trainings, or having learned ASD support strategies through partnerships or collaborations. One respondent answered "strongly agree" to quantitative item 7 (AT) and listed several examples of both high- and low-tech AT in the qualitative portion. The same respondent discussed exploring public school WBL programs and resources, but had not partnered with any WBL, employment service, or pre-employment service providers.

Chapter 5. Discussion

Overview

The purpose of this pilot study was to better understand the extent to which partnerships with school- and community-based work experience, pre-employment, and employment service providers impact employers' confidence levels in their own capacity to support employees with ASD in competitive jobs. The research questions were:

Research Question 1: How do employers who partner with work experience, pre-employment, and/or employment service providers differ in their confidence levels from employers who have not partnered with providers?

Research Question 2: Which types of school-based and/or community-based providers are partnering with employers?

Research Question 3: Do partnerships include employer capacity-building initiatives as part of the collaboration process?

Research Question 1. Based on the quantitative results, only two total respondents participated in some sort of partnership with community-based employment service providers, school-based WBL program providers, and/or community-based pre-employment service providers. The one respondent who agreed to participating in partnerships within all three categories was neutral in confidence. The other respondent participated in partnerships with community-based pre-employment service providers as well as school-based WBL providers, but was neutral for community-based pre-employment service providers. This respondent was also neutral in confidence. The two total respondents who agreed in feeling confident in their abilities to support workers with ASD did not agree to having participated in any community- or

school-based partnerships. At least among this sample, partnerships and confidence in self-capacity did not seem to be associated.

Research Question 2. Respondents provided limited information in the way of community- or school-based partnerships. Only one respondent reported "exploring" school-based WBL programs, while others listed three different programs located within a higher education institution as resources. No respondent listed any specific community-based employment service or pre-employment service provider that serves people with disabilities.

Research Question 3. No respondent agreed to having learned effective support strategies for workers with ASD through either community- or school-based partnerships. Likewise, no respondent agreed with having participated in formal trainings through partnerships of any sort.

Discussion

Generally, respondents seem relatively assured of their knowledge of ASD, but less so in their self-capacity to support workers with ASD in their own businesses. This may be partially explained by an overall increase of autism awareness in recent years, though this general knowledge might not necessarily translate to specific workplace applications (Dillenburger, Jordan, McKerr, Devine, & Keenan, 2013; Hahler & Elsabagh, 2014; Karpur et al., 2014; Unger & Kregel, 2003). Respondents who were confident in their self-capacity did not engage in any partnership, while those that had engaged in partnerships were neutral in their confidence. Among this sample, while partnerships are happening that may tangentially benefit some workers with ASD in terms of securing employment – such as higher education career services – no respondent listed any community-based employment service providers that specifically help workers with ASD secure and maintain jobs in community businesses and organizations for

competitive wages. This is in spite of the fact that 97 businesses were specifically recruited for this study from the online employment service provider partner directory mentioned in Chapter 3. Some of those businesses had also partnered with school-based WBL programs. However, those businesses only represented about 15% of the total number of businesses contacted at least once for participation in this study.

Individual needs and supports. In spite of an overall lack of confidence in self-capacity, the majority of respondents reported both considering individual strengths and needs when arranging the working environment as well as adapting the environment when necessary to meet individual needs. Though fewer reported implementing reasonable accommodation strategies specifically for workers with ASD, six of 14 respondents did agree or strongly agree to doing so. Six of 14 respondents also reported knowing what to do if an interviewee with ASD gives an unconventional or unexpected response. Interestingly, these practices seem to be occurring in the absence of partnerships with school or community agencies. However, Unger and Kregel (2003) noted that employers may often rely on their own, rather than outside resources for implementing accommodations.

Limitations. The results of this study, including statistically significant relationships, should be interpreted with caution. This was a pilot study limited to a mid-sized, midwestern university city, and was distributed to community businesses without prior networking, incentives, or immediate and direct benefit, factors which may have contributed to a low response rate. As a result, the views expressed by this small convenience sample may not be representative of the local or broader business communities as a whole. While the completion rate of the quantitative portion of the survey was relatively high at 86%, few respondents completed the qualitative portion, and even fewer offered specific information to better explain

the quantitative data. It is also possible that the questionnaire contained too many open-ended questions, which may have partially contributed to the low response rate. For those who may have hosted minor students as part of school-based WBL program partnerships, it may have been impossible to determine disability labels due to confidentiality reasons. Likewise, it is possible that any number of these respondents may have unknowingly hired workers with ASD who have not self-disclosed. While working definitions of employment service providers, pre-employment service providers, work-based learning, and other relevant terms are provided to consumers of this document, they were not provided for respondents as part of the survey questionnaire. Though survey items were written in an intentionally vague fashion to avoid response bias, it is possible that these terms may have been interpreted differently than originally intended by the researcher. Additionally, the broad range of characteristics of ASD – again, an operational definition was not provided to participants – could mean that first-hand experiences have varied significantly from one employer to the next.

Directions for Future Research. Though initial findings are difficult to generalize as a result of the above limitations, the data presented here could provide a foundation for ongoing research. One such approach could be to develop and conduct interviews and focus groups involving employers as well as service providers. Recall from Chapter 2 that Rashid et al. (2017) and Hagner & Cooney (2005) conducted interviews and focus groups with employment support providers and employers recommended by employment service providers, respectively, to develop theories of effective supports for workers with DD and ASD. The Hagner & Cooney study included observations as well, culminating in the framework outlined in Table 5.1 on the following page. This framework is noteworthy since it provides strategies that can be incorporated without requiring specialized knowledge or extensive adaptations or modifications

Table 5.1. Key supervision strategies from 'I Do That for Everybody': Supervising Employees with Autism (Hagner & Cooney, 2005).

Area	Strategy
Job modification	1.Maintain a consistent schedule and job duties. 2. Keep the social demands of the job manageable and predictable 3. Provide organizers to help structure and keep track of work. 4. Add activities to reduce or eliminate unstructured time.
Supervision	1. Be direct and specific when giving directions. 2. Verify that communications are correctly understood. 3. Assist the employee in learning social rules and interpret social cues encountered on the job. 4. Explain and help the employee deal with changes on the job.
Co-worker relationships and social interactions	1. Encourage co-workers to initiate interactions. 2. Ensure that one or two co-workers play a role in helping to give job-related suggestions and "keep an eye out" for the employee.
Support services	1. Provide a sense of familiarity and reassurance until the employee and company staff get to know one another. 2. Transfer relationships and supports to company employees. 3. Check in and remain on-call in case problems arise. 4. Maintain a liaison role for nonwork issues that affect the job.

to the working environment, but also because partnerships between businesses and community agencies are key components to success – a finding not reflected in the current study. These strategies are also consistent with research- and evidence-based educational interventions for

ASD (see Standifer, 2009). The strategies listed in this framework could be adapted and developed into questions that could then be embedded within the survey domains from the present study, both as a discussion guide or self-assessment.

Frameworks developed from the current study, Hagner & Cooney (2005), and other resources could be adapted to create a checklist of supervisory practices for supporting workers with ASD. Using the checklist as the instrument, comparative studies could be conducted through which businesses who partner with school- and community-based providers could be compared to those who do not to determine (a) what support and accommodation practices are occurring within businesses, and (b) what role(s) partner agencies may play in their implementation over time. Participating employers could also rank their confidence in self-capacity prior to and at the end of the study, following debriefing and discussion of the practices they already have in place.

The survey questionnaire, methods, and procedure for this study were designed to be replicated in different communities and with larger or smaller populations. In future studies, it may be beneficial to (a) offer some sort of incentive for survey completion, and/or (b) replace some of the open-ended questions with questions that provide a few response options. Incentives could be financial – such as small payments, gift cards, etc. – or could involve access to resources and/or trainings that promote strategies to support workers with ASD. Also, methods to improve response rates should be considered, such as accessing familiar contacts/networks, snowball sampling, targeting a smaller population of employers who have likely hired workers with ASD – such as those currently partnering with school- or community-based pre-employment and employment service providers – and distributing an informational email or flyer to gauge potential interest prior to distributing the survey instrument itself.

Conclusion

This study explored the extent to which partnerships with school- and community-based WBL, pre-employment, and employment service providers impacted employers' confidence in their own capacity to support employees with ASD. Based on the results of a survey questionnaire, (a) partnerships are occurring at a low rate – a result reflected in the relatively small proportion of businesses who partner with school- and community-based pre-/employment service providers when compared to the business community as a whole – and (b) partnerships and confidence in self-capacity are not closely associated. However, given the small convenience sample and low response rate, results should be interpreted with caution, and additional research is needed. Future research may build upon these findings through several means, including (a) providing incentives, (b) adapting the questionnaire to include fewer open-ended items in favor of response options, (c) conducting targeted interviews or focus groups composed of employers and representatives of school and community agencies, and (d) conducting comparative studies in which both employers engaging and not engaging in partnerships implement support strategies based upon established frameworks of support.

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Workforce Investment Act of 1998, Pub. L. 105-220, (1998).

Workforce Innovation and Opportunity Act of 2014, Pub. L. 113-128, (2014).

Appendix A: Survey Instrument

SECTION I. Using the following 1-5 scale, please indicate the degree to which you agree or disagree with the following statements by clicking or tapping the most accurate response.

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

1 2 3 4 5 1. I consider myself knowledgeable about autism spectrum disorders (ASD).
1 2 3 4 5 2. I am confident in my ability to support workers with ASD.
1 2 3 4 5 3. I know what to do if an interviewee with self-disclosed ASD gives an unconventional or unexpected response.
1 2 3 4 5 4. I provide reasonable accommodation strategies that help employees with ASD perform essential tasks.
1 2 3 4 5. 5. I consider the strengths and needs of individual employees when arranging the work environment.
1 2 3 4 5 6. I feel comfortable adapting the work environment to meet individual needs.
1 2 3 4 5 7. I am aware of assistive technology (AT) that may be helpful in supporting employees with ASD.
1 2 3 4 5 8. I know what to do when an employee with ASD appears to be overwhelmed.
1 2 3 4 5 9. I have partnered with community-based employment service providers to hire workers with ASD.
1 2 3 4 5 10. I have partnered with local school district work experience programs to provide work-based learning (WBL) experiences for students with ASD.
1 2 3 4 5 11. I have partnered with community-based pre-employment service providers to provide work-based learning (WBL) experiences for students and/or young adults with ASD.
1 2 3 4 5 12. I have learned effective support strategies through collaborating with pre-employment program providers for students/young adults with ASD.
1 2 3 4 5 13. I have learned effective support strategies through collaborating with external employment program providers for workers with ASD.
1 2 3 4 5 14. I have participated in formal trainings provided by pre-employment service providers.
1 2 3 4 5 15. I have participated in formal trainings provided by employment service providers.
1 2 3 4 5 16. I am aware of community resources that can help me learn more about supporting employees with ASD.
1 2 3 4 5 17. I am aware of resources outside the local community that can help me learn more about supporting employees with ASD.

SECTION II. Please provide a brief response to the following statements. If a statement doesn't apply to your experience, please answer "N/A." If you aren't sure a particular statement applies, please answer "not sure."

18. Strategies I've used to help prospective employees with self-disclosed ASD navigate the interview process include _____
_____
_____

19. Some workplace accommodations I have provided include _____
_____
_____

20. An example of a workplace adaptation or support strategy I have provided include
_____
_____
_____

21. Some examples of AT I'm familiar with include
_____
_____
_____

22. I have collaborated with the following community-based employment service providers:
_____
_____
_____

23. I have collaborated with the following community-based pre-employment program providers:
_____
_____
_____

24. I have collaborated with the following school district work experience programs:
_____
_____
_____

25. Resources (e.g. formal/informal trainings, collaboration, conversations, books or scholarly journals, agencies, etc.) I have accessed to learn more about supporting workers with ASD include _____
_____
_____

SECTION III. Demographics

26. What is your gender? _____

27. How would you describe your primary industry? _____

28. How many total years have you worked in this industry? _____

29. How many years have you worked in this industry in a hiring capacity? _____

30. Please circle your highest level of education.

- Less than a high school diploma
- High school degree or equivalent (e.g. GED)
- Some college, no degree
- Associate degree (e.g. AA, AS)
- Bachelor's degree (e.g. BA, BS)
- Master's degree (e.g. MA, MS, MEd)
- Professional degree (e.g. MD, DDS, DVM)
- Doctorate (e.g. PhD, EdD)

Appendix B: Introductory Email

Dear Job Provider:

My name is Gary Burdette, and I'm a special education graduate student at the University of Kansas. In partial fulfillment of my MSE program, I'm reaching out to employers to request participation in a research project I'm conducting to better understand business practices and community partnerships related to supporting employees with autism spectrum disorders (ASD). If you are primarily responsible for hiring, evaluating, and retaining or terminating employees, I invite you to complete a short survey questionnaire, which should take about 20 minutes. If you're interested, please read the Informed Consent Statement attached to this email for more information and procedures for consenting or withdrawing consent, which you may feel free to do at any time. Thank you so much for your time and consideration!

Sincerely,

Gary Burdette

Appendix C: Statement of Informed Consent

Employer Confidence in Self-Capacity to Support Employees with Autism Spectrum Disorders: Partnerships with Community Agencies

Informed Consent Statement

Dear Job Provider:

The Department of Special Education at the University of Kansas supports the practice of protection for human subjects participating in research. The following information is provided for you to decide whether you wish to participate in the present study. You may refuse participate in this study. You should be aware that even if you agree to participate, you are free to withdraw at any time. If you do withdraw from this study, it will not affect your relationship with this unit, the services it may provide to you, or the University of Kansas.

PURPOSE OF THIS STUDY

We are contacting employers to request participation in a research project we are conducting to better understand attitudes, beliefs, and practices related to self-capacity to support employees with autism spectrum disorders (ASD). If you are primarily responsible for hiring, evaluating, and retaining or terminating employees, we invite you to complete a short survey questionnaire, which should take about 20 minutes.

The purpose of this study is to better understand the extent to which partnerships with school-based work experience providers and/or community-based employment service providers impact employers' confidence levels in their own capacity to support employees with ASD in competitive jobs. Even if you have not participated in any of these experiences, your views are vital in answering the following research questions:

> Research Question 1: How do employers who partner with work experience or employment service providers differ in their confidence levels from employers who have not partnered with providers?
>
> Research Question 2: Which school-based and/or community-based providers are partnering with employers?
>
> Research Question 3: Do partnerships include employer capacity-building initiatives as part of the collaboration process?

RISKS AND BENEFITS

There are no known risks or harm associated with participation in this study, which should cause you no more discomfort than you would typically experience from day to day. Though you may not directly benefit in the near term, your participation will contribute substantially to enhancing our understanding of vocational needs as they relate to this population. You may directly benefit in the future, however, by helping lay the foundation for later scholarly or

action research that serves to promote inclusive employment practices and to address potential barriers.

PARTICIPANT CONFIDENTIALITY

We wish to assure you that you will not be asked for your name, address, or place of business as part of this study. Your email address will in no way be disclosed in any publication or associated in any fashion with the research findings. Demographic information you choose to provide, such as gender identity, level of education, and industry type, will be assigned codes for purposes of categorization and will in no way be personally linked to you in the research findings. It is possible, however, with internet communications, that through intent or accident someone other than the intended recipient may see your response.

Your email address will be securely stored only for the duration of the study, and will be destroyed once the study is complete. If you request a summary of the research findings, your email address will be destroyed once you receive the summary.

QUESTIONS ABOUT PARTICIPATION

Questions about procedures should be directed to the principal investigator, Gary Burdette. Contact information is listed at the bottom of this form.

PARTICIPANT CERTIFICATION

Completion of the survey represents that you have read and understand this consent form and are willing to participate in this study. However, you may withdraw your consent at any time by contacting Gary Burdette at garyb@ku.edu or at (785) 430-8358. If you choose to revoke consent, your email address and survey responses will be destroyed. If you have any additional questions about your rights as a research participant, please call (785) 864-7429 or (785) 864-7385, write the Human Research Protection Program (HRPP), University of Kansas, 2385 Irving Hill Road, Lawrence, Kansas 66045-7568, or email irb@ku.edu.

Researcher Contact Information

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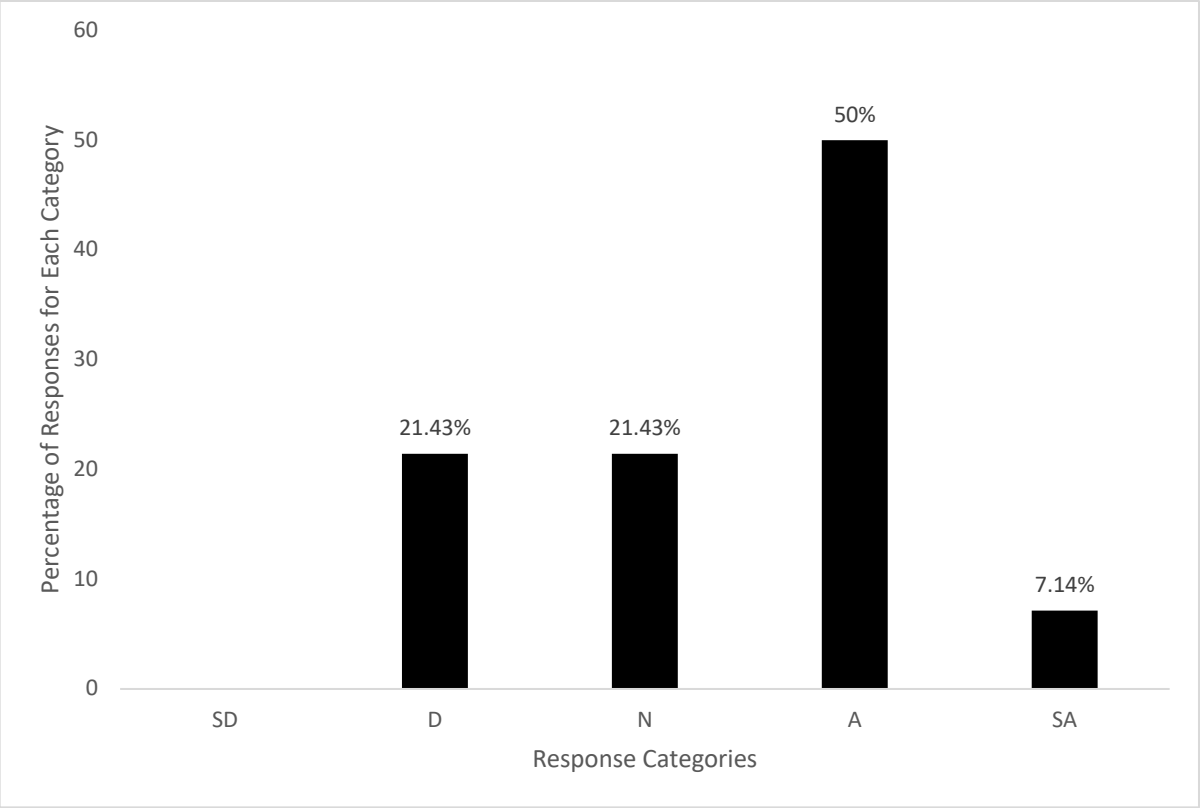
KU Lawrence IRB # STUDY00144283 | Approval Period 7/2/2019 – 7/1/2023

Appendix D: Results for Each Quantitative Survey Item

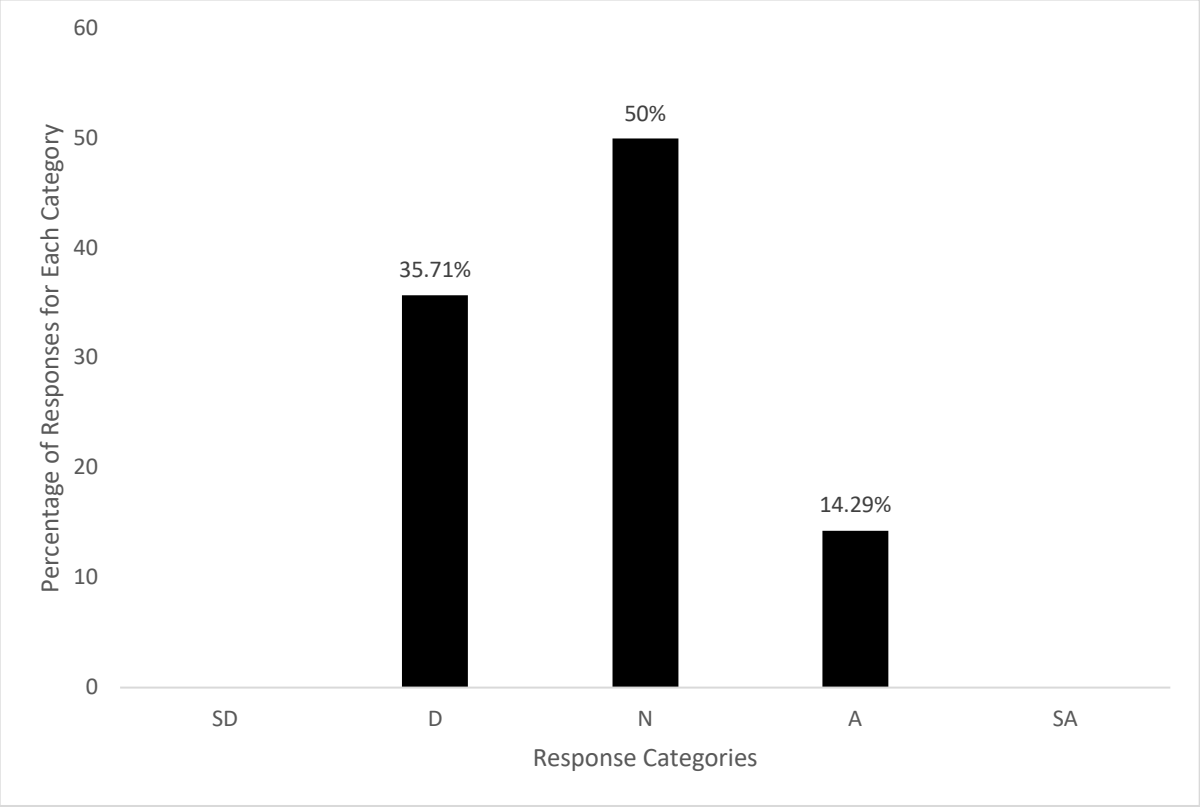
I1. I consider myself knowledgeable about autism spectrum disorders (ASD).



n	**Range**	***m***	***sd***
14	2-5	3.43	0.90

Note. SD = strongly disagree, D = disagree, N = neutral, A = agree, SA = strongly agree.

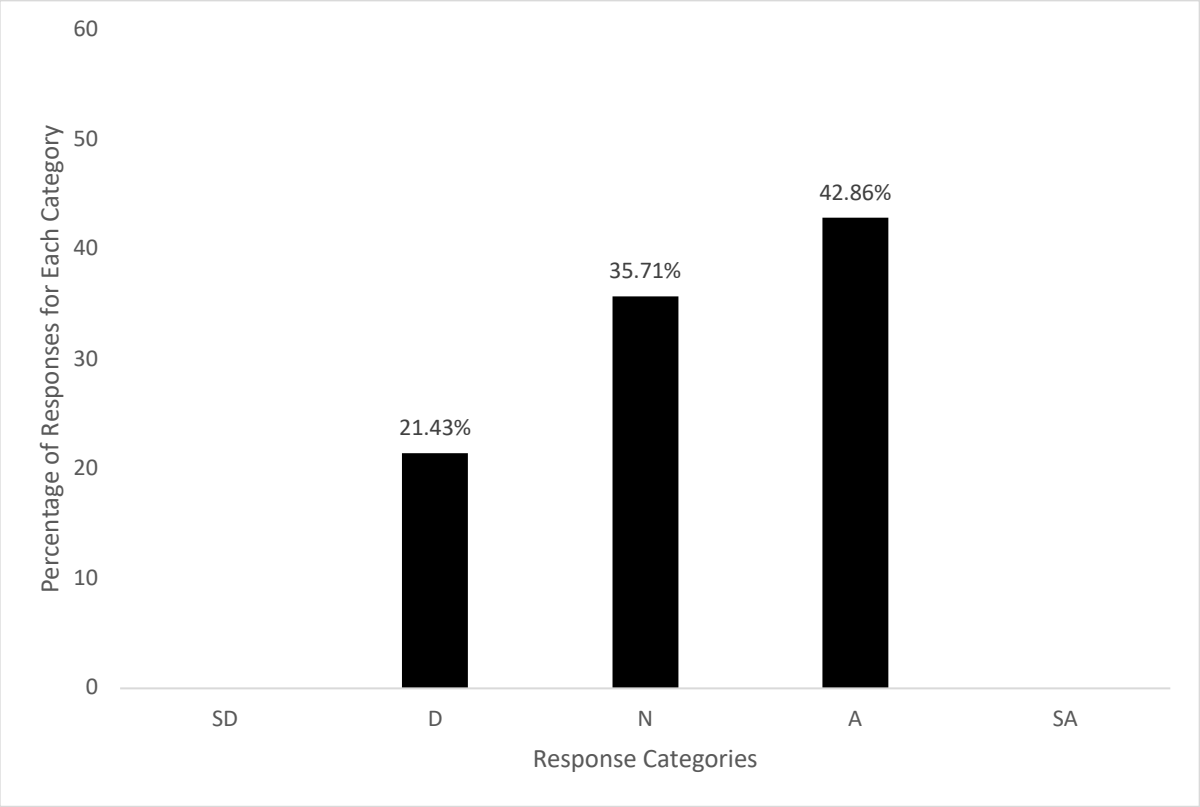
I2. I am confident in my ability to support workers with ASD.



n	**Range**	***m***	***sd***
14	2-4	2.79	0.67

Note. SD = strongly disagree, D = disagree, N = neutral, A = agree, SA = strongly agree.

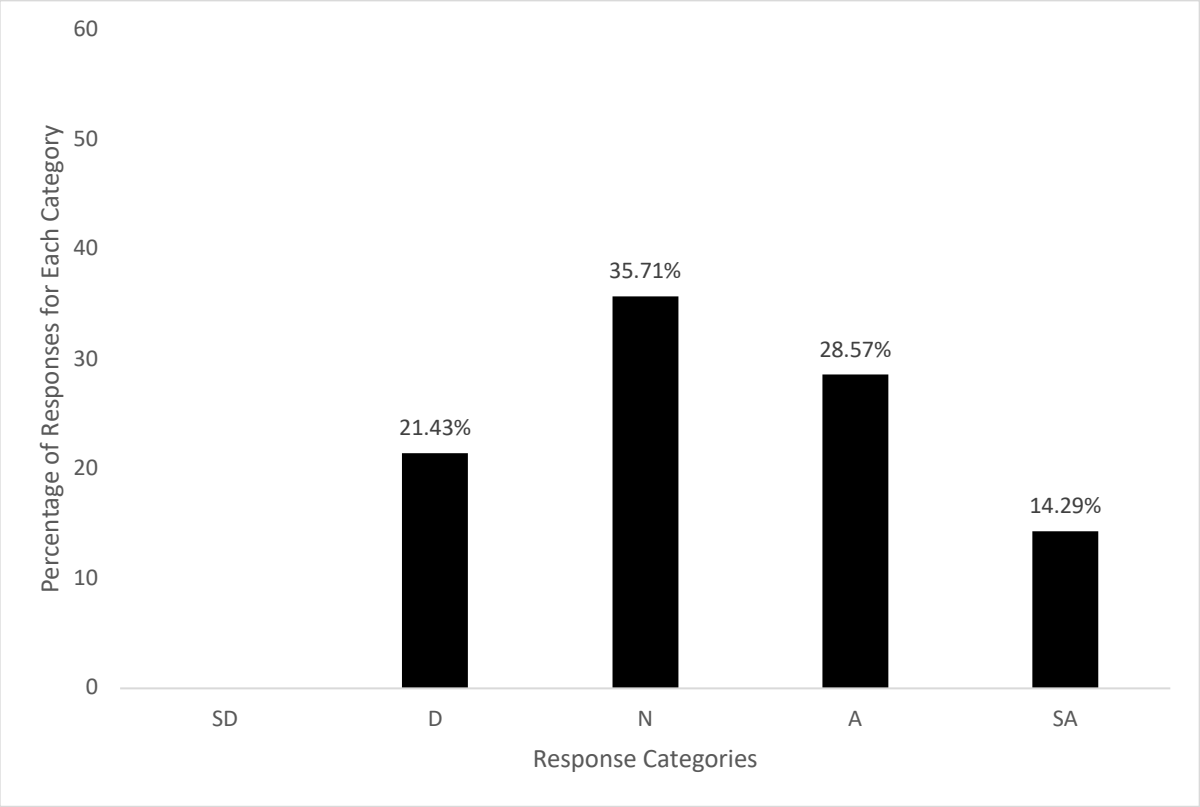
I3. I know what to do if an interviewee with self-disclosed ASD gives an unconventional or unexpected response.



n	**Range**	***m***	***sd***
14	2-4	3.21	0.77

Note. SD = strongly disagree, D = disagree, N = neutral, A = agree, SA = strongly agree.

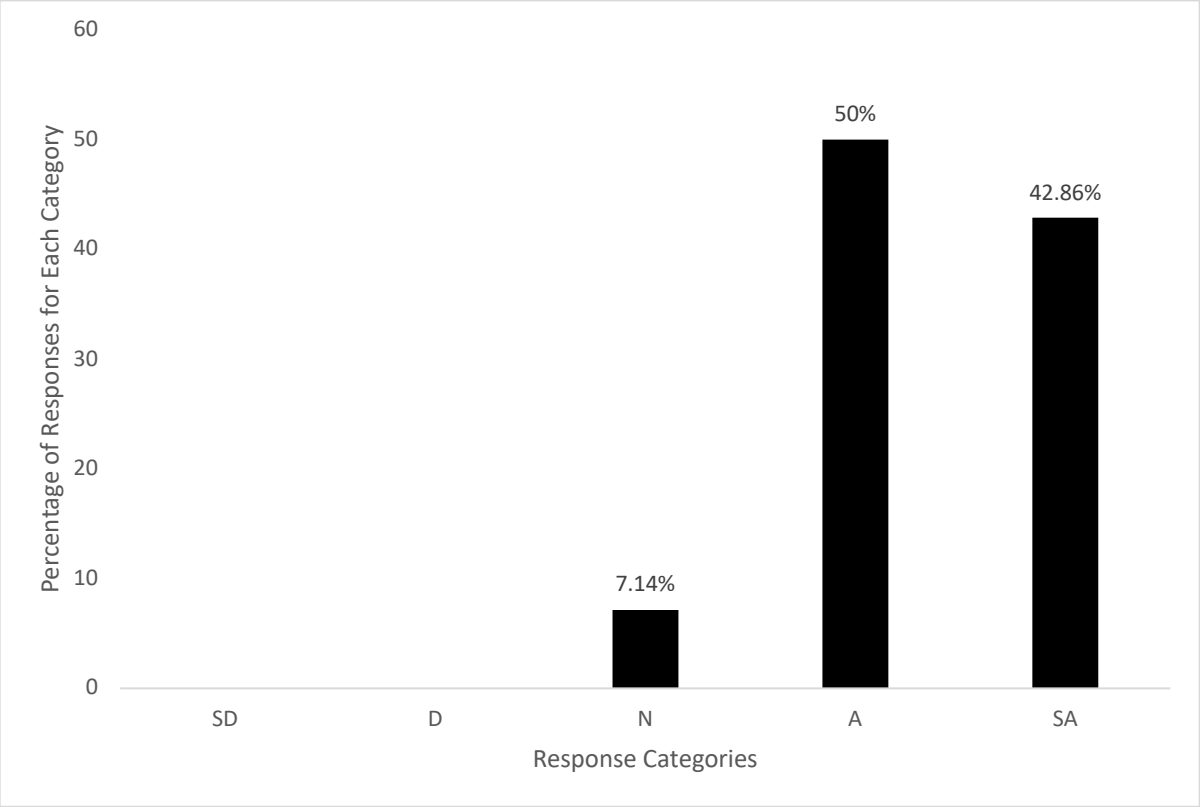
I4. I provide reasonable accommodation strategies that help employees with ASD perform essential tasks.



n	Range	*m*	*sd*
14	2-5	3.36	0.97

Note. SD = strongly disagree, D = disagree, N = neutral, A = agree, SA = strongly agree.

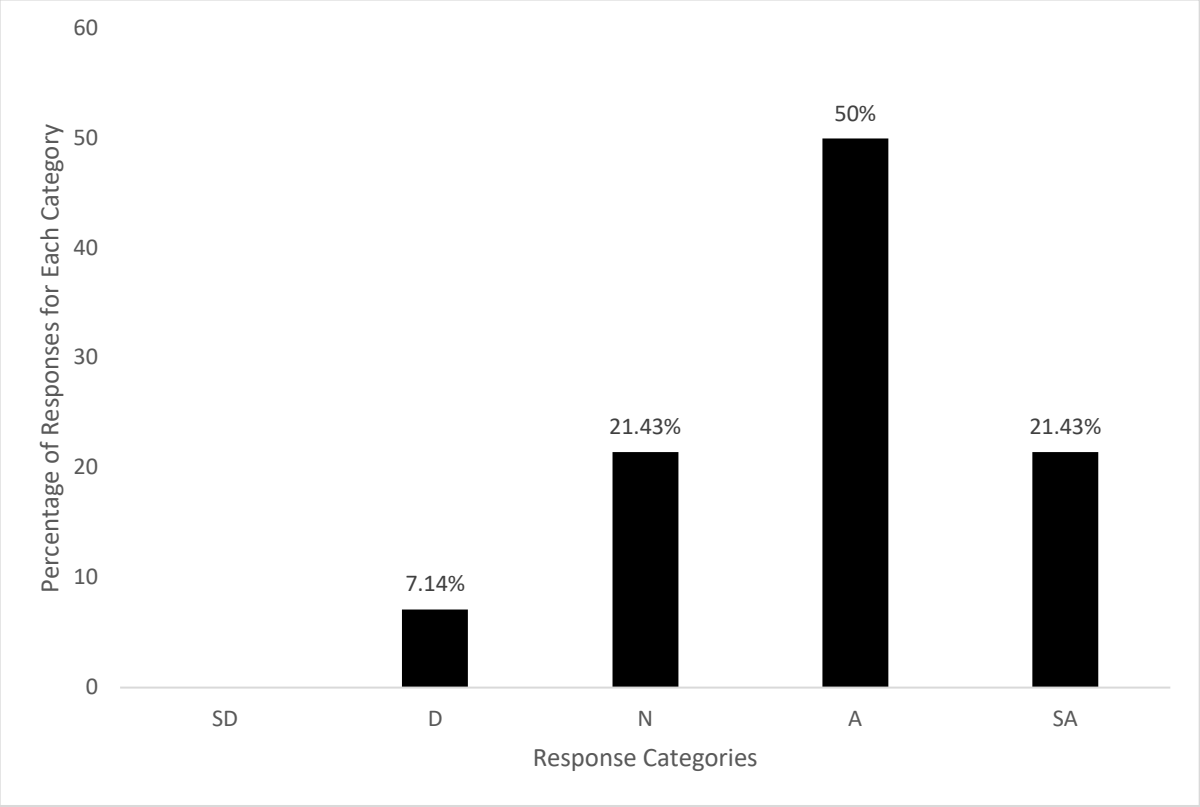
I5. I consider the strengths and needs of individual employees when arranging the work environment.



n	Range	*m*	*sd*
14	3-5	4.36	0.61

Note. SD = strongly disagree, D = disagree, N = neutral, A = agree, SA = strongly agree.

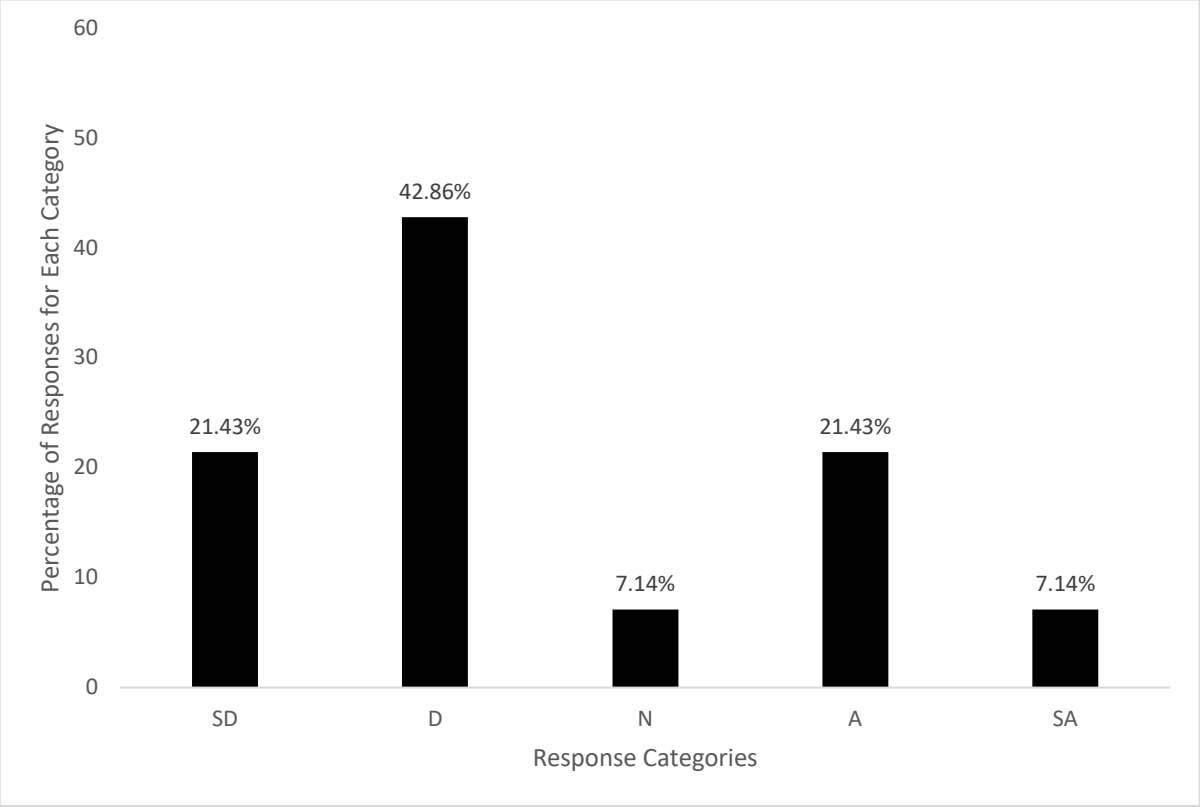
I6. I feel comfortable adapting the work environment to meet individual needs.



n	Range	*m*	*sd*
14	2-5	3.86	0.83

Note. SD = strongly disagree, D = disagree, N = neutral, A = agree, SA = strongly agree.

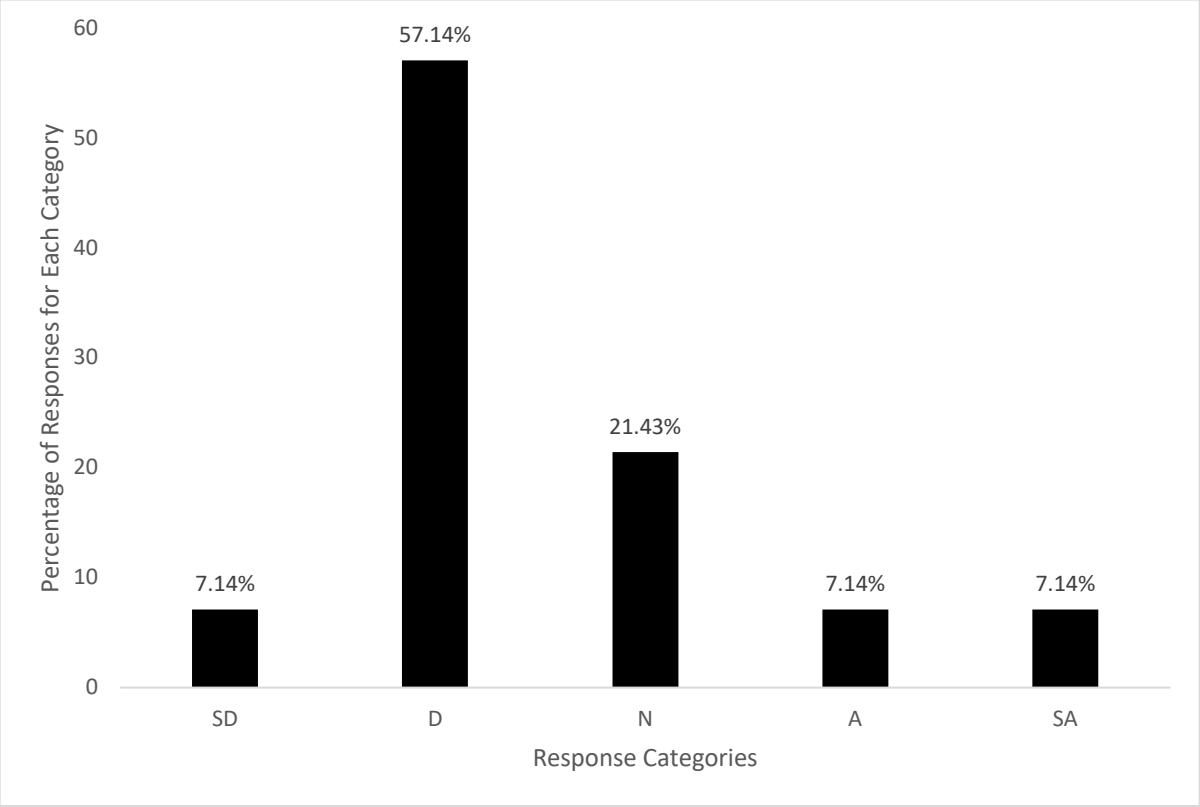
I7. I am aware of assistive technology that may be helpful in supporting employees with ASD.



n	**Range**	***m***	***sd***
14	1-5	2.50	1.24

Note. SD = strongly disagree, D = disagree, N = neutral, A = agree, SA = strongly agree.

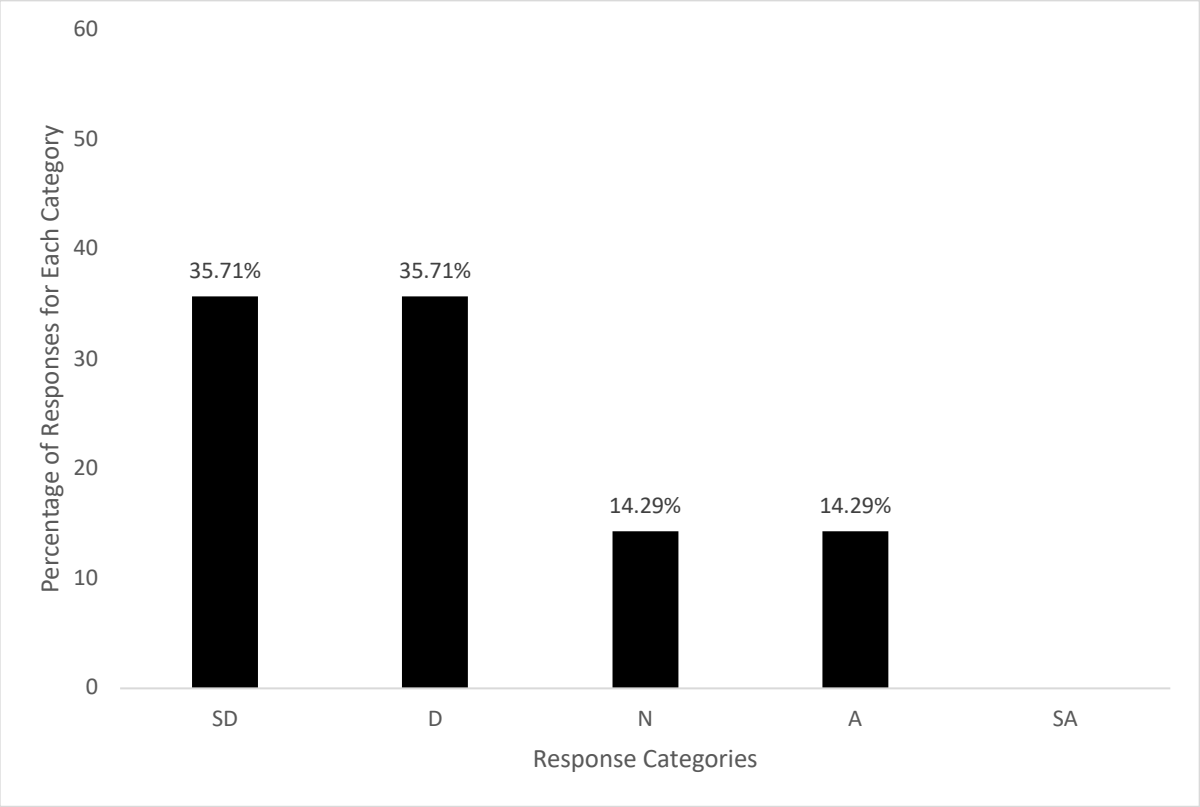
I8. I know what to do when an employee with ASD appears to be overwhelmed



n	Range	*m*	*sd*
14	1-5	2.50	0.98

Note. SD = strongly disagree, D = disagree, N = neutral, A = agree, SA = strongly agree.

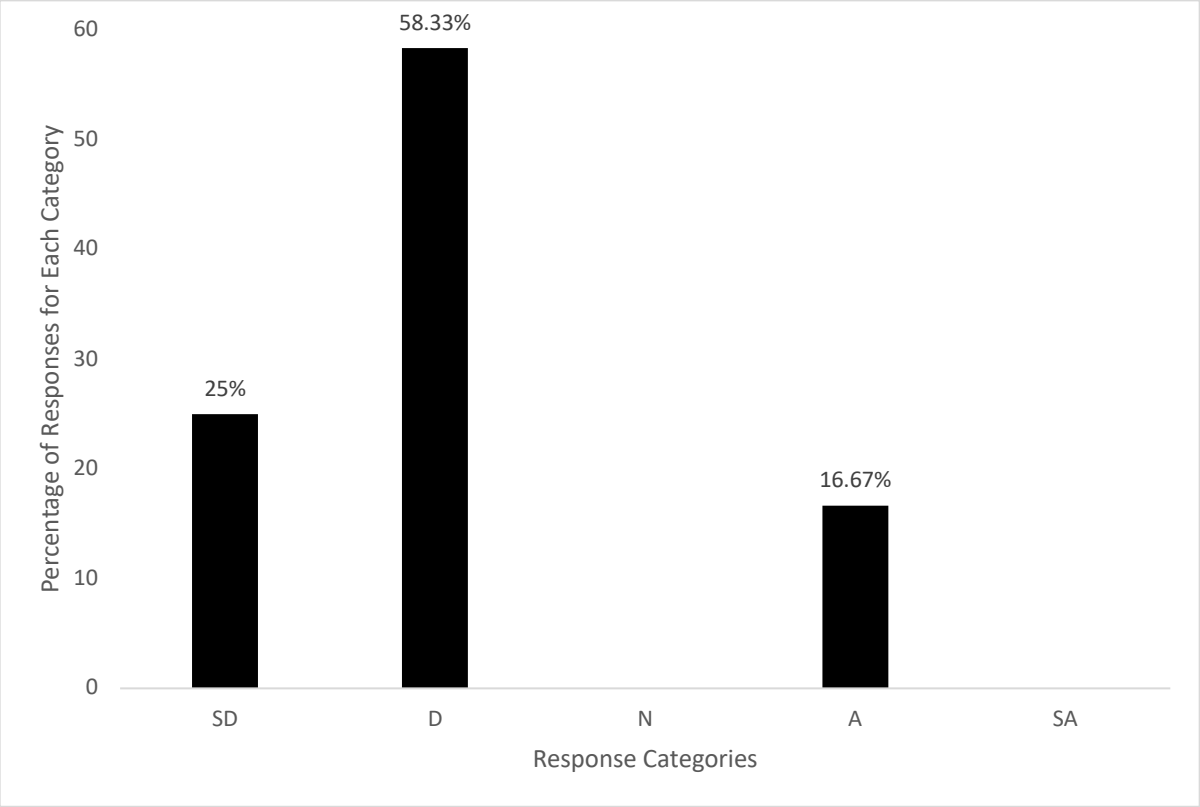
I9. I have partnered with community-based employment service providers to hire workers with ASD.



n	Range	*m*	*sd*
14	1-4	2.07	1.03

Note. SD = strongly disagree, D = disagree, N = neutral, A = agree, SA = strongly agree.

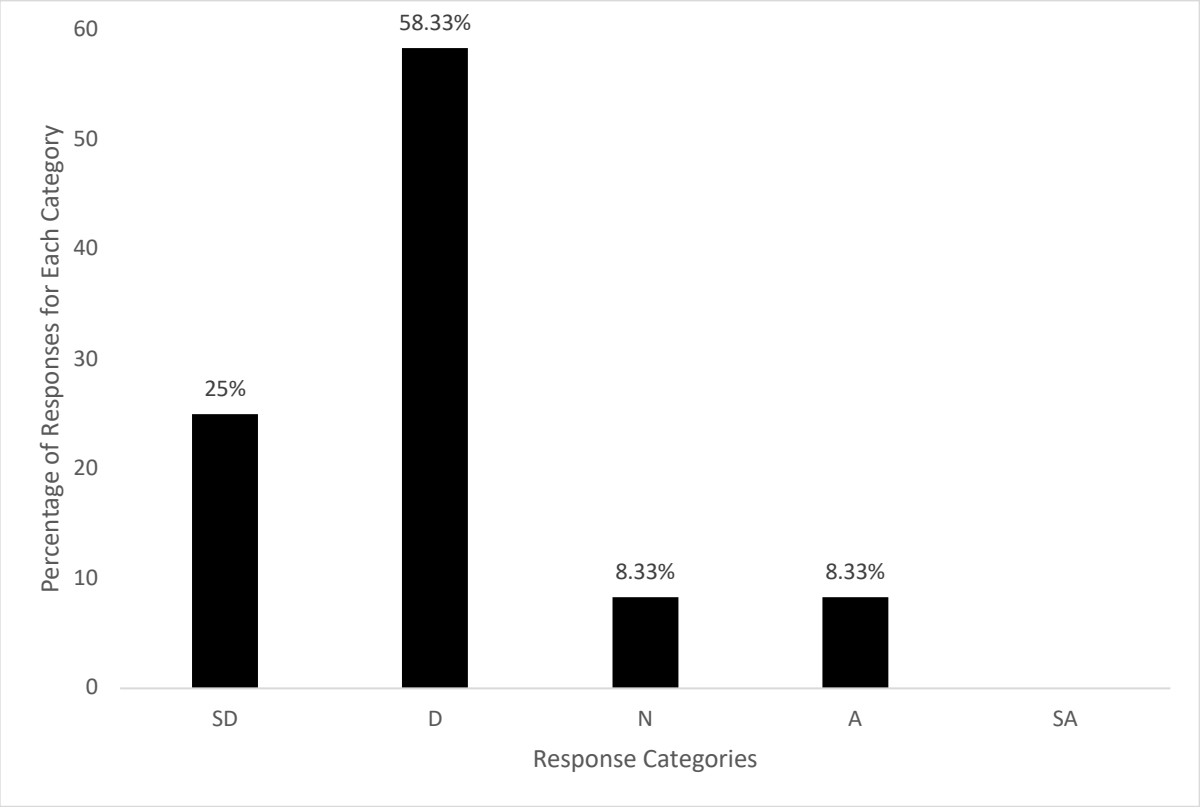
I10. I have partnered with local school district work experience programs to provide word-based learning (WBL) experiences for students and/or young adults with ASD.



n	Range	*m*	*sd*
12	1-4	2.08	0.95

Note. SD = strongly disagree, D = disagree, N = neutral, A = agree, SA = strongly agree.

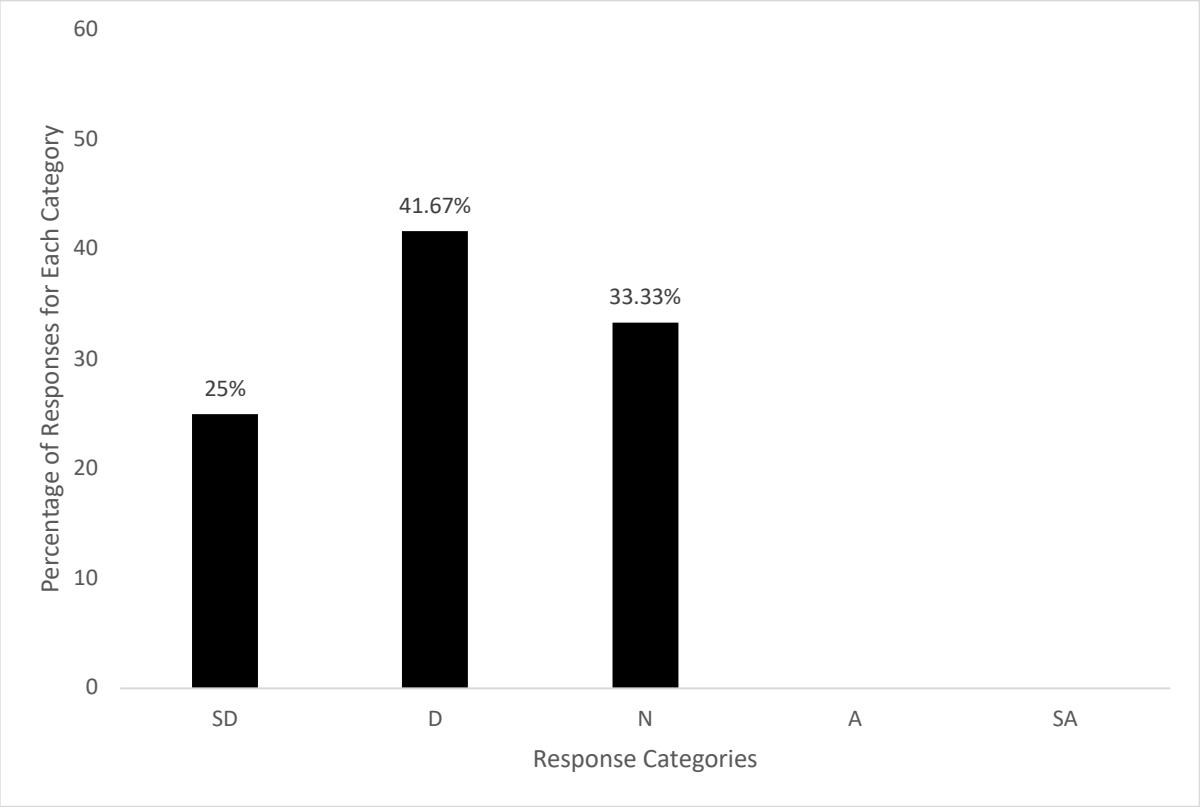
I11. I have partnered with community-based pre-employment service providers to provide work-based learning (WBL) opportunities for students and/or young adults with ASD.



n	Range	*m*	*sd*
12	1-4	2.00	0.82

Note. SD = strongly disagree, D = disagree, N = neutral, A = agree, SA = strongly agree.

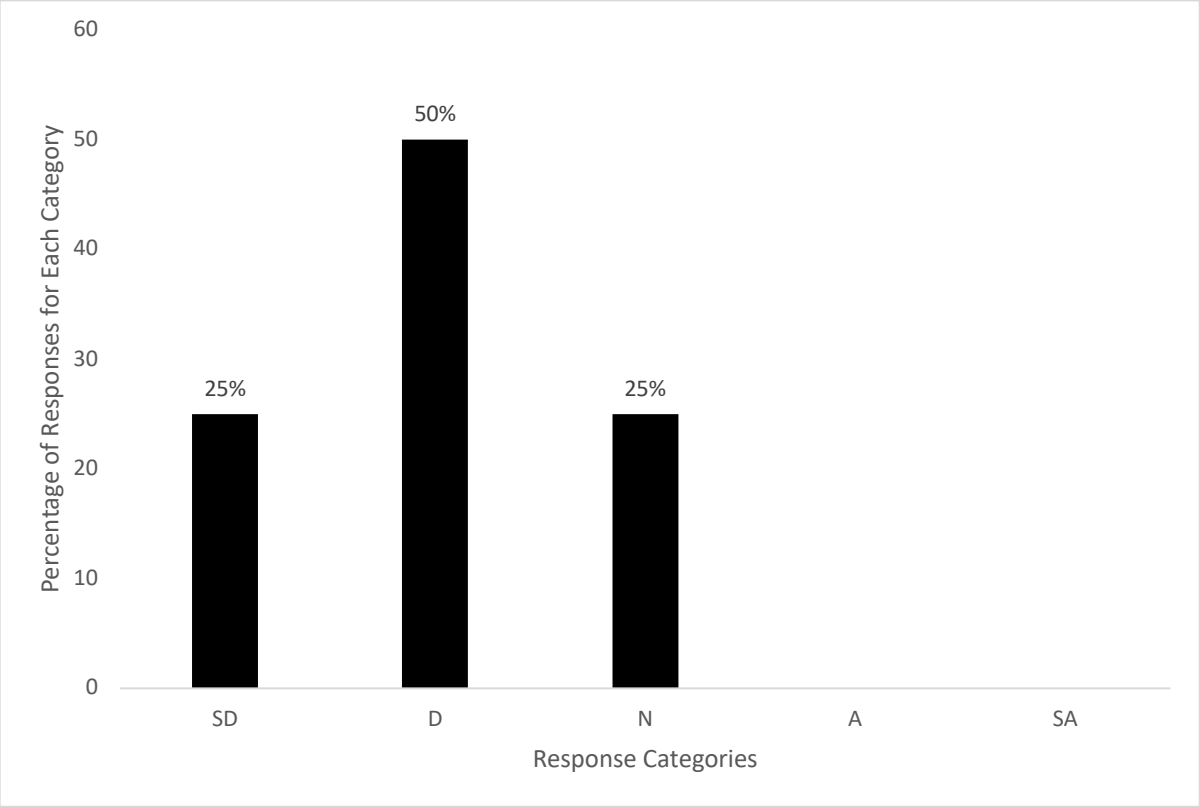
I12. I have learned effective support strategies through collaborating with pre-employment program providers for students/young adults with ASD.



n	Range	*m*	*sd*
12	1-3	2.08	0.76

Note. SD = strongly disagree, D = disagree, N = neutral, A = agree, SA = strongly agree.

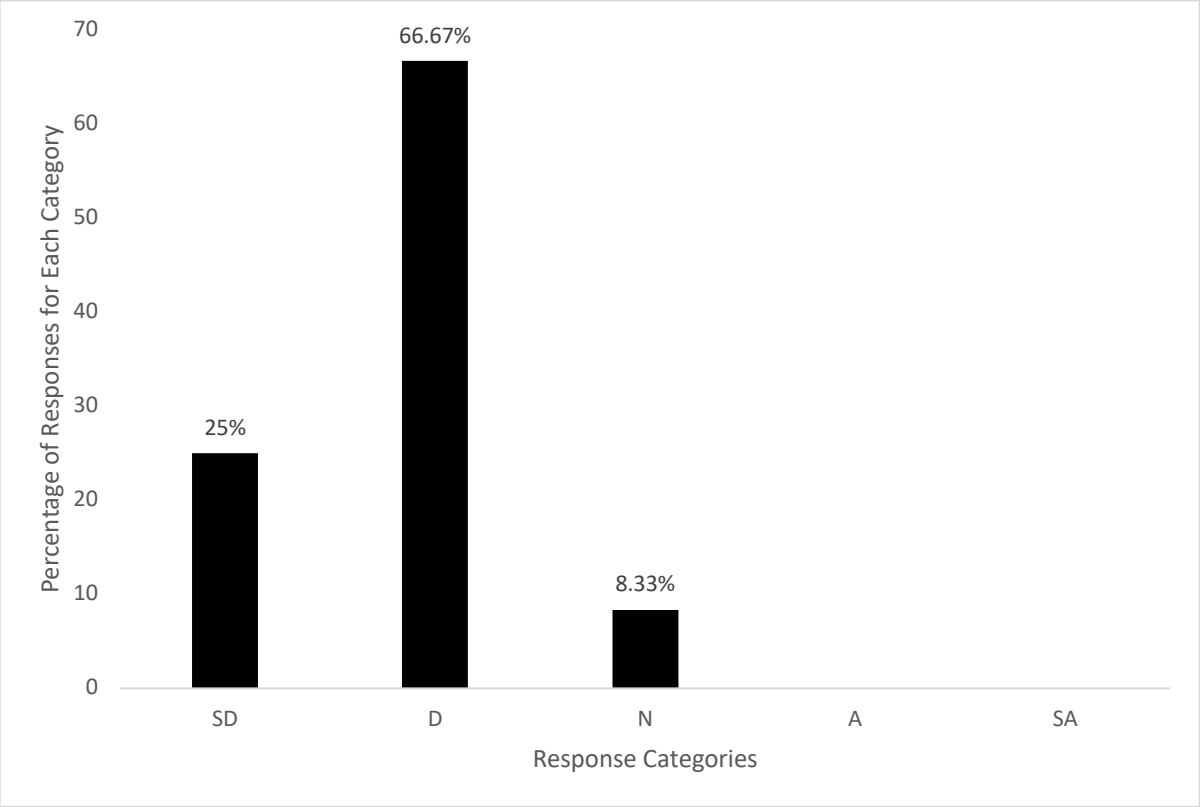
I13. I have learned effective support strategies through collaborating with employment program providers for workers with ASD.



n	Range	*m*	*sd*
12	1-3	2.00	0.71

Note. SD = strongly disagree, D = disagree, N = neutral, A = agree, SA = strongly agree.

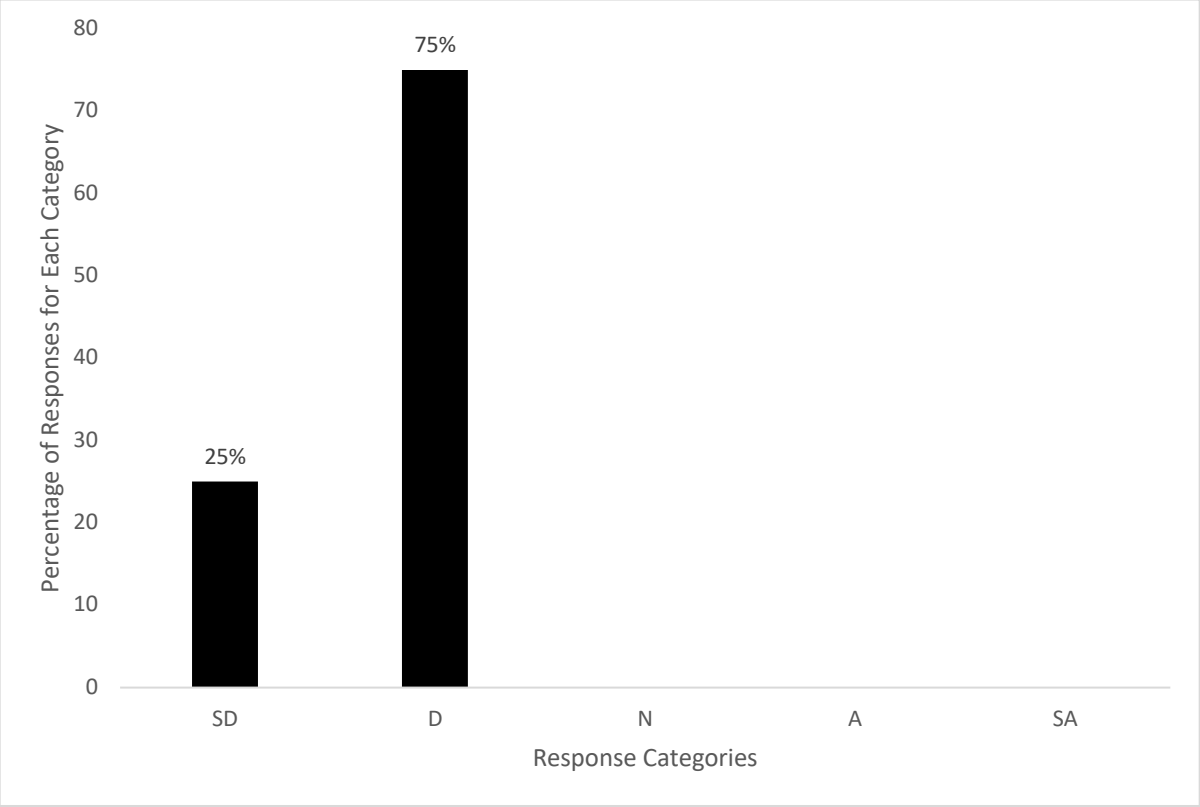
I14. I have participated in formal trainings provided by pre-employment service providers.



n	Range	*m*	*sd*
12	1-3	1.83	0.55

Note. SD = strongly disagree, D = disagree, N = neutral, A = agree, SA = strongly agree.

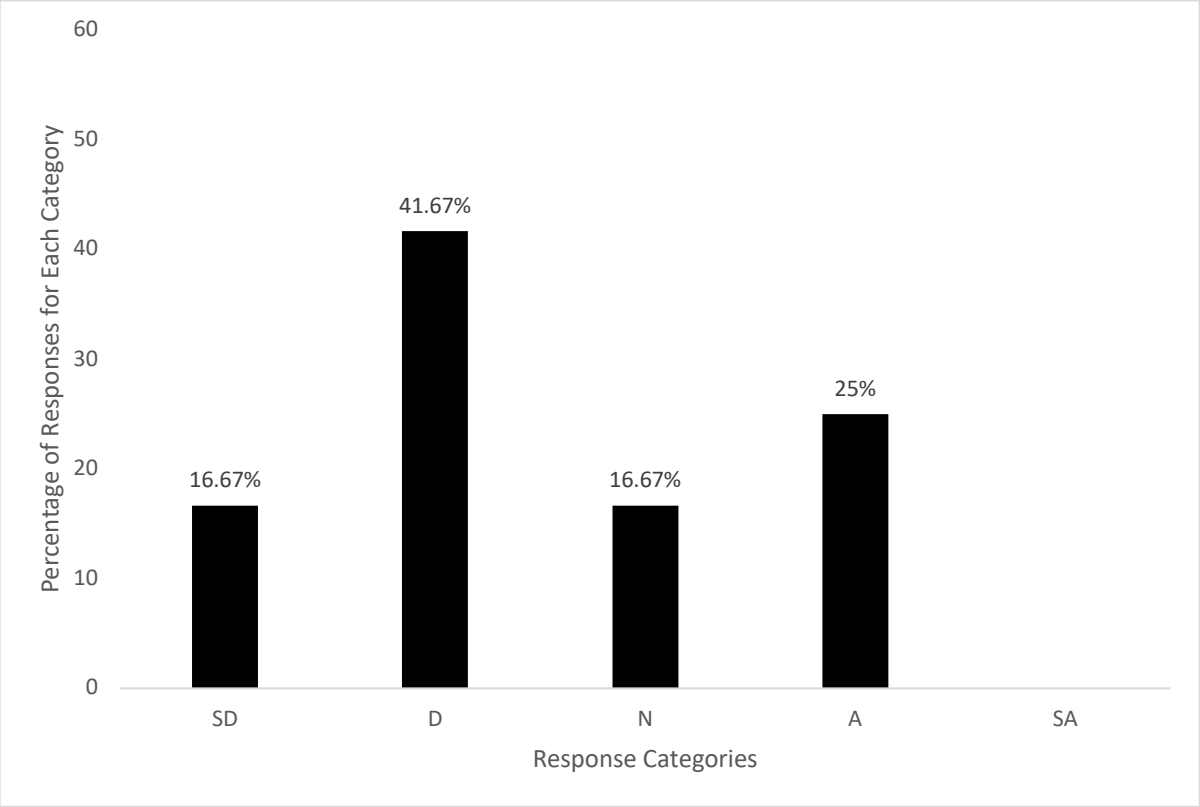
I15. I have participated in formal trainings provided by employment service providers.



n	Range	*m*	*sd*
12	1-2	1.75	0.43

Note. SD = strongly disagree, D = disagree, N = neutral, A = agree, SA = strongly agree.

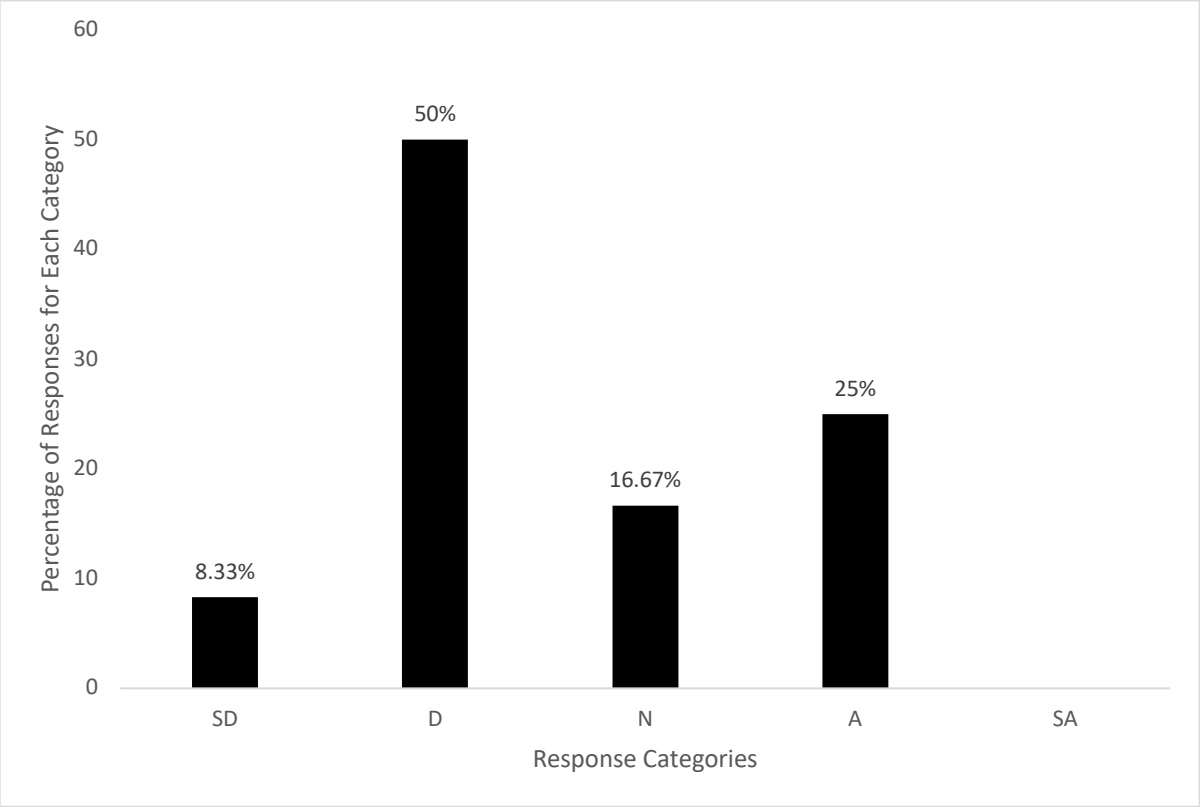
I16. I am aware of community resources that can help me learn more about supporting employees with ASD.



n	**Range**	***m***	***sd***
12	1-4	2.50	1.04

Note. SD = strongly disagree, D = disagree, N = neutral, A = agree, SA = strongly agree.

I17. I am aware of resources outside the local community that can help me learn more about supporting employees with ASD.



n	Range	*m*	*sd*
12	1-4	2.58	0.95

Note. SD = strongly disagree, D = disagree, N = neutral, A = agree, SA = strongly agree.