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Tailoring higher education instruction for students with ASD to transition to employment : employer perspectives

Hillary M. Adams

West Virginia Autism Training Center, Marshall University, brown235@marshall.edu

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**TAILORING HIGHER EDUCATION INSTRUCTION FOR STUDENTS WITH
ASD TO TRANSITION TO EMPLOYMENT: EMPLOYER PERSPECTIVES**

A dissertation submitted to
the Graduate College of
Marshall University
In partial fulfillment of
the requirements for the degree of
Doctor of Education

In
Educational Leadership

by
Hillary Adams

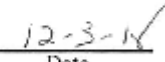
Approved by
Dr. Eugenia Webb-Damron, Committee Chairperson

Dr. Marc Ellison
Dr. Bobbi Nicholson

Marshall University
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APPROVAL OF DISSERTATION

We, the faculty supervising the work of **Hillary Adams**, affirm that the dissertation, *Tailoring Higher Education Instruction for Students with ASD to Transition to Employment: Employer Perspectives*, meets the high academic standards for original scholarship and creative work established by the EdD Program in **Leadership Studies** and the College of Education and Professional Development. This work also conforms to the editorial standards of our discipline and the Graduate College of Marshall University. With our signatures, we approve the manuscript for publication.

 _____ Dr. Eugenia Damron Leadership Studies	 _____ Committee Chairperson Major	 _____ Date
 _____ Dr. Rebekah Nicholson Leadership Studies	 _____ Committee Member Major	 _____ Date
 _____ Dr. Marc Ellison	_____ Committee Member External	 _____ Date

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DEDICATION

This dissertation is dedicated to Christopher Smedley – one of the most hard working and passionate individuals I have ever had the pleasure of calling a friend. He is meant for great things in his field and he inspires me to work harder in my own.

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TABLE OF CONTENTS

List of Tables	xii
Abstract.....	xiii
Chapter One: Introduction	1
Background.....	1
Autism Spectrum Disorder	2
Students with Autism Spectrum Disorder in Higher Education	4
Students with Autism Spectrum Disorder Transitioning to Employment.....	5
Employers’ Understanding of Autism Spectrum Disorder.....	6
Disclosure and Accommodations	7
Higher Education’s Responsibility to Prepare Students for the Workforce	8
Statement of the Problem.....	11
Chapter Two: Literature Review	14
Autism Spectrum Disorder and Employment Outcomes.....	14
Why Autism Spectrum Disorder Creates Employment Challenges	15
Social Communication and Interaction.....	16
Repetitive Patterns of Behavior	17
General Expectations Employers Have for Employees	18
Employer Attitudes and Actions.....	20
Disability Rights and Employment.....	22
Effects of the Americans with Disabilities Act and the Rehabilitation Act	22

Facing the Issue of Disclosure	23
Accommodations and the Perceived Burden	26
Access to Employment Preparation in College	30
Why Employment of Individuals with ASD Matters	33
Humanitarian Benefits	33
Economic Benefits	34
Higher Education Benefits.....	35
Employer Benefits	37
Chapter Three: Research Methods.....	40
Research Design.....	41
Sample.....	43
Instrumentation	44
Data Collection	46
Data Analysis	48
Limitations and Delimitations.....	48
Chapter Four: Presentation and Analysis of Data.....	50
Data Collection and Participant Characteristics	50
Major Findings.....	54
Research Question 1: How Knowledgeable are Employers about ASD?.....	54
Knowledge of ASD and Having Employed or Worked with a Person with ASD.....	56
Knowledge of ASD and Company Size.....	59
Research Question 2: What are Employer Attitudes toward Hiring Employees with ASD?	61

Effects of Disclosure and Accommodations on Hiring and Having Employed or Worked with a Person with ASD.....	62
Effects of Disclosure and Accommodations on Hiring and Company Size.....	63
Research Question 3: What are Employer Attitudes toward Employees' Disclosure of ASD?	64
Employer Attitudes toward Disclosure and Having Employed or Worked with a Person with ASD	66
Employer Attitudes toward Disclosure and Company Size	68
Research Question 4: What are Employer Attitudes toward Workplace Accommodations for Employees with ASD? ..	70
Perceptions of Other Business Managers' Willingness to Accommodate and Having Employed or Worked with a Person with ASD	72
Perceptions of Other Business Managers' Willingness to Accommodate and Company Size..	74
Ancillary Findings	76
Summary of Findings.....	77
Research Question 1: How Knowledgeable are Employers about ASD?.....	78
Research Question 2: What are Employer Attitudes toward Hiring Employees with ASD?	79
Research Question 3: What are Employer Attitudes toward Employees' Disclosure of ASD?	80
Research Question 4: What are Employer Attitudes toward Workplace Accommodations for Employees with ASD? ..	81
Chapter Five: Summary, Discussion of Findings, and Recommendations.	84
Purpose of the Study	84

Sample.....	85
Methods.....	85
Summary of Findings.....	86
Research Question 1: How Knowledgeable are Employers about ASD?.....	86
Research Question 2: What are Employer Attitudes toward Hiring Employees with ASD?	90
Research Question 3: What are Employer Attitudes toward Employees' Disclosure of ASD?	92
Research Question 4: What are Employer Attitudes toward Workplace Accommodations for Employees with ASD? ..	95
Discussion.....	97
Implications.....	100
Recommendations for Future Research	101
Limitations of this Study.....	102
References.....	104
Appendices.....	115
Appendix A: Institutional Review Board Approval Letter.....	115
Appendix B: Survey Instrument with Consent Letter.....	116
Appendix C: Email Exchange with Local Chambers of Commerce Regarding Survey Distribution	135
Appendix D: Email to Local Business Managers, Employers, and Those Involved in Hiring	138
Appendix E: Vita	139

LIST OF TABLES

Table 1. Demographic Characteristics of Respondents	54
Table 2. Tested Knowledge of ASD Concepts	55
Table 3. Chi-Square Results from Comparison of Tested Knowledge of ASD Concepts and Employed/Worked with Person with ASD	58
Table 4. Chi-Square Results from Comparison of Tested Knowledge of ASD and Company Size	60
Table 5. Employer Perceptions on Effects of ASD Disclosure and Requested Accommodations on Hiring	62
Table 6. Chi-Square Results from Comparison of Effects on Hiring and Employed/Worked with Person with ASD	63
Table 7. Chi-Square Results from Comparison on Effects on Hiring and Company Size	64
Table 8. Employer Perceptions on Disclosure Methods	65
Table 9. Employer Perceptions on Disclosure Timing	66
Table 10. Chi-Square Results on Disclosure Methods and Having Employed/Worked with Person with ASD	67
Table 11. Chi-Square Results on Disclosure Timing and Having Employed/Worked with Person with ASD	68
Table 12. Chi-Square Results on Disclosure Methods and Company Size	69
Table 13. Chi-Square Results on Disclosure Timing and Company Size ..	70
Table 14. Employer Perceptions of Other Business Managers' Willingness to Accommodate Employees with ASD	71
Table 15. Chi-Square Results on Accommodations and Having Employed/Worked with Person with ASD	73
Table 16. Chi-Square Results on Accommodations and Company Size	75
Table 17. Chi-Square Results from Comparison of Employers' Self-Reported Knowledge/Attitudes and Employers' Perceptions of Other Business Managers' Knowledge/Attitudes	77

ABSTRACT

This study explores the need for tailored higher education curricula for students with Autism Spectrum Disorder (ASD) as they transition from college to employment. It is estimated that 50,000 individuals diagnosed with ASD turn eighteen each year (Autism Speaks, 2012), and one in three of those individuals are entering higher education (Roux, Shattuck, Rast, Rava, & Anderson, 2015). Individuals with ASD face poor outcomes in the workforce; 75-85% of adults with ASD do not have full-time employment (Scheiner, 2013). Lack of employment opportunities derive from impairments in social skills, behaviors, theory of mind, and sensory issues (Grandin & Duffy, 2008) in addition to an overall low interest by employers to hire individuals with disabilities (Wilgosh & Skaret, 1987; Millington, Szymanski, & Hanley-Maxwell, 1994; Hernandez, Keys, & Balcazar, 2000; Unger, 2002). Students with ASD need specific instruction to understand their diagnosis, understand their rights in the workplace, know the risks and benefits of disclosure, and recognize needed accommodations. Employers, business managers, and individuals who have had influence or experience in hiring at their place of work were surveyed (N = 150) to gather information on current employer understanding of ASD, attitudes regarding hiring employees with ASD, attitudes toward disclosure of an ASD diagnosis, and attitudes toward accommodations for an employee with ASD. Data will assist in the development of relevant preparatory curricula for higher education institutions to support students with ASD transitioning from college to the workforce.

CHAPTER ONE

INTRODUCTION

Background

The transition into adulthood is typically an exciting time for teens, as many experience for the first time newfound freedom and choices. However, for the fifty thousand individuals with Autism Spectrum Disorder (ASD) who turn eighteen each year (Autism Speaks, 2012), the transition to adulthood is a daunting period filled with unknowns. Many young adults will abandon the comfort and safety of living with their families and enter higher education. The majority of these institutions of higher learning are ill prepared to provide dedicated support and staff necessary to address the areas of socialization, organization, and independent living skills, in addition to academic support, that are integral to college success (Ellison, 2013). Preparation is fundamental to the overall success of students with ASD in the transition from higher education to the workforce. According to the Higher Learning Commission (HLC; 2018b), criteria for institutional accreditation includes a focus on preparing students for employment. While tailored preparation and support is uncommon in higher education for college students with ASD, students diagnosed with the disorder are successfully matriculating, graduating, and transitioning out of college in hope of finding meaningful work. The objectives of this study are to find current employer understanding of ASD, attitudes toward hiring individuals with ASD, and attitudes toward disclosure and accommodations specific to college graduates with ASD. Research outcomes will assist in developing higher education tools to better prepare students with ASD for employment.

Tools and curricula to properly prepare students with ASD are inherent to employment success. Currently, students with ASD are unable to get and keep good jobs due to a lack of

career-relevant knowledge before graduation (Grandin & Duffy, 2008). Studies indicate that 75-85% of adults diagnosed with ASD do not hold a full-time job (Scheiner, 2013). Indeed, the West Virginia Higher Education Policy Commission (2013) holds its institutions accountable for assisting students to transition to work. For institutions of higher learning to properly prepare students with ASD for employment prior to graduating, faculty and staff must remain current in their understanding of employer needs in a constantly evolving job landscape (Wehman, 2013; Harrison, 2017).

Autism Spectrum Disorder

The Autism and Developmental Disabilities Monitoring Network, through The Centers for Disease Control and Prevention, estimate that one in fifty-nine children is diagnosed with ASD (Baio et al., 2018). This prevalence is jarring when compared to prevalence estimates from the 1960s and 70s, when about one in two thousand met the diagnostic criteria. Despite data and media reports publicizing an increase in numbers and growing attention in educational research, there is still very little known about how best to provide support that will result in postsecondary and employment success. The majority of research and programmatic efforts have focused on young children, with relatively little concentration placed on adolescents and adults with ASD (Hendricks, 2010).

The *Diagnostic and Statistical Manual of Mental Disorders*, Fifth Edition (DSM-5), of the American Psychiatric Association (APA; 2013), lists the first and second indicators of ASD as persistent deficits in both social communication and social interaction; these deficits can manifest through atypical social-emotional reciprocity, lack of nonverbal communicative behaviors, and deficits in developing, maintaining, and understanding relationships. These indicators play out in the daily lives of individuals with ASD in a number of ways, leaving

routine tasks daunting, and observed behaviors confusing to those who do not understand the diagnosis. The mutual give-and-take nature of typical communication, understanding people's feelings, or talking about their own feelings can all be particularly challenging for individuals with ASD (National Institute of Neurological Disorders and Stroke, 2017).

The third indicator of ASD includes restricted, repetitive patterns of behavior, interests, or activities (APA, 2013). Symptoms can be observed as repetitive motor movements, use of objects, or speech; insistence on sameness, routines, or patterns of verbal and nonverbal behavior; restricted, fixated interests that are abnormal in intensity; and hyper- or hypo-reactivity to sensory input (APA, 2013). Individuals with ASD generally have challenges with new environments, changes in routine, adjusting to instructions, and planning or multitasking (Scott et al., 2017). Overstimulation and sensitivity to noise, light, touch, taste, and smell can create emotional responses and distractions from tasks. While some deep interests can lead to a successful passion in academia or employment, some may become obsessively fixated (National Institution of Neurological Disorders and Stroke, 2017) resulting in the inability to focus on other endeavors and thwarting time management skills. ASD can range in severity, from Level 1 (requiring support) to Level 3 (requiring very substantial support). These severity levels encompass considerable variability, making for a range of diverse profiles across all aspects of life, from a brilliant scientist to a nonverbal individual who will always need supervision (Grandin & Duffy, 2008).

Even though symptoms of ASD create significant challenges and the need for support, the diagnosis should no longer conjure images of violence, separate classrooms, or a life lived in the family basement. Whatever the severity of symptoms, adults diagnosed with ASD can lead meaningful lives. A life of quality can involve varying levels of independence (Roux, Shattuck,

Rast, Rava, & Anderson, 2015), socialization (Tschopp, Perkins, Hart-Katuin, Born, & Holt, 2007; Roux et al., 2015), romantic or sexual relationships (Hellemans, Colson, Verbraeken, Vermeiren, & Deboutte, 2007), postsecondary education (Taylor & Seltzer, 2011), and meaningful employment (Wilczynski, Trammell, & Clarke, 2013; Hansen, 2015; Scott et al., 2017).

Students with Autism Spectrum Disorder in Higher Education

A surge of children was diagnosed with an autism spectrum disorder in the 1990s, producing a wave of individuals with ASD currently transitioning to adulthood. As the number of individuals reaching adulthood rises, so does their entry into post-secondary education settings and concerns of unemployment. Roux et al. (2015) notes that approximately 36% of young adults with ASD enter post-secondary institutions (two- and four-year). Individuals with ASD face immense challenges when it comes to milestone transitions. Students transitioning to higher education experience difficulty adjusting to a large number of choices and the consequences of those choices; they leave behind familiar environments, structure, and people, creating a vastly different world (Hees, Moyson, & Roeyers, 2015).

Support for students with ASD in higher education is often crucial for success. The needs which reflect the most common challenges include emotion regulation and stress management, socialization, transition to adulthood/independence, time management, and academic demands (Hees et al., 2015; White et al., 2016). Core communication deficits, and a lack of self-determination and flexibility, are quickly brought to the surface in the large, social environment of a college campus (White et al., 2016).

Just as the transition from high school to college is a precarious life stage for students with ASD, so is the transition from college to employment. College degrees can be instrumental

in finding a career path, but strong academic capacity represents only one aspect of what students with ASD need to succeed in the workplace (Lee & Carter, 2012). Preparation for new routines and employer expectations weigh heavily on these students. A student participant in Gelbar, Shefcyk, and Reichow's (2015) study expressed, "Sometimes I'm surprised I've made it this far and other times I feel like it's for nothing because I'm not sure that college is helping me learn enough social skills to get a job" (p. 1). It is the responsibility of higher education institutions to prepare students with ASD for the transition from college to employment by incorporating new instruction and strategies to fit their unique needs (VanBergeijk, Klin, & Volkmar, 2008).

Students with Autism Spectrum Disorder Transitioning to Employment

As previously stated, ASD is identified through three main indicators—challenges with social communication, challenges with social interactions, and restricted, repetitive patterns of behavior (APA, 2013). These indicators typically result in trouble attaining and securing employment (Järbrink, McCrone, Fombonne, Zandén, & Knapp, 2007; Kaye, Jans, & Jones, 2011; Van Wieren, Armstrong, & McMahon, 2012). Research overwhelmingly demonstrates poor employment outcomes for individuals with ASD (Hendricks, 2010; Butterworth, Hall, Smith, Migliore, & Winsor, 2011; Taylor & Seltzer, 2011; Baldwin, Costley, & Warren, 2014; Roux et al., 2015; Farley, et al., 2017; Scott et al., 2017). The Bureau of Labor Statistics (2017) reports only 17.9% of individuals with disabilities successfully find employment. Shattuck et al. (2012) found young adults with ASD, particularly within the first two years after high school, have a lower rate of employment relative to those diagnosed with a speech/language impairment, learning disability, or intellectual disability. Roux et al. (2015) found only one-third of young adults with ASD are employed or seeking post-secondary education. Research by Eaves and Ho (2008) reported only 56% of young adults with ASD are employed, most in sheltered, volunteer,

or part-time work, while the National Autistic Society of Northern Ireland (2011) found only 15% of adults with ASD are employed full-time. When looking at long-term outcomes of adults with ASD concerning employment, independence, and education, Billstedt, Gillberg, and Gillberg (2005) found that 78% of participants had poor outcomes.

Employers have a generally weak to moderate interest in hiring individuals with disabilities, according to Andersson, Luthra, Hurtig, and Tideman (2015), who found that ASD was the second highest ranked disability to generate low desirability for future employees. This absence of desire is due to lack of education about disabilities, discrimination, and concern over accommodations or legal liability (Kaye et al., 2011). Although vocational challenges faced by individuals with ASD vary, those challenges often include a lack of interview skills and difficulty communicating and socializing appropriately with coworkers (Scott et al., 2017). Research by Hansen (2015) highlights a stark contrast between employer and student beliefs on important qualities in an employee. Employers emphasized the need for knowing how to network, interview, communicate, and manage stress, while students ranked many of these as least important (Hansen, 2015). Students with ASD misunderstand some of the most important employer expectations, further supporting the need for colleges to provide specialized employment preparedness prior to leaving college (Hansen, 2015) as outlined by college accreditation criteria (HLC, 2018b).

Employers' Understanding of Autism Spectrum Disorder

The crucial role in addressing high unemployment rates experienced by individuals with disabilities often falls into the hands of employers; however, employers are often reliant on outside support to initiate employment opportunities for those diagnosed with ASD (Migliore, Hall, Butterworth & Winsor, 2010; Simonsen, Fabian, & Luecking, 2015). Relying on

employment agencies or social connections for job prospects is problematic, therefore students in higher education must receive tailored preparation to navigate the workforce prior to graduation. It is the role of colleges and universities to prepare students with ASD for work through conscious and planned efforts (VanBergeijk, et al., 2008). Currently, employers are apathetic in their attitudes toward hiring individuals with disabilities. When surveyed, there is general interest for hiring, but this interest diminishes when there are questions about hiring at their own company (Andersson et al., 2015).

Most employees with ASD are not hired through traditional methods. Employers hesitate to hire individuals with ASD based off skills or company needs, and hire solely due to altruism or assistance from outside services (Simonsen et al., 2015). Grandin and Duffy (2008) advise people with ASD not to expect to enter the job market through the front door, because these doors are guarded by human resources departments looking to fit particular molds. Many individuals with ASD wind up in part-time and low-wage work, as the majority of specialized programs concentrating on school-to-work transitions for students with disabilities focus on the preparation for low-wage jobs (Dougherty & Lombardi, 2016). These individuals, many of whom earn specialized college degrees, are capable of much more.

Disclosure and Accommodations

College graduates with ASD, like other graduates with disabilities, face a unique set of challenges as they seek employment. These students must understand how their disability directly effects them, create a plan regarding disability disclosure, practice workplace advocacy, and prepare to request needed accommodations (Lee & Carter, 2012). While some students may choose to not disclose for fear of discrimination (Banks, Novak, Mank, & Grossi, 2007), others will take the risk in hopes of working in an environment that can recognize and support their

needs to successfully meet job expectations. Disclosure carries significant benefits for employers and employees, like the ability to make accommodations, improve the workplace climate, and measure disability in order to comply with federal initiatives (von Schrader, Malzer, & Bruyère, 2013). Policies in place through The Americans with Disabilities Act (ADA) and Section 501 of the Rehabilitation Act create the groundwork on which potential employees with ASD can stand, but only 58% of 20-25 year olds find work (Roux et al., 2015).

Employers are not obligated to provide accommodations if the employee does not disclose (Equal Employment Opportunity Commission [EEOC], 2017b). Accommodations exist to remove or mitigate the effects of physical, social, or environmental barriers on the ability of people with disabilities to perform essential job functions (EEOC, 2017b). Unlike many accommodations for employees with physical disabilities, accommodations for employees with developmental disabilities, like ASD, tend to need accommodations involving assistance from employers, coworkers, or job coaches (MacDonald-Wilson, Rogers, Massaro, Lyass, & Crean, 2002). General trepidation about hiring individuals with ASD may stem from concerns over accommodations, including how accommodations will benefit job performance (Gold, Spalatin, Fabian, & Wewiorski, 2012), the legal responsibilities of the employer (Kaye et al., 2011), and overall costs (Chi & Qu, 2003; von Schrader et al., 2013). Further education for both employers and employees on disability rights in the workplace is ideal, easing minds on one end and empowering minds on the other.

Higher Education's Responsibility to Prepare Students for the Workforce

According to the HLC's (2018a) Guiding Values, higher education institutions are responsible for assuring quality teaching and learning through accreditation. The primary focus of any institution centers on student learning; this focus encapsulates all aspects of student

experiences, including what happens after they leave the institution (HLC, 2018a). Criterion 4A for accreditation, according to the HLC (2018b) policy title, lists the importance of institutions evaluating the success of their graduates.

“The institution assures that the degree or certificate programs it represents as preparation for advanced study or employment accomplish these purposes. For all programs, the institution looks to indicators it deems appropriate to its mission, such as employment rates, admission rates to advanced degree programs, and participation in fellowships, internships, and special programs” (HLC, 2018b).

Public higher education is vital to providing students with the tools to be productive in the workforce, according to The West Virginia Higher Education Policy Commission (WVHEPC; 2013); while part of post-graduation success lies in assisting students to understand and transition to job opportunities and community engagement. Making higher education institutions accountable for students’ outcomes was a major theme recognized by the commission (WVHEPC, 2013). The WVHEPC’s 2013-2018 Master Plan set forth a vision for higher education that included focus on the access of higher education to West Virginians, success through degree completion, and positive impact on the economic future. The positive impact this plan hopes to achieve includes an increase of graduates ready to contribute to the workforce, and the development of pathways to the West Virginia workforce for students and recent graduates (WVHEPC, 2013). To assess this impact, the WVHEPC tracks student employment outcomes, particularly eyeing career readiness initiatives (WVHEPC, 2013).

Institutions must reach beyond simplistic vocational training, and move toward training for a broad intellectual and social context to ensure success in the workforce (HLC, 2018b). As students with ASD enter four-year institutions at increasing rates (Autism Speaks, 2012),

vocational training must be relevant to the additional workforce challenges they will face. Both career services and university recruiting professionals need to plan to meet the needs of this population (Rowe, 2017). The HLC's (2018b) criteria for accreditation includes the development of student skills adaptable to changing environments, and the recognition that human and cultural diversity plays a vital role in the world in which students live and work. An expectation of institutions is to provide student support services suited to the needs of the student population (HLC, 2018b).

As the WVHEPC continues to target interventions that will ensure quality education resulting in gainful employment, institutions must consider the high volume of students with ASD and their vocational needs. Research suggests faculty do not have an acceptable level of understanding of the ADA and a student's rights to accommodations (Dona & Edminster, 2001). Students should understand their rights (Van Wieren et al., 2012; McAward, 2015), know the benefits and risks of disclosure, have plans for disclosure (McAward, 2015; Job Accommodation Network, 2017), and practical explanations for needed accommodations (Gold et al., 2012) before graduation.

The WVHEPC's 2013-2018 Master Plan (2013) recognizes that once students graduate, higher education institutions have limited roles in students' lives. Individuals with ASD spend more of their lifetime outside of the educational system than in, meaning it is pivotal for colleges to maximize this critical period by improving outcomes (Hendricks & Wehman, 2009). Before graduating, providing opportunities for professional development and different avenues for career placement to students is expected (WVHEPC, 2013). Grounded in research and best practices, the HLC believes one of the necessary means to ensuring successful graduates are entering the workforce is to create links with local businesses to learn about workforce needs

(WVHEPC, 2013). This study aims to foster that link, by determining employer understanding and expectations for hiring and supporting highly educated and career-ready graduates with ASD.

Statement of the Problem

Colleges and universities are subject to meeting standards and values put forth by the HLC's accreditation process, assuring quality education and learning for its students (HLC, 2018a). Evaluating the employment rates and success of students post-graduation directly aligns with the HLC's criteria for accreditation. Statistics regarding the number of students in higher education with ASD are not readily available, but with a prevalence of one in fifty-nine (Baio et al., 2018), and a significant rise in diagnoses in the 1990s, students with ASD in higher education are here to stay. Approximately 50,000 individuals with ASD are turning eighteen each year (Autism Speaks, 2012) and one in three of those individuals are entering higher education (Roux et al., 2015). There is a dearth of empirical research to guide the development of higher education programs that students with ASD need (Gelbar, et al., 2015). Among all categories of disability, ASD has the lowest rate of employment (Roux et al., 2015) – 75-85% of adults with ASD do not hold a full-time job (Scheiner, 2013). Because ASD shows marked impairments in communication, behaviors, and sensory intake (APA, 2013), it is critical for this population of students to receive increased, deliberate, and specific information for the transition to employment prior to college graduation.

Employers have an overall low interest in hiring individuals with disabilities, particularly those labeled with anything other than a physical disability (Wilgosh & Skaret, 1987; Millington, Szymanski, & Hanley-Maxwell, 1994; Hernandez, Keys, & Balcazar, 2000; Unger, 2002). Little is known about employer knowledge and needs for employees with ASD as they transition from

higher education to the workforce (VanBergeijk et al., 2008; Gelbar et al., 2015). As Hansen (2015) identifies, college students with ASD have a lack of awareness related to what employers believe to be the most important qualities in their employees, leading to the need of employment preparedness programs in higher education. Students cannot adequately prepare for employment without a clear picture of what employers know and expect when it comes to hiring someone with ASD. Higher education has a duty to be familiar with the constantly changing needs of regional employers (Harrison, 2017) and to collaborate with their communities (McAward, 2015) to create proper strategies and curricula for students with ASD.

Higher education institutions are lacking the tailored tools needed for students with ASD to increase their chances of attaining employment. Colleges and universities need relevant and current knowledge on the attitudes of employers so that college personnel can prepare students with ASD for workforce expectations; students with ASD need structured guidance through the job search and application process, and personalized plans for disclosure and accommodation requests.

This study seeks to add to the current body of literature for adults with ASD by tapping into current employer understanding of ASD, attitudes regarding hiring employees with ASD, attitudes toward disclosure of an ASD diagnosis, and attitudes toward accommodations for an employee with ASD. This study seeks to create a practical reference for university and college staff to develop tools and implement plans for students with ASD transitioning from higher education to the workforce. Finally, this research will seek to provide information to adults with autism seeking employment, and to professionals and advocates in the field of autism. Research questions included:

1. How knowledgeable are employers about ASD?
2. What are employer attitudes toward hiring employees with ASD?
3. What are employer attitudes toward employees' disclosure of ASD?
4. What are employer attitudes toward workplace accommodations for employees with ASD?

CHAPTER TWO

LITERATURE REVIEW

Autism Spectrum Disorder and Employment Outcomes

There is a very meaningful satisfaction we, as individuals, receive from work—we contribute to a team, see the outcome of a project, support ourselves financially, find outlets for talents, and create relationships. Temple Grandin, a pioneer in the autism community, expressed her very real fear that many individuals with Autism Spectrum Disorder (ASD) miss the important experience of work. She worries “they will never know the satisfaction of contributing to their families and their communities, of being independent, and economically self-sufficient” (Grandin & Duffy, 2008).

While the number of people living with ASD in the United States is unclear, estimates range from 1.5 to 3.5 million (Advancing Futures for Adults with Autism, 2014; Autism Society, 2015). Prevalence continues to increase each year, making it the fastest growing developmental disability (Autism Society, 2015), as currently, about one in fifty-nine children is identified with ASD (Baio et al., 2018). An average of 35% of young adults (ages 19-23) with ASD have not had a job or received postgraduate education after leaving high school (Shattuck et al. 2012). The Bureau of Labor Statistics (as cited in Autism Society, 2015) reported only 19.3% of United States citizens with disabilities were contributing to the work force (working or seeking work). Of those, 12.9% were seeking work, therefore only 16.8% of the population with disabilities held a job, compared to 69.3% of those without disabilities. Two years later, these rates showed slight improvement, as the Bureau of Labor Statistics (2017) reported that 17.9% of individuals with a disability were employed in 2016.

As we look at the past three decades of research on employment and disabilities, more specifically employment and ASD, we do not see significant change. More than one-third of young adults with ASD do not enter employment or further their education after high school; this problem carries financial and social costs to society, families, and individuals (Roux et al., 2015). The U.S. cost for a person with ASD (or any intellectual or developmental disability) over the lifespan is about \$2.4 million, compared to \$1.4 million for a person without (Ostrow, 2014). According to Dr. Paul Shattuck, an associate professor at Drexel University, “More studies are needed of adults with autism, and better ways to join with businesses to hire more adults with special needs” (Ostrow, 2014). One of the most pressing concerns that graduates with ASD will face post high school and college is the low employment rate for individuals with disabilities (Shattuck et al., 2012). Farley et al. (2017) illuminates how adults with ASD have unmet needs for securing and maintaining meaningful work; achieving their own career goals is critically important. We must initiate innovative methods for matching individuals to employer needs, and help employers to recognize the potential of a population ready for work (Farley et al., 2017).

Why Autism Spectrum Disorder Creates Employment Challenges

College students with ASD possess the ability to succeed in complex jobs, but each person is affected by their diagnosis differently. The Centers for Disease Control and Prevention (2018) reports that 69% of individuals diagnosed with ASD have an IQ of at least 70. The most pressing challenges faced by graduates with ASD entering the workforce, however, have little to do with IQs and grade point averages. Problems include, but are not limited to, difficulty with social skills and developing friendships; carrying on conversations; obsessions with rituals or limited behavior patterns; sensory issues; fine and gross motor skills; theory of mind; tantrums;

understanding others' thoughts; anxiety; and depression or other emotional problems (Grandin & Duffy, 2008).

Social Communication and Interaction

Individuals with disabilities who do not meet societal expectations for behavioral or communicative norms may be particularly prone to experiencing negative attitudes, stereotypes, and discrimination in the workplace (Scheid, 2005; Van Wieren et al., 2012). Hansen (2015) found that the biggest concerns reported by both employers and parents of individuals with ASD revolved around social communication issues. Some of these issues included reciprocal dialogue, networking, personal insight, nonverbal communication, and workplace etiquette (Hansen, 2015). Employment difficulties are common because of social and communicative deficits in ASD (Van Wieren et al., 2012; Wilczynski et al., 2013). Scott et al., (2017) note that employees with ASD face challenges with interviews, communication, and socialization with coworkers. Similarly, research by Baldwin et al. (2014) highlights the difficulties experienced in the areas of social and collegial relationships, and adds that there are often challenges with personal health and wellbeing at work. Carr (2012) suggests the deficits that exist in core areas of functioning (socialization, communication, and behavior) can vary over time. Magiati, Tay, and Howlin (2013), however, believe socialization skills and language impairments within social communication tend to remain stagnant and challenging, while adaptive functioning, such as daily living skills, may improve over time. These variances likely stem from the nature of the diagnosis—a broad range affecting individuals differently.

Lack of social communication skills can negatively affect getting and keeping a job, but these challenges also halt opportunities for meaningful, well-suited employment. Individuals with ASD who attain work often find themselves in part-time positions and poorly paid (Taylor

& Seltzer, 2011). Part-time work may have benefits to individuals with ASD, but it can also be problematic for those who have the intellectual capability for more. There are limited opportunities for training and career advancement within part-time work, and the jobs generally require minimal skills (Taylor & Seltzer, 2011). “Furthermore, a high proportion of casual jobs are found in primarily ‘people facing’ industries, such as retail and hospitality, which may create particular anxiety and discomfort” (Baldwin et al., 2014, p. 2448) due to communication challenges.

Repetitive Patterns of Behavior

According to Taylor and Seltzer (2011), behavior problems are most likely to result in unemployment for individuals with ASD. Abnormal or inappropriate behaviors may stem from interruptions in routine, anxiety, miscommunication, or reactions to sensory problems. Grandin and Duffy (2008) explain that upset behaviors in adults with ASD translate into irritability, withdrawal, anxiety, confusion, and even anger.

People with ASD tend to resist change, and many are reluctant to try new things (Grandin & Duffy, 2008). Major life transitions are much more likely to be successful with proactive planning. Employees with ASD demonstrate that they are more confident in structured work environments, including simplified tasks and set work goals (Scott, Falkmer, Girdler, & Falkmer, 2015). Farley et al. (2017) found the most common factors limiting positive employment outcomes were trouble with abstract concepts and novel experiences, difficulty staying on task, and the need for supervision.

In contrast to the difficulties with employment stemming from ASD, there are also job tasks where they may excel, including systematic information processing, tasks that require a high degree of accuracy in visual perception, precise technical abilities, and tasks requiring high

tolerance for repetition or long hours (Scott et al., 2017). Because of fixated interests, many adults with ASD can put their interests to good use in a vocational context (Simone, 2010). Employees with ASD are also typically trustworthy, reliable, punctual, have attention to detail, and low absenteeism (Scott et al., 2017).

General Expectations Employers Have for Employees

The rate of ASD diagnoses continues to rise (Baio et al., 2018), as does the rate of students with ASD entering college (Autism Speaks, 2012) and seeking employment. The next generation of students will inherit the outcomes of our decisions today, and their ability to shape our economy will be instrumental in the success of our future (AlphaBeta, 2016). While most schools often emphasize “hard skill” development, employers are looking for college graduates to possess a unique set of skills, often referred to as “soft skills,” which are considered the key to lifelong career success (Andrews, 2015). Andrews and Higson (2010) identified the following list of soft skills integral for graduate employability: (a) professionalism; (b) reliability; (c) ability to cope with uncertainty; (d) ability to work under pressure; (e) ability to plan and think strategically; (f) ability to communicate, interact, and network; (g) good written and verbal communication; (h) Information and Communication Technology skills; (i) creativity; (j) self-confidence; (k) self-management and time-management skills; (l) a willingness to accept responsibility. Working in a team, learning, oral communication, and written communication, according to Dench, Perryman, and Giles (1998), are the highest rated skills for employees to possess, yet young employees’ possession of these skills generated lower employer satisfaction than the actual ratings of skill importance. Amongst business managers, the most desired skills include communication, leadership, problem solving, and strategic thinking skills, yet they are the hardest to find amongst graduates (Andrews, 2015). Other highly rated soft skills include

initiative, flexibility, interpersonal skills, detail-oriented thinking, and organization (Andrews, 2015).

A typical employee with ASD would be challenged to master these soft skills. The DSM-5 reports the diagnostic criteria for ASD as persistent deficits in both social communication and social interaction, in addition to restricted, repetitive patterns of behavior, interests, or activities (APA, 2013). Symptoms include atypical social-emotional reciprocity; lack of nonverbal communicative behaviors; deficits in relationships; repetitive motor movements, use of objects, or speech; insistence on sameness, routines, or patterns of verbal and nonverbal behavior; restricted, fixated interests that are abnormal in intensity; and hyper- or hypo-reactivity to sensory input (APA, 2013). The challenges that accompany a diagnosis of ASD directly affect the soft skills that employers are seeking. An employee with ASD will likely show deficits in time management, organization, communication, self-determination, and flexibility (White et al., 2016). Teamwork and collaboration are increasingly important in the modern workplace, but shutting the office door to escape coworkers or noise is no longer acceptable, emphasizing the need for soft skill development in future employees (Sander, 2017).

The way employees present themselves through applications and interviews is vital to getting the job (Dench et al., 1998). Employers presume written communication and broad abilities and attitudes through resumes and applications, while oral communication, critical thinking skills, and problem-solving abilities are evaluated from interviews (Dench et al., 1998). Successfully navigating an interview is challenging for an individual with ASD (Scott et al., 2017), because the expectation to “sell yourself” and demonstrate proper social skills is difficult (Scott et al., 2015). Opinions vary as to whether soft skills can be taught. Some employers argue that these skills depend on natural ability, early experiences, background, and socialization;

others believe soft skills show improvement through training and development (Dench et al., 1998).

Employer Attitudes and Actions

Employer attitude is an important factor in the overwhelming unemployment rate of persons with disabilities (Unger, 2002). Research regarding employment of individuals with disabilities demonstrates a general disconnect between the willingness to employ and the actual hiring of employees with disability (Wilgosh & Skaret, 1987). Andersson et al. (2015) discovered overall positive responses to hiring people with disabilities, but not necessarily at their own company. Hernandez et al. (2000) compiled data that looked at employer beliefs, discrepancies, willingness, and expectations associated with different types of disabilities. They generally found that while broad, global perspectives of workers with disabilities received positive remarks, more specific examples evoked negative attitudes (Hernandez et al., 2000).

Employers often have lowered expectations for people with mental health disabilities (Unger, 2002), adding to the persistent trend of better attitudes toward physical disabilities compared to intellectual or psychiatric ones (Hernandez et al., 2000). Chi and Qu (2003) found that employers were less accepting of mentally disabled workers, one of the biggest concerns being the amount of training, special attention, and supervision they need on the job. Millington et al. (1994) found the least desirable attributes of employees were mental health problems, a criminal record, or substance abuse. These identifiers conjured up stigmas, such as social inappropriateness, safety concerns, and employee discomfort (Millington et al., 1994).

Kaye et al. (2011) questioned the amount of prior research that showed positive attitudes and success stories regarding the hiring and employment of those with disabilities post enactment of the Americans with Disabilities Act (ADA). The actual unemployment rates of

individuals with disabilities starkly contrasts a rosy picture; therefore, reports may have stemmed from social desirability bias or lack of participation in research by those with negative attitudes (Kaye et al., 2011). Kaye et al. (2011) surveyed human resource professionals and managers regarding their opinions as to why other employers fail to hire or retain employees with disabilities; of the 468 questionnaires completed, the main issues were lack of education, cost concerns, legal concerns, and continued discrimination.

In addition to the general reluctance of employers to hire individuals with disabilities, literature suggests that employers are relying on job development professionals to assist them in customizing jobs and hiring people with ASD (Simonsen et al., 2015). Overall, employers are looking to see that employees with disabilities are adding value to the business' bottom line, but the desire to fill existing vacancies is the lowest rated factor for hiring individuals with disabilities (Simonsen et al., 2015). Farley et al. (2017) reported that over half of employer participants pointed to a policy of corporate social responsibility or contact by an outside agency as reasons for hiring individuals with ASD.

Employer generalizations of employees with disabilities can either help or hinder applicants. Research conducted by Smith, Webber, Graffam, and Wilson (2004) implies that previous or current satisfaction of employees with disabilities directly relates to the potential for hiring future employees with disabilities. Therefore, if employers have a negative experience with an employee with a disability, they are much less likely to report willingness to hire again. The results of this single experience can perpetuate stigma against hiring others diagnosed with a disability (Smith et al., 2004). On the other hand, literature shows that employer-reported positive experiences with employees with disabilities result in positive attitudes toward hiring again (Wilgosh & Skaret, 1987; Andersson et al., 2015; Farley et al., 2017).

Disability Rights and Employment

Effects of the Americans with Disabilities Act and the Rehabilitation Act

Increasing literacy about disability issues is critically important, not only because of regulatory requirements such as the ADA, but also because of an evolving nation and federal initiatives being implemented to improve disability nondiscrimination policies and practices in the workplace (von Schrader, Malzer, & Bruyère, 2014). The ADA and Section 501 of the Rehabilitation Act of 1973 provide significant regulations to assist in the promotion of hiring individuals with disabilities. The ADA prohibits private businesses with over fifteen employees from discriminating against those with disabilities (Equal Employment Opportunity Commission [EEOC], 2017a). Many Americans dreamed that one of the major benefits of the ADA was the promise of competitive employment, but because lack of knowledge regarding the full potential of individuals with disabilities remains the norm, dreams have not yet come to fruition (Wehman, Brooke, Green, Hewett, & Tipton, 2008).

Section 501 of the Rehabilitation Act applies only to federal government positions requiring affirmative action, meaning certain government agencies must meet employment quotas for individuals with disabilities (EEOC, 2017a). Because affirmative action left room for interpretation, the EEOC decided to clarify these regulations, setting into motion a proposal for amending Section 501. The EEOC (2017a) implemented new requirements for federal hiring, specifically to identify the employment and retention of “targeted disabilities.” A targeted disability intends to include a broad range of disabilities that are often branded with stereotypes and myths (EEOC, 2017a). These targeted disabilities include developmental disorders, traumatic brain injury, deafness, blindness, mobility impairments, intellectual disabilities, and psychiatric disorders (EEOC, 2017a). ASD falls under a “targeted disability.” Federal agencies,

as of 2018, are required to achieve a 12% workforce with disabilities, while 2% should include employees with targeted disabilities (EEOC, 2017a).

Even with improved standards and policy intent, these adjustments barely reduce the employment gap that adults with disabilities face compared to the rest of the working age population (Butterworth et al., 2011). One of the most prevalent concerns is that although we have laws to protect individuals with disabilities, there are extremely low numbers of allegations reported by individuals with ASD to the EEOC; individuals with ASD are unaware of their rights, unaware of the discrimination, not motivated to act (Van Wieren et al., 2012) or fear retaliation (MacDonald-Wilson, Fabian, & Dong, 2010; von Schrader et al., 2013).

Regrettably, most individuals with disabilities do not achieve the level of career satisfaction that corresponds with their capabilities (Brolin & Gysbers, 1989). Individuals with ASD face employment barriers alongside individuals with mobility impairments, like the need for a walker, but they experience obstacles unlike the other. Cognitive disorders like ASD face much different stereotypes and fears in comparison to physical disabilities. Individuals with developmental, intellectual, and psychiatric disabilities are often deemed less desirable (Millington et al., 1994; Hernandez et al., 2000; Unger, 2002).

Facing the Issue of Disclosure

As students with ASD apply for jobs, they will inevitably consider if they will disclose their diagnosis or not—a double-edged sword that has no easy solution. On one hand, they may feel reservations about the ramifications of disclosing for fear of stigma, not being accepted by personnel, or being viewed as different, inadequate, or incompetent (Banks et al., 2007). These students may be anxious for a “new beginning” in a setting without being labeled (Getzel & Thoma, 2008). On the other hand, avoiding disclosure removes the opportunity for needed

accommodations and reduces honest, open relationships with employers, both of which can benefit job performance. Because of low advocacy, lack of awareness, poor communication skills, psychological state, or personality, some individuals are not fully aware of the problems they face and are unsure of how to improve their status by speaking out (Chen, 2013).

The ADA is in place to protect discrimination based on disability, but individuals must disclose their diagnosis for protection eligibility. Disclosure can provide positive outcomes for both the employer and employee (von Schrader et al., 2013). Kirchner and Dziobek (2014) found that employer's awareness of an employee's diagnosis is a crucial factor in facilitating work performance. ASD is often considered an "invisible disability," making characteristics of the diagnosis unrecognizable to coworkers and employers unless expressly exhibited during the workday.

In order for individuals with ASD to receive the needed support and accommodations for successful employment, disclosure is vital (Job Accommodation Network, 2017). Research by Banks et al. (2007) studied the workplace experiences of 162 employees supported by employment programs in the United States. Findings revealed: 1) employees who disclosed their disability were significantly more likely to have an accommodation in place at the workplace than those who did not disclose; 2) company personnel were more likely to provide support to employees who disclosed than those who did not disclose; and 3) company personnel were more likely to have received training if the employee's disability was disclosed than if it was not (Banks et al., 2007). Individuals with disabilities who do not participate in a supported employment program, however, may see varying results with disclosure (Banks et al., 2007).

Von Schrader et al. (2013) evaluated survey responses from 599 individuals with disabilities regarding disclosure of a disability. From this group, approximately 80% disclosed

their diagnosis, listing needed accommodations and workplace environment as major factors in the decision. Most, 62.5%, expressed they would disclose again in similar circumstances (von Schrader et al., 2013).

Kirk-Brown, Van Dijk, Simmons, Bourne, and Cooper (2014) studied the effects of disclosure of multiple sclerosis in the workplace. Employer responses were generally positive once disclosure occurred, according to employees. Kirk-Brown et al. (2014) drew attention, however, to the large number of employees who showed concern that their organization would respond negatively. Ignoring expected negative reactions from employees with disabilities is a disservice (Kirk-Brown et al., 2014).

Hesitation to disclose on the part of individuals with ASD does not come without warrant. Pearson et al. (2003) submitted over 1,600 job applications to 400 job advertisements, with and without disclosing a variety of disabilities. Applications disclosing a disability were less likely to be offered a position than those without, while those listing a mental health issue were the least likely to receive an offer in comparison to a physical disability. Although von Schrader et al. (2013) reported overall positive results from disclosure of a diagnosis, 34% reported their disclosure experiences as negative. Survey responses included factors to take into consideration if respondents had the opportunity to disclose again. Their concerns included disparate treatment, balancing the timing of disclosure and their need for accommodations, their assessment of the environment and supervisor, and the importance of “being themselves” (von Schrader et al., 2013).

Accommodations and the Perceived Burden

Unemployment is a significant issue for adults with ASD and workplaces are failing to provide accommodations and adjustments appropriate to individual needs (Baldwin et al., 2014). Supports within the workplace are vastly important for most workers in business and industry to meet work performance standards; for individuals with disabilities, these supports are an essential part of the business environment (Wehman, 2008; Chen, 2013). Accommodations aim to assist individuals with disabilities to perform necessary work-related duties (EEOC, 2017b). Reasonable accommodations can involve the purchase of equipment, supplies, or technology, and ongoing modification of work activities job tasks (like changing work schedules or restructuring duties) to ensure that employees with disabilities can perform the essential functions of a job (Wehman, 2008; MacDonald-Wilson et al., 2010). The Job Accommodation Network (2017) interviewed 1,188 employers, and of those who had implemented accommodations, 75% reported that the accommodations were either very effective or extremely effective.

Managers have access to a variety of easily accessible strategies that will enhance the chances for successful and efficient outcomes for employees with ASD. According to MacDonald-Wilson et al. (2002), the accommodation most commonly reported by employers for employees with ASD was a change in personnel (62%), which included changes in interactions with the employee, the addition of assistance to the employee, or specific training that assisted others to interact with the employee. Accommodations also involved changes in company procedure (52%), namely exceptions or changes in activities and operations in how the job was traditionally completed (MacDonald-Wilson, et al., 2002). These social, communication,

executive functioning, or environmental accommodations (for visual, auditory, or olfactory sensitivities), can appear costly, burdensome, and legally concerning to employers.

Costs of accommodations for disabilities has always been an apprehension for employers and an important factor in hiring decisions (Chi & Qu, 2003; von Schrader et al., 2013). Despite several studies indicating typical accommodations are inexpensive and pay for themselves in the end (Kaye et al., 2011), employers state reluctance to providing accommodations on legal and cost grounds (Gold et al., 2012). According to Title I of the ADA, employers must provide reasonable accommodations to employees or applicants who are deemed qualified individuals with disabilities, unless it would create “undue hardship” on the employer (EEOC, 2017b). Undue hardships are judged on a case-by-case basis and mean that significant challenges or expenses would result from providing the specific accommodation (EEOC, 2017b).

The concern over costs of accommodations is generally discredited when employers understand that most modifications cost companies little to nothing. According to Olson, Cioffi, Yovanoff, and Mank (2001), the most common accommodations were extra supervision time, flexible hours, or a job coach; the costs of these accommodations are negligible, with the exception of some reported training costs. Drake, Becker, and Bond (2003) found that workplace accommodations for individuals with psychiatric disabilities typically involve scheduling adjustments, more break time, or extra supervision, but rarely include significant expenditures on the part of the employer. The Job Accommodation Network (2017) reports that of the 712 employers who provided cost data on accommodations, 59% said the accommodations cost nothing, 36% paid a one-time cost, and 4% reported ongoing costs. Typical one-time payments averaged \$500 (Job Accommodation Network, 2017). MacDonald-Wilson et al. (2002) reported that of the 322 accommodations provided to 191 employees, only one involved a direct

expenditure of twenty-five dollars for a job performance test. Farley et al. (2017) described no significant differences between employees with and without ASD in weekly supervision costs, cost to employers, or costs related to training. Järbrink et al. (2007) found the cost for employment services accounted for 2.6% of the total cost for their sample. The size of this cost, in comparison to the costs of community support and health care, was minimal (Järbrink et al., 2007). The most significant expenditure is time, which employers may perceive as taxing; 28% of employers averaged five additional hours of supervisory time per month, and 12% reported an average of nine additional hours per month of coworkers' time (MacDonald-Wilson et al., 2002).

Attaining needed accommodations for employees with ASD also relies upon the method of request. Gold et al. (2012) found that employees with disabilities, service providers, and employers agree that convincing employers to approve requests resides with employees. Employers rely on employees not only to bring attention to needed accommodations, but also to provide clear proof that requested accommodations will benefit the employee in combination with job performance (Gold et al., 2012). Some employees with ASD may find difficulty advocating for accommodations without support or practice due to challenges with communication skills (APA, 2013), vulnerable disposition, and simply feeling uncomfortable asking (Briel & Wehman, 2005 as cited in McAward, 2015).

Employers' concerns with accommodation requests may also stem from fears over legal liability. Qualitative responses from Kaye et al. (2011) showed a need for employer education on disabilities, the laws surrounding disabilities, and types of accommodations. Fears of lawsuits or discrimination complaints were central issues reported (Kaye et al., 2011). Employer compliance with ADA showed that over 25% of charges submitted to the EEOC by employees report employers' failure to appropriately respond to accommodation requests (Gold et al, 2012).

Employer participants in the case study by Gold et al. (2012) expressed desires to have an honest conversation with the employee; they hope employees will take a leap of faith that they have their best interests in mind, and that they will not be judged based on disclosing a disability. In six of the ten studies reviewed by Hernandez et al. (2000), workplace participants were more positive about general issues without direct actions or costs (like attitudes toward the ADA), but were more negative about specific issues they deemed complicated or costly (such as accommodations and potential legal threats).

Individuals with disabilities need self-determination skills to be successful, including acceptance of their disability, how it affects them, and recognition of which accommodations are needed (Getzel & Thoma, 2008). According to Wehman (2008), one of the greatest findings from their research into workplace supports for individuals with disabilities is the empowerment they provide. The Job Accommodation Network's (2017) longitudinal research of over 1,000 employers showed multiple direct and indirect benefits after providing accommodations to their employees with disabilities. Von Schrader et al. (2013) affirms these findings. The direct benefits most mentioned include (a) retaining a valuable employee (90%); (b) an increase in employee productivity (72%); (c) the elimination of costs to hire a new employee (61%); (d) an increase in employee attendance (56%). The most frequently mentioned indirect benefits to employers include (a) improved interactions with coworkers (64%); (b) an increase in overall company morale (62%); (c) an increase in overall company productivity (56%); (d) an increase in workplace safety (46%). While some information exists on the types, frequency, and costs of reasonable accommodations for people with intellectual disabilities, not much is understood about which employee and employer characteristics are associated with reasonable accommodations (MacDonald-Wilson et al., 2002).

Access to Employment Preparation in College

The number of students attending college with ASD is on the rise, and higher education institutions have a duty to provide appropriate employment supports for them (Hansen, 2015). Chen (2013) states that transition needs after college graduation are unavoidable. If schools do not properly assess the challenges caused by disabilities or provide proper supports for these challenges, students with disabilities may graduate without sufficient preparation (Chen, 2013). Within the pedagogical literature, there has been a call to develop an awareness of this demand on higher education and a demand to address the social and organizational difficulties of this population (VanBergeijk et al., 2008). Briel and Wehman's 2005 study (as cited in McAward, 2015) identified nine challenges students with disabilities face in terms of career development:

- Being comfortable with their disability
- Building self-esteem and confidence
- Learning about their disability and its impact on learning or the work environment
- Becoming familiar with compensatory strategies and assistive technology
- Learning about protections afforded and responsibilities under the Americans with Disabilities Act
- Acquiring the self-disclosure skills and the ability to request accommodations
- Obtaining workplace supports through community resources
- Learning how to manage insensitive employer comments and attitudes
- Gaining traditional employment experiences (p. 293)

According to *The Chronicle of Higher Education* and American Public Media's *Marketplace* (2012), 31% of employers indicated that recent graduates are unprepared or very unprepared for their job search, and 34% of surveyed managers rated colleges' ability to produce

successful employees as “poor” or “fair.” According to Dowrick, Anderson, Heyer, and Acosta (2005), students with disabilities (including physical, sensory, cognitive, emotional, and learning disabilities) in higher education revealed concerns of understaffed disability offices, a gap between policies and follow-through, difficulty getting basic accommodations without committed advocacy, and lack of outreach. The transition from college to employment was of further concern, where discriminatory attitudes and assumptions about abilities and accommodations halt opportunity. Students noted the need for more internship and job training opportunities, preparation on promoting personal qualifications and abilities, along with strategies for requesting workplace accommodations (Dowrick et al., 2005). Many participants did mention counselors or faculty members by name, expressing how important they were in their success and highlighting the value a single mentor can have (Dowrick et al., 2005).

A central issue in higher education is the relationship with the labor market, specifically the outputs and value that graduates add (Tomlinson, 2012). Higher education institutions not only have a responsibility to understand economic and employment change in the world, but also have the ability to shape that change. Harrison (2017) explains that to support students in this ever-evolving landscape, those who work in higher education and career services must strive to provide relevant preparation at the baccalaureate and graduate levels; they must stay attuned to the evolving needs of regional employers to remain leaders in the U.S. economy. According to Wehman (2013), it is critical to find out what businesses and industry require for their workforce and determine if instruction aims to promote skills that relate to those employer needs. Recent critics of higher education preparation, particular Masters of Business Administration programs, contend that curriculum is out-of-touch with the “real world” (Rubin & Dierdorff, 2009). Course instruction should include how to write resumes, and students with ASD should practice the

application process (VanBergeijk et al., 2008). Preparation challenges for the workforce are relevant to all students in higher education, yet for those with ASD, the need for appropriate preparation becomes even more vital.

McAward (2015) recognized the importance of community and higher education collaboration in supporting students with disabilities, specifically in the areas of skills development, personal awareness, knowledge of the world of work, and interpersonal skills. Hansen (2015) found that college students with ASD are unaware that employers are looking for abilities unrelated to specific degrees or skillsets, but are seeking networking ability and natural social communication. For students with ASD, the development of interpersonal skills is important. Because ASD is a social disability in nature, students need specific education on introducing themselves, small talk, where to sit, and how to conduct themselves during a job interview through role-play (VanBergeijk et al., 2008). In addition, Paradiz, Kelso, Nelson, and Earl (2018) state the need for self-advocacy skills in transition periods is growing for young adults with ASD. Students must develop self-advocacy skills, possessing an awareness of needs, preferences, interests, and rights; they must build the competence to implement strategies to attain these needs and aspirations (Paradiz et al., 2018).

VanBergeijk et al. (2008) suggest having a discussion on the topic of disclosure with students prior to job interviews so they will understand their choices. College students with ASD need assistance to develop disclosure skills, the ability to gage when and how to disclose, skills to handle workplaces that may not be accustomed to having employees with disabilities, and an understanding of the legal protections afforded to them (McAward, 2015). Getzel and Thoma (2008) studied students with disabilities in college; most self-reported that they would prefer for efforts to teach self-determination skills begin earlier and that colleges focus on strategies to

solve problems and identify resources. In the absence of instruction, students reported learning by trial and error while in the college setting. Among several recommendations, Getzel and Thoma (2008) agree that future research should seek what role postsecondary settings should play in strengthening self-determination of students with disabilities to ensure their success. “More needs to be done with educators, industry and government working together to ensure young people will be equipped with the skills they need for future jobs” (Sander, 2017).

Why Employment of Individuals with ASD Matters

Humanitarian Benefits

Enriched lives are sums of a whole—each part is integrated. “Education impacts employment... employment impacts living arrangements... living arrangements affect your social life... and so on” (Roux et al., 2015, 31). There is rarely an emphasis on “quality of life” as a measured outcome in vocational research (Beyer, Brown, Akandi, & Rapley, 2010). Key findings from Roux et al. (2015) found an average of one in four young adults (early 20s) with ASD were socially isolated, and nearly one in three had no community participation outside of school (never saw or talked with friends and were not invited to social activities within the past year). In addition, community-based, paid employment was an unlikely outcome for adults with ASD, supporting only 14% from a national survey (Roux, Shattuck, Rast, & Anderson, 2017). According to Barnes and Mercer (2005) (as cited in Cregan, Kulik, & Bainbridge, 2016) there has been a remarkable consensus across academic research, government policy, and interest groups that paid employment is central to social inclusion.

To be unemployed when you want to be working is irrefutably poor for both mental and physical health (Järbrink et al., 2007). The world is recognizing that to improve the lives of individuals with disabilities, we must focus on strategies for employment (Cregan et al., 2016).

Employment creates the ability to be self-sufficient, and often leads to the improvement in one's quality of life (Hendricks, 2010; Scott et al., 2017). Changing the dialogue from, "how do we help them correct these differences?" to "how do we adapt to accept and support these differences?" is an important evolution in justifying that individuals with disabilities enrich the human experience. "Society loses out if individuals with autism spectrum disorders are not involved in the world of work or make other kinds of contributions to society" (Grandin & Duffy, 2008, xi).

Baldwin et al. (2014) found two intrinsic benefits of employment for those with ASD. First, it established an appreciation for the opportunity to confront challenges associated with their ASD, affording them the ability to grow and learn a great deal from their work. Second, it provided an outlet to prove their strengths, "come into their own," and flourish (Baldwin et al., 2014). Employers note that there are socially desirable reasons to hire, which include diversifying the workforce, providing opportunity to youth, and giving back to the community (Simonsen et al., 2015). Harvard Business School's Gary Pisano, as quoted in Holland (2016) states that we do better when we mix people who think differently. "There are possibilities here to do something that is socially good and yet is still being very responsible to the business" (Holland, 2016, 1).

Economic Benefits

The cost to care for an individual with ASD may exceed \$2 million in a lifetime (Ostrow, 2014), while services for adults with ASD costs U.S. citizens \$175-196 billion annually (Autism Society, 2015). Each year the federal government is spending more money on payments to disabled workers (Joffe-Walt, 2013), and for many individuals with symptoms causing the inability to work, disability funds are crucial. For those able, the creation of job opportunities for

individuals with ASD is not just altruistic, but economically sound. Järbrink et al. (2007) report that productivity losses and the need for day care activities would decrease when a person with ASD gets into employment. There are reasons to believe employment could reduce the need for costly living supports, and there is the possibility that the high prevalence of psychiatric morbidity could decrease because of employment; these results could lead to a lower overall cost for society (Järbrink et al., 2007).

The majority of adults with ASD remain in their parents' home during adulthood (Farley et al., 2017). According to Howlin, Goode, Hutton, and Rutter (2004), thirty-one individuals (46%) were categorized “poor” in overall adult outcomes—almost all were in residential accommodations with very limited autonomy, or were living at home. Eight participants were in long-stay hospitals and rated as having a “very poor” outcome (Howlin et al., 2004). The Easter Seals' (2008) “Living with Autism” study showed 61% of parents of children with ASD are significantly more likely than typical parents to incur debt to meet family needs. Families of individuals with ASD are four times more likely to fear their child will not have enough financial support after their deaths (Easter Seals, 2008). Significant costs resulting from adult care and lost productivity of both individuals with ASD and their parents have major implications on families and society in general (Ganz, 2007).

Higher Education Benefits

The West Virginia Higher Education Policy Commission and Higher Learning Commission (HLC) have standards set in place for colleges and universities to meet, specifically regarding the employability and outcomes of their graduates. Accreditation through the HLC (2018b) clearly states, “The institution looks to indicators it deems appropriate to its mission, such as employment rates” (Criterion 4a). Adapting to the needs of students with ASD is a

responsibility that higher education must accept, not only as a central role in higher education, but to also meet the expectations of accreditation.

According to the U.S. Department of Education (USDOE, 2015a), there are far too many colleges and universities graduating students with degrees that are not valued by employers, because of a lack of quality education. “America’s students and families need, and the nation’s economic strength will depend on, a higher education system that helps all students succeed” (USDOE, 2015a). By implementing change, families, students and higher education institutions stand to benefit. The issue of graduate employability rests within the economization of higher education (Tomlinson, 2012). Former Secretary of Education, Arne Duncan, called for the accountability of institutions, states, and accreditors, noting that students and taxpayers should not be paying them when they are not providing a quality education. Institutions were rewarded and supported, however, for taking struggling students and helping them to succeed (USDOE, 2015b). Mr. Duncan expressed that the recognition and reward of institutions that improve student outcomes, particularly the students with the greatest needs for support, should be encouraged, while those institutions more concerned about their bottom lines would lose taxpayer money (USDOE, 2015b).

Colleges and universities are seeing a new demographic of students entering the classroom—no longer the typical 18-year-old out of high school. They are facing federal, state, public, and student expectations in regard to the outcomes of graduates (Fishman, Ludgate, & Tutak, 2017) and experiencing pressures to respond to a wide range of internal and external market demands (Tomlinson, 2012). Higher education institutions are rising to the challenge, responding with holistic, student-centered strategies that promote success for students and institutions. Georgia State University (GSU) made a very deliberate commitment to students who

have been underserved in the past, transforming the university. According to Fishman et al., (2017), because of these positive initiatives, GSU began to attract more applications from students already on the path to succeed. GSU has stayed committed to students who face challenges, creating a positive public persona.

Colleges and universities have the ability to attract an untapped population of students if course curricula, career service centers, and administrative focus aims to properly prepare students for the current job market through tailored supports. Marshall University is the home of The College Program for Students with Autism Spectrum Disorder, established in 2002. The goal of the program is to help students earn a college degree, successfully find employment in their desired field, and gain the skills to live a productive, independent, and quality life (College Program, 2017). This on-campus support program, and many others like it across the United States, attracts an abundance of applications each year to the university, many from out of state. When enrollment, retention, funding, and meeting standards are crucial factors for institutional success, attracting worthy applicants is a no-brainer.

Employer Benefits

Today, a good product is not always enough for companies to earn customer trust and return. Consumers want to give their business to companies who are socially responsible; a company's social footprint has become quite important (Tran, 2015). Hiring individuals with disabilities shines a light on company morality, effectively creating more business. Siperstein, Romano, Mohler, and Parker, in their 2006 national survey on consumer attitudes toward companies that hire people with disabilities, stated participants had strong, positive beliefs about companies who hire individuals with disabilities. This national survey showed that 92% of participants reported being "more favorable" and "much more favorable" toward companies that

hired individuals with disabilities (Siperstein et al., 2006). In addition, 96% of participants believed that providing opportunities for employment to people with disabilities helps to create meaningful, productive lives (Siperstein et al., 2006). Almost all participants reported they would prefer to give their business to a company who hired people with disabilities (Siperstein et al., 2006).

Employers are seeing value in hiring individuals with disabilities without being enticed by economic incentives—they are embracing diversity as the American workplace changes (Olson et al., 2001). “This is not about political correctness. Employers who recognize that human brains may be wired in many different ways can quite simply recruit a more diverse workforce. Those who are prepared to tweak how they do things to enable neurodivergent employees to flourish in the workplace can reap the business rewards” (Power, 2018, para. 11). Farley et al. (2017) found several benefits to hiring individuals with ASD, like positive workplace cultural shifts, improvements in workplace morale, increased autism awareness, and creative skillsets. Olson et al. (2001) research found the majority of employees with intellectual disabilities used the same or less sick leave than the average employee, and were absent the same or fewer days in comparison to average employees in the workplace.

Individuals with ASD often rely on routines, schedules, and clear rules to follow (APA, 2013). They generally have skills in specific areas that match job objectives, such as attention to detail, a methodical approach, strong research skills, good long-term memories, and excellent record keeping (National Institute of Neurological Disorders & Stroke, 2017). According to Patterson (2018), as cybersecurity becomes one of the defining challenges of our time, the key to success may be seeking out a neurodiverse workforce, including individuals with ASD. People with ASD tend to think literally and systematically, making them skilled in mathematics and

pattern recognition; neurodiversity should be seen as a competitive advantage (Patterson, 2018). Software analysts and programmers, according to Lagace (2008), often hate the concentration and repetition involved in testing software before a launch. For those with ASD, however, the testing process directly makes use of their high intelligence, precision-oriented skills, concentration, and patience (Lagace, 2008). The Denmark company, Specialisterne, a highly recognized and successful IT business built around the talents of individuals with ASD, highlights their employees' ability to catch critical flaws in software, making them professionals who play a crucial role in the first-rate IT business's success (Wareham & Sonne, 2008).

Many people with ASD have special interests leading to vast and detailed knowledge on a subject that they pursue with passion and veracity (National Institute of Neurological Disorders & Stroke, 2017). Patterns of specialized interests appear to be a dominant characteristic in individuals with ASD, reported in over 90% of children and adults (Attwood, 2003). These passions can directly benefit employers. According to Kirchner and Dziobek (2014), people with ASD may have natural abilities finding the function of objects. They pursue a wide range of special interests intensively and self-report their competency within their fields, making them well suited for employment (Kirchner & Dziobek, 2014). Special interests are valuable sources to rely on when developing employment strategies for individuals with ASD.

CHAPTER THREE

RESEARCH METHODS

One in fifty-nine children is diagnosed with Autism Spectrum Disorder (ASD) according to the most recent Centers for Disease Control estimates (Baio et al., 2018). The increase in the number of individuals diagnosed with ASD in the past two decades can be expected to increase the numbers entering higher education (Gelbar et al., 2015), where students hope to develop the skills to adapt to adult life while earning degrees (Autism Society, 2016). Although there is a rapidly increasing number of college-bound students with ASD, it is rare for higher education institutions to be prepared for their unique needs (VanBergeijk et al., 2008; Gelbar et al., 2015). No known reports on college graduation rates specifically for this student population are published (White et al., 2016).

It is well established that life transitions for people with ASD require planning, including preparatory instruction to transition students from higher education to employment (Chen, 2013). Employment difficulties are common for individuals with ASD because of social and communicative deficits (Van Wieren et al., 2012; Wilczynski et al., 2013). The decision and strategy to disclose a diagnosis of ASD (Banks et al., 2007) and how to request and properly attain accommodations in the workplace (Baldwin et al., 2014) are typical issues that individuals with ASD will face.

The West Virginia Higher Education Policy Commission (2013) attests that higher education must provide students with proper instruction to successfully transition to the workforce. To ensure this success, colleges must develop relevant vocational training to a wide variety of intellects and social contexts (Higher Learning Commission, 2018b). Universities are responsible for creating empirically evaluated ways to prepare students with ASD for the

workforce in the areas of communication, socialization, independent living skills, and executive functioning skills (VanBergeijk et al., 2008). Gelbar et al. (2015) found that colleges provide adequate academic support to students with ASD. Supports from other service providers like career services, however, were less helpful; yet these departments are essential for students with ASD (Gelbar et al., 2015).

As the world of work changes, so too must higher education instruction – higher education institutions must provide relevant preparation to graduates facing the evolving needs of employers (Harrison, 2017). This study surveyed employers to assess their perceptions of employees with ASD. While the findings may not be generalizable to employers elsewhere, they ostensibly raised some common concerns. Being aware of employee knowledge and attitudes will assist college and university personnel to develop and adapt instruction for students with ASD transitioning from higher education to the workforce. To gauge employer knowledge and attitudes regarding ASD, research questions included:

1. How knowledgeable are employers about ASD?
2. What are employer attitudes toward hiring employees with ASD?
3. What are employer attitudes toward employees' disclosure of ASD?
4. What are employer attitudes toward workplace accommodations for employees with ASD?

Research Design

This study used descriptive research design aimed to produce information on an existing group of employers (Fink, 2003a). This type of design provided a reasonably accurate portrayal of a group, a depiction of characteristics that existed within that group, and answered questions based on ongoing events (Dulock, 1993). Quantitative survey methods provided more breadth of numerical, objective information as opposed to qualitative methods, and sought trends, attitudes,

and opinions of an identified sample of employers (Creswell, 2014). Questions focused on measuring the current climate of employer understanding and attitudes toward employees with ASD. A cross-sectional design provided a portrait of one group's opinion at the time of the survey's completion (Fink, 2003a). The intent was to attempt to generalize results (Creswell, 2014) to a broader employer population. This method was ideal due to the objectivity of numerical results and the efficient turnaround of data collection (Creswell, 2014).

Very little research on employers' perspectives of employees with ASD exists. Most research focused on employer attitudes, generalizes ASD into a category of "disabilities," such as a communication, intellectual, or psychiatric disability, and may even be lumped in with physical disabilities (Banks et al., 2007; Kaye et al., 2011; Andersson et al., 2015; Simonsen et al., 2015; Job Accommodation Network, 2017). Research questions ascertained the knowledge employers possess of ASD, their attitudes toward hiring employees with ASD, attitudes regarding disclosure of a diagnosis of ASD, and attitudes toward workplace accommodations for employees with ASD. Parts of the survey used indirect questioning to minimize social desirability bias – a phenomenon of human behavior that stems from the basic human tendency to present oneself in a good light, leading to biased and distorted data (Fisher, 1993). Instead of asking participants to identify solely their own attitudes, this survey also asked them to estimate the attitudes of employers in general (Kaye et al., 2011). Kaye et al. (2011) found this indirect questioning strategy to be much more effective in engaging participants. Data gathered from surveys is hoped to be useful for higher education personnel as they develop or enhance essential guidance and curricula for students with ASD who are transitioning from college to the workforce.

Sample

This study used non-probability, purposive sampling, which does not guarantee all eligible participants had an equal chance of inclusion (Fink, 2003c). This research sought survey participation from employers, business managers, and employees who have been involved in or have had influence in the process of hiring at their workplace. To be included, participants had to have a personal or business Facebook account, and follow the researcher, follow the President and CEO of the Huntington Regional Chamber of Commerce on Facebook, follow the Chamber of Commerce of the Mid-Ohio Valley on Facebook, or follow those on Facebook who shared the survey with others. Businesses or individuals who follow the researcher on LinkedIn also had access to the survey. Although surveys presented online cannot be seen as representative of all hiring personnel, this study aimed to make it available to and representative of different types of employers and businesses. Finally, individual employers, business managers, or those in charge of hiring may have received the survey by email directly from the researcher. These employers were identified through colleagues, peers, friends, and family members of the researcher and email addresses were provided for direct survey distribution.

Participants included members of The Huntington Regional Chamber of Commerce – a non-profit association of over 500 businesses and 2,000 professional people in Cabell and Wayne counties, West Virginia. Also included were members of the Chamber of Commerce of the Mid-Ohio Valley; this group is composed of approximately 380 members from Calhoun, Jackson, Pleasants, Ritchie, Roane, Wirt, and Wood counties, West Virginia, as well as Washington County, Ohio. These businesses represent a wide variety of local businesses and industries, including public sector, private sector, and non-profits. A total of 150 professionals comprised the sample of the study.

Instrumentation

A research-generated survey developed by the researcher collected respondents' workplace demographics and measured participants' knowledge of ASD, attitudes in relation to hiring employees with ASD, disclosure of ASD, and workplace accommodations for employees with ASD. Qualtrics Survey Software allowed for self-administered, unsupervised survey disbursement. Self-administered, emailed surveys were advantageous due to their low cost and low need for additional personnel (Bourque & Fielder, 2003). This survey design allowed for expansive coverage of a geographic region with the opportunity to recruit an overall larger sample size (Bourque & Fielder, 2003). Bourque and Fielder (2003) suggest that electronic surveys are beneficial to reduce the potential influences of timing, limiting the possibility of outside events causing participants to answer differently. This design was hoped to also increase truthfulness of participants, as face-to-face interviews or administered surveys are not ideal for sensitive topics (Bourque & Fielder, 2003). Qualtrics allowed for the quick creation of a tailor-made survey and for efficient distribution. Online survey platforms created easily transferable results that were put into a spreadsheet for further analysis (Creswell, 2014).

Participants had the opportunity to complete the thirty-eight-item survey through a Qualtrics link shared on Facebook, LinkedIn, or via email. The Internet and social media have permeated daily life in many areas of the world, and should therefore be viewed as a way of reaching participants in research (Kayam & Hirsch, 2012). The survey included a built-in letter of consent. Participants began by indicating their agreement with four screening statements: 1) I (or the business I work for) am a member of the Huntington Regional Chamber of Commerce; 2) I (or the business I work for) am a member of the Chamber of Commerce of the Mid-Ohio Valley; 3) I am involved/have influence in the process of hiring at my workplace; and 4) I am not

involved/have influence in the process of hiring at my workplace. Only individuals who selected one of the first three options were allowed to provide responses to the remainder of the survey. Participants who chose the fourth option were immediately disqualified.

Part I of the survey identified participants' familiarity with the terms "autism, Autism Spectrum Disorder, or Asperger's Syndrome" and asked if they worked with someone with ASD, past or present. Research depicting both employers' understanding of ASD and the needs of employees with this developmental disorder, is sparse (VanBergeijk et al., 2008; Gelbar et al., 2015). For higher education to develop preparatory instruction for students with ASD entering the workforce, educators must first recognize the level of understanding employers have about an ASD diagnosis.

Part II of the survey measured this general understanding. This section used statements depicting possible characteristics of ASD and provided three nominal response choices: "this statement is accurate," "this statement is not accurate," and "I am not certain." Nominal responses on survey instruments have no numerical or preferential values (Fink, 2003b).

Part III of the online survey was broken into three parts (A, B, and C) and was intended to identify perceptions and attitudes regarding hiring employees with ASD, disclosure of an ASD diagnosis, and accommodations for employees with ASD. There is a lack of interest in hiring individuals with disabilities (Andersson et al., 2015) and generally less interest is shown for those with mental health disabilities as opposed to physical ones (Hernandez et al., 2000). Part III A combined direct and indirect questioning to minimize social desirability bias. "Yes" or "no" nominal response options with custom qualifiers were provided to survey participants to measure attitudes on hiring with consideration of the disclosure of an ASD diagnosis and accommodation requests. According to Rohrman (2007), qualifiers in survey responses provide

advantages, such as ease-of-explanation and familiarity. Part III B assessed employer preferences regarding the method and time period of disclosure, using nominal, multiple-choice questions. Employer survey responses revealed perceptions of hiring and disclosure, along with the timing of disclosure, which is critically important in the instruction of students with ASD transitioning to work. Pronouns identifying sex of the applicant described in the questions were used in this section for clarity of response options. Male pronouns were chosen, because there is an estimated 4:1 ratio of male to female ASD diagnosis and research that examines autism using vignettes generally uses male descriptors (Matthews, Ly, & Goldberg, 2015).

Part III C used only indirect questioning to measure participants' perceptions of other employers' willingness to make accommodations for employees with ASD. Accommodations are often necessary for employees with ASD to succeed (Wehman, 2008), yet they often go unrequested due to fear (Briel & Wehman, 2005 as cited in McAward, 2015) or a misunderstanding of their rights (Van Wieren et al., 2012). Nominal responses with qualifiers of "yes, it is likely they would provide this accommodation" and "no, it is not likely they would provide this accommodation" measured employers' willingness to make proposed environmental, communication, social communication, and executive functioning accommodations.

Finally, the last section of the survey categorized respondents based upon workplace sector and size. Trends were identified, dependent on these demographic data.

Data Collection

After Institutional Review Board approval, the researcher emailed Dr. Bill Bissett, President and CEO of the Huntington Regional Chamber of Commerce, and Jill Parsons, President and CEO of the Chamber of Commerce of the Mid-Ohio Valley, to share the survey in

their weekly emailed memos to all members (Appendix C). Due to a low response rate in the first three days, a revised survey was developed, which included a qualifying question to ensure participant experience with hiring. The survey and a brief description of the research were shared to Dr. Bissett's personal Facebook page and The Chamber of Commerce of the Mid-Ohio Valley's Facebook page. In addition, the survey and description were posted to the researcher's personal Facebook page and LinkedIn page. Those inclined also shared the post. Finally, the researcher personally emailed employers, business managers, or employees with influence in hiring to ask for participation. These individuals ($n = 35$) were identified through colleagues, friends, and family members of the researcher.

An informed consent letter within the survey explained the survey process, the risks and benefits of participating, the intent to keep all participant identities anonymous, and provided the researcher's contact information. Participants had the opportunity to identify themselves as members of The Huntington Regional Chamber of Commerce or the Chamber of Commerce of the Mid-Ohio Valley. Participants were asked, but not required, to choose their field of work and company size from multiple-choice lists. No other identifying information was requested. The survey was available through Qualtrics and was accessible through the link provided in social media posts or emails. Participants had the opportunity to respond from October 12, 2018 to October 21, 2018, giving them a total of ten days. A total number of 189 participants began the survey. Thirty-eight were disqualified from their responses to the first statement regarding hiring experience, and one did not move on even after qualifying, leaving 150 responses.

Data Analysis

This study used IBM SPSS Statistics 23 to analyze survey data from multiple-choice questions, which included both direct and indirect questioning. SPSS is the leading statistical analysis software for the social sciences (Ozgun, Kleckner, & Li, 2015). This method was appropriate, because it was a convenient platform for statistical tests and allowed themes to emerge from complex data analysis (Ozgun et al., 2015). SPSS linked numerically coded data back to their original meanings, which was valuable to the researcher (Ozgun et al., 2015). Descriptive statistics provided simple summaries of the demographic data. Answers to the four research questions relating to employer understanding of ASD, employer attitudes toward hiring employees with ASD, the disclosure of ASD, and workplace accommodations for employees emerged using statistics from the data analysis.

Limitations and Delimitations

The findings of this study are limited to the perceptions of individuals who have been involved in or who have had influence in the process of hiring at their workplace. Findings are also limited to (a) Facebook and LinkedIn followers of the researcher; (b) Facebook followers of Dr. Bill Bissett of The Huntington Regional Chamber of Commerce; (c) Facebook followers of The Chamber of Commerce of the Mid-Ohio Valley; (d) Facebook or LinkedIn followers of users who shared the survey; and (e) forty-seven regional employers directly emailed by the researcher. Sampling was not randomized, because participants had access to the Internet and were a part of specialized online groups (Kayam & Hirsch, 2012). These participants may have characteristics (such as age, sex, or education) that affected the applicability of the survey's results to the target population, therefore influencing external validity (Fink, 2003d).

The researcher ran a pilot test, surveying five experts in the field of autism to minimize limitations. This study, however, is limited by the dependability and internal validity of the survey, which may have affected result accuracy (Fink, 2003d). Research flaws, revealing findings that were not consistent or are unable to be repeated, may have challenged dependability.

It is assumed that respondents answered truthfully, but it is acknowledged that biases of respondents may have existed, affecting the objectivity of their responses to survey items. Participants who responded to the survey may have done so out of biases toward the subject, positive or negative. These biases may have stemmed from a general preconceived perception of ASD. The researcher purposefully avoided requesting participation of employers affiliated with the field of autism, but respondents within this career field or an affiliated field may have participated due to social media sharing. Biases of participants may have resulted in nonrandom deviations from the true value and an error in the measure (Lavrakas, 2008).

The eventual sample size, and thus the response rate, may also be limitations of this study; the smaller the sample size, the higher the chances of standard error (Fink, 2003c). Finally, insufficient generalizability is a potential limitation of this study (Bogdan & Biklen, 2007).

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF DATA

This study examined employer beliefs regarding employees with Autism Spectrum Disorder (ASD) in order to effectively develop higher education curricula for the preparation of college students with ASD transitioning to the workplace. Specifically, this study sought employers' basic understanding of an ASD diagnosis, their beliefs on hiring individuals with ASD, their attitudes toward disclosure of an ASD diagnosis, and their perspectives on accommodations for employees with ASD. The findings are organized into the following sections: (a) data collection and participant characteristics, (b) major findings, (c) ancillary findings, and (d) summary of the findings.

Data Collection and Participant Characteristics

Employers, business managers, and employees who have been involved in or have had influence in the process of hiring at their workplace provided data for this study, which was approved by Marshall University's Institutional Review Board (Appendix A). Collected data were used to determine current employer understanding of ASD and their attitudes toward hiring, disclosure, and accommodations concerning employees with ASD.

Participants in this study were invited through online social media or through email (Appendix D). This study's population consisted of individuals with hiring experience who were (1) Facebook followers of Dr. Bill Bissett, President and CEO of the Huntington Regional Chamber of Commerce; (2) Facebook followers of the Chamber of Commerce of the Mid-Ohio Valley; (3) Facebook or LinkedIn followers of the researcher; (4) followers of Facebook or LinkedIn users who shared the survey link; and (5) hiring personnel who received the survey link in an email directly from the researcher. Participants were given access to the survey (Appendix

B) between October 12, 2018 and October 21, 2018 via social media posts or email, which included the informed consent letter and description of the research.

A total number of 189 participants began the survey. A qualifying question at the beginning of the survey asked respondents to choose all of the following that applied: (a) I (or the business I work for) am a member of the Huntington Regional Chamber of Commerce; (b) I (or the business I work for) am a member of the Chamber of Commerce of the Mid-Ohio Valley; (c) I am involved/have influence in the process of hiring employees at my workplace; (d) I am not involved/have influence in the process of hiring employees at my workplace. Respondents who chose the last option, stating they are not involved in hiring, were immediately disqualified from taking the remainder of the survey. These categories were not mutually exclusive, allowing participants to choose more than one of the four categories. Participants were limited in two ways by the qualifying question. These limitations may have unfairly disqualified 0-38 individuals from completing the questionnaire. It is assumed that some of the thirty-eight participants disqualified were justly removed due to lack of involvement in hiring, but it is also presumed that a portion were eliminated due to two survey instrument errors. First, the present-tense wording stipulated that participants must currently have authority in hiring at their workplaces, possibly eliminating those who may have had previous experience. Second, due to researcher error, the Qualtrics survey logic did not allow individuals to complete the questionnaire if they chose the fourth choice (“I am not involved/have influence in the process of hiring employees at my workplace”) in combination with any of the first three choices. Respondents should have been permitted to continue as long as they selected one of the first three choices, identifying Chamber of Commerce membership or involvement in hiring.

Of the 189 total respondents, twenty percent ($n = 38$) reported they were not involved in the hiring process and were not permitted to continue the survey. Eighty percent ($n = 151$) of total respondents indicated they were involved or were influential in hiring; one of these qualified participants left the survey immediately, leaving 150 participants. Seven percent ($n = 10$) of the 150 qualified respondents did not finish the survey, leaving 140 wholly completed survey responses. The answers of the ten respondents collected before exiting the survey were still included in the results. As shown in Table 1, 16% ($n = 30$) of total respondents were members of the Huntington Regional Chamber of Commerce, while only 2% ($n = 4$) were members of the Chamber of Commerce of the Mid-Ohio Valley. The remaining participants, forming the majority of the research sample, included individuals involved in hiring who participated through the survey link on Facebook, LinkedIn, or through an email invitation from the researcher. Due to the nature of acquiring survey responses through social media, general characteristics of these participants are unknown. Those invited via email ($n = 35$) were individuals identified through colleagues, friends, and family members of the researcher who were said to be involved in hiring; the majority invited through email were employers located in Huntington, WV or the surrounding region.

Respondents who proceeded beyond the qualifying question ($N = 150$) were asked if they had heard of the terms “autism, Autism Spectrum Disorder, or Asperger’s Syndrome.” One-hundred percent ($N = 150$) responded “yes.” Respondents were also asked if they had ever employed or worked with a person with ASD in their previous or current job. Results showed that 35.3% ($n = 53$) responded “yes;” 38% ($n = 57$) responded “no;” and 26.7% ($n = 40$) responded, “I do not know.”

This study requested participants provide two optional pieces of demographic data from multiple-choice lists – their field of work and company size. These questions could be left unmarked to assure participant anonymity. Participants were provided twenty-three categories from the Bureau of Labor Statistics’ “2018 Standard Occupation Classification System” to identify their field of work. Respondents chose sixteen of the twenty-three categories. Of the 140 total responses, the majority of qualifying participants worked in management, 35% ($n = 49$); business or financial operations, 16.4% ($n = 23$); sales, 7.9% ($n = 11$); educational instruction or library services, 7.1% ($n = 10$); and as healthcare practitioners, 7.1% ($n = 10$). A full list of reported fields of occupation is displayed in Table 1.

One hundred and forty participants reported their company size, revealing 31.4% ($n = 44$) worked in a company with less than twenty-five people; 30% ($n = 42$) worked with 25-150 people; and 38.6% ($n = 54$) worked with 151 people or more. Table 1 summarizes the demographic data from this study’s population.

Table 1

Demographic Characteristics of Respondents

Characteristic	n	%
Qualifying employment		
Huntington Regional Chamber member	30	15.9
Mid-Ohio Valley Chamber member	4	2.1
Involved in hiring	151	79.9
Not involved in hiring	38	20.1
Occupational field		
Management	49	35.0
Business/financial	23	16.4
Computer/mathematical	3	2.1
Architecture/engineering	5	3.6
Life/physical/social sciences	2	1.4
Community/social services	4	2.9
Legal	5	3.6
Education Instruction/library	10	7.1
Arts/design/entertainment/sports	4	2.9
Healthcare practitioners	10	7.1
Healthcare support	3	2.1
Food preparation/serving	3	2.1
Personal care/service	3	2.1
Sales	11	7.9
Office administration/support	3	2.1
Installation/maintenance	2	1.4
Company size		
Less than 25	44	31.4
25-150	42	30.0
151 or above	54	38.6

Major Findings**Research Question 1: How Knowledgeable are Employers about ASD?**

This study's first research question sought to understand employers' basic understanding of an ASD diagnosis. To measure general knowledge of ASD, employers were given eight statements that could describe individuals with the developmental disorder. Respondents (N = 145) chose from multiple-choice options, including "this statement is accurate," "this statement is not accurate," or "I am not certain." A Chi-square "goodness of fit" test was chosen to use in

this study to compare observed values with what was expected to then analyze if deviations were a result of chance or if there were other factors at work; significant results reveal that results are not by chance. This study hypothesized, through the use of the “goodness of fit” test, that employers’ responses regarding their knowledge of ASD would not differ significantly from an equal number of responses for each category. A null hypothesis of equally distributed answers was assumed. For seven of the eight ASD knowledge variables, the null was rejected. Overall, these results suggest that the tested knowledge of employers is statistically significant, quantifying that factors other than chance are creating the deviation. Results of employers’ (N = 145) tested ASD knowledge and the “goodness of fit” test are revealed in Table 2.

Table 2

Tested Knowledge of ASD Concepts

Knowledge Concepts	Accurate		Not Accurate		Not Certain		x ² (1)	p
	n	%	n	%	n	%		
ASD is a mental illness	11	7.6	99	68.3	35	24.1	85.63	.00
ASD is a dev. disability	98	67.6	8	5.5	39	26.9	86.50	.00
Limited eye contact	92	63.4	16	11.0	37	25.5	63.74	.00
Sensitivity to light/sound	91	62.8	11	7.6	43	29.7	67.10	.00
Literal interpretation	87	60.0	10	6.9	48	33.1	61.34	.00
Focus on “big picture”	7	4.8	90	66.9	48	33.1	71.27	.00
Irregular communication	107	73.8	10	6.9	28	19.3	110.17	.00
Need for aides/support	30	20.7	57	39.3	58	40.0	10.44	.05

To further depict employer knowledge of ASD, participants (N = 144) self-reported their beliefs as to whether they have a good understanding of ASD. Of the 144 respondents, 41.7% (n = 60) chose that they believe their understanding of ASD is “better than most,” while 58.3% (n =

84) chose that their understanding of ASD is “not that good.” The data were analyzed using a Chi-square “goodness of fit” test. The null hypothesis was rejected, $\chi^2(1) = 4.0$, $.046 < .05$, showing statistical significance. These results depict a difference beyond chance between employers’ self-reported knowledge of ASD and the evenly distributed expectation.

The survey developed for this study utilized a method of indirect questioning in order to mitigate social desirability bias that often occurs when respondents lean toward more socially desirable answers. Hoskin (2012) explains that even when trying to be honest, survey participants may not provide an accurate response to a question because of lack of introspection. Most individuals, to some extent, are unable to assess themselves accurately, therefore any self-reported information provided may be dishonest despite best efforts (Hoskin, 2012). This study sought to attain clearer descriptions of employer knowledge, therefore employers were asked about their perceptions of *other* business managers’ understanding of ASD. Of the 144 respondents, 6.3% ($n = 9$) believed other business managers have a good understanding of ASD, while 93.8% ($n = 135$) of respondents do not believe other business managers have a good understanding of ASD. The data were analyzed using a Chi-square “goodness of fit” test which showed statistical significance, $\chi^2(1) = 110.3$, $.00 < .05$. These results show a clear difference from expected values; an overwhelming majority of employers felt other business managers lacked familiarity of ASD.

Knowledge of ASD and Having Employed or Worked with a Person with ASD.

Chi-square tests for independence were used in addition to “goodness of fit” tests in this study. These tests of independence helped to compare the study’s variables derived from the employer population to determine if there were significant associations between them. A Chi-square test of independence was conducted to conclude if there was an association between

employers' tested knowledge of ASD and if they have ever employed or worked with a person with ASD. The null hypothesis expected the two variables, tested knowledge and experience with a person with ASD, to be independent of each other. Data were analyzed and only one of the eight variables was statistically significant. The results of the survey question regarding literal language interpretation compared with employers' experience having employed or worked with a person with ASD was significant ($p = .05$). Seven of the eight results, including the statistically significant result, displayed an expected cell count of less than five. Cell counts less than five may mean that groups are underrepresented within the analysis. Table 3 displays the results of this Chi-square test for independence.

Table 3

Chi-Square Results from Comparison of Tested Knowledge of ASD Concepts and Employed/Worked with Person with ASD

Knowledge Concepts	Employed or Worked with Someone with ASD						x ² (1)	p
	Yes		No		Don't Know			
	n	%	n	%	n	%		
ASD is a mental illness							2.60*	.63
Accurate	4	2.8	5	3.4	2	1.4		
Not Accurate	38	26.2	34	23.4	27	18.6		
Uncertain	9	6.2	16	11.0	10	6.9		
ASD is a dev. disability							8.24*	.08
Accurate	39	26.9	37	25.5	22	15.2		
Not Accurate	2	1.4	1	0.7	5	3.4		
Uncertain	10	6.9	17	11.7	12	8.3		
Limited eye contact							8.47*	.08
Accurate	32	22.1	37	25.5	23	15.9		
Not Accurate	10	6.9	4	2.8	2	1.4		
Uncertain	9	6.2	14	9.7	14	9.7		
Sensitivity to light/sound							7.36*	.12
Accurate	37	25.5	32	22.1	22	15.2		
Not Accurate	5	3.4	5	3.4	1	0.7		
Uncertain	9	6.2	18	12.4	16	11.0		
Literal interpretation							16.67*	.00
Accurate	38	26.2	29	20.0	20	13.8		
Not Accurate	6	4.1	4	2.8	0	0.0		
Uncertain	7	4.8	22	15.2	19	13.1		
Focus on "big picture"							3.69*	.45
Accurate	4	2.8	1	0.7	2	1.4		
Not Accurate	34	23.4	33	22.8	23	15.9		
Uncertain	13	9.0	21	14.5	14	9.7		
Irregular communication							2.68*	.61
Accurate	36	24.8	39	26.9	32	22.1		
Not Accurate	5	3.4	4	2.8	1	0.7		
Uncertain	10	6.9	12	8.3	6	4.1		
Need for aides/support							7.95	.09
Accurate	16	11.0	6	4.1	8	5.5		
Not Accurate	20	13.8	22	15.2	15	10.3		
Uncertain	15	10.3	27	18.6	16	11.0		

*Cells have expected count less than 5

In addition to analyzing employers' tested knowledge of ASD in relation to experience working with people with ASD, a Chi-square test for independence was used to determine if a relationship existed between employers' self-reported knowledge of ASD and their experience having employed or worked with a person with ASD. The results of this Chi-square test revealed that results were statistically significant. The null hypothesis was rejected, $\chi^2(1) = 15.79, .00 < .05$, meaning self-reported knowledge and previous experience with a person with ASD were dependent on each another.

This study also tested if there was a significant difference between employers' perceptions of other business managers' knowledge of ASD and employers' experience having employed or worked with a person with ASD. A Chi-square test of independence showed that there was no significance between these two variables. The null was accepted, $\chi^2(1) = 5.48, .07 > .05$. The experience participants had working with a person with ASD was independent of their perceptions of other business managers' knowledge of the diagnosis.

Knowledge of ASD and Company Size.

The relationship between employers' tested knowledge of ASD and company size was examined using a Chi-square test for independence. Generally, the difference between these variables was not significant. Of the eight variables, two were statistically significant. Significance was shown with company size in relation to results from the knowledge question regarding the "big picture" ($\chi^2(1) = 10.83, .03 < .05$), and irregular communication styles ($\chi^2(1) = 10.36, .04 < .05$). All variables had an expected cell count less than five. Results of the Chi-square test of independence are displayed in Table 4. From these results, it appears that, overall, a company's size is not a major factor in an employer's understanding of an ASD diagnosis, but larger companies may have a better understanding of the diagnosis.

Table 4

Chi-Square Results from Comparison of Tested Knowledge of ASD and Company Size

Knowledge of ASD	Size of Company						x ² (1)	p
	Less than 25		25-150		151 or More			
	n	%	n	%	n	%		
ASD is a mental illness							7.26*	.12
Accurate	4	2.9	5	3.6	2	1.4		
Not Accurate	25	17.9	28	20.0	43	30.7		
Uncertain	15	10.7	9	6.4	9	6.4		
ASD is a dev. disability							6.54*	.16
Accurate	24	17.1	32	22.9	39	27.9		
Not Accurate	3	2.1	1	0.7	4	2.9		
Uncertain	17	12.1	9	6.4	11	7.9		
Limited eye contact							3.79*	.44
Accurate	24	17.1	29	20.7	38	27.1		
Not Accurate	5	3.6	4	2.9	6	4.3		
Uncertain	15	10.7	9	6.4	10	7.1		
Sensitivity to light/sound							6.05*	.20
Accurate	27	19.3	31	22.1	31	22.1		
Not Accurate	1	0.7	3	2.1	6	4.4		
Uncertain	16	11.4	8	5.7	17	12.1		
Literal interpretation							4.32*	.37
Accurate	23	16.4	24	17.1	38	27.1		
Not Accurate	3	2.1	3	2.1	4	2.9		
Uncertain	18	12.9	15	10.7	12	8.6		
Focus on “big picture”							10.83*	.03
Accurate	0	0.0	1	0.7	6	4.3		
Not Accurate	28	20.0	24	17.1	37	26.4		
Uncertain	16	11.4	17	12.1	11	7.9		
Irregular communication							10.36*	.04
Accurate	27	19.3	36	25.7	41	29.3		
Not Accurate	3	2.1	1	0.7	6	4.3		
Uncertain	14	10.0	5	3.6	7	5.0		
Need aides/support							3.86*	.43
Accurate	7	5.0	13	9.3	10	7.1		
Not Accurate	20	14.3	13	9.3	22	15.7		
Uncertain	17	12.1	16	11.4	22	15.7		

*Cells have expected count less than 5

A Chi-square test of independence was also performed to compare company size with employers' self-reported knowledge and employers' perceptions of other business managers' knowledge of ASD. The results of the test of independence for self-reported understanding of ASD and company size revealed that the relationship was not significant. The null was accepted ($\chi^2(1) = 2.24, .33 > .05$). The relationship between employers' perceptions of other business managers' knowledge of ASD and company size also proved to be insignificant ($\chi^2(1) = 5.15, .08 > .05$). The comparison of employer knowledge of ASD and company size was generally insignificant within all three Chi-square tests for independence. This insignificance shows that the knowledge employers were tested on or reported did not change dependent on the size of the company for which they worked.

Research Question 2: What are Employer Attitudes toward Hiring Employees with ASD?

The second research question of this study sought to measure employer attitudes toward hiring individuals with ASD. Hiring attitudes were measured through employers' responses to four questions; responses included "yes, that is mostly accurate" or "no, that is mostly not accurate." Two questions requested employers to report personal attitudes toward hiring, while the other two questions requested employers to report their beliefs about other business managers' attitudes toward hiring. Questions requesting the perceptions of other business managers were used to attain comprehensive descriptions of employer attitudes toward hiring by reducing social desirability bias.

One hundred and forty-four employers responded to questions about hiring individuals with ASD. Respondents were first asked to report if the disclosure of an ASD diagnosis would affect their personal decision to hire and then if it would affect other business managers' decision

to hire. Additionally, employers were asked to report if the request for accommodations would affect their personal decision to hire and if it would affect other business managers' decision to hire. Chi-square "goodness of fit" tests were performed to analyze the variables; the data were statistically significant. Reasons other than chance resulted in employers' self-perceptions and their perceptions of other business managers' hiring practices of individuals with ASD. Results are displayed in Table 5.

Table 5

Employer Perceptions on Effects of ASD Disclosure and Requested Accommodations on Hiring

Effects on Hiring	Accurate		Not Accurate		x ² (1)	p
	n	%	n	%		
Disclosure of ASD						
Self	45	31.3	99	68.8	20.25	.00
Other	107	74.3	37	25.7	34.03	.00
Need for accommodations						
Self	31	21.5	113	78.5	46.70	.00
Other	97	67.4	47	32.6	17.36	.00

Effects of Disclosure and Accommodations on Hiring and Having Employed or Worked with a Person with ASD.

A Chi-square test of independence was performed to determine if there was a relationship between hiring attitudes after disclosure of an ASD diagnosis and an employer's experience having employed or worked with a person with ASD. This test of independence was also used to determine if a relationship existed between employer attitudes toward requested accommodations in the hiring process and employers' experience having employed or worked with a person with ASD. Overall, the relationship between these variables was not significant. Statistical significance was found, however, between one set of variables – employers' self-reported attitudes toward the effects of disclosure of ASD on hiring and employers' having employed or

worked with a person with ASD ($\chi^2(1) = 6.66, .04 < .05$). This result signifies that an employer's willingness to hire an individual with ASD after they have disclosed their diagnosis is dependent on the employer's experience working with a person with ASD. Table 6 displays the results of the Chi-square test of independence.

Table 6

Chi-Square Results from Comparison of Effects on Hiring and Employed/Worked with Person with ASD

Effects on Hiring		Employed/Worked with Person with ASD						$\chi^2(1)$	p
		Yes		No		Don't Know			
		n	%	n	%	n	%		
Self-reported attitudes on disclosure	Accurate	13	9.0	24	16.7	8	5.6	6.66	.04
	Not Accurate	37	25.7	31	21.5	31	21.5		
Perceptions of other managers' attitudes on disclosure	Accurate	38	26.4	41	28.5	28	19.4	0.21	.90
	Not Accurate	12	8.3	14	9.7	11	7.6		
Self-reported attitudes on accommodations	Accurate	11	7.6	12	8.3	8	5.6	0.03	.98
	Not Accurate	39	27.1	43	29.9	31	21.5		
Perception of other managers' attitudes on accommodations	Accurate	36	25.0	36	25.0	25	17.4	0.77	.68
	Not Accurate	14	9.7	19	13.2	14	9.7		

Effects of Disclosure and Accommodations on Hiring and Company Size.

Results from self-reported attitudes and attitudes ascribed to other business managers concerning the effects of ASD disclosure and accommodation requests on hiring were paired with employer company size using a Chi-square test of independence. Self-reported attitudes toward the effects of disclosure on hiring proved not to be significant ($p = .67$), meaning employers' perceptions of hiring post-disclosure was not reliant on company size. Self-reported attitudes toward the effects of accommodations on hiring ($p = .03$), perceptions of other business managers' attitudes toward disclosure's effects on hiring ($p = .04$), and the perceptions of other

business managers' attitudes toward accommodations and hiring ($p = .01$), however, were concluded to be statistically significant. Results from this analysis are displayed in Table 7 and confirm that, generally, the size of an employer's company created a significant difference in the attitudes employers had on hiring after ASD disclosure or accommodation requests.

Table 7

Chi-Square Results from Comparison of Effects on Hiring and Company Size

Effects on Hiring		Company Size						x ² (1)	p
		Less than 25		26-150		151 or Above			
		n	%	n	%	n	%		
Self-reported attitudes on disclosure	Accurate	15	10.7	15	10.7	15	10.7	0.79	.67
	Not Accurate	29	20.7	27	19.3	39	27.9		
Perceptions of other managers' attitudes on disclosure	Accurate	35	25.0	36	25.7	34	24.3	7.23	.03
	Not Accurate	9	6.4	6	4.3	20	14.3		
Self-reported attitudes on accommodations	Accurate	15	10.7	9	6.4	7	5.0	6.30	.04
	Not Accurate	29	20.7	33	23.6	47	33.6		
Perception of other managers' attitudes on accommodations	Accurate	35	25.0	32	22.9	28	20.0	10.44	.01
	Not Accurate	9	6.4	10	7.1	26	18.6		

Research Question 3: What are Employer Attitudes toward Employees' Disclosure of ASD?

The third research question in this study sought to identify employer attitudes toward the process of ASD disclosure in the workplace. Attitudes were first measured by asking respondents to select *how* they would prefer employees to disclose their diagnosis among six choices; participants could choose more than one method, as answers were not exclusive. These methods of disclosure included, (a) face-to-face with me; (b) phone call with me; (c) written letter

addressed to me; (d) email sent to me; (e) through the Human Resources Department; and (f) I prefer he not disclose.

A Chi-square “goodness of fit” test was conducted to measure employers’ attitudes toward disclosure methods. Of the six methods, the null was rejected for each test. Overall, these results suggest that the employer-reported preferences for disclosure methods is statistically significant and differs from expected, equally distributed responses. Employer responses (N = 143) and the results of the Chi-square “goodness of fit” test regarding disclosure methods are revealed in Table 8.

Table 8

Employer Perceptions on Disclosure Methods

Disclosure Method	Preferred		Not Preferred		x ² (1)	p
	n	%	n	%		
Face-to-face	111	77.6	32	22.4	43.64	.00
Phone call	43	30.1	100	69.9	22.72	.00
Written letter	36	25.2	107	74.8	35.25	.00
Email	42	29.4	101	70.6	24.34	.00
HR department	52	36.4	91	63.6	10.64	.00
Not disclose	26	18.2	117	81.8	57.91	.00

Employer attitudes in regard to the disclosure of an ASD diagnosis were also measured through the preference of disclosure timing. Participants were asked to choose options depicting *when* they would prefer a potential employee to disclose (answers were not mutually exclusive). Employers could choose from, (a) on the application; (b) on a resume or cover letter; (c) during the interview; (d) during the first week of employment; (e) during the first month of employment; (f) during the first year of employment; or (g) I prefer he not disclose.

A Chi-square “goodness of fit” test was performed to determine if data collected on employer preferences of disclosure timing were significant when compared to equal answers amongst each category. For all seven variables, the null was rejected. Results deviated significantly

from the expected responses, highlighting employers' preferences for when employees disclose a diagnosis were not circumstantial. Employer responses (N = 143) and results of the Chi-square "goodness of fit" test are revealed in Table 9.

Table 9

Employer Perceptions on Disclosure Timing

Disclosure Timing	Preferred		Not Preferred		x ² (1)	p
	n	%	n	%		
On the application	27	18.9	116	81.1	55.39	.00
On resume/cover letter	32	22.4	111	77.6	43.64	.00
During the interview	86	60.1	57	39.9	5.88	.02
First week employed	23	16.1	120	83.9	65.80	.00
First month employed	18	12.6	125	87.4	80.06	.00
First year employed	11	7.7	132	92.3	102.39	.00
Not disclose	35	24.5	108	75.5	37.27	.00

Employer Attitudes toward Disclosure and Having Employed or Worked with a Person with ASD.

The relationship between disclosure methods and participants having employed or worked with a person with ASD was examined using a Chi-square test of independence. Overall, the relationship between these variables was not significant and attitudes toward disclosure were not dependent on an employer's experience working with a person with ASD. Of the six variables concerning methods of disclosure, only the results regarding "no disclosure" were statistically significant, ($x^2(1) = 8.29, .02 < .05$); an employer's preference for an employee to not disclose a diagnosis is dependent on their experience working with someone with ASD. Table 10 displays the results of the Chi-square test of independence.

Table 10

Chi-Square Results on Disclosure Methods and Having Employed/Worked with Person with ASD

Disclosure Methods	Employed or Worked with Someone with ASD						x ² (1)	p
	Yes		No		Don't Know			
	n	%	n	%	n	%		
Face-to-face							0.40	.82
Preferred	40	28.0	42	29.4	29	20.3		
Not preferred	10	7.0	12	8.4	10	7.0		
Phone call							1.77	.41
Preferred	18	12.6	13	9.1	12	8.4		
Not preferred	32	22.4	41	28.7	27	18.9		
Written letter							0.68	.71
Preferred	14	9.8	14	9.8	8	5.6		
Not preferred	36	25.2	40	28.0	31	21.7		
Email							3.43	.18
Preferred	17	11.9	11	7.7	14	9.8		
Not preferred	33	23.1	43	30.1	25	17.5		
HR department							2.32	.31
Preferred	22	15.4	16	11.2	14	9.8		
Not preferred	28	19.6	38	26.6	25	17.5		
Not disclose							8.29	.02
Preferred	6	4.2	7	4.9	13	9.1		
Not preferred	44	30.8	47	32.9	26	18.2		

A Chi-square test of independence was also performed to measure significance between the data collected on employers' preference of disclosure timing and having employed or worked with a person with ASD. The overall results of the comparison proved not significant; the null was accepted on all eight independence tests. These outcomes establish that employers' preferences for when employees disclose their diagnosis are not dependent on their experience working with someone with ASD. Results are shown in Table 11.

Table 11

Chi-Square Results on Disclosure Timing and Having Employed/Worked with Person with ASD

Disclosure Timing	Employed or Worked with Person with ASD						x ² (1)	p
	Yes		No		Don't Know			
	n	%	n	%	n	%		
On the application							1.46	.48
Preferred	12	8.4	8	5.6	7	4.9		
Not preferred	38	26.6	46	32.2	32	22.4		
In resume or cover letter							5.06	.08
Preferred	15	10.5	13	9.1	4	2.8		
Not preferred	35	24.5	41	28.7	35	24.5		
During the interview							0.41	.82
Preferred	30	21.0	34	23.8	22	15.4		
Not preferred	20	14.0	20	14.0	17	11.9		
First week employed							4.99	.08
Preferred	10	7.0	4	2.8	9	6.3		
Not preferred	40	28.0	50	35.0	30	21.0		
First month employed							3.98	.14
Preferred	8	5.6	3	2.1	7	4.9		
Not preferred	42	29.4	51	35.7	32	22.4		
First year employed							1.95	.38
Preferred	5	3.5	2	1.4	4	2.8		
Not preferred	45	31.5	52	36.4	35	24.5		
Not disclose							0.45	.80
Preferred	12	8.4	12	8.4	11	7.7		
Not preferred	38	26.6	42	29.4	28	19.6		

Employer Attitudes toward Disclosure and Company Size.

Employer preferences with regard to the methods and timing of ASD disclosure in the workplace were tested with employers' company size using a Chi-square test of independence. For the tests of independence on the six methods of disclosure compared to company size, only preference for disclosure to occur "through the human resources department" was dependent on company size ($p = .03$). Results of these tests of independence, as shown in Table 12, illustrate

that company size does not have an overall significant effect on employers' preferences for disclosure methods.

Table 12

Chi-Square Results on Disclosure Methods and Company Size

Disclosure Methods	Company Size						x ² (1)	p
	Less than 25		26-150		151 or Above			
	n	%	n	%	n	%		
Face-to-face							4.45	.11
Preferred	38	27.1	33	23.6	37	26.4		
Not preferred	6	4.3	9	6.4	17	12.1		
Phone call							1.18	.55
Preferred	11	7.9	13	9.3	19	13.6		
Not preferred	33	23.6	29	20.7	35	25.0		
Written letter							2.10	.35
Preferred	11	7.9	14	10.0	11	7.9		
Not preferred	33	23.6	28	20.0	43	30.7		
Email							0.94	.63
Preferred	12	8.6	15	10.7	15	10.7		
Not preferred	32	22.9	27	19.3	39	27.9		
HR department							6.78	.03
Preferred	10	7.1	15	10.7	26	18.6		
Not preferred	34	24.3	27	19.3	28	20.0		
Not disclose							1.19	.55
Preferred	6	4.3	8	5.7	12	8.6		
Not preferred	38	27.1	34	24.3	42	30.0		

An analysis of employer preferences for the timing of ASD disclosure in the workplace and company size was performed using a Chi-square test of independence to determine significance. Seven time periods were tested against company size, revealing one significant result; preference for disclosure to take place during the interview was dependent upon the employer's company size ($p = .02$). Generalized results, displayed in Table 13, show that company size is not a significant factor in determining employers' preferences for the timing of ASD disclosure.

Table 13

Chi-Square Results on Disclosure Timing and Company Size

Disclosure Timing	Company Size						x ² (1)	p
	Less than 25		26-150		Above 151			
	n	%	n	%	n	%		
On the application							3.70	.16
Preferred	9	6.4	11	7.9	6	4.3		
Not preferred	35	25.0	31	22.1	48	34.3		
In resume or cover letter							1.93	.38
Preferred	12	27.3	11	26.2	9	16.7		
Not preferred	32	22.9	31	22.1	45	32.1		
During the interview							7.46	.02
Preferred	34	24.3	23	16.4	28	20.0		
Not preferred	10	7.1	19	13.6	26	18.6		
First week employed							0.01	.99
Preferred	7	5.0	7	5.0	9	6.4		
Not preferred	37	26.4	35	25.0	45	32.1		
First month employed							1.71	.43
Preferred	3	2.1	6	4.3	8	5.7		
Not preferred	41	29.3	36	25.7	46	32.9		
First year employed							1.49	.48
Preferred	2	1.4	3	2.1	6	4.3		
Not preferred	42	30.0	39	27.9	48	34.3		
Not disclose							2.60	.27
Preferred	7	5.0	11	7.9	16	11.4		
Not preferred	37	26.4	31	22.1	38	27.1		

Research Question 4: What are Employer Attitudes toward Workplace**Accommodations for Employees with ASD?**

This study sought to examine employer willingness to make accommodations for employees with ASD. To assess these attitudes, employers were asked to report the likelihood of other business managers' to make twelve different accommodations typical for employees with ASD. Participants were not asked to report personal attitudes, only their perceptions of other

business managers’ attitudes, to mitigate social desirability bias and to attain stronger descriptions of employer willingness to make accommodations. Respondents (N = 140) reported the likelihood of other business managers to provide environmental, communication, social communication, and executive functioning workplace accommodations.

To analyze the data, a Chi-square “goodness of fit” test was performed, comparing observed results with an equal distribution of answers amongst each category. Eleven of the twelve variables were statistically significant, illustrating employers’ reported willingness to make accommodations was due to influences other than chance. Results are displayed in Table 14.

Table 14

Employer Perceptions of Other Business Managers’ Willingness to Accommodate Employees with ASD

Accommodation	Likely		Not Likely		x ² (1)	p
	n	%	n	%		
Work from home	56	39.7	85	60.3	5.97	.02
Change lighting	96	68.1	45	31.9	18.45	.00
Noise-cancel headsets	117	83.0	24	17.0	61.34	.00
Written responses	105	74.5	36	25.5	33.76	.00
Written reports	119	84.4	22	15.6	66.73	.00
Speech/text technology	98	69.5	43	30.5	21.45	.00
Provide mentor	104	73.8	37	26.2	31.84	.00
Employee training	103	73.0	38	27.0	29.97	.00
Optional events	128	90.8	13	9.2	93.80	.00
Modify schedule	79	56.0	62	44.0	2.05	.15
Additional time	91	64.5	50	35.5	11.92	.00
Written instructions	130	92.2	11	7.8	100.43	.00

Perceptions of Other Business Managers' Willingness to Accommodate and Having Employed or Worked with a Person with ASD.

Results depicting other business managers' willingness to make accommodations for employees with ASD and employers' experience having hired or worked with a person with ASD were compared using a Chi-square test of independence. Analysis of these tests showed that employers' experience working with an individual with ASD does not have statistically significant effects on their willingness to make accommodations. The null was accepted for all seven variables of accommodations, meaning willingness to accommodate and experience working with someone with ASD are independent of one another. Results of this Chi-square test of independence are displayed in Table 15.

Table 15

Chi-Square Results on Accommodations and Having Employed/Worked with Person with ASD

Accommodation	Employed or Worked with Person with ASD						$\chi^2(1)$	p
	Yes		No		Don't Know			
	n	%	n	%	n	%		
Work from home							0.05	.98
Likely	19	13.5	21	14.9	16	11.3		
Not likely	30	21.3	32	22.7	23	16.3		
Change lighting							1.52	.47
Likely	33	23.4	39	27.7	24	17.0		
Not likely	16	11.3	14	9.9	15	10.6		
Noise-cancel headsets							0.14	.93
Likely	40	28.4	44	31.2	33	23.4		
Not likely	9	6.4	9	6.4	6	4.3		
Written responses							1.23	.54
Likely	36	25.5	42	29.8	27	19.1		
Not likely	13	9.2	11	7.8	12	8.5		
Written reports							2.53	.28
Likely	40	28.4	48	34.0	31	22.0		
Not likely	9	6.4	5	3.5	8	5.7		
Speech/text technology							1.55	.46
Likely	37	26.2	34	24.1	27	19.1		
Not likely	12	8.5	19	13.5	12	8.5		
Provide mentor							5.02	.08
Likely	41	29.1	34	24.1	29	20.6		
Not likely	8	5.7	19	13.5	10	7.1		
Employee training							1.32	.52
Likely	38	27.0	39	27.7	26	18.4		
Not likely	11	7.8	14	9.9	13	9.2		
Optional events							1.39	.50
Likely	43	30.5	50	35.5	35	24.8		
Not likely	6	4.3	3	2.1	4	2.8		
Modify Schedule							0.38	.83
Likely	28	19.9	28	19.9	23	16.3		
Not likely	21	14.9	25	17.7	16	11.3		
Additional time							4.81	.09
Likely	37	26.2	29	20.6	25	17.7		
Not likely	12	8.5	24	17.0	14	9.9		
Written instructions							2.58	.28
Likely	45	31.9	51	36.2	34	24.1		
Not likely	4	2.8	2	1.4	5	3.5		

Perceptions of Other Business Managers' Willingness to Accommodate and Company Size.

Finally, a Chi-square test of independence was performed to compare employer willingness to make accommodations with company size. Overall results illuminated that little significance was found between the variables. Accommodation requests for noise cancelling headsets ($p = .03$) and employee training ($p = .03$), however, presented statistical significance. Reported willingness to make these two accommodations was affected by a respondent's company size. Table 16 displays the results of this test of independence.

Table 16

Chi-Square Results on Accommodations and Company Size

Accommodation	Company Size						x ² (1)	p
	Less than 25		26-150		Above 151			
	n	%	n	%	n	%		
Work from home							0.77	.68
Likely	15	10.7	17	12.1	23	16.4		
Not likely	29	20.7	25	17.9	31	22.1		
Change lighting							0.07	.97
Likely	30	21.4	29	20.7	36	25.7		
Not likely	14	10.0	13	9.3	18	12.9		
Noise-cancel headsets							6.89	.03
Likely	32	22.9	34	24.3	50	35.7		
Not likely	12	8.6	8	5.7	4	2.9		
Written responses							1.47	.48
Likely	32	22.9	34	24.3	38	27.1		
Not likely	12	8.6	8	5.7	16	11.4		
Written reports							1.24	.54
Likely	35	25.0	37	26.4	46	32.9		
Not likely	9	6.4	5	3.6	8	5.7		
Speech/text technology							3.31	.19
Likely	26	18.6	32	22.9	39	27.9		
Not likely	18	12.9	10	7.1	15	10.7		
Provide mentor							5.26	.07
Likely	27	19.3	32	22.9	44	31.4		
Not likely	17	12.1	10	7.1	10	7.1		
Employee training							7.18	.03
Likely	30	21.4	26	18.6	46	32.9		
Not likely	14	10.0	16	11.4	8	5.7		
Optional events							1.46	.48
Likely	39	27.9	37	26.4	51	36.4		
Not likely	5	3.6	5	3.6	3	2.1		
Modify Schedule							1.92	.38
Likely	22	15.7	22	15.7	34	24.3		
Not likely	22	15.7	20	14.3	20	14.3		
Additional time							1.32	.52
Likely	31	22.1	27	19.3	32	22.9		
Not likely	13	9.3	15	10.7	22	15.7		
Written instructions							0.80	.67
Likely	40	28.6	40	28.6	49	35.0		
Not likely	4	2.9	2	1.4	5	3.6		

Ancillary Findings

This study developed survey questions that measured attitudes regarding knowledge of ASD, the effects of disclosure of an ASD diagnosis on hiring, and the effects of accommodation requests on hiring. Each set of questions asked employers to respond according to their personal attitudes, and then respond according to their expectations of other business managers' attitudes. This strategy was chosen to circumvent social desirability bias to develop comprehensive descriptions of employer attitudes. Each set of questions with direct and indirect perceptions was compared using Chi-square tests of independence.

A Chi-square test of independence was used to assess if self-reported understanding of ASD and reported perceptions of other business managers' understanding of ASD were dependent. Results, shown in Table 17, revealed there was no significant relationship between the variables, ($\chi^2(1) = 0.03$, $.86 > .05$), denoting these two variables were independent of each other.

A Chi-square test of independence was performed to measure if the self-reported effects that a disclosed diagnosis would have on hiring were dependent on the perceived effects disclosure would have on other business managers' hiring practices. The relationship between these two variables was, indeed, found to be significant, ($\chi^2(1) = 12.41$, $.00 < .05$) and is displayed in Table 17. The self-reported influences that the disclosure of ASD has on hiring practices are associated with the indirect perceptions of disclosure's influence on hiring.

Finally, a Chi-square test of independence was performed to determine the relationship between self-reported attitudes on the effects accommodation requests would have on hiring with perceptions of other business managers' attitudes on accommodation requests and hiring. The test of independence showed statistically significant effects, ($\chi^2(1) = 15.55$, $.00 < .05$), which are

presented in Table 17. Results denote a relationship between the self-reported and indirect presumptions on accommodation requests' influence in hiring practices.

Table 17

Chi-Square Results from Comparison of Employers' Self-Reported Knowledge/Attitudes and Employers' Perceptions of Other Business Managers' Knowledge/Attitudes

Self-Report	Employers' Perceptions of Other Managers				x ² (1)	p
	Accurate		Not Accurate			
	n	%	n	%		
ASD knowledge					0.03	.86
Better than most	4	2.8	56	38.9		
Not that good	5	3.5	79	54.9		
Disclosure effects on hiring					12.41	.00
Accurate	42	29.2	3	2.1		
Not accurate	65	41.5	34	23.6		
Accommodation request effects on hiring					15.55	.00
Accurate	30	20.8	1	0.7		
Not accurate	67	46.5	46	31.9		

Summary of Findings

Based upon responses to the survey developed for this study, answers from a variety of employers are represented in the findings. All participants (N = 150, 100%) had heard of ASD before, while a generally split number of participants reported they did or did not have experience employing or working with a person with ASD. Of the sixteen occupational fields identified, the largest number of participants worked in management (35%). Overall, an evenly divided number of participants came from companies with less than twenty-five people, 25-150 people, and 151 people or above (demographics in Table 1).

Survey participants provided insight into the current knowledge and attitudes of employers with regard to employment for individuals with ASD. This summary of findings is presented within the framework of the research questions presented in Chapter 1. Employers

responded to survey items that explored their current knowledge of an ASD diagnosis, their attitudes toward hiring employees with ASD, attitudes toward the process of disclosure, and attitudes toward requested accommodations.

Research Question 1: How Knowledgeable are Employers about ASD?

Employers (N = 145) responded to eight questions to measure their basic understanding of ASD. The majority of employers (above 60%) responded correctly to seven of the eight diagnostic questions. Employers were generally able to identify that ASD is a developmental disability ($n = 98, 67.6\%$) and not a mental illness ($n = 99, 68.3\%$). The majority of employers were also able to identify that individuals with ASD have limited eye contact ($n = 92, 63.4\%$); are sensitive to sound and light ($n = 91, 62.8\%$); interpret language literally ($n = 87, 60.0\%$); have challenges focusing on the “big picture” ($n = 90, 66.9\%$); and have irregular communication styles ($n = 107, 73.8\%$). Employers were challenged to answer whether individuals with ASD need aides or support staff in the workplace. This question drew the largest number of uncertain ($n = 58, 40\%$) and incorrect ($n = 30, 20.7\%$) responses. Chi-square “goodness of fit” tests on all eight variables (shown in Table 2) showed statistical significance.

Employers self-reported that they generally do not have a good understanding of ASD, while they overwhelmingly perceived other business managers as having less understanding of the diagnosis. Over fifty-eight percent of employers ($n = 84$) chose that their understanding of ASD was “not that good,” while 93.8% ($n = 135$) perceived other business managers’ understanding of ASD as “not that good.” Self-reported results ($p = .046$) and perceptions of other business managers results ($p = .00$) were statistically significant using a Chi-square “goodness of fit” test.

Three Chi-square tests for independence were conducted to determine if relationships existed between employer knowledge of ASD and employers’ experience having employed or

worked with a person with ASD. Results, shown in Table 3, suggested that, overall, there is neither a relationship between employers' tested understanding of ASD, nor their perceptions of other business managers' knowledge, when compared to their experience having employed or worked with a person with ASD. Results did establish, however, that employers' self-reported knowledge of ASD and their experience having employed or worked with a person with ASD were dependent on each other ($p = .00$).

In addition, results for employers' knowledge of ASD were compared with company size to find if a relationship existed. Three Chi-square tests of independence, displayed in Table 4, revealed no significant relationship between employer knowledge of ASD and company size.

Research Question 2: What are Employer Attitudes toward Hiring Employees with ASD?

Employers were asked to identify if the disclosure of an ASD diagnosis or the request for accommodations in the workplace would affect their hiring decisions. Of the 144 employers responding, the majority chose that neither disclosure ($n = 99, 68.8%$) nor the request for accommodations ($n = 113, 78.5%$) would affect their decision to hire an employee with ASD. When asked to estimate other business managers' attitudes toward hiring employees after disclosure and accommodation requests, however, nearly opposite views were reported. The majority of employers believed that other business managers' hiring practices would be affected by disclosure ($n = 107, 74.3%$) and accommodation requests ($n = 97, 67.4%$). A Chi-Square "goodness of fit" test showed significance in all four variables (Table 5).

Employers' responses to the four questions about hiring were tested against their experience having employed or worked with a person with ASD using a Chi-square test of independence (Table 6). A statistically significant relationship was found between self-reported

employer attitudes on disclosure of ASD and having employed or worked with someone with ASD ($p = .04$). Additionally, results from the four hiring measures, tested against employers' company sizes using a Chi-square test of independence (Table 7), revealed generally significant results. Dependent relationships existed between employers' company sizes and their perceptions of other business managers' willingness to hire post disclosure ($p = .03$), other business managers' willingness to hire post accommodation request ($p = .01$), and their self-reported willingness to hire post accommodation request ($p = .04$).

Research Question 3: What are Employer Attitudes toward Employees' Disclosure of ASD?

Employer preferences ($N = 143$) on the methods and timing of disclosure of ASD were explored using a Chi-square "goodness of fit" test, resulting in significance for all measures. Employers overwhelmingly prefer for the disclosure method to be face-to-face with them ($n = 111, 77.6\%$), as shown in Table 8. Other methods, such as phone calls ($n = 43, 30.1\%$), written letters ($n = 36, 25.2\%$), emails ($n = 42, 29.4\%$), through the human resources department ($n = 52, 36.4\%$), or to not disclose at all ($n = 26, 18.2\%$) were less popular.

When examining employer responses to the choices for timing of the disclosure of an ASD diagnosis, the preference was, again, clear. Over sixty percent of employers ($n = 86$) chose for disclosure to take place during the interview. Almost 25% of participants ($n = 35$), however, preferred no disclosure in the workplace. The results of a Chi-Square "goodness of fit" test, as displayed in Table 9, proved that all variables for timing of disclosure were statistically significant.

Preferences for methods of disclosure and timing of disclosure of ASD were compared to results of employers' experience having employed or worked with a person with ASD using a

Chi-square test of independence (shown in Table 10 and Table 11). Overall, results of both measures (methods of disclosure and timing of disclosure) in comparison to employers' experience working with a person with ASD, proved independent of each other.

Chi-Square tests of independence were performed to measure preferences for methods and timing of ASD disclosure in comparison to employer company size, which also resulted in generally insignificant results. Analysis of disclosure methods and company size (Table 12) resulted in one significant comparison – employers' preference for employees to disclose through the human resources department ($p = .03$) shows dependence on company size. Analysis of disclosure timing and company size (Table 13) also resulted in one significant comparison – employers' preference for disclosure to occur during the interview ($p = .02$) was dependent on company size.

Research Question 4: What are Employer Attitudes toward Workplace

Accommodations for Employees with ASD?

Employers were given twelve different types of workplace accommodations that are typical of individuals with ASD for successful employment. Employer perceptions ($N = 140$) were explored which showed the likelihood that other business managers would provide accommodations. The majority of employers believed that eleven of the twelve accommodations were likely to be provided by other business managers. The most agreeable accommodations included written instructions ($n = 130, 92.2\%$), optional attendance at social functions ($n = 128, 90.8\%$), the ability to provide written reports instead of in person ($n = 119, 84.4\%$), and noise-cancelling headsets ($n = 117, 83.0\%$). The least agreeable accommodation, and the only one to have less than half of respondents believe it would be provided, was the accommodation to work

from home ($n = 56, 39.7\%$). The Chi-square “goodness of fit” test (Table 14) revealed all accommodation variables to be statistically significant.

A Chi-square test of independence showed that an employer’s experience having employed or worked with a person with ASD had no significant effects on their willingness to make accommodations for employees with ASD (Table 15). In addition, the Chi-Square test of independence comparing employer company size with their willingness to provide accommodations showed similar results, establishing that there is little significance between these variables overall (Table 16).

In summary, statistical analyses for this study’s first research question on employers’ understanding of ASD revealed significant differences in employers’ tested knowledge of ASD, their self-reported knowledge of ASD, and their perceptions of other business managers’ knowledge of ASD.

Results depicting attitudes toward hiring employees with ASD, stemming from this study’s second research question, showed employers’ direct and indirect aptitude to hire is affected by an employee’s disclosure and their request for accommodations. Generally speaking, company size proved to make a difference in employer attitudes when thinking about the effects that the disclosure of ASD and the request for accommodations would have on hiring.

Analysis of the results of this study’s third research question, which sought employer attitudes toward the methods and timing of disclosure, resulted in statistical significance for all methods and time periods, showing employer responses were not by chance. Finally, results from research question four, which sought employers’ opinions of other business managers’ willingness to make accommodations, revealed significant differences from the expected responses in eleven of the twelve types of accommodation requests.

Analysis of the results from the four research questions in this study provided valuable data to assist individuals with ASD to pursue employment. Information gathered on employer knowledge, attitudes toward hiring, disclosure preferences, and attitudes toward accommodations will assist in the development of relevant and useful guidelines for individuals with ASD who are transitioning from higher education to the workforce. A deeper understanding of the results and how this information can be put to practical use will be explained in Chapter 5.

CHAPTER FIVE

SUMMARY, DISCUSSION OF FINDINGS, AND RECOMMENDATIONS

Purpose of the Study

The purpose of this study was to identify current employer knowledge and attitudes regarding the employment of individuals with Autism Spectrum Disorder (ASD) for the establishment of practical instruction for students with ASD in higher education. College personnel, including career services or disability services have the ability to prepare students with ASD during their formative college years so that these highly qualified and educated adults can connect to meaningful work. In addition, faculty within departments such as education, counseling, or communication studies can enhance current curricula to prepare a new generation of professionals to assist in workforce readiness. To do so, higher education must stay in tune with the dynamic landscape of the employment world. Research outcomes revealed unique and relevant information regarding employer understanding of ASD, along with their attitudes toward hiring employees with ASD, disclosure of an ASD diagnosis, and accommodations for employees with ASD in the workplace. The research questions that guided this study were as follows:

1. How knowledgeable are employers about ASD?
2. What are employer attitudes toward hiring employees with ASD?
3. What are employer attitudes toward employees' disclosure of ASD?
4. What are employer attitudes toward workplace accommodations for employees with ASD?

Sample

This research sought employers, business managers, or those who were involved or had experience in hiring at their workplace to participate in the survey. The study was comprised of 150 participants. Sixteen different fields of work were represented among participants – the largest group from the field of management. Participants came from fairly evenly distributed company sizes of less than twenty-five employees, 25-150 employees, and 151 employees or more. Trends on knowledge and attitudes of employers were compared to company size and will be discussed concerning each research question in this chapter.

Over 35% of participants in this study reported they had employed or worked with a person with ASD in their previous or current job; the remaining participants reported no experience or that they did not know if they had experience. Trends on knowledge and attitudes of employers were compared to their experience having employed or worked with a person with ASD and will be discussed in regard to each research question in this chapter.

Methods

This study used a descriptive research design to investigate employer knowledge of ASD and attitudes toward hiring, disclosure, and accommodations concerning employees with ASD. To this purpose, a quantitative survey (Appendix B) was designed for employers involved in hiring. The survey was distributed through Facebook and LinkedIn by the researcher and was shared by the President of the Huntington Regional Chamber of Commerce and President of the Chamber of Commerce of the Mid-Ohio Valley on Facebook. Finally, this survey was distributed through email (Appendix D) to those known to be involved in hiring.

The research-designed survey instrument was tested for face and content validity through a pilot study of experts in the field of autism and higher education. Both direct and indirect

questioning were used to minimize social desirability bias. The survey was administered by sharing and emailing a link to the Qualtrics survey, which remained available for approximately ten days.

IBM SPSS Statistics 23 analyzed this quantitative data. Chi-square “goodness of fit” tests were performed to seek significance of data regarding knowledge, hiring, disclosure, and accommodations in comparison to expected values. These results will be discussed within the summary of findings for each research question. Chi-square tests of independence were used to compare these four areas of data (knowledge, hiring, disclosure, and accommodations) with employers’ company size and employers’ reported experience having employed or hired a person with ASD, to establish whether dependence existed. Results of these tests will be discussed within the research questions’ summary of findings.

Summary of Findings

Research Question 1: How Knowledgeable are Employers about ASD?

Employers in this study had a generally good understanding of common characteristics of ASD. The majority of employers correctly identified seven out of eight features from the survey that are common among individuals with ASD. Those employers who did not choose the correct answer selected they were “not certain.” This ability to correctly identify or admit uncertainty shows that false knowledge of the diagnosis is unlikely to be circulating within workplace culture. Autism awareness has now been a mantra in society for decades, and while awareness was the foundation needed, acceptance needs to build upon that foundation.

This need for acceptance was reinforced by the responses from employers to the tested knowledge statement, “Generally speaking, people with Autism Spectrum Disorder need aides/support staff in the workplace.” Over 20% of employers incorrectly chose that this

statement was accurate and 40% chose they were not certain. This knowledge statement was the only question directly related to a characteristic of ASD in the workplace. Employers often have positive broad, global understanding about workers with disabilities, but specific examples of this population at their place of work are met with more negative responses (Hernandez et al., 2000). Employers' lack of knowledge about necessary support on the job for a person with ASD signifies that although the common traits of an ASD diagnosis are more well-known, ASD in the workplace is much less understood. This result is telling. In the development of higher education curricula, students should recognize that having ASD in the workplace may spur expectations of higher than necessary needs of support, limiting opportunities. Due to the majority of uncertain responses regarding the need for support staff, it could also be assumed that employers are unsure of how to manage employees with ASD. The ability to advocate, clearly identify needs, and explain how those needs will result in quality work should be expressly taught to students with ASD to reduce employer uncertainty or confusion. Self-awareness development is the essential foundation to graduating a student who is confident to recognize how their diagnosis affects them and is empowered to explain why the diagnosis will not diminish their performance. Self-awareness can be explored through open and honest dialogue with the help of general guidelines and key points for self-exploration.

Employers' tested knowledge of ASD compared with participants' experience having employed or worked with a person with ASD revealed a general lack of significance between the variables. Whether an employer did report experience, did not report experience, or didn't know if they had experience in the workplace with a person with ASD created little effect on their knowledge of ASD. These results reinforce the idea that the basic components of the diagnosis seem to be adequately understood.

Employers' tested knowledge of ASD was compared to company size, again, revealing generally insignificant connections. Two variables on tested knowledge, however, presented significant findings for employees of companies with 151 or more employees. The majority of employers of larger companies correctly reported "individuals with ASD focus on the 'big picture'" as inaccurate and that irregular communication is an accurate characteristic of a person with ASD. These results lead to the belief that employees of larger companies may have a better understanding of ASD. Large employer understanding of the diagnosis could stem from company policy, initiatives, general diversity in the workplace, or outcomes of The Americans with Disabilities Act (ADA), which is required by businesses with twenty-five employees or more (Equal Employment Opportunity Commission, 2017a). College personnel should illuminate the employment opportunities that are often extended by large companies for individuals with disabilities due to the increased commitment to disability inclusion within the workplace. Trends in employment are showing that businesses are seeing the value in employees with ASD (Olson et al., 2001; Kirchner & Dziobek, 2014; Patterson, 2018). Higher education must prepare students to capitalize on this movement by keeping a list of large employers who are seeking a diverse population, particularly employers seeking college graduates with disabilities or ASD.

Employers' self-reported knowledge of ASD revealed that the majority of employers (58.3%) believed that their understanding of ASD was "not that good," while the remaining believed they had a "better understanding than most." Even more revealing, however, were employers' perceptions of *other* business managers' knowledge of ASD; almost 94% of respondents believed other business managers do not have a good understanding of ASD. Employers' perceptions of other business managers' knowledge may be indicative of stigma,

negative behaviors toward disabilities in the workplace, or an overall lack of workplace culture that openly recognizes individuals with disabilities. Studies have shown that knowledge alone does not significantly improve behaviors or decrease stigma toward individuals with mental illness (Thornicroft, Rose, Kassam, & Sartorius, 2007; Ling, Mak, & Cheng, 2010; Gillespie-Lynch et al., 2015). Without open dialogue or education in the workplace about inclusion and diversity, employers are likely to assume that their peers are less accepting or understanding of employees with ASD; people are less likely to believe they are affected by bias in comparison to others.

The contrast between self-reported “good understanding” (41.7%) and other business manager’s “good understanding” (only 6.3%) of ASD could also stem from social desirability bias, signifying the unintentional inability to answer truthfully. It should be recognized that the majority of employers self-reported that both their own understanding of ASD, as well as other business managers’ understanding, was “not that good,” therefore suggesting a lack of confidence not only in employer knowledge, but likely their confidence to work with and manage an employee with ASD. College students with ASD should be made aware of this uncertainty that may exist. Due to stagnate stigma about employees with ASD in the workplace, students transitioning to employment must reassure employers of their capacities. Higher education can prepare these students to show sureness in their abilities, which would decrease the doubts of employers.

Employers’ self-reported understanding of ASD was compared with their experience having employed or worked with a person with ASD. Results exposed that, overall, employers who had experience with a person with ASD reported a higher understanding of ASD, while those without experience reported their understanding was “not that good.” The more exposure

and interactions individuals engage in with people with ASD, the more comfortable they feel (Campbell, 2006; Ling et al., 2010). Experience gives employers more confidence in their abilities to recognize and understand ASD. Higher education should research regional and national employers who are known to have worked with individuals with ASD and encourage students to seek out opportunities within these companies. Connecting with regional employers who have had experience with people with ASD may prove most helpful, potentially securing networking, job shadowing, and internship opportunities that are catalysts to future success.

Research Question 2: What are Employer Attitudes toward Hiring Employees with ASD?

Employers do not typically show incentive to hire individuals with disabilities, particularly when questioned about hiring at their own company (Andersson et al., 2015). Employers' willingness to hire people with disabilities does not match behavior and actions in hiring practices (Wilgosh & Skaret, 1987). In this study, employers' self-reported attitudes toward hiring individuals with ASD were vastly different from the attitudes they perceived other business managers would hold concerning ASD and hiring. Specifically, the majority of employers self-reported that if a potential employee disclosed their ASD diagnosis, it would not affect their decision to hire. Reversely, employers overwhelmingly perceived that other business managers' decisions to hire *would* be affected by disclosure of an ASD diagnosis. This pattern was exhibited again when looking at the effect accommodation requests would have on hiring. Most employers self-reported that the need for accommodations would not affect their decision to hire, while expecting the majority of other business managers' hiring practices to, indeed, be affected by accommodation requests. According to Pronin, Lin, and Ross (2002), individuals often rate themselves as less subject to bias than their peers. It is likely that employers in this

study are subject to this phenomenon. These results may also stem from workplace environments that do not prioritize inclusion, educate employees, or transparently discuss the employment of people with ASD and other disabilities. Corporate culture often reinforces obstacles for employees with disabilities (Schur, Kruse, & Blanck, 2005), therefore, employers may view their workplace culture as less understanding of ASD, in comparison to personal attitudes. It is assumed that there continues to be bias in the hiring process of individuals with ASD. Disclosure and accommodation requests in the hiring process should be approached with caution. Before college students with ASD transition to the workforce, thorough explanation of the benefits and repercussions of their choices regarding disclosure and accommodation requests in the hiring process is needed. With plans in place, however, college personnel can enhance student chances of successfully navigating the hiring process.

Employers' personal attitudes toward hiring and their perceptions of other business managers' attitudes toward hiring individuals with ASD were compared to their experience having employed or worked with a person with ASD. Self-reported attitudes on the effects of disclosure of an ASD diagnosis were shown to be significant when compared to experience in the workplace with a person with ASD. Having employed or worked with someone with ASD may reduce the effects that ASD disclosure would have on an employer's decision to hire. This result reaffirms the potential for students to find opportunities with companies who are known to have had experience with individuals with ASD. With higher education guidance toward such workplaces, college personnel can assist in planning for disclosure, which is highly beneficial to both employers and employees in the right setting.

When comparing the effects of hiring attitudes and company size, results point to generally significant differences in the attitudes of employers within companies of different

sizes. Results exhibited trends of companies with 151 or more employees reporting fewer effects of disclosure and accommodation requests on hiring. Interestingly, employers in these larger companies also appeared to give more credit to their peers as compared to smaller companies, reporting fewer effects on other business managers' attitudes, as well. These results emphasize that larger companies may have a different workplace culture, resultant of more acceptance of ASD in the workplace. Differences could be due to programs in place for employees with disabilities, more initiatives for hiring individuals with disabilities, adherence to ADA, or more diversity. These results reinforce that students with ASD should be directed to look at employment opportunities in large companies and higher education should work to foster partnerships with these establishments.

Research Question 3: What are Employer Attitudes toward Employees' Disclosure of ASD?

Employers reported discernible preferences for the method of disclosure of an ASD diagnosis in the workplace. Almost 78% of employers prefer an employee to disclose their diagnosis of ASD face-to-face. Other options, including in a phone call, a letter, an email, through the human resources department, or for disclosure not to occur at all, were chosen far less. Although the majority chose otherwise, still notable are the employers who preferred employees to disclose through the human resources department (36.4%) and those who preferred employees to not disclose at all (18.2%). Disclosure creates positive results for both the employer and employee (von Schrader et al., 2013) and is crucial to work performance (Kirchner & Dziobek, 2014). Most research findings reveal positive attitudes and outcomes from disclosure (Banks et al., 2007; von Schrader et al., 2013; Kirk-Brown et al., 2014; Job Accommodation Network, 2017), but employers still report negative reactions to disclosure, as well (Kirk-Brown

et al., 2014; Pearson et al. (2003). Although employers in this study may have chosen the human resources option because of company policy or perceived rules, results from those choosing no disclosure at all suggest that some employers may not see the value in disclosure. Higher education curricula on employment transition for students with ASD must teach students to discern when to disclose face-to-face, when to disclose through HR, or when disclosure may not be a viable option. Disclosure through an email, phone call, or letter should be avoided, unless circumstances lead college personnel and the student to decide otherwise. Although a subjective decision, college personnel should assist students to research future employers through guided website navigation and distinguish characteristics that would assist in making disclosure decisions.

Methods of disclosure were compared to employers' experience having employed or worked with a person with ASD. Results from this test were generally insignificant, but did show that the majority of employers who were uncertain if they had employed or worked with an individual with ASD before preferred for employees not to disclose their diagnosis of ASD at all. Uncertainty and lack of experience working with someone with ASD may lead to uncertainty in how to manage the disclosure of an employee. From this result, it is suggested that higher education assist students with ASD to research a company's policies on disabilities and have a script in place. By feeling confident in what to say and who to speak to, awkward or challenging discussions with employers who are uncertain of how to manage disclosure could be minimized.

Methods of disclosure were compared to employer company size and, generally, these variables were not significant. One result, however, illuminated that companies of 151 employees or more were prone to favor disclosure through the human resources department as compared to smaller companies. These results imply that larger companies may have protocol or

rules established when dealing with disabilities and disclosure. Results may also reflect a workplace culture where managing the responsibility of an employee's disclosure is preferably directed elsewhere. Colleges should advise students with ASD that it is likely for a large business to have established human resources personnel that handle and support disclosure, while direct managers or supervisors may be the appropriate authority to approach in smaller businesses. Identifying potential workplaces with students and highlighting simple differences in employers' preferences according to the size of the company is practical and relevant for employment preparation.

Employers' preferences for the timing of disclosure was clear. The majority of employers chose for employees to disclose during the interview. This preference makes sense, knowing employers also valued disclosure face-to-face. The second most common choice was for employees not to disclose at all. Disclosure of a disability is still seen as a risky endeavor by employees because of negative ramifications (Banks et al., 2007). Interestingly, the preference of no disclosure rose by 6.3% between method preferences and timing preferences which, again, exposed concerns that employers do not see the value of employees disclosing their diagnosis. This result illuminates the need for higher education to develop scripts for face-to-face disclosure in the interview if this method is right for the student with ASD. College personnel must provide guidance, tailor wording, and practice disclosure with students through mock interviews. Although employers' favored face-to-face interview disclosure, the choice must be decided upon carefully, as employers also chose "no disclosure" at rates that incite concern.

Employer preference for the timing of disclosure when compared to company size exposed that employers of companies with fewer than twenty-five employees clearly prefer disclosure to occur in the interview, while companies of twenty-five employees or more

preferred it less. These results suggest that small business employers would prefer to have disclosure occur early in the interview since these employers would likely be the ones directly managing and accommodating the employee with ASD. This information should be relayed to students with ASD whose field may lead them to apply to small business positions.

Although face-to-face disclosure in the interview is highly favored by employers, it has not been established that this method is the most successful path to employment for individuals with ASD. It is important to highlight this difference to students with ASD. By developing students' self-awareness, enhancing their verbal and nonverbal communication skills through mock interviews, and creating a strategy beforehand, disclosure is less likely to affect hiring decisions.

Research Question 4: What are Employer Attitudes toward Workplace

Accommodations for Employees with ASD?

Accommodations in the workplace give empowerment to employees with disabilities to properly do their job (Wehman, 2008) while also providing effective solution to employers (Job Accommodation Network, 2017). Of the twelve environmental, communication, social communication, and executive functioning workplace accommodations, the majority of employers believed that other business managers would be willing to make eleven of the requested accommodations. The least agreeable accommodation was to allow the employee to work from home. The lack of willingness to permit employees with ASD to work from home may stem from employers working within jobs that require workplace attendance, but may also provide a glimpse into more rigid or outdated beliefs of how a job must be performed.

These results suggest that, because of reported employer willingness, employees with ASD should feel empowered to request the accommodations they need to perform their job. To

increase the likelihood of employees acting on this opportunity, higher education must first help students to learn their rights. Teaching students their rights under the Americans with Disabilities Act and the Equal Employment Opportunity Commission is important for potential workplace scenarios. Students should also be taught to recognize what reasonable accommodations are and why they will enhance their job performance. This knowledge and skillset will increase student self-awareness and confidence to seek out needed accommodations once in the workplace.

Employers' perceptions of other business managers' willingness to make accommodations was tested for independence with employer company size. Generally, results were not significant, but the willingness to grant requests for noise-cancelling headsets and employee training did show to be dependent on company size. Companies with 151 employees or more were more likely to provide all twelve accommodations in comparison to companies with fewer than 151 employees. Results of the research on employers' attitudes toward accommodations reflect that larger companies may be more willing to provide accommodations, although companies of all sizes were generally agreeable. It is often perceived that accommodations are costly (Chi & Qu, 2003; von Schrader et al., 2013), which may be less intimidating to larger companies who have financial means, or programs in place specifically to support employees with disabilities. Students with ASD seeking employment should be aware of these company differences, and recognize accommodations may be more easily accessible in large companies. These results emphasize higher education's need for up-to-date information regarding larger company hiring initiatives to provide to students seeking jobs.

Discussion

At a time when one in fifty-nine children is diagnosed with ASD (Baio et al., 2018), and over fifty-thousand teens with ASD are turning eighteen each year (Autism Speaks, 2012), higher education must be prepared to meet the unique needs of college students with ASD – particularly when transitioning from college to employment. It is a fundamental responsibility of higher education to ensure the proper preparedness of its students for the workforce prior to graduation (Higher Learning Commission, 2018b). Tapping into current employer knowledge and attitudes for this population of future employees with ASD is vital to their well-rounded preparation.

This study found that employers have a generally good understanding of the characteristics of ASD. These results may prove that societal ASD awareness has become more widespread in recent years, with a rise in diagnosis and even a rise in representation in popular culture. This research exhibits progress in awareness, but shines a light on the need for acceptance of individuals with ASD in the workplace. Results showed that employers were knowledgeable about ASD characteristics, but lacked understanding ASD in an employment setting. Higher education must teach students to prepare for this potential stigma and bias as they transition from college to employment. Employers reported generally mixed opinions about their own level of understanding of ASD, yet employers overwhelmingly believed that other business managers (94%) did not have a good understanding of ASD. These results may reflect workplace cultures that lack open dialogue, education, or initiatives toward diversifying.

This study found a stark contrast between employers' self-reported attitudes about hiring employees with ASD in comparison to their beliefs of their peers' attitudes, making it difficult to establish employers' true attitudes toward this topic. The disparity in hiring attitudes found in

this research reinforces that increased knowledge does not permeate workplace culture without thoughtful efforts toward inclusion and diversity. This contrast may also reflect more favorable results for self-reported data due to biases that individuals face when self-assessing. It is assumed that employers' expectations of their peers may be closer to a true assessment. Higher education should, therefore, advise students with care, ensuring they recognize the benefits and repercussions of disclosure or accommodation requests in the hiring process.

Employer attitudes regarding the methods and timing of disclosure were revealed in this study. The majority of employers favored disclosure to occur face-to-face and during the interview period. It is relevant to note that some employers may not recognize the benefits of ASD disclosure in the workplace due to the number of reported preferences for employees not to disclose. Students with ASD would benefit from assistance researching companies and developing strategies prior to application.

This study found that employers report high willingness to make common accommodations for employees with ASD. Employers felt that other business managers would be willing to make the majority of proposed accommodations – an encouraging result for individuals with ASD and their employers who recognize how accommodations will enhance quality of work. College personnel can assist students to learn their rights and identify needs prior to requesting, empowering students to fulfill their potential at work.

Employers' experience having worked with a person with ASD proved to increase confidence on self-reported knowledge of ASD. Research has shown that previous satisfaction in working with employees with disabilities directly relates to the potential for future hiring (Smith et al., 2004). This study confirmed this finding and, therefore, higher education should seek out

employers known for their work with the ASD population, establish relationships with them, and connect students with opportunities.

Results of this study also found that company size may have an effect on hiring practices. Larger companies reported that their hiring practices would be less affected by ASD disclosure or requests for accommodations in comparison to small companies, and they were also more willing to provide accommodations than small companies. Smaller companies of twenty-five or less preferred disclosure to occur in the interview, while companies of 151 or more preferred disclosure through the human resources department. Pointing out the benefits of working for a large company and guiding students to recognize the organization of these companies can assist students to make informed decisions.

From these findings, higher education institutions have the ability to develop practical preparatory guides and curricula for students with ASD who are transitioning to the workforce. Sections of this curriculum can follow the organization of the four research questions analyzed in this study, providing information on employer knowledge, statistics on hiring, the process of disclosure, and reasonable workplace accommodations. These topics can be thoroughly expanded to include learning outcomes such as, (a) knowing your rights; (b) how to research a company and their philosophy; (c) developing self-awareness; (d) verbal and non-verbal communication in the employment process; (e) the decision and implementation of disclosure; and (f) how to request accommodations. This curriculum could be adapted to fit college coursework for education departments, communication departments, and counseling departments. It could also enhance career services' supports for student with ASD, or be used by disability services departments for students seeking transition assistance. This curriculum could

also be adapted to assist high school students who are seeking employment after graduation, rather than college.

Implications

The intent of this study was to provide a glimpse at current employer attitudes toward employing individuals with ASD so colleges can adequately prepare students for the workforce after graduation. Gathered information from this research can be practically organized to develop and implement relevant tools that can be quickly and easily inserted into already existing career services initiatives or adapted to enhance course curriculum within related fields of study. Curricula should begin with open dialogue through tailored discussion-starters to increase student self-awareness of how their diagnosis affects them and where their strengths lie.

Advanced discussion about disclosure will further develop student self-awareness before the hiring process begins. Employers clearly preferred disclosure to be face-to-face and during the interview, but this method is not proven to evade employer bias. Planning when and how to disclose through simple strategies, such as developing a script or role-playing, should be a part of transition curricula.

Students may not recognize what accommodations are reasonable or how to ask for them even though employers appear willing to provide them. Higher education can provide information on types of accommodations, along with when and how to ask, with the use of information guides. These guides or handouts should include an explanation and list of reasonable accommodations with consideration to the accommodations employers are most willing to make. Similar to disclosure, a script for requesting accommodations, along with explanations of proper etiquette based on company type, should be discussed.

Students with ASD need assistance to identify companies that would be most likely to understand and accommodate their diagnosis in the job search. Colleges can establish relationships with regional and national employers who are known for previous experience with employees with ASD and general initiatives for employees with disabilities. It may also be fruitful to focus on companies of larger sizes. These relationships can be established through invitations to career fairs, invitations to speak at events, or alumni outreach.

Ellison (2013) calls for on-campus services to address the holistic needs of both society and this increasing population of students. Results from this research can be woven into the fabric of higher education course curricula, already existing structures of career services, disability program initiatives, and even high school transitional programs. It is higher education's obligation to adequately and proactively empower college students with ASD to enter the workforce with strategies in place.

Recommendations for Future Research

Replication of this study with a different population of employers could create a more comprehensive understanding of their knowledge and attitudes toward employees with ASD. To develop data further, a mixed-methods approach with quantitative and qualitative survey design may provide richer results. This study relied upon quantitative research to deploy descriptive statistics, but the inclusion of qualitative methods would create details through expressive data on research objectives (Hughes, 2016). Qualitative data may be able to provide reasoning behind several unanswered questions that arose from quantitative results. These questions include the disparity in self-reported knowledge of ASD and the perceptions of other business managers' knowledge, the contrast in self-reported hiring attitudes and the perceptions of the attitudes of other business managers, and the responses preferring employees with ASD to not disclose at all.

This study collected information from employers on their occupational fields, yet meaningful categorization and results were not developed. Future research should look further into employers' occupational fields to determine if there are changes in knowledge or attitudes according to field.

Finally, the results of this study could serve as a basis for a pilot program in higher education to assist students with ASD to prepare for the workforce. Simple, yet effective, curricula with scholarly information, checklists, worksheets, templates, and scripts have the potential to create a real difference for students with ASD to enter the workforce prepared.

Limitations of this Study

This study was designed to measure current employer knowledge and attitudes toward employees with ASD. This study is limited by its population of employers. The majority of recruited participants in this study came from two social media accounts, Facebook and LinkedIn. Not everyone is on the internet, and those who use the internet and chose to participate differ from those who do not use the internet (Kayam & Hirsch, 2012). Participants came from the following groups: (a) followers of the researcher on Facebook or LinkedIn; (b) followers of the Huntington Regional Chamber of Commerce President and CEO on Facebook; (c) followers of the Chamber of Commerce of the Mid-Ohio Valley on Facebook; (d) followers of those who shared the survey link; or (e) employers who were directly emailed by the researcher. Despite social media's ability to be far-reaching, it is understood that those within the circles described are quite limited. Participants were reached through certain avenues, which make them part of specific online or social groups (Kayam & Hirsch, 2012).

It is recognized that the population in this study may include employers who are more familiar with the ASD diagnosis or ASD community than typical employers. The majority of

participants of this research, first, worked or lived in West Virginia – a state with a history and reputation known for its dedication to the rights and needs of the autism community. This, too, can be said of the college town from which most employer participants resided. Second, it is recognized that those who had access to the survey through social media accounts may have been followers of the researcher, while those employers who were directly emailed were identified through either personal, colleague, friend, or family connections of the researcher. Because the researcher works within the higher education and autism field, participants may have characteristics that affected the survey's results. This study is also limited in scope with a total population of 150.

Finally, the design of the survey in this study created limitations due to researcher error. A qualifying question within the Qualtrics survey may have unjustly eliminated between zero and thirty-eight participants due to improper skip logic, as well as present-tense wording that created confusion.

REFERENCES

- Advancing Futures for Adults with Autism. (2014). *Autism on the rise*. Retrieved from <http://www.afa-us.org/about>
- AlphaBeta. (2016). The new basics: Big data reveals the skills young people need for the new work order. *Foundation for Young Australians*. Retrieved from http://www.fya.org.au/wp-content/uploads/2016/04/The-New-Basics_Web_Final.pdf
- American Psychiatric Association. (2013). Autism Spectrum Disorder. In *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.). Washington, DC: Author.
- Andersson, J., Luthra, R., Hurtig, P., & Tideman, M. (2015). Employer attitudes toward hiring persons with disabilities: A vignette study in Sweden. *Journal of Vocational Rehabilitation, 43*(1), 41-50. doi:10.3233/JVR-150753
- Andrews, J., & Higson, H. (2010). Graduate employability, 'soft skills' versus 'hard' business knowledge: A European study. *Higher Education in Europe, 33*(4), 411-422. doi: 10.1080/03797720802522627
- Andrews, M. (2015, June 30). What do employers want? *Inside Higher Ed*. Retrieved from <https://www.insidehighered.com/blogs/strategy/what-do-employers-want>
- Attwood, T. (2003). Understanding and managing circumscribed interests. In Prior, M. (2003). *Learning and behavior problems in Asperger Syndrome*. New York, NY: Guilford Press, 126-147.
- Autism Society. (2015). *Facts and statistics*. Retrieved from <http://www.autism-society.org/what-is/facts-and-statistics/>
- Autism Society. (2016). *Transitions and post-secondary*. Retrieved from <https://www.autism-society.org/living-with-autism/autism-through-the-lifespan/transitions/>
- Autism Speaks. (2012). *Mounting evidence of critical need for adult transition support*. Retrieved from <https://www.autismspeaks.org/science/science-news/top-ten-lists/2012/mounting-evidence-critical-need-adult-transition-support>
- Baio, J., Wiggins, L., Christensen, D., Maenner, M., Daniels, J., Warren, Z., Kurzius-Spencer, M., ... Dowling, N. (2018). Prevalence of Autism Spectrum Disorder among children aged 8 years – autism and developmental disabilities monitoring network, 11 Sites, United States, 2014. *Centers for Disease Control and Prevention MMWR Surveillance Summaries;67*(6),1-23. doi: 10.15585/mmwr.ss6706a1
- Baldwin, S., Costley, D., & Warren, A. (2014). Employment activities and experiences of adults with high-functioning autism and Asperger's Disorder. *Journal of Autism and Developmental Disorders, 44*(5), 1-12.

- Banks, B., Novak, J., Mank, D., & Grossi, T. (2007). Disclosure of a psychiatric disability in supported employment: An exploratory study. *International Journal of Psychosocial Rehabilitation, 11*(1), 69-84.
- Beyer, S., Brown, T., Akandi, R., & Rapley, M. (2010). A comparison of quality of life outcomes for people with intellectual disabilities in supported employment, day services and employment enterprises. *Journal of Applied Research in Intellectual Disabilities, 23*(3), 290-295.
- Billstedt, E., Gillberg, I.C., & Gillberg, C. (2005). Autism after adolescence: Population-based 13- to 22-year follow-up study of 120 individuals with autism diagnosed in childhood. *Journal of Autism and Developmental Disorders, 35*(3), 351-360.
- Bogdan, R., & Biklen, S. (2007). *Qualitative research for education: An introduction to theories and methods* (5th ed.). New York: Pearson Education, Inc.
- Bourque, L., & Fielder, E. (2003). *How to conduct self-administered and mail surveys* (2nd ed.). Thousand Oaks, California: Sage Publications.
- Brolin, D., & Gysbers, N. (1989). Career education for students with disabilities. *Journal of Counseling and Development, 68*(2), 155-200.
- Bureau of Labor Statistics. (2017, June 21). *Persons with a disability: Labor force characteristics summary*. Retrieved from <https://www.bls.gov/news.release/disabl.nr0.htm>
- Bureau of Labor Statistics. (2018, June 20). *Standard Occupational Classification System*. Retrieved from https://www.bls.gov/soc/2018/major_groups.htm
- Butterworth, J., Hall, A.C., Smith, F. Migliore, A., & Winsor, J. (2011). StateData: The national report on employment services and outcomes, 2013.
- Campbell, J. (2006). Changing children's attitudes toward autism: A process of persuasive communication. *Journal of Developmental Physical Disabilities, 18*(3), 251-72. doi: 10.1007/s10882-006-9015-7
- Carr, S. (2012). *Quality of life in emerging adults with Autism Spectrum Disorder*. PhD diss., Virginia Commonwealth University.
- Centers for Disease Control and Prevention. (2018, April 26). *Community report on autism 2018*. Retrieved from <https://www.cdc.gov/ncbddd/autism/addm-community-report/key-findings.html>
- Chen, L. (2013). Transition needs identification of college students with disabilities in Taiwan. *Career Development and Transition for Exceptional Individuals, 36*(2), 105-113.

- Chi, C., & Qu, H. (2003). Integrating persons with disabilities into the workforce. *International Journal of Hospitality & Tourism Administration*, 4(4), 59-83. doi:10.1300/J149v04n04_04
- Chronicle of Higher Education & American Public Media's Marketplace. (2012). *The role of higher education and career development: Employer perceptions* [PowerPoint slides]. Retrieved from <http://www.chronicle.com/items/biz/pdf/Employers%20Survey.pdf>
- College Program for Students with Autism Spectrum Disorder. (2017). *The College Program for Students with Autism Spectrum Disorder*. Retrieved from <http://www.marshall.edu/collegeprogram/>
- Cregan, C., Kulik, C., & Bainbridge, H. (2016). Differences in well-being among people with disabilities in paid employment: Level of restriction, gender and labour market context. *Social Policy & Administration*, 51(7), 1210-1230. doi:10.1111.spol.12263
- Creswell, J. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches*. Los Angeles, California: Sage Publications, Inc.
- Dench, S., Perryman, S., & Giles, L. (1998). Employers' perceptions of key skills. *The Institute for Employment Studies*. Retrieved from <https://www.employment-studies.co.uk/system/files/resources/files/349.pdf>
- Dona, J., & Edminster, J. (2001). An examination of community college faculty members' knowledge of the Americans with Disabilities Act of 1990 at the fifteen community colleges in Mississippi. *Journal of Postsecondary Education and Disability*, 14(2), 255-256.
- Dougherty, S., & Lombardi, A. (2016). From vocational education to career readiness: The ongoing work of linking education and the labor market. *Review of Research Education*, 40(1), 326-355. doi:10.3102/009173X16678602
- Dowrick, P., Anderson, J., Heyer, K., & Acosta, J. (2005). Postsecondary education across the USA: Experiences of adults with disabilities. *Journal of Vocational Rehabilitation*, 22(1), 41-47.
- Drake, R., Becker, D., & Bond, G. (2003). Recent research on vocational rehabilitation for persons with severe mental illness. *Current Opinion in Psychiatry*, 16(4), 451-455.
- Dulock, H. (1993). Research design: Descriptive research. *Journal of Pediatric Oncology Nursing*, 10(4), 154-157.
- Easter Seals. (2008). *Understanding what it means to live with autism: Easter Seals' living with autism study* [PowerPoint Slides]. Retrieved from https://www.massmutual.com/mmfg/pdf/autism_keyfindings.pdf

- Eaves, L., & Ho, H. (2008). Young adult outcomes of autism spectrum disorders. *Journal of Autism and Developmental Disorders*, 38(4), 739-747.
- Ellison, M. (2013). *Assessing the readiness of higher education to instruct and support students with Asperger's Disorder*. Retrieved from Marshall Digital Scholar. (428)
- Equal Employment Opportunity Commission. (2017a). *Questions and answers: The EEOC's final rule on affirmative action for people with disabilities in federal employment*. Retrieved from <https://www.eeoc.gov/laws/index.cfm>
- Equal Employment Opportunity Commission. (2017b). *Enforcement guidance: Reasonable accommodation and undue hardship under the Americans with Disabilities Act*. Retrieved from <https://www.eeoc.gov/policy/docs/accommodation.html#general>
- Farley, M., Cottle, K.J., Bilder, D., Viskochil, J., Coon, H., & McMahon, W. (2017). Mid-life social outcomes for a population-based sample of adults with ASD. *Autism Research*, 11(1), 142-152. doi:10.1002/aur.1897
- Fink, A. (2003a). *How to design survey studies* (2nd ed.). Thousand Oaks, California: Sage Publications, Inc.
- Fink, A. (2003b). *How to manage, analyze, and interpret survey data* (2nd ed.). Thousand Oaks, California: Sage Publications, Inc.
- Fink, A. (2003c). *How to sample in surveys* (2nd ed.). Thousand Oaks, California: Sage Publications, Inc.
- Fink, A. (2003d). *The survey handbook* (2nd ed.). Thousand Oaks, California: Sage Publications Inc.
- Fisher, R. (1993). Social desirability bias and the validity of indirect questioning. *Journal of Consumer Research*, 20(2), 303-315. doi: 10.1086/209351
- Fishman, T., Ludgate, A., & Tutak, J. (2017). Success by design: Improving outcomes in American higher education. *Deloitte Insights*. Retrieved from <https://www2.deloitte.com/insights/us/en/industry/public-sector/improving-student-success-in-higher-education.html>
- Ganz, M. (2007). The lifetime distribution of the incremental society costs of autism. *Archives of Pediatric and Adolescent Medicine*, 161(4), 343-349.
- Gelbar, N., Shefcyk, A., & Reichow, B. (2015). A comprehensive survey of current and former college students with autism spectrum disorders. *Yale Journal of Biology and Medicine*, 88(1), 45-68.

- Getzel, E., & Thoma, C. (2008). Experiences of college students with disabilities and the importance of self-determination in higher education settings. *Career Development for Exceptional Individuals, 31*(2), 77-84. doi:10.1177/0885728808317658
- Gillespie-Lynch, K., Brooks, P., Someki, F., Obeid, R. Shane-Simpson, C. Kapp, S., Daou, N., & Smith, D. (2015). Changing college students' conceptions of autism: An online training to increase knowledge and decrease stigma. *Journal of Developmental Disorders, 45*(25), 53-66. doi: 10.1007/s10803-015-2422-9
- Gold, P., Spalatin, O., Fabian, E., & Wewiorski, N. (2012). Reasonable workplace accommodations: Perspectives of employers, employees with disabilities, and rehabilitation service providers. *Journal of Vocational Rehabilitation, 37*(1), 25-37. doi:10.3233/JVR-2012-0597
- Grandin, T., & Duffy, K. (2008). *Developing talents: Careers for individuals with Asperger Syndrome and High-Functioning Autism*. Shawnee Mission, Kansas: Autism Asperger Publishing Company.
- Hansen, R. (2015). *Understanding employment preparedness needs for college students with Asperger's Disorder*. Retrieved from Marshall Digital Scholar. (905)
- Harrison, D. (2017, Oct 23). The role of higher education in the changing world of work. *EDUCAUSEreview*. Retrieved from <https://er.educause.edu/articles/2017/10/the-role-of-higher-education-in-the-changing-world-of-work>
- Hees, V., Moyson, T., & Roeyers, H. (2015). Higher education experiences of students with Autism Spectrum Disorder: Challenges, benefits and support needs. *Journal of Autism & Developmental Disorders, 45*(6), 1673-1688. doi:10.1007/s10803-014-2324-2
- Hellemans, H., Colson, K., Verbraeken, C., Vermeiren, R., & Deboutte, D. (2007). Sexual behavior in high-functioning male adolescent and young adults with Autism Spectrum Disorder. *Journal of Autism and Developmental Disorders, 37*(2), 260-269.
- Hendricks, D. (2010). Employment and adults with autism spectrum disorders: Challenges and strategies for success. *Journal of Vocational Rehabilitation, 32*(2), 125-134. doi: 10.3233/JVR-2010-0502
- Hendricks, D., & Wehman, P. (2009). Transition from school to adulthood for youth with autism spectrum disorders. *Focus on Autism and Other Developmental Disabilities, 24*(2), 77-88. doi:10.1177/1088357608329827
- Hernandez, B., Keys, C., & Balcazar, F. (2000). Employer attitudes toward workers with disabilities and their ADA employment rights: A literature review. *Journal of Rehabilitation, 66*(4), 4-16.

- Higher Learning Commission. (2018a). *Guiding Values*. Retrieved from <https://www.hlcommission.org/Publications/guiding-values.html>
- Higher Learning Commission. (2018b). *Criteria for accreditation (CRRT.B.10.010)*. Retrieved from <https://www.hlcommission.org/Policies/criteria-and-core-components.html>
- Holland, R. (2016, July 11). Neurodiversity: The benefits of recruiting employees with cognitive disabilities. *Harvard Business School*. Retrieved from <https://hbswk.hbs.edu/item/neurodiversity-the-benefits-of-recruiting-employees-with-cognitive-disabilities>
- Hoskin, R. (2012, March 3). The dangers of self-report. *Blogs, Brain and Behaviour, Cognitive Psychology*. Retrieved from <http://www.sciencebrainwaves.com/the-dangers-of-self-report/>
- Howlin, P., Goode, S., Hutton, J., & Rutter, M. (2004). Adult outcome for children with autism. *Journal of Child Psychology and Psychiatry*, 45(2), 212-229.
- Hughes, A. (2016). Mixed methods research. *Association for Psychological Science (in Observer)*, 29(5). Retrieved from <https://www.psychologicalscience.org/observer/mixed-methods-research>
- Järbrink, K., McCrone, P., Fombonne, E., Zandén, H., & Knapp, M. (2007). Cost-impact of young adults with high-functioning autistic spectrum disorder. *Research in Developmental Disabilities*, 28(1), 94-104. doi:10.1016/j.ridd.2005.11.002
- Job Accommodation Network (2017, September 1). *Workplace accommodations: Low cost, high impact*. Retrieved from <https://askjan.org/media/lowcosthighimpact.html>
- Joffe-Walt, C. (2013, March 29). Unfit for work: The startling rise of unemployment in America. Retrieved from <http://apps.npr.org/unfit-for-work/>
- Kayam, O., & Hirsch, T. (2012). Using social media networks to conduct questionnaire based research in social studies case study: Family language policy. *Journal of Sociological Research*, 3(2), 57-67. doi: 10.5296/jsr.v3i2.2176
- Kaye, S., Jans, L., & Jones, E. (2011). Why don't employers hire and retain workers with disabilities? *Journal of Occupational Rehabilitation*, 21(4), 526-36. doi:10.1007/s10926-011-9302-8
- Kirchner, J., & Dziobek, I. (2014). Toward the successful employment of adults with autism: A first analysis of special interests and factors deemed important for vocational performance. *Scandinavian Journal of Child and Adolescent Psychiatry and Psychology*, 2(2), 77-85.

- Kirk-Brown, A., Van Dijk, P., Simmons, R., Bourne, M., & Cooper, B. (2014). Disclosure of diagnosis of multiple sclerosis in the workplace positively affects employment status and job tenure. *Multiple Sclerosis Journal*, 20(7), 871-876. doi:10.1177/1352458513513967
- Lagace, M. (2008, April 14). The surprising right fit for software testing. *Harvard Business School*. Retrieved from <https://hbswk.hbs.edu/item/the-surprising-right-fit-for-software-testing>
- Lavrakas, P. (2008). Response bias. *Encyclopedia of Survey Research Methods*. Thousand Oaks, California: Sage Publications.
- Lee, C., & Carter, E. (2012). Preparing transition-age students with high-functioning autism disorders for meaningful work. *Psychology in the Schools*, 49(10), 988-997. doi: 10.1002/pits.21651
- Ling, C., Mak, W., & Cheng, J. (2010). Attribution model of stigma towards children with autism in Hong Kong. *Journal of Applied Research in Intellectual Disabilities*, 23, 237-49. doi: 10.1111/j.1468-3148.2008.00456.x
- Macdonald-Wilson, K., Fabian, E., & Dong, S. (2010). Best practices in developing reasonable accommodations in the workplace: Findings based on the research of literature. *The Rehabilitation Professional*, 16(4), 221-32.
- MacDonald-Wilson, K., Rogers, S., Massaro, J., Lyass, A., & Crean, T. (2002). An investigation of reasonable workplace accommodations for people with psychiatric disabilities: Quantitative findings from a multi-site study. *Community Mental Health Journal*, 38(1), 35-50.
- Magiati, I., Tay, X. W., & Howlin, P. (2013). Cognitive, language, social and behavioural outcomes in adults with autism spectrum disorders: A systematic review of longitudinal follow-up studies in adulthood. *Clinical Psychology Review*, 34(1), 73-86.
- Matthews, N., Ly, A., & Goldberg, W. (2015). College students' perceptions of peers with autism spectrum disorder. *Journal of Autism and Developmental Disorder*, 45(1), 90-99. doi: 10.1007/s10803-014-2195-6
- McAward, S. (2015, March 19). Navigating the career development of students with disabilities: A collaborative approach. *NASPA*. Retrieved at <https://www.naspa.org/constituent-groups/posts/navigating-the-career-development-of-students-with-disabilities-a-collabora>
- Migliore, A., Hall, A., Butterworth, J., & Winsor, J. (2010). What do employment specialists really do? A study on job development practices. *Research & Practice for Persons with Severe Disabilities*, 35(1-2), 15-23.

- Millington, M., Szymanski, E., & Hanley-Maxwell, C. (1994). Effect of the label of mental retardation on employer concerns and selection. *Rehabilitation Counseling Bulletin*, 38(1), 27-43. Retrieved from http://digitalcommons.usu.edu/cgi/viewcontent.cgi?article=1187&context=sped_facpub
- National Autistic Society of Northern Ireland. (2011). *Employing people with autism: A brief guide for employers*. Retrieved from <http://www.equalityni.org/ECNI/media/ECNI/Publications/Delivering%20Equality/Employingpeoplewithautism.pdf>
- National Institute of Neurological Disorders and Stroke. (2017, December 6). *Autism Spectrum Disorder*. Retrieved from <https://www.ninds.nih.gov/Disorders/Patient-Caregiver-Education/Fact-Sheets/Autism-Spectrum-Disorder-Fact-Sheet>
- Olson, D., Cioffi, A., Yovanoff, P., & Mank, D. (2001). Employers' perceptions of employees with mental retardation. *Journal of Vocational Rehabilitation*, 16(2), 125-133.
- Ostrow, Nicole. (2014, June 10). Autism costs more than \$2 million over patient's life. *Bloomberg News (Washington Post News Service)*. Retrieved from <https://www.bloomberg.com/news/articles/2014-06-09/autism-costs-more-than-2-million-over-patient-s-life>
- Ozgur, C., Kleckner, M., & Li, Y. (2015). Selection of statistical software for solving big data problems: A guide for businesses, students, and universities. *Business Faculty Publications, April-June 2015*, 1-12. doi: 10.1177/2158244015584379
- Paradiz, V., Kelso, S., Nelson, A., & Earl, A. (2018). Essential self-advocacy and transition. *Pediatrics*, 141(4), 373-377. doi:10.1542/peds.2016-4300P
- Patterson, G. (2018, Jan. 17). Fighting cybercrime with neurodiversity. *Project Syndicate*. Retrieved from <https://www.project-syndicate.org/commentary/neuro-diversity-cybersecurity-autism-asperger-by-gavin-patterson-2018-01>
- Pearson, V., Ip, F., Hui, H., Yip, N., Ho, K. & Lo, E. (2003). To tell or not to tell; disability disclosure and job application outcomes. *Journal of Rehabilitation*, 69(4), 35-38. Retrieved from <https://search.proquest.com/docview/236290862?accountid=12281>
- Power, B. (2018, April 24). The benefits of autism in the office. *Financial News*. Retrieved from <https://www.fnlondon.com/articles/the-benefits-of-autism-in-the-office-20180424>
- Pronin, E., Lin, D., & Ross, L. (2002). The bias blind spot: Perceptions of bias in self versus others. *Personality and Social Psychology Bulletin*, 28(3), 369-381.
- Rohrman, B. (2007). Verbal qualifiers for rating scales: Sociolinguistic considerations and psychometric data. *University of Melbourne, Melbourne2007*.

- Roux, A., Shattuck P., Rast, J., Rava, J., & Anderson, K. (2015). National autism indicators report: Transition into young adulthood. *Life Course Outcomes Research Program*, A.J. Drexel Autism Institute, Drexel University, Philadelphia, PA.
- Roux, A., Shattuck, P., Rast, J., & Anderson, K. (2017). National autism indicators report: developmental disability services and outcomes in adulthood. *Life Course Outcomes Research Program*, A.J. Drexel Autism Institute, Drexel University, Philadelphia, PA.
- Rowe, J. (2017, February 1). Autism spectrum disorders on the rise. *NACE Journal*. Retrieved from <http://www.naceweb.org/career-development/special-populations/autism-spectrum-disorders-on-the-rise/>
- Rubin, R., & Dierdorff, E. (2009). How relevant is the MBA? Assessing the alignment of required curricula and required managerial competencies. *Academy of Management Learning & Education*, 8(2), 208-224.
- Sander, L. (2017, March 7). In the workplace of the future, these are the skills employers want. *World Economic Forum*. Retrieved from <https://www.weforum.org/agenda/2017/03/in-the-workplace-of-the-future-these-are-the-skills-employers-want>
- Scheid, T. (2005). Stigma as a barrier to employment: Mental disability and the Americans with Disabilities Act. *International Journal of Law and Psychiatry*, 28(6), 670-690.
- Scheiner, M. (2013). *Tackling the unemployment crisis for adults with Asperger's Syndrome*. Retrieved at <http://www.autismaroundtheglobe.org/countries/USA26.asp>
- Schur, L., Kruse, D., Blanck, P. (2005). Corporate culture and the employment of persons with disabilities. *Behavioral Sciences & the Law*, 23(1), 3-20. doi: 10.1002/bsl.624
- Scott, M., Falkmer, M., Girdler, S., & Falkmer, T. (2015). Viewpoints on factors for successful employment for adults with Autism Spectrum Disorder. *PLoS one*, 10(10). doi:10.1371/journal.pone.0139281
- Scott, M., Jacob, A., Hendrie, D., Parsons, R., Girdler, S., Falkmer, T., & Falkmer, M. (2017). Employers' perceptions of the costs and the benefits of hiring individuals with Autism Spectrum Disorder in open employment in Australia. *PLoS one*, 12(5). doi: 10.1371/journal.pone.0177607
- Shattuck, P., Narendorf, S., Cooper, B., Sterzing, P., Wagner, M., & Taylor, J. (2012). Postsecondary education and employment amongst youth with an autism spectrum disorder. *Pediatrics*, 129(6), 1042-1049. doi:10.1542/peds.2011-2864.
- Simone, R. (2010). *Asperger's on the job*. Arlington, TX: Future Horizons.
- Simonsen, M., Fabian, E., & Luecking, R. (2015). Employer preferences in hiring youth with disabilities. *Journal of Rehabilitation*, 8(1), 9-18.

- Siperstein, G., Romano, N., Mohler, A., & Parker, R. (2006). A national survey of consumer attitudes towards companies that hire people with disabilities. *Journal of Vocational Rehabilitation, 24*(1), 3-9.
- Smith, K., Webber, L., Graffam, J., & Wilson, C. (2004). Employer satisfaction, job-match and future hiring intentions for employees with a disability. *Journal of Vocational Rehabilitation, 21*(3), 165-173.
- Taylor, J., & Seltzer, M. (2011). Employment and post-secondary educational activities for young adults with autism spectrum disorders during the transition to adulthood. *Journal of Autism and Developmental Disorders, 41*(5), 566-574.
- Thornicroft, G., Rose, D., Kassam, A., & Sartorius, N. (2007). Stigma: Ignorance, prejudice, or discrimination? *British Journal of Psychiatry, 190*(3), 192-193. doi: 10.1192/bjp.bp.106.025791
- Tomlinson, M. (2012). Graduate employability: A review of conceptual and empirical themes. *Higher Education Policy, 25*(4), 407-431.
- Tran, T. (2015). Corporate social responsibility and profits: A tradeoff or a balance? PhD. Thesis. Stanford University.
- Tschopp, M., Perkins, D., Hart-Katuin, C., Born, D., & Holt, S. (2007). Employment barriers and strategies for individuals with psychiatric disabilities and criminal histories. *Journal of Vocational Rehabilitation, 26*(3), 175-187. doi:10.1057/hep.2011.26
- Unger, D. (2002). Employers' attitudes toward persons with disabilities in the workforce: Myths or realities? *Focus on Autism and Other Developmental Disabilities, 17*(1), 2-10.
- U.S. Department of Education. (2015a, July 27). *Fact sheet: Focusing higher education on student success*. Retrieved from <https://www.ed.gov/news/press-releases/fact-sheet-focusing-higher-education-student-success>
- U.S. Department of Education. (2015b, July 27). *Toward a new focus on outcomes in higher education: Remarks by Secretary Arne Duncan at the University of Maryland-Baltimore County (UMBC), July 27, 2015*. Retrieved from <https://www.ed.gov/news/speeches/toward-new-focus-outcomes-higher-education>
- VanBergeijk, E., Klin, A., & Volkmar, F. (2008). Supporting more able students on the autism spectrum: College and beyond. *Journal of Autism and Developmental Disorders, 38*(7), 1359-1370. doi:10.1007/210803-007-0524-8.

- Van Wieren, T., Armstrong, A., & McMahon, B. (2012). Autism spectrum disorders and intellectual disabilities: A comparison of ADA Title I workplace discrimination allegations. *Journal of Vocational Rehabilitation, 36*(3), 159-169. doi:10.3233/JVR-2012-0591
- Von Schrader, S., Malzer, V., & Bruyère, S. (2014). Perspectives on disability disclosure: The importance of employer practices and workplace climate. *Employee Responsibilities and Rights Journal, 26*(4), 237-255. doi:10.1007/s10672-013-9227-9
- Wareham, J., & Sonne, T. (2008). Harnessing the power of Autism Spectrum Disorder (innovations case narrative: Specialisterne). *Innovations: Technology, Governance, Globalization, 3*(1), 11-27.
- Wehman, P. (2008). Introduction. In *Workplace supports and job retention: Promoting an employer driven approach to employment of people with disabilities*. Retrieved from <http://www.worksupport.com/documents/Research%20Monograph%20June%202008.pdf>
- Wehman, P. (2013). Transition from school to work: Where are we and where do we need to go? *Career Development and Transition for Exceptional Individuals, 36*(1) 58-66. doi: 10.1177/2165143413482137
- Wehman, P., Brooke, V., Green, H., Hewett, M., & Tipton, M. (2008). Public-private partnerships and employment of people with disabilities: Preliminary evidence from a pilot project. In *Workplace supports and job retention: Promoting an employer driven approach to employment of people with disabilities*. Retrieved from <http://www.worksupport.com/documents/Research%20Monograph%20June%202008.pdf>
- West Virginia Higher Education Policy Commission. (2013). *Master plan: Leading the way*. Retrieved from <http://www.wvhpec.edu/master-plan-leading-the-way/>
- White, S., Elias, R., Salinas, C., Capriola, N., Conner, C., Asselin, S.,... Getzel, E. (2016). Students with Autism Spectrum Disorder in college: Results from a preliminary mixed methods needs analysis. *Research in Developmental Disabilities, 56*, 29-40. doi: 10.1016/j.ridd.2016.05.010
- Wilczynski, S., Trammell, B., & Clarke, L. (2013). Improving employment outcomes among adolescents and adults on the autism spectrum. *Psychology in the Schools, 50*(9), 876-887. doi:10.1002/pits.21718
- Wilgosh, L., & Skaret, D. (1987). Employer attitudes toward hiring individuals with disabilities: A review of the recent literature. *Canadian Journal of Rehabilitation, 1*(2), 89-98. doi: 10.1177/026921558700100201

APPENDIX A: INSTITUTIONAL REVIEW BOARD APPROVAL LETTER



www.marshall.edu

Office of Research Integrity
Institutional Review Board
One John Marshall Drive
Huntington, WV 25755

FWA 00002704

IRB1 #00002205

IRB2 #00003206

September 27, 2018

Eugenia Webb-Damron, EdD
Leadership Studies, COEPD

RE: IRBNet ID# 1325061-1

At: Marshall University Institutional Review Board #2 (Social/Behavioral)

Dear Dr. Webb-Damron:

Protocol Title: [1325061-1] TAILORING HIGHER EDUCATION INSTRUCTION FOR STUDENTS WITH AUTISM SPECTRUM DISORDER TO TRANSITION TO EMPLOYMENT: EMPLOYER PERSPECTIVES

Site Location: MUGC

Submission Type: New Project APPROVED

Review Type: Exempt Review

In accordance with 45CFR46.101(b)(2), the above study was granted Exempted approval today by the Marshall University Institutional Review Board #2 (Social/Behavioral) Designee. No further submission (or closure) is required for an Exempt study unless there is an amendment to the study. All amendments (including the addition of research staff) must be submitted and approved by the IRB Chair/Designee.

This study is for student Hillary Adams.

If you have any questions, please contact the Marshall University Institutional Review Board #2 (Social/Behavioral) Coordinator Bruce Day, ThD, CIP at 304-696-4303 or day50@marshall.edu. Please include your study title and reference number in all correspondence with this office.

APPENDIX B: SURVEY INSTRUMENT WITH CONSENT LETTER

Employer Perspectives: Workforce Preparation for College Students with Autism Spectrum Disorder

Q1

You are invited to participate in a research project entitled "TAILORING HIGHER EDUCATION INSTRUCTION FOR STUDENTS WITH ASD TO TRANSITION TO EMPLOYMENT: EMPLOYER PERSPECTIVES" designed to explore employer attitudes toward employees with Autism Spectrum Disorder (ASD), employer attitudes toward employee disclosure of an ASD diagnosis, and employer attitudes toward accommodations in the workplace for employees with ASD.

The study is being conducted by Hillary Adams, EdD candidate, and her faculty advisor, Dr. Eugenia Webb-Damron from the College of Education and Professional Development at Marshall University. The study is being conducted in partial fulfillment of the requirements for the degree of Doctor of Education in Leadership Studies at Marshall University.

There are no known risks involved with this study. Participation is completely voluntary and there will be no penalty or loss of benefits if you choose to not participate in this research study or to withdraw. This survey is comprised of 38 items, including yes/no and multiple choice questions, and should take no more than 10 minutes to complete. This survey is anonymous; please do not enter your name or other identifying information anywhere on the survey. If you choose not to participate you can leave the survey site. Once you begin the survey, you may end your participation at any time by simply closing your browser. Your IP address will not be collected. Once you complete the survey you can delete your browsing history for added security. Completing the on-line survey indicates your consent for use of the

answers you supply. Results will be reported only in aggregate form.

If you have any questions about the study you may contact Eugenia Webb-Damron, EdD at (304) 746-8959 or at webb24@marshall.edu, or Hillary Adams at (304) 696-3110 or at brown235@marshall.edu. If you have any questions concerning your rights as a research participant, you may contact the Marshall University Office of Research Integrity at (304) 696-4303.

By completing this survey, you are also confirming that you are 18 years of age or older.

Please print this page for your records.

Sincerely,

Hillary Adams, MA

Doctoral Student, Marshall University

Q2 I agree to continue.

Yes

No

End of Block

Start of Block

Q45 Please check all that apply.

I (or the business I work for) am a member of the Huntington Regional Chamber of Commerce.

I (or the business I work for) am a member of the Chamber of Commerce of the Mid-Ohio Valley.

I am involved/have influence in the process of hiring employees at my workplace.

I am not involved/have influence in the process of hiring employees at my workplace.

End of Block

Start of Block: Part I

Q3 Have you ever heard of autism, Autism Spectrum Disorder, or Asperger's Syndrome?

Yes

No

Q5 Have you ever employed or worked with someone with Autism Spectrum Disorder (previous or current job)?

- Yes
- No
- I do not know

End of Block: Part I

Start of Block: Part II

Q6 Please read the following statements and answer whether you believe the statement is accurate, not accurate, or if you are uncertain based solely on your knowledge of Autism Spectrum Disorder.

Q7 Autism Spectrum Disorder is a mental illness.

- This statement is accurate.
 - This statement is not accurate.
 - I am not certain.
-

Q8 Autism Spectrum Disorder is a developmental disability.

- This statement is accurate.
 - This statement is not accurate.
 - I am uncertain.
-

Q9 Generally speaking, people with Autism Spectrum Disorder have limited eye contact.

- This statement is accurate.
 - This statement is not accurate.
 - I am uncertain.
-

Q10 Generally speaking, people with Autism Spectrum Disorder are sensitive to light/sound.

- This statement is accurate.
 - This statement is not accurate.
 - I am uncertain.
-

Q11 Generally speaking, people with Autism Spectrum Disorder interpret language literally.

- This statement is accurate.
 - This statement is not accurate.
 - I am uncertain.
-

Q12 Generally speaking, people with Autism Spectrum Disorder focus on the "big picture" rather than details.

- This statement is accurate.
 - This statement is not accurate.
 - I am uncertain.
-

Q13 Generally speaking, people with Autism Spectrum Disorder have irregular communication styles.

- This statement is accurate.
 - This statement is not accurate.
 - I am uncertain.
-

Q14 Generally speaking, people with Autism Spectrum Disorder need aides/support staff in the workplace.

- This statement is accurate.
- This statement is not accurate.
- I am uncertain.

End of Block: Part II

Start of Block: Part III A

Q15 To what extent do you agree with the following statements?

Q16 I have a good understanding of Autism Spectrum Disorder.

- Yes, better than most.
 - No, not that good.
-

Q17 I believe other business managers (outside of my own business) have a good understanding of Autism Spectrum Disorder.

- Yes, that is mostly accurate.
 - No, that is mostly not accurate.
-

Q18 Would it affect your decision to hire a potential employee if he said he has Autism Spectrum Disorder?

- Yes, that is mostly accurate.
 - No, that is mostly not accurate.
-

Q19 Would it affect other business managers' (outside of my own business) decisions to hire a potential employee if he said he has Autism Spectrum Disorder?

- Yes, that is mostly accurate.
 - No, that is mostly not accurate.
-

Q20 Would it affect your decision to hire a potential employee if he said he would need some accommodations in your workplace?

- Yes, that is mostly accurate.
 - No, that is mostly not accurate.
-

Q21 Would it affect other business managers' (outside of my own business) decisions to hire a potential employee if he said he would need accommodations in their workplaces?

- Yes, that is mostly accurate.
- No, that is mostly not accurate.

End of Block: Part III A

Start of Block: Part III B



Q22 Please select all options of *how* you would prefer a potential employee tell you he has a diagnosis of Autism Spectrum Disorder.

Face-to-face with me

Phone call with me

Written letter addressed to me

Email sent to me

Through the Human Resources Department

I prefer he not disclose



Q23 Please select all options of *when* you would prefer a potential employee tell you he has a diagnosis of Autism Spectrum Disorder.

On the application

In a resume or cover letter

During an interview

During the first week of employment

During the first month of employment

During the first year of employment

I prefer he not disclose

End of Block: Part III B

Start of Block: Part III C

Q24 Indicate how likely you believe other business managers (outside of your business) would be to provide the following accommodations for employees who have reported a diagnosis of Autism Spectrum Disorder.

Q25 Allow the employee with Autism Spectrum Disorder to work from home.

- Yes, it is likely they would provide this accommodation.
 - No, it is not likely they would provide this accommodation.
-

Q26 Change the lighting in the office to accommodate sensitivity to light for the employee with Autism Spectrum Disorder.

- Yes, it is likely they would provide this accommodation.
 - No, it is not likely they would provide this accommodation.
-

Q27 Provide noise cancelling headsets to accommodate sensitivity to sound for the employee with Autism Spectrum Disorder.

- Yes, it is likely they would provide this accommodation.
 - No, it is not likely they would provide this accommodation.
-

Q28 Allow employee with Autism Spectrum Disorder to provide clients written responses through email instead of verbal responses over the phone.

- Yes, it is likely they would provide this accommodation.
 - No, it is not likely they would provide this accommodation.
-

Q29 Allow employee with Autism Spectrum Disorder to provide written reports on progress or projects instead of in person.

- Yes, it is likely they would provide this accommodation.
 - No, it is not likely they would provide this accommodation.
-

Q30 Provide text-to-speech or speech-to-text technology for reading or preparing work documents.

- Yes, it is likely they would provide this accommodation.
 - No, it is not likely they would provide this accommodation.
-

Q31 Provide an employee mentor to help the employee with Autism Spectrum Disorder adapt to a new work environment.

- Yes, it is likely they would provide this accommodation.
 - No, it is not likely they would provide this accommodation.
-

Q32 Provide training about Autism Spectrum Disorder to employees.

- Yes, it is likely they would provide this accommodation.
 - No, it is not likely they would provide this accommodation.
-

Q33 Make employee attendance at social functions for work optional.

- Yes, it is likely they would provide this accommodation.
 - No, it is not likely they would provide this accommodation.
-

Q34 Modify the work schedule for the employee with Autism Spectrum Disorder.

- Yes, it is likely they would provide this accommodation.
 - No, it is not likely they would provide this accommodation.
-

Q35 Allow additional time for the employee with Autism Spectrum Disorder to complete new or large tasks.

- Yes, it is likely they would provide this accommodation.
 - No, it is not likely they would provide this accommodation.
-

Q36 Provide the employee with Autism Spectrum Disorder a checklist or written instructions for tasks.

- Yes, it is likely they would provide this accommodation.
- No, it is not likely they would provide this accommodation.

End of Block: Part III C

Start of Block: Demographics

Q37 Please choose the field that most closely describes your current occupation.

- Management
- Business/Financial Operations
- Computer/Mathematical
- Architecture/Engineering
- Life/Physical/Social Sciences
- Community/Social Services
- Legal
- Educational Instruction/Library
- Arts/Design/Entertainment/Sports/Media
- Healthcare Practitioners
- Healthcare Support
- Protective Service
- Food Preparation/Serving-Related
- Building/Grounds Cleaning/Maintenance

- Personal Care/Service
 - Sales
 - Office/Administration Support
 - Farming/Fishing/Forestry
 - Construction/Extraction
 - Installation/Maintenance/Repair
 - Production
 - Transportation/Material Moving
 - Military Specific
-

Q38 Please indicate your company size.

0-25

26-50

51-75

76-100

101-150

Above 151

End of Block: Demographics

APPENDIX C: EMAIL EXCHANGE WITH LOCAL CHAMBERS OF COMMERCE REGARDING SURVEY DISTRIBUTION

From: [Adams, Hillary](#)
To: ["Bill Rossett"](#)
Subject: Dissertation Survey
Date: Thursday, September 13, 2018 4:18:00 PM

Good Afternoon, Bill,

I hope you and your family are well! I am reaching to discuss emailing my dissertation survey to the HRCOC with your help. I believe we should be ready to roll within the next 2-3 weeks.

After chatting with Marc and Dr. Nicholson, we would love to be able to send the survey to not only the Huntington Regional Chamber of Commerce members, but perhaps another county's chamber, as well. Essentially, we would love to compare responses of Cabell and Wayne with, say, Wood, Jackson, Kanawha, or Harrison County. A county like Wood would be ideal, with a larger population, but very different culture. Do you have close ties to another other COC President that may be willing to disseminate the survey? I am certainly open to suggestions and if you are not comfortable with the idea, it is not a problem.

In addition, when you were on campus to assist us with the Employment Workshop this summer, you briefly mentioned the idea of an op-ed potentially spurring more responses to the survey. Do you all have some sort of a newsletter you were referring to? I'm all about getting the word out in reference to hiring individuals with autism, whether it helps me get more survey response or not – let me know if there is something I could submit!

Thank you for all your help and support of the autism community (and of suffering doc students)!

Best,

Hillary Adams
Student Support Specialist, CPSASD
WV Autism Training Center

From: [Adams, Hillary](#)
To: info@movchamber.org
Cc: [Bill Bissett](#)
Subject: Request for Chamber of Commerce Participation in Dissertation Survey
Date: Wednesday, September 26, 2018 10:20:00 AM

Good Morning, Ms. Parsons,

I am emailing you at the recommendation of Dr. Bill Bissett, a dear friend of The WV Autism Training Center, to see if you would be willing to assist me in dispersing a short online survey to members of the Chamber of Commerce of the Mid-Ohio Valley.

The study is being conducted in partial fulfillment of the requirements for the degree of Doctor of Education in Leadership Studies at Marshall University. The survey will provide vital employer insights for college students with autism preparing for the transition to the workforce. This survey seeks to gage employer knowledge of Autism Spectrum Disorder, employer opinions on hiring individuals with autism, opinion on the disclosure of a diagnosis, and opinions on accommodations in the workplace. Participation is voluntary; participants will be asked to identify their general field of work and their current business size from multiple-choice lists. To maintain confidentiality, no other identifying information will be requested.

I would be happy to email you more detailed information regarding this study and the survey. Please let me know if you would be willing to send an invitation to participate in this study to your chamber members.

Thank you for your time and I hope you have a wonderful day.

Best,

Hillary Adams, M.A.
Student Support Specialist, CPSASD
WV Autism Training Center
Old Main 307, Marshall University
Phone: (304) 696-3110
Fax: 304) 696-2846
Email: Brown235@marshall.edu

From: [Adams, Hillary](#)
To: ["Jill Parsons"](#)
Subject: RE: Favor Regarding Autism Survey Distribution
Date: Thursday, October 11, 2018 11:26:00 AM

Ms. Parsons,

I'd love to take you up on the Facebook offer. Because that will open up the participant pool, I am going to edit my survey just a little to reflect that. Therefore, I will send you a new link to share as soon as it is all edited.

Thank you, again. This will be a great way to get more eyes on it.

Hillary

From: Jill Parsons [<mailto:jparsons@movchamber.org>]
Sent: Thursday, October 11, 2018 10:06 AM
To: Adams, Hillary <brown235@marshall.edu>; Bill Bissett <bissett13@gmail.com>
Subject: RE: Favor Regarding Autism Survey Distribution

Morning! Unfortunately we are booked for eblasts until the week of October 29. I am happy to share on our MOV Chamber FB page if that would be helpful? Please advise. (Obviously the audience is more than Chamber members on our page, but it might generate survey participation.)

Jill Parsons, MBA
President/CEO
Chamber of Commerce of the Mid-Ohio Valley

United Building
501 Avery Street, 9th Floor
Parkersburg, WV 26101
304.422.3588
304.893.9393 fax

www.movchamber.org
Like us on Facebook at www.facebook.com/MOVchamber/

From: Adams, Hillary [<mailto:brown235@marshall.edu>]
Sent: Thursday, October 11, 2018 7:39 AM
To: Bill Bissett <bissett13@gmail.com>; Jill Parsons <jparsons@movchamber.org>
Subject: Favor Regarding Autism Survey Distribution

Good Morning, Bill & Ms. Parsons,

APPENDIX D: EMAIL TO LOCAL BUSINESS MANAGERS, EMPLOYERS, AND THOSE INVOLVED IN HIRING

From: [Adams, Hillary](#)
To: [Adams, Hillary](#)
Subject: FW: Doctoral Dissertation Regarding Employment & Autism
Date: Monday, November 12, 2018 4:40:59 PM

From: Adams, Hillary
Sent: Saturday, October 13, 2018 4:29 PM
To: Adams, Hillary <brown235@marshall.edu>
Subject: Doctoral Dissertation Regarding Employment & Autism

Hello!

I appreciate your willingness to take part in my research. The survey should take you no longer than 10 minutes.

If you have ever had influence or have participated in the hiring process at a job, please select "I am involved/have influence in the process of hiring employees at my workplace."

Please also consider forwarding or sharing this survey link with others who are involved in the hiring process within their place of work.

Survey Link: https://marshall.az1.qualtrics.com/jfe/form/SV_5AA7UgZEqlPnoJn

I *deeply* appreciate your help.

More about my research:

Highly skilled and qualified college graduates with Autism Spectrum Disorder (ASD) are eager to work, but they face poor employment outcomes as they transition from higher education to the workforce. These future employees require tailored strategies and instruction in college to adequately prepare to meet employer needs. To develop these strategies, higher education must understand the expectations of employers. This research will explore the perspectives of employers regarding hiring and managing employees with ASD. Participation in this study is voluntary, confidential, and anonymous. The results of this research will assist in the development of relevant preparatory instruction for higher education institutions to support students with ASD transitioning from college to the workforce.

If you have questions, please don't hesitate to email me. Thank you for your time and consideration!

Hillary Adams, M.A.
The College Program for Students with Autism Spectrum Disorder
WV Autism Training Center
Old Main 307
(304) 696-3110
Brown235@marshall.edu

APPENDIX E: VITA

Hillary Adams
2733 Washington Blvd., Huntington, WV 25705
Brown235@marshall.edu
(304) 638-4520

Qualifications

- Skilled in supporting adults with Autism Spectrum Disorder, particularly in a higher education setting
- Thorough understanding of Autism Spectrum Disorder and employment
- Knowledge of wide range of disabilities and comfortable working with diverse population
- Years of experience working in higher education, with roles such as advisor, mentor, and case manager
- Experienced advocate for individuals with disabilities
- Trained in developing tailored supports to empower individuals to meet personal goals
- Doctoral candidate for Educational Leadership at Marshall University

Skills

- Trained in Positive Behavior Support
- Goal-oriented and experienced in motivating others to meet agreed-upon outcomes
- Led and assisted in development of several new initiatives and trainings
- Experience in promoting program initiatives and networking
- Deeply motivated by client and team success
- Highly organized

Employment History

West Virginia Autism Training Center, Marshall University
Huntington, WV

08/2011-Present

Student Support Specialist, Marshall University's College Program for Students with Autism Spectrum Disorder

- Directly supervise 10-15 students with Autism Spectrum Disorder while they pursue degrees at Marshall University.
- Correspond frequently and professionally with families, staff, and faculty at Marshall University in regard to students via email, phone call, and face-to-face meetings.
- Supervise graduate assistant staff who oversee students in order to keep them on task, help guide them professionally, and give advice for providing support to individual students.
- Attend seminars/meetings to further educate others on The College Program for Students with ASD, how to help adults with Autism Spectrum Disorder in a variety of community settings, how to assist in the transition of students from higher education to work, and how to create inclusive communities for individuals with autism.
- Academic advisor for students with Autism Spectrum Disorder.
- Conduct interviews for potential students and graduate staff.
- Marshall University Employee of the Month: April 2014.
- WVATC Leadership Council Representative: August 2014-August 2015.
- Led in the creation of the "Allies Supporting Autism Spectrum Diversity" training; assisted in training approximately 1,000 community/campus allies to date.

- Assisted in development and training for WVATC's Summer Employment Workshop: June 2016 & June 2017
- Assisted in development and training for WVATC's Summer Leadership Workshop: May 2018
- Marshall University College Coordinator for US Department of Labor's Workforce Recruitment Program: May 2018-present

Cammack Children's Center

05/2010-12/2011

Huntington, WV

Mental Health Counselor

- Provided individual therapy, group therapy, and family therapy.
- Provided support, guidance, and therapeutic goals for adolescents and young adults, ages 12-19.
- Successfully created agendas and led several types of group therapy focusing on substance abuse, teen relationships, and anger management.

Marshall University HELP Program

08/2009-05/2010

Huntington, WV

Undergraduate & Graduate Student Tutor

- Tutored students with learning disabilities enrolled at Marshall University; students ranged from mild to severe learning disabilities.

Education

Marshall University Graduate College

12/2018

South Charleston, WV

Doctoral candidate, Educational Leadership

Marshall University Graduate College

05/2010

Huntington, WV

Master of Arts in Clinical Mental Health Counseling

Marshall University

05/2006

Huntington, WV

Bachelor of Arts in Psychology

Training/Presentation Experience

Marshall University

Mountwest Community & Technical College

**Autism Society of American Conference
(2013, 2014)**

Fairmont State University

WV Division of Rehabilitation Services

WVU Parkersburg

Furman University

Concord University

**College STAR Student Support Summit
Presentation**

Cabell County Public Library

**West Virginia Library Association
Conference**

Kiwanis of Huntington