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An Exploratory Factor Analysis: Factors that Influence Employers Disposition to Hire and Retain Persons with Disabilities

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AN EXPLORATORY FACTOR ANALYSIS: FACTORS THAT INFLUENCE EMPLOYERS
DISPOSITION TO HIRE AND RETAIN PERSONS WITH DISABILITIES

A Dissertation

by

JAVIER NAZARIO RODRIGUEZ

Submitted to the Graduate College of
The University of Texas Rio Grande Valley
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July 2018

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AN EXPLORATORY FACTOR ANALYSIS: FACTORS THAT INFLUENCE EMPLOYERS
DISPOSITION TO HIRE AND RETAIN PERSONS WITH DISABILITIES

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July 2018

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ABSTRACT

Rodriguez, Javier Nazario, An Exploratory Factor Analysis: Factors that Influence Employers Disposition to Hire and Retain Persons with Disabilities. Doctor of Philosophy (PhD), July, 2018, 101 pp., 9 tables, 1 figure, references, 78 titles.

Despite the laws that are in place to ensure equal employment opportunities for persons with disabilities, there continues to be a disparity in employment rates for persons with disabilities when compared to persons without disabilities. Understanding factors that influence employers disposition to hire and retain persons with disabilities is the first step towards developing a guide for professionals that provide direct job placement services to this population in developing an educational intervention plan that is conducive to employers being more receptive to hiring persons with disabilities.

Currently there are many studies that focus on employers' attitudes towards hiring and retaining persons with disabilities from different perspectives. The purpose of this study is to survey and explore factors that influence employer's disposition to hire and retain persons with disabilities and devise a scale that goes beyond attitudes. The survey instrument was developed based on review of the literature. To assess the factor structure and internal consistency of the scale an exploratory factor analysis was performed on the survey response items to establish reliability and validity. The present study presents an instrument that goes beyond attitudes towards hiring and retaining persons with disabilities. The scale also assesses knowledge areas related to The Americans with Disabilities Act, disability and employer resources for persons

with disabilities. Data was collected from employers located in Cameron and Hidalgo counties located in the Border Region of South Texas (N = 190). The results from the exploratory factor analysis provided a four-factor solution with 16 items. The factors were labeled *Fears and Concerns*, *Employers Resources for Persons with Disabilities*, *ADA Competence* and *Knowledge of Disability*. The scale demonstrated overall internal consistency of .709. The discussion focuses on utility of the scale, recommendations for future research and limitations for the study.

Keywords: exploratory factor analysis, hiring and retaining persons with disabilities, border regions of South Texas, employer attitudes, job placement services.

DEDICATION

What a journey this has been....I have experienced more than I expected throughout the process of completing this once in a lifetime project. I have lost very close friends who were key supporters throughout this journey. I will not be able to share this accomplishment with them. However, they are with me in spirit and I know they are proud of my accomplishment. I thank god for the faith instilled in me and for always blessing me with the ability to move forward despite the adversities that come with life. I thank god for giving me the necessary energy and motivation to be able to achieve this goal, I AM TRULY BLESSED!!!!!!

The completion of my dissertation is dedicated to my family, friends and those that have passed on who always believed in my ability to complete a doctoral program, even when I had doubts. Thank you!!!

“Never let the fear of striking out get in your way”

(Author: Baby Ruth).

ACKNOWLEDGMENTS

Thank you to all my committee members!!!

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CHAPTER I

INTRODUCTION

There are millions of persons with disabilities currently employed in various types of jobs. However, the rate for unemployment for Americans with disabilities remains higher when compared with the non-disabled population (Bruyere, Erickson, & VanLooy, 2006). According to the Bureau of Labor Statistics (2017), in 2016, 17.9% of persons with disabilities were employed compared to 65.3% of persons without disabilities. The unemployment rate for persons with disabilities was 10.5% with a minimal increase from the previous year while the rate for persons without disabilities declined by 12.5%. Forty-seven percent of persons with a disability were ages 65 and older, only 15% of those with no disability occupied this age group (Bureau of Labor Statistics, 2017). Those with higher education are more likely to be employed among both groups; however, persons with disabilities were still less likely to be employed than those without disabilities across all age groups and educational levels. Thirty-four percent of persons with disabilities were employed part time as opposed to 18% of the non-disabled population (Bureau of Labor Statistics, 2017). Despite the efforts to introduce disability policy to enhance employment for persons with disabilities, the disparities continue (Bruyere, 2000).

The Americans with Disabilities Act (ADA) of 1990 is a federal law that provides civil rights protections to individuals with disabilities by promising equal opportunity for individuals with disabilities in public accommodations, employment, transportation, State

and local government services, and telecommunications. Title I of the ADA addresses employment for persons with disabilities pertaining to employers with 15 or more employees from state and local governments, private employers, employment agencies, and labor unions. The ADA prohibits discrimination against qualified individuals with disabilities in all employment related practices including the application process, hiring, advancement, training, leave and fringe benefits (Americans with Disabilities Act, 1990). A qualified individual with a disability refers to an individual who possesses the education, experience and ability to perform the essential functions of the job being sought with or without reasonable accommodations (ADA, 1990).

The ADA Amendments Act of 2008 (ADAAA) came into effect on January 1, 2009. This law changed the definition of disability under the ADA making it easier to establish that an individual has a disability. The U.S. Equal Employment Opportunity Commission (EEOC) was directed to amend their ADA regulations for consistency with the ADAAA (Fact Sheet ADAAA, n.d.). Employers will need to exercise caution before making a final determination regarding employees and applicants with physical or mental impairments as a result of the broader definition of disability of the ADA Amendments Act (Dwoskin & Squire, 2013).

Employers' attitudes and predispositions are crucial to the effect of ADAAA in employment settings. The ADAAA will increase the disability issues in employment settings if employers do not exercise a collaborative, proactive and accommodating attitude that is in harmony with the reformed ADA to avoid lawsuits that can be costly and they are less likely to win (Bradbury & Jacobson, 2013).

The ADA has contributed to the increase in hiring rates for persons with disabilities (Hunt & Hunt, 2004). Interestingly, Hernandez, Keys and Balcazar (2003) found that employer

knowledge regarding the ADA is limited. The results in their study found a correlation between level of education and knowledge of ADA. Participants with graduate or college level education scored higher in ADA knowledge when compared to participants with high school education levels. These findings are in support of the notion that individuals with higher education are more likely knowledgeable about civil rights law (Hernandez, Keys, & Balcazar, 2003).

In addition to The Americans with Disabilities Act, the Rehabilitation Act of 1973 is another federal civil rights law that guarantees equal employment opportunity for persons with disabilities. Section 501 requires affirmative action and nondiscrimination in employment by federal agencies of the executive branch. Section 503 requires affirmative action and prohibits employment discrimination by Federal government contractors and subcontractors with contracts of more than \$10,000 (Rehabilitation Act, 2012). Section 504 prohibits discrimination under programs that receive federal financial assistance or the United States Postal Service (Section 504, Rehabilitation Act of 1973, 1978).

Bruyere, Erickson, and VanLooy, (2006) found that larger businesses are more likely to have made accommodations for employees with disabilities and are more knowledgeable with providing accommodations. Larger businesses are more concerned with attitudes and stereotypes towards persons with disabilities and smaller businesses are more concerned with cost of accommodations. Barriers to employment for persons with disabilities regardless of business size were perceived lack of training and lack of knowledge of what accommodations to provide. Similarly, Hountenville and Kalargyrou (2012) found that larger businesses are more likely to recruit and hire persons with disabilities when compared to smaller businesses and large businesses appear to be less concerned with cost when compared to small businesses.

Kay, Jans and Jones (2011) found various reasons that employers might not retain, hire or accommodate employees with disabilities. The most salient barriers for not hiring or retaining employees with disabilities are concerns about the cost of providing reasonable accommodations, not knowing how to address the needs of a person with a disability and fear of not being able to discipline a person with a disability for poor performance due to fear of potential law suits. Other areas of concern are lack of knowledge regarding the capabilities of persons with disabilities, knowledge of discrimination laws and job performance.

The lack of skills and experience to perform the job tasks as well as the cost of accommodating workers with disabilities is also a common concern among businesses in hiring persons with disabilities. Moreover, businesses that actively recruit persons with disabilities were more concerned with how to take disciplinary action and lack of knowledge about persons with disabilities. Businesses that actively recruit persons with disabilities are less likely to report concerns and challenges. Nonetheless, the challenges and concerns are the same for businesses that recruit employees with disabilities and those that do not (Houtenville & Kalargyrou, 2012).

Relatedly, Henry, Petkauskos, Stanislawzyk, and Vogt (2013) examined employer challenges in hiring persons with disabilities. Consistent with similar research, employers assume that a person's disability will have a negative impact on job performance. Employers noted that job candidates with disabilities were perceived to emphasize what they cannot do during job interviews. Employers are concerned that co-workers may be uncomfortable working with a person with a disability. Some employers fear saying something inappropriate and also believe that a person with a disability will require more of their time and energy and will only add to their responsibilities. In addition, employers feared legal reprisals if they fire an employee

with a disability. Employers also expressed a lack of awareness of resources to recruit professionals with disabilities.

Conversely, Gilbride, Stensrud, Vადergoot and Golden (2003), examined employer characteristics that are in support of and willing to hire persons with disabilities. They found that employers view inclusion of persons who are different as part of their organization's success and found their sample of employers focused on the employee's ability to perform essential job tasks, and not the disability itself. Moreover, employers who are experienced with working with different ethnic groups viewed disability as another form of diversity. Similarly, Irvine and Lupart (2008), found that inclusion of employees with disabilities in the workplace benefited employers as well as other employees. Employers described employees with disabilities as role models for persons with and without disabilities. Employers described the interaction with co-workers as positive and perceive workers with disabilities as efficient, dedicated and hard working.

Simonsen, Luecking and Fabian (2015) examined employer preferences in hiring youth with disabilities. Their findings suggest that employer's perspective of persons with disabilities professionalism, ability to perform the job tasks and readiness for employment interviews are the main factors in their decision to hire persons with disabilities. Interestingly, Hernandez and McDonald (2010), found that when comparing employees with and without disabilities on the following six employment variables: job performance, supervision, tenure, absences, worker's compensation claims and accommodations, there were no statistically significant differences.

Statement of the Problem

According to the Bureau of Labor Statistics (2017), in 2016, 17.9% of persons with disabilities were employed compared to 65.3% of persons without disabilities. Persons with

disabilities were less likely employed than those without disabilities across all age groups and educational levels. The rate in unemployment for Americans with disabilities remains higher when compared with the non-disabled population (Bruyere et al., 2006). This disparity is unlikely to change with the current hiring practices in the United States (Kurata & Brodwin, n.d.).

The ADA prohibits discrimination in all employment related practices and requires employers to provide reasonable accommodations to employees with disabilities unless providing accommodations would cause undue hardship (Americans With Disabilities Act, 1990). However, Hernandez et al. (2003), found that employer knowledge regarding the ADA is limited.

Research consistently indicates that barriers for not hiring or retaining employees with disabilities are related to the cost of accommodations (Houtenville & Kalargyrou, 2012; Kay, Jans, & Jones, 2011; Peck & Kirkbride, 2001), fears associated with potential law suits (Fraser, Ajzen, Johnson, Hebert, & Chan, 2011; Henry et al., 2013), lack of knowledge on how to address the needs of persons with disabilities (Houtenville & Kalargyrou, 2012; Kay et al., 2011) and lack of education/knowledge regarding the implications of the ADA when hiring persons with disabilities (Fraser et al., 2011; Hernandez et al., 2003).

Many studies have been conducted and explore employer attitudes towards hiring persons with disabilities. According to Antonak and Livneh (1988), assessing attitudes toward persons with disabilities is complicated but necessary to improve the knowledge and hiring practices of this traditionally marginalized group. There has been improvement in the quality of scales developed over the last 40 years. In the early 1960s, two instruments were developed that are still used; the Attitude Toward Disabled Persons scale (ATDP) and the Opinions about Mental Illness

scale (OMI). These authors note that attitudes towards persons with disabilities have been impacted in part by laws that are currently in place related to discrimination against persons with disabilities. These changes render some of the existing scales inadequate and calls for modification of existing scales and/or development of new ones. In addition, the reliability and validity of existing and newly developed scales must be established. Measurements of attitudes towards people with disabilities are predominantly developed with specific situations in mind and lack validation (Antonak & Livneh, 1988).

Hernandez, Keys, and Balcazar (2000) performed a literature review of employer attitudes towards workers with disabilities and their ADA employment rights. They reviewed a total of 37 studies that were available from 1987 to 1999. Limitations noted for their review of the literature was that the reliability and validity was not reported for some data and self-report bias and social desirability bias can account for participant responses.

More recently, Ju, Roberts, and Zhang (2013) provided a review of research performed between 1999 and 2012 that focused on employer attitudes towards employees with disabilities. The studies considered for their review focus on assessing employer attitudes in charge of hiring, supervision, or terminating employees, measure employer attitudes toward people with disabilities, and were published in peer-reviewed journal articles. Reliability and validity was reported for only five of the studies considered in this review (Ju, Roberts, & Zhang, 2013).

In order to address employer concerns, one must first understand the factors that influence employers' decision to hire and retain persons with disabilities (Hartnett, Stuart, Thurman, Loy, & Batiste, 2011).

The high unemployment rate among persons with disabilities is, to a certain extent, a result of misconceptions regarding hiring persons with disabilities and associated fears of

legalities that come into play when hiring or not hiring this population. Barriers to employment of persons with disabilities result from misconceptions regarding the capabilities and employability potential of persons with disabilities and fears and concerns associated with laws that are in favor of hiring persons with disabilities. Research indicates that barriers to employment of persons with disabilities stem from lack of knowledge of the ADA and lack of knowledge of resources and incentives available to assist employers with facilitating employment opportunities for persons with disabilities. In addition, lack of knowledge related to the implications of disability, both physical and mental in terms of employment potential is a barrier to employment of persons with disabilities. In order to address the aforementioned misconceptions, fears, lack of knowledge and overall associated hesitance to hire and retain persons with disabilities, there is a need to develop an intervention plan that will dissipate these barriers to employment for persons with disabilities. To accomplish this goal, a reliable and valid scale that highlights constructs/factors that contribute to employers' disposition to hire and retain persons with disabilities is necessary.

Purpose of the Study

Despite the laws that are in place to ensure equal employment opportunities for persons with disabilities, there continues to be a disparity in employment rates for persons with disabilities when compared to persons without disabilities. "Employment is a critical factor in liberating people with disabilities and ensuring their equal participation in American Society" (Bruyere, 2000, p. 27).

The purpose of this study is to survey and explore factors that influence employers' disposition to hire and retain persons with disabilities and devise a scale that highlights construct/factors that will guide professionals involved directly and indirectly in removing

barriers and facilitating employment for persons with disabilities. Understanding what factors impact an employer's decision to hire and or retain a person with a disability will guide professionals that provide direct job placement assistance/services in developing an intervention plan that is conducive to employers being more receptive to hiring persons with disabilities. Hiring managers need to be educated regarding the misconceptions of employing persons with disabilities in order to reduce barriers to hiring persons with disabilities (Kulkarni & Lengnick-Hall, 2013). To assess factors that influence employers' disposition to hire and retain persons with disabilities, a survey instrument was developed based on review of the literature. Items developed for the survey instrument are related to attitudes towards hiring and retaining persons with disabilities and other factors that research indicates are contributors to employer hesitation to hire and retain persons with disabilities. The survey instrument that was developed is intended to capture a holistic inclusion of the areas that may have an impact on employers' disposition to hire and retain persons with disabilities. The goal is to develop a reliable and valid scale that assesses specific areas that need to be addressed to remove barriers to employment such as employer attitudes, fears and concerns as well as knowledge of disability, ADA and knowledge of resources that can contribute to employers being more receptive to hiring and retention of persons with disabilities. To achieve this goal, an exploratory factor analysis was performed on the survey response items to establish reliability and validity. Factor analysis is a data reduction technique that is used to reduce a large set of variables to groups of related variables called factors. Factor analysis is a statistical procedure that is used for the development and evaluation of instruments (Huck, 2014; Pallant, 2013; Warner, 2013).

This study raises the following series of research questions and related hypotheses to assess the factor structure and internal consistency of the scale that assesses factors that contribute to employers' disposition to hire and retain persons with disabilities:

Q1: Do the items in the instrument account for a significant amount of variance in the scale?

Hypothesis 1:

Ho: The factor structure of the instrument will account for most of the variability in the construct.

Ha: The factor structure of the instrument will not account for most of the variability in the construct.

Q2: Which, if any of the items in the instrument help identify factors associated with employers' fears and concerns related to hiring persons with disabilities?

Hypothesis 2:

Ho: The instrument will identify factors associated with employer's fears and concerns related to hiring persons with disabilities.

Ha: The instrument will not identify factors associated with employer's fears and concerns related to hiring persons with disabilities.

Q3: Which, if any of the items in the instrument help identify factors associated with knowledge of ADA and government resources that influence employers' disposition to hire and retain persons with disabilities?

Hypothesis 3:

Ho: The instrument will identify factors associated with knowledge of ADA and government resources that influence employers disposition to hire and retain persons with disabilities.

Ha: The instrument will not identify factors associated with knowledge of ADA and government resources that influence employers disposition to hire and retain persons with disabilities.

Q4: Which, if any of the items in the instrument help identify factors associated with knowledge of disability types?

Hypothesis 4:

Ho: The instrument will identify factors associated with knowledge of disability types.

Ha: The instrument will not identify factors associated with knowledge of disability types.

Limitations and Scope of the Study

Several limitations should be noted for this study. The questionnaires were disseminated in the border region of South Texas consisting of Cameron and Hidalgo counties. According to the Census Bureau’s population estimates, Cameron and Hidalgo counties combined had an estimated population of 1,247,119 during 2012-2016 (U.S. Census Bureau, 2016). This region is within close proximity to the Mexican border. The predominant culture in this region is Hispanic, the views of Hispanics in this region are not necessarily reflective of Hispanics from regions further north of the border or other ethnic/racial groups. Most of the persons in hiring positions are presumed to be Hispanic and thus generalizability to regions where this is not the case would not be plausible. When in person visitation to businesses was performed, participants self-identified as persons directly in charge of hiring, proof was not required or requested. Similarly, when participants responded via email there was no assurance that the person in charge of hiring actually responded to the survey. Generally, persons in charge of hiring have busy schedules and thus they may have rushed through the responses. Self-reporting and providing socially acceptable responses is also a possible limitation. The participants considered for this study are limited to the businesses located in Cameron and Hidalgo counties. Finally, the

survey items considered for this study were developed based on review of the literature to devise a new survey instrument and thus reliability and validity has not been established.

Definitions and Terminology

A qualified individual with a disability: Refers to an individual who possesses the education, experience and ability to perform the essential tasks of the employment position being sought with or without reasonable accommodations.

Assistive technology (AT): Any item, piece of equipment, or product system that is used to increase, maintain, or improve functional capabilities of individuals with disabilities. Examples include message boards, screen readers, refreshable Braille displays, keyboard and mouse modifications, and head pointers.

Attitude: A predisposition or a tendency to respond positively or negatively towards a certain idea, object, person, or situation. Attitude influences an individual's choice of action, and responses to challenges, incentives, and rewards (together called stimuli). Four major components of attitude are (1) Affective: emotions or feelings. (2) Cognitive: belief or opinions held consciously. (3) Conative: inclination for action. (4) Evaluative: positive or negative response to stimuli.

Direct threat: Significant risk of substantial harm to the health or safety of the individual or others that cannot be eliminated or reduced by reasonable accommodation (as defined in Title I of the Americans with Disabilities Act (ADA)).

Disability: A physical or mental impairment that substantially limits one or more major life activities, a record of such an impairment, or being regarded as having such an impairment.

Equal Employment Opportunity Commission (EEOC): Federal agency primarily responsible for enforcement of Title I of the Americans with Disabilities Act (ADA), which deals with employment discrimination.

Equal Opportunity: An opportunity for people with disabilities to participate and benefit from programs and services that is equal to and as effective as the opportunity provided to others.

Essential job function: Fundamental job duties of the employment position the individual with a disability holds or desires.

Impairment: A physical impairment is a physiological disorder or condition, cosmetic disfigurement or anatomical loss affecting one or more of the body systems. A mental impairment is any mental or psychological disorder.

Individual with a Disability: A person who has a physical or mental impairment that substantially limits one or more of the major life activities of such individual or a record of such an impairment or is regarded as having such an impairment.

Qualified individual with a disability: A person with a disability who satisfies the requisite skill, experience, education and other job-related requirements of the employment position such individual holds or desires, and who, with or without reasonable accommodation, can perform the essential functions of such position.

Reasonable accommodation: A modification or adjustment to a job, the work environment, or the way things usually are done that enables a qualified individual with a disability to enjoy an equal employment opportunity.

The Americans with Disabilities Act (ADA) of 1990: Is a federal law that provides civil rights protections to individuals with disabilities by promising equal opportunity for individuals with

disabilities in public accommodations, employment, transportation, State and local government services, and telecommunications.

The Rehabilitation Act of 1973: Is a Federal civil rights law that guarantees equal employment opportunity for persons with disabilities.

Title 1 of the ADA: Addresses employment for persons with disabilities. Title 1 applies to employers with 15 or more employees from State and local governments, private employers, employment agencies, and labor unions.

Undue hardship: An action that requires "significant difficulty or expense" in relation to the size of the employer, the resources available, and the nature of the operation. The concept of undue hardship includes any action that is unduly costly, extensive, substantial, disruptive, or would fundamentally alter the nature or operation of the business. Accordingly, whether a particular accommodation will impose an undue hardship must always be determined on a case-by-case basis.

CHAPTER II

REVIEW OF THE LITERATURE

Chapter II of the proposed study is the literature review. The literature review will serve as a basis and guide to the development of a new scale that comprises more than attitudes. The scale that will be designed will attempt to assess other areas that can influence employers disposition to hire and retain persons with disabilities. The goal is to develop a scale that will assess areas of concern and possibly weaknesses related to knowledge that is necessary to make a decision about hiring and or retaining employees with disabilities. A thorough review of the literature related to employer attitudes related to hiring persons with disabilities will shed light on what attitudes and areas will guide the development and selection of items to be considered when developing the scale. This chapter encompasses statistics for unemployment rates for persons with disabilities and factors that influence employers disposition to hire and retain persons with disabilities from different perspectives. The impact of experience with employees with disabilities, costs and benefits of accommodations and pre-conceived notions by disability type will be discussed in terms of the impact on employer's willingness to hire employees with disabilities. Employers' perceived benefits and barriers, concerns, and misconceptions related to employees with disabilities will also be addressed. Laws that favor hiring of person's disabilities and employer resources and incentives for hiring persons with disabilities will be discussed as well as the impact on employer's disposition to hire and retain persons with disabilities. In

addition, considerations for requesting accommodations and the impact of pre-conceived notions by disability type in terms of employability from employers' perspective will be reviewed. Lastly, the literature review ends with an overview of studies that have focused on employer attitudes towards employees with disabilities and concerns regarding the absence of reliability and validity of most survey instruments that have been developed and used.

Statistics for Unemployment Rates

The rate for unemployment for Americans with disabilities remains higher when compared with the non-disabled population (Bruyere et al., 2006). According to the Bureau of Labor Statistics (2017), in 2016, 17.9% of persons with disabilities were employed compared to 65.3% of persons without disabilities. Those with higher education are more likely to be employed among both groups; however, persons with disabilities were still less likely to be employed than those without disabilities across all age groups and educational levels (Bureau of Labor Statistics, 2017). Despite the efforts to introduce disability policy to enhance employment for persons with disabilities the disparities continue (Bruyere, 2000; Hotchkiss, 2004).

In the border region of South Texas consisting of Cameron and Hidalgo counties there was an estimated population increase of 90,989 from April 2010 (1,180,989) to July 2016 (1,271,978) which reflects an increase of 7.7% in population (U.S. Census Bureau, 2016). Based on the 2016 Census, 66.9% of the population (835,097) individuals comprise ages 18 and older who are considered to participate in employment in this area.

Employment status for Cameron and Hidalgo counties for 2016 indicate that of 449,717 employed individuals, 23,576 (5.24%) are classified with a disability compared to 426,141 (94.75%) who do not have a disability. The unemployment rate indicates that of a total of 35,135 individuals who are unemployed, 3,555 (10.11%) have a disability compared to 31,580 (89.88%)

who do not have a disability (U.S. Census Bureau, 2016). Moreover, of 311,519 who are employed full time, 12,769 (4.09%) are classified with a disability compared to 298,750 (95.90%) of persons without a disability. A total of 177,788 are employed part time, of which 14,228 (8.00%) are classified with a disability compared to 163,560 (91.99%) of persons without a disability (U.S. Census Bureau, 2016).

Laws in Favor of Equal Employment Opportunity

Employers are hesitant to employ persons with disabilities even though there are laws that prohibit employment discrimination (Hernandez et al., 2008). The Americans with Disabilities Act (ADA) of 1990 is a federal law that provides civil rights protections to individuals with disabilities by promising equal opportunity for individuals with disabilities in public accommodations, employment, transportation, State and local government services, and telecommunications. Title I of the ADA addresses employment for persons with disabilities pertaining to employers with 15 or more employees from state and local governments, private employers, employment agencies, and labor unions. The ADA prohibits discrimination in all employment related practices including the application process, hiring, advancement, training, leave and fringe benefits and discrimination is prohibited against qualified individuals with disabilities (Americans With Disabilities Act, 1990).

A qualified individual with a disability refers to an individual who possesses the education, experience and ability to perform the essential functions of the job being sought with or without reasonable accommodations. The law requires employers to provide reasonable accommodations to employees with disabilities unless providing accommodations would cause undue hardship (Americans With Disabilities Act, 1990).

The Americans with Disabilities Act Amendments Act (ADAAA) of 2008 went into effect on January 1, 2009 with significant changes to how disability was interpreted before the act. The changes came about because the courts interpreted the definition of disability in a way that many were not covered, which resulted in many not being protected from discrimination. Therefore, Congress changed the definition of disability so that more persons are covered and thus prevent more discrimination. The challenge now is understanding the implications of these changes. These changes suggest that employers should focus on providing accommodations and avoiding discrimination instead of who has a disability (Accommodation and Compliance Series: The ADA Amendments Act of 2008, n.d.). Employers are experiencing more requests for accommodations and they are unclear on what constitutes a reasonable accommodation for employees with disabilities (Dwoskin & Squire, 2013).

Congress authorized the EEOC to revise its regulations related to the definition of disability to ensure consistency with the purpose of the ADAAA. The ADAAA did not change the definition of disability. However, the interpretation of words used in the definition of disability were changed in terms of how they apply to persons with disabilities. Disability is defined as: A physical or mental impairment that substantially limits one or more major life activities of such individual; a record of such an impairment; or being regarded as having an impairment (Accommodation and Compliance Series: The ADA Amendments Act of 2008, n.d.). The definition of impairment remains the same with the exception that the ADAAA added references to the immune system and the circulatory system because they are mentioned in the definition of “major bodily functions” and the EEOC wanted to be consistent. Major Life Activities was expanded to include Bodily functions. The operation of a major bodily function includes the operation of an individual organ within a body system. The legal system was

challenged with whether bodily functions were classified as major life activities and thus congress clarified by stating in the ADAAA that bodily functions are major life activities. The EEOC did not define substantially limits, instead a guidance referred to as rules of construction was provided (Accommodation and Compliance Series: The ADA Amendments Act of 2008, n.d.).

The rules of construction reflect Congress's intent to establish predictable, consistent, and workable standards when determining if an individual is substantially limited in performing a major life activity. The term substantially limits requires a lower standard in relation to functional limitation than before this Act. Substantially limits is to be interpreted broadly, to the maximum extent possible by the terms of the ADA. An individualized assessment is required to determine if an impairment substantially limits a major life activity as was required before this act. In determining if an impairment substantially limits a major life activity, ameliorative effects of mitigating measures (e.g. hearing aids and medication) will not be considered with the exception of eyeglasses or contact lenses. Impairments that are episodic or in remission are considered disabilities if when active it would substantially limit a major life activity. In compliance with Congress's directive that the primary focus of the ADA should be on whether discrimination occurred, determining if there is a disability should not require extensive analysis. Moreover, an individual must have a disability or record of a disability in order to qualify for reasonable accommodations (Fact Sheet ADAAA, n.d.). The ADAAA clarifies that individuals meeting the regarded as part are not entitled to accommodations (Accommodation and Compliance Series: The ADA Amendments Act of 2008, n.d.).

In addition to The Americans with Disabilities Act, the Rehabilitation Act of 1973 is another federal civil rights law that guarantees equal employment opportunity for persons with

disabilities. Section 501 requires affirmative action and nondiscrimination in employment by federal agencies of the executive branch. Section 503 requires affirmative action and prohibits employment discrimination by Federal government contractors and subcontractors with contract of more than \$10,000 (Rehabilitation Act, 2012). Section 504 prohibits discrimination under programs that receive federal financial assistance or the United States Postal Service (Section 504, Rehabilitation Act of 1973, 1978).

Although employers have been challenged with effectively meeting employees with disabilities requests for accommodations, providing reasonable accommodations is associated with enhanced performance, satisfaction and job tenure (Gold, Oire, Fabian, & Wewiorski, 2012). Bruyere et al. (2006) used a Cornell University survey of human resource professionals to explore compliance with the ADA based on employer size. Results of this survey suggest that larger businesses are more likely to have made accommodations for employees with disabilities. In addition, larger companies are more knowledgeable and experienced with providing accommodations. A possible explanation for this phenomenon is that large businesses are more likely to recruit and hire persons with disabilities. Larger businesses are more concerned with attitudes and stereotypes towards persons with disabilities. Smaller businesses are more concerned with cost of accommodations (Bruyere et al., 2006; Houtenville & Kalargyrou, 2012). Barriers to employment and advancement for persons with disabilities for both large and small businesses were perceived lack of experience, skills and training and lack of knowledge of what accommodations to provide (Bruyere et al., 2006). Similarly, Houtenville and Kalargyrou (2012) found that larger businesses are more likely to recruit and hire persons with disabilities when compared to medium-size and small businesses.

Hernandez, Keys, and Balcazar (2004) studied private and public sector representative's attitudes toward disability rights. Their study consisted of 133 participants, 109 from the private sector and 24 from the public sector. Seventy-seven percent of participants had prior contact with persons with disabilities through family, relatives, friends, volunteering/work, and 21% reported having an employee with a disability. They found no significant differences between participant's attitudes towards disability rights among those with formal education and less education. In addition, they found that prior work experience with persons with disabilities is associated with positive attitudes towards disability rights. "A significant positive relationship was found between knowledge of the ADA and attitudes toward this law" (Hernandez, Keys, & Balcazar, 2004, p. 33).

Hunt and Hunt (2004) studied the impact of educational intervention in changing attitudes toward persons with disabilities. They found that an educational intervention significantly impacted participant's knowledge and attitudes in relation to persons with disabilities. Hiring managers need to be educated regarding the misconceptions of employing persons with disabilities in order to reduce barriers to hiring persons with disabilities (Kulkarni & Lengnick-Hall, 2013). The level of manager commitment to employing persons with disabilities has been found to be consistent with the level of knowledge about the ADA and accommodations (Chan et al., 2010; Hernandez et al., 2008).

Employer Concerns about Hiring Persons with Disabilities

Employers continue to voice concerns regarding hiring and retaining persons with disabilities (Gaunt, & Kulkarni, 2008; Hartnett et al., 2011; Lengnick-Hall). Kay et al. (2011) found various reasons that employers might not retain, hire or accommodate employees with disabilities. The most salient barriers for not hiring or retaining employees with disabilities are

concerns about the cost of providing reasonable accommodations, not knowing how to address the needs of a person with a disability and fear of not being able to discipline a person with a disability for poor performance due to the fear of potential law suits. Other areas of concern are lack of knowledge regarding the capabilities of persons with disabilities, knowledge of discrimination laws and job performance (Hernandez et al., 2008; Kay et al., 2011). Employers who have no experience with persons with disabilities believe that performance and productivity of persons with disabilities when compared with persons without disabilities is lower despite the research that indicates the differences are insignificant (Lengnick-Hall et al., 2008).

The lack of skills and experience to perform the job tasks as well as the cost of accommodating workers with disabilities is a common concern among businesses in hiring persons with disabilities (Houtenville & Kalargyrou, 2012; Lengnick-Hall et al., 2008). Moreover, businesses that actively recruit persons with disabilities were more concerned with how to take disciplinary action and lack of knowledge about persons with disabilities. Businesses that actively recruit persons with disabilities are less likely to report concerns and challenges. Nonetheless, the challenges and concerns are the same for businesses that recruit employees with disabilities and those that do not (Houtenville & Kalargyrou, 2012).

Similarly, Henry et al. (2013) examined employer's challenges in hiring persons with disabilities. Consistent with similar research, employers assume that a person's disability will have a negative impact on job performance. Employers noted that job candidates with disabilities were perceived to emphasize what they cannot do during job interviews. Employers are concerned that co-workers may be uncomfortable working with a person with a disability. Some employers fear saying something inappropriate and also believe that a person with a disability will require more of their time and energy and will only add to their responsibilities. In addition,

employers feared legal reprisals if they fired an employee with a disability. Employers also expressed a lack of awareness of resources to find professionals with disabilities.

Peck and Kirkbride (2001) discuss various fears associated with hiring and advancement of persons with disabilities. These authors elaborated on fears experienced by employers when hiring persons with disabilities associated with the cost of hiring, additional supervision, loss of productivity, being stuck with an employee with a disability and “fear of damaged goods” (Peck & Kirkbride, 2001, p. 74). Fears associated with hiring are related to the unknown cost of accommodations (Houtenville & Kalargyrou, 2012; Lengnick-Hall et al., 2008; Peck & Kirkbride, 2001), which can be overcome by educating employees about ADA (Hunt & Hunt, 2004; Peck & Kirkbride, 2001). Fears associated with supervision and productivity are also discussed. With regards to supervision, employers believe they have to dedicate additional supervision time to a person with a disability which will reduce their time to take care of other responsibilities (Henry et al., 2013; Peck & Kirkbride, 2001). In relation to productivity, employers fear they will have to employ different standards of productivity for persons with disabilities. However, if employers invest extra time to train employees with disabilities, the results in terms of productivity and savings in training and recruiting another employee are worth it (Peck & Kirkbride, 2001).

Employers also fear that once they hire a person with a disability and they cannot perform the essential functions of a job they cannot let that individual go, because they are protected (Henry et al., 2013; Peck & Kirkbride, 2001). Employers need to know they do not have to accept an employee who does not meet their productivity standards regardless of the employee having a disability or not. An employer needs to know they are not getting “damaged goods” (Peck & Kirkbride, 2001, p. 74), making reference to a person with a disability who

cannot perform the job. Employers need to take in consideration the ability of the persons with a disability and not the disability itself (Peck & Kirkbride, 2001).

Similarly, Fraser et al. (2010), examined factors affecting employers' intention to hire persons with disabilities within the context of company size. These authors found that small company employers consistently reported positive experiences with employing persons with disabilities (Fraser et al., 2010). Although, some employers perceived persons with disabilities as unable to meet the performance standards, they valued the commitment, loyalty and reliability they bring to employment (Fraser et al., 2010; Groschl, 2012). Employers also expressed fears associated with losing revenue and litigation (Fraser et al., 2010, 2011). The fears of losing revenue were attributed to the belief that additional training would be required to train an employee with a disability to complete job tasks. On the other hand, additional training would be required for the supervisors to be able to train the employee with a disability. The fears of litigation were attributed to being sued for wrongful termination of an employee with a disability and the costs associated with legal reprisals.

Some employers expressed concern related to structural barriers and a lack of resources to make the necessary accommodations for persons with disabilities. Employers of mid-size and large companies did not have the same concerns as the small companies. Large and mid-size employers were not concerned with litigation or losing revenue. Knowledge about government incentives and the low cost of accommodations could mitigate the concerns expressed by small companies (Fraser et al., 2010). Interestingly, Fraser et al. (2011) found that less than half of 92 employers surveyed had training related to the Americans with Disabilities Act.

The Impact of Experience with Hiring Persons with Disabilities

Managers concerns about hiring persons with disabilities are associated with negative experiences and or lack of experience with employees that have a disability (Hernandez et al., 2008). Conversely, positive employer attitude result from a positive experience with employees with disabilities in the workforce (Gilbride, Stensrud, Ehlers, Evans, & Peterson, 2000; Hernandez, Keys, & Balcazar, 2000). Similarly, other studies found that employers with previous experience in working with persons with disabilities have a more positive outlook of persons with disabilities and are more likely to hire this population (Gilbride et al., 2000; Unger, 2002). Interestingly, a study conducted by McManus, Feyes, and Saucier (2010) to explore attitudes toward individuals with intellectual disabilities found that positive attitudes towards this population are associated with the quality of contact but not with quantity of contact. The quality of previous interactions seems to predict whether an employer will have a positive or negative attitude towards persons with intellectual disabilities (McManus, Feyes, & Saucier, 2010). Similarly, Copeland, Chan, Bezyak, and Fraser (2010), found that higher levels of experience in working with persons with disabilities can have a positive impact in employer's perceptions about employees with disabilities productivity.

Luecking (2003) examined employer perspectives on hiring and accommodating youth in transition. He found that employer's express concerns related to youths' lack of skills, immaturity and unreliability before they have the experience of working with youth. However, in most cases employers change their attitudes about youths' productivity once they have actually experienced working with the youth (Luecking, 2003). The disability is not the main concern for employers with experience in hiring persons with disabilities, once persons with disabilities are hired performance becomes the focus (Luecking, 2008).

Ju, Zhang, and Pacha (2011) examined employability skills valued by employers for entry level employees, and if their expectations differ for persons with and without disabilities. Participants consisted of 168 employers from different industries. They found four skills that are valued for both groups. The four skills valued include: “demonstrating personal integrity/honesty in work, ability to follow instructions, ability to show respect for others and ability to be on time” (Ju, Zhang, & Pacha, 2011, p. 7). These finding indicate that employers value these employability skills regardless of disability status. Differences were noted in the fifth skill that employers value for each of these groups. For persons without disabilities, the fifth valued skill was the ability to read with understanding. Interestingly, for persons with disabilities, ability to show high regard for safety procedures was the fifth most valued skill. This could be indicative that employers perceive that all persons with disabilities pose a safety concern (Ju et al., 2011).

Cost and Benefits of Accommodations

Most discrimination claims under ADA are related to employment retention and advancement opportunities not with hiring (McMahon et al., 2008; Rumrill Jr., Fitzgerald, & McMahon, 2010). Unger and Kregel (2003) explored employer’s knowledge regarding the use of accommodations. They indicate that supervisor’s knowledge of accommodations, their ability to identify supports and having the authority to provide accommodations are factors that can impact employment retention and advancement of persons with disabilities. These authors found that most of the supervisors surveyed indicated that most of the accommodations cost less than \$100 and although less common, accommodations consisting of structural changes tend to elevate the cost (Unger & Kregel, 2003). In addition, they found that most accommodations are related to employees work areas consisting of equipment and work stations followed by modifications to work schedules (Solovieva, Dowler, & Walls, 2011; Unger & Kregel, 2003).

Relatedly, Solovieva, Dowler, and Walls (2011), explored employer benefits of providing accommodations to persons with disabilities. Ninety percent of employers surveyed indicated that providing accommodations contributed to retention of qualified employees. Fifty percent reported that accommodations increased productivity and avoided expenses related to training a new employee. Improved attendance and increased diversity were also noted. Copeland et al. (2010), found that “positive attitudes toward accommodations and equal treatment of people with disabilities also leads to a stronger belief about reasonableness of accommodations in the workplace” (Copeland et al., 2010, p. 432).

Similarly, an analysis of costs and benefits of providing accommodations that consisted of 890 employer interviews was performed. Results indicate 87.1 % of interviewed employers reported that accommodations resulted in employee retention and 16.7% reported that accommodations contributed to hiring qualified employees with disabilities. In addition, 73.8% reported a positive impact on productivity, and over half indicated the cost of training a new employee was eliminated and an increase in attendance. These findings suggest that employers acknowledge the effectiveness of accommodations in reducing barriers to employment for persons with disabilities (Schartz, Hendricks, & Blanck, 2006).

Employer Benefits of Hiring Persons with Disabilities

Conversely, Gilbride et al. (2003), examined employer characteristics that are in support of and willing to hire persons with disabilities. They found that employers view inclusion of persons who are different as part of their organization’s success and found their sample of employers focused on the employee’s ability to perform essential job tasks, and not the disability itself. Moreover, employers who are experienced with working with different ethnic groups viewed disability as another form of diversity. Similarly, Irvine and Lupart (2008), found that

inclusion of employees with disabilities in the workplace benefited employers as well as other employees. Employers described employees with disabilities as role models for persons with and without disabilities. Employers described the interaction with co-workers as positive and perceive workers with disabilities as efficient, dedicated and hard working.

Simonsen et al. (2015) examined employer preferences in hiring youth with disabilities. Their findings suggest that employer's perspective of persons with disabilities professionalism, ability to perform the job tasks and readiness for employment interviews are the main factors in their decision to hire persons with disabilities. Interestingly, Hernandez and McDonald (2010), found that when comparing employees with and without disabilities on six employment variables, job performance, supervision, tenure, absences, worker's compensation claims and accommodations there were no statistically significant differences.

Employer Resources and Incentive for Hiring Persons with Disabilities

Mcloughlin (2002) examined factors that employers consider when hiring persons with disabilities. Results indicate that employers who are inexperienced in hiring persons with disabilities do not actively recruit this population due to lack of knowledge directly related on how to access employees with disabilities. In addition, employers who lack the experience of hiring persons with disabilities were unaware of governmental services and financial incentives that were available to assist employers with hiring persons with disabilities. Employers who lack the experience of hiring persons with disabilities for the most part have a negative outlook towards hiring persons with disabilities. In contrast, employers who have experience with hiring persons with disabilities demonstrate satisfaction with employees with disabilities (Mcloughlin, 2002). The lack of knowledge regarding available incentives and resources for employers related

to hiring persons with disabilities seems unjustified in light of the research possibilities that come with access to internet.

There are different internet resources for employers that can educate regarding the various resources and incentives available to employers for hiring persons with disabilities. For example, “The Office of Disability Employment Policy’s (ODEP) mission is to develop and influence policies and practices that increase the number and quality of employment opportunities for people with disabilities” (ODEP, n.d., para. 2). The ODEP website contains a frequently asked questions section that can assist employers by guiding them to resources that can assist with various concerns related to hiring persons with disabilities. How to find qualified applicants with disabilities, tax incentives for hiring persons with disabilities, workplace accommodations, employer obligations under Title I of the ADA and disability awareness materials for employers are available on this website.

“The Job Accommodation Network (JAN) is the leading source of free, expert, and confidential guidance on workplace accommodations and disability employment issues. The Job Accommodation Network shows employers how to capitalize on the value and talent that people with disabilities add to the workplace” (JAN Web Team, 2018 para. 1). The Job Accommodation Network is a service of the U.S. Department of Labor’s Office of Disability Employment Policy (ODEP). A study conducted by JAN illustrates the positive outcomes of providing accommodations for persons with disabilities in the workplace. Providing accommodations results in various benefits such as, employee retention, improved productivity, and a reduction in training and workers’ compensation costs. Of the employers who were surveyed, 58% reported that the accommodations provided cost nothing and 37% reported spending \$500 for a one-time accommodation (Loy, 2015).

The Job Accommodation Network also provides a summary of tax incentives related to accessibility and the employment of people with disabilities. Among the tax incentives available to employers are The Disabled tax credit to help businesses comply with the ADA and The Architectural and Transportation Barrier Removal Deduction to assist with making a facility or a vehicle used for business accessible to persons with disabilities. Moreover, there are Vocational Rehabilitation (VR) programs which can provide on the job training (OJT) that consists of sharing payment for wages for employees with disabilities for a predetermined/negotiated time frame with the expectancy that they will be hired. The Work Opportunity Tax Credit program (WOTC) encourages employers to hire persons with disabilities by reducing their income tax liability (JAN Web Team, 2015). The aforementioned incentives have a specific purpose and employers must meet the required criteria to benefit.

Considerations for Requesting Accommodations

Dong, Oire, MacDonald-Wilson, and Fabian (2012), examined factors that are considered important in providing accommodations from the perspective of employees with disabilities, employers and service providers. Their study consisted of 531 participants who were predominantly educated, 82% reported possessing a bachelor's degree. Half of the participants self-identified as having a disability. The top five factors rated as most important among all groups were: "supportiveness of the employee's direct supervisor, employer's support for requesting accommodations, communication between the employee and employer, employers' understanding of disabilities and ADA eligibility, and the extent to which the accommodations are matched to job requirements" (Dong et al., 2012, p. 185). Interestingly, employers who were less likely to provide accommodations and employees who were less likely to request

accommodations rated the extent to which accommodations match job requirements as very important (Dong et al., 2012).

Noteworthy, according to Schrader, Malzer, and Bruyere (2014), in order for an employer to conform to federal laws that are in favor of hiring and retention of persons with disabilities, an employee with a disability must be willing to disclose his/her disability. Disclosing a disability to employers is the first step towards receiving adequate employment accommodations which contributes to hiring and retention of persons with disabilities (Schrader, Malzer, & Bruyere, 2014). Interestingly, a qualitative study that consisted of 20 participants with a diagnosis of schizophrenia to assess the impact of ADA in their lives found that only 11 participants had knowledge of ADA but only four used ADA. The remaining nine participants reported no knowledge or use of the ADA (Gioia & Brekke, 2003).

Shrader et al. (2014) examined factors that influence persons with disabilities decision to disclose their disability. Results from 780 participants indicate the following factors were rated as very important: “risk of being fired/not hired (73.0% rated this as “very important”). This was followed by concern that the employer may focus on disability (62.0%), the individual may lose health care benefits (61.5%), have limited promotion opportunities (61.1%), the supervisor may not be supportive (60.1%), being treated differently by supervisor/co-workers (57.8 %) and being viewed differently by supervisor/co-workers (53.8 %). Overall fewer than one in three respondents rated a desire for privacy as a very important factor in the decision not to disclose; and fewer than half rated disability does not have an impact on the ability to perform the job as a very important factor in the decision not to disclose (Schrader et al., 2014, p. 244).”

Similar results were obtained by Madaus, Foley, McGuire, and Ruban (2002) who surveyed 132 graduates with learning disabilities who were employed. These authors found that

90% of participants indicated that their learning disorder impacted their work performance in some way. However, 66.3% did not disclose their disability to their employer. Over half of the participants reported no need to disclose and 46.1% indicated that reasons for not disclosing were related to fear of a negative impact on the relationship with their supervisor and coworkers as well as job security (Dalgin & Gilbride, 2003; Madaus, Foley, McGuire, & Ruban, 2002).

Pre-Conceived Notions by Disability Type

“A prototype is an ongoing, cognitive representation of common attributes and distinct characteristics that define an object or person” (McCaughey & Strohmer, 2005, p. 89). With this idea in mind, McCaughey and Strohmer (2005) explored the potential relationships between prototypes, attitudes and the resulting predisposition towards six disability groups. Participants consisted of 122 undergraduate college students enrolled in psychology courses. The disability groups considered for this study were hearing and visual impairments, spinal cord injury, attention-deficit/hyperactivity disorder (ADHD), schizophrenia and intellectual developmental disorder (IDD). Results suggest that there are common misconceptions or overgeneralizations among participant’s prototypes of disability groups. The core prototype characteristics found for each of the disability groups studied were as follows; for hearing impairment, sign language (83%), hearing aid (82%), and speech problems (61%); for visual impairments, contacts/glasses (62%), blind/cannot see at all (59%), heightened reliance of other senses (56%) and seeing eye dog (54%); for spinal cord injury, paralysis (76%), uses/confined to a wheelchair (75%), needs help/dependent on others (69%) and limited mobility/cannot walk (56%); for ADHD, cannot sit still/hyper (90%), cannot concentrate/short attention span (87%), takes medication (70%) and learning disability/difficulty in school (51%); for schizophrenia, takes medicine (51%); and for

IDD, needs help/dependent on others (77%) and slow learner/comprehension problems (72%) (McCaughey & Strohmer, 2005).

Moreover, McCaughey and Strohmer (2005) found that the need for help or dependence on others was associated with visual impairment (44%), IDD (57%) and spinal cord injury (77%). Interestingly, there was only one core characteristic for schizophrenia which was indicated by only 51% of participants. In contrast, for spinal cord injury, IDD and ADHD between 75 and 90 percent of participants identified core characteristics. This suggests that participants have a limited prototype of schizophrenia when compared to spinal cord injury, IDD and ADHD. A person with schizophrenia was described as harmful and dangerous to self and others by 37% of the participants (McCaughey & Strohmer, 2005; Scheid, 2005). Participants from a study consisting of self-identified persons with psychiatric disabilities expressed concern about the stigma and fear associated with the violent behaviors as portrayed by the media (Dalgin & Gilbride, 2003). Employers perceptions of mental illness are associated with cognitive inability to make decisions and inability to deal with stress or pressure (Scheid, 2005).

Similarly, Gouvier, Sytsma-Jordan, and Mayville (2003) conducted a study that suggests stereotypes and discrimination vary by disability type. The disability types considered for this study were back injury, chronic mental illness, developmental disability, and closed head injury. These authors found that applicants with back injury were rated more positively than applicants with head injury, chronic mental illness and developmental disabilities in interpersonal skills, job performance and employability. Applicants with a head injury and mental illness received significantly less positive ratings than the applicant with a developmental disability. Applicants with back injury were more likely to be hired than applicants with the other disability types and applicants with chronic mental illness were less likely selected when compared to applicants

with developmental disabilities and closed head injury. These findings suggest that applicants with a physical disability have a higher probability of being hired when compared to applicants with mental illness (Gouvier, Sytsma-Jordan, & Mayville, 2003). These findings are consistent with research that suggests that persons with physical disabilities are rated more favorably than persons with mental disabilities (Dalgin & Bellini, 2008; Gouvier et al., 2003; Ren, Paetzold, & Colella, 2008).

Employers' attitudes surveys towards hiring persons with disabilities

There is a plethora of research that focuses on employer attitudes towards hiring persons with disabilities from different perspectives that explain contributing factors that can pose barriers to employment of persons with disabilities.

Hernandez et al. (2000) performed a literature review of employer attitudes towards workers with disabilities and their ADA employment rights. They reviewed a total of 37 studies that were available from 1987 to 1999. Eight studies indicated employers have positive attitudes toward employees with different types of disabilities; Eleven studies indicated negative employer attitudes toward workers with disabilities. Ten studies related to attitudes towards disability rights indicated that employers are in support of the ADA, interestingly, when the focus was on Title I of the ADA that is related to employment, employers expressed concern. Nine studies indicated positive employer attitudes toward employees with disabilities who were assisted by vocational employment programs. These authors summarize by indicating that employers' attitudes are generally positive towards employees with disabilities based on their review of the literature. However, employers' attitudes are not as positive when specific attitudes towards persons with disabilities are assessed as evidenced by employers demonstrating support of the ADA in general but demonstrating hesitation when the focus is on Title I of the ADA that relates

to employment. Limitations noted for their review of the literature are that reliability and validity was not reported for some data and self-report bias and social desirability bias can account for participant responses (Hernandez et al., 2000).

Ju et al. (2013) provided a review of research performed between 1999 and 2012 that focus on employer attitudes towards employees with disabilities. The studies considered for their review focus on assessing employer attitudes in charge of hiring, supervision, or terminating employees, measure employer attitudes toward people with disabilities, and were published in peer-reviewed journal articles. All studies were conducted in the United States except for one that was considered because it was published in a vocational rehabilitation journal in the United States. There review consisted of 15 studies that assessed attitudes with survey questionnaires, personal interviews and focus group discussions. Four scales are mentioned that focus on attitudes: a) Employment Characteristics Scale (ECS) b) Modified version of the Attitudes Toward the Employability of People with Severe Handicaps Scale (ATTEMP) c) Candidate Employability Scale (CES) and d) Attitudes Toward Disabled Persons Scale-Form o (ATDP-O). Reliability and validity was reported for only five of the studies considered in this review (Ju et al., 2013).

Assessing attitudes toward disabled persons is complicated but necessary to improve the lives of persons with disabilities (Antonak & Livneh, 1988). According to Antonak and Livneh, (1988), there has been improvement in the quality of scales developed over the last 40 years. In the early 1960s, two instruments were developed that are still used today; the Attitude Toward Disabled Persons scale (ATDP) and the Opinions about Mental Illness scale (OMI). These authors note that attitudes towards persons with disabilities have been impacted in part by laws that are currently in place related to discrimination against persons with disabilities. These

changes render some of the existing scales inadequate and calls for modification of existing scales and/or development of new ones. In addition, the reliability and validity of existing and newly developed scales must be established. Measurements of attitudes towards people with disabilities are predominantly developed with specific situations in mind and lack validation (Antonak & Livneh, 1988).

Summary

Previous research has focused on different areas related to attitudes towards hiring persons with disabilities from different perspectives. Employers continue to voice concerns regarding hiring and retaining persons with disabilities (Hartnett et al., 2011; Lengnick-Hall et al., 2008), despite the laws that prohibit employment discrimination (Hernandez et al., 2008). The literature review conducted for this study suggests there are different factors that contribute to employers' disposition to hire and retain persons with disabilities that go beyond employer attitudes. Research indicates there are fears associated with hiring and retention of persons with disabilities related to the unknown cost of accommodations (Houtenville & Kalargyrou, 2012; Kay et al., 2011; Lengnick-Hall et al., 2008; Peck & Kirkbride, 2001), fears associated with supervision and productivity (Henry et al., 2013; Peck & Kirkbride, 2001), fears associated with losing revenue and litigation (Fraser et al., 2010, 2011; Henry et al., 2013), lack of knowledge regarding the implications of the ADA (Fraser et al., 2011; Hernandez et al., 2003), concerns associated with negative experiences and or lack of experience with employees with disability (Hernandez et al., 2008) that can be associated with lack of knowledge of governmental services and financial incentives that are available to assist employers with hiring persons with disabilities (McLoughlin, 2002).

Moreover, research indicates that persons with physical disabilities are rated more favorably than persons with mental disabilities (Dalgin & Bellini, 2008; Gouvier et al., 2003; Ren et al., 2008), and thus have a higher probability of being hired (Gouvier et al., 2003). Lack of knowledge regarding the capabilities and employment potential of persons with disabilities and how to address the needs of persons with disabilities (Houtenville & Kalargyrou, 2012; Kay et al., 2011) can also contribute to employers' disposition to hire and/or retain persons with disabilities.

A literature review was performed by Hernandez et al. (2000) of employer attitudes towards workers with disabilities and their ADA employment rights that comprised studies that were available from 1987 to 1999. More recently, Ju et al. (2013) provided a review of research performed between 1999 and 2012 that focus on employer attitudes towards employees with disabilities. These reviews of the literature comprise studies conducted between 1987 through 2012. Both these literature reviews noted that a limitation to the studies conducted during this time frame was that reliability and validity was not reported for some of the studies considered in their review of the literature. According to Antonak and Livneh (1988), measurements of attitudes towards people with disabilities are predominantly developed with specific situations in mind and lack validation. Assessing attitudes toward disabled persons is complicated but necessary to improve the lives of persons with disabilities (Antonak & Livneh, 1988). The reliability and validity of existing and newly developed scales must be established (Antonak & Livneh, 1988).

The literature review performed for this study consists of studies that have focused on employer attitudes from different perspectives and thus the focus varies depending on the area of interest of the researchers. In summary, barriers to employment of persons with disabilities result

from misconceptions regarding the capabilities and employability potential of persons with disabilities and fears and concerns associated with laws that are in favor of hiring persons with disabilities. In addition, research indicates that barriers to employment of persons with disabilities stem from lack of knowledge of ADA, resources and incentives available to assist employers with facilitating employment opportunities for persons with disabilities as well as an understanding of the implications of disability, both physical and mental in terms of employment potential. In order to address the aforementioned misconceptions, fears, lack of knowledge and overall associated hesitance to hire and retain persons with disabilities there is a need to develop an intervention plan that will dissipate these barriers to employment for persons with disabilities. Hunt and Hunt (2004) studied the impact of educational intervention in changing attitudes toward persons with disabilities. They found that an educational intervention significantly impacted participant's knowledge and attitudes in relation to persons with disabilities. To accomplish this goal, a scale that highlights constructs/factors that contribute to employers' disposition to hire and retain persons with disabilities is necessary.

This researcher developed a survey instrument guided by the focus of study of the research considered for this literature review. The survey instrument consists of 30 items that are intended to capture a holistic inclusion of the areas that may have an impact on employers' disposition to hire and retain persons with disabilities. Specifically, the survey instrument includes items associated with fears and concerns, knowledge of disability, benefits of hiring persons with disabilities, knowledge of ADA, perceived benefits of accommodations, experience with persons with disabilities and knowledge about resources. Since this is a new survey, reliability and validity have not been established.

To achieve this goal, an exploratory factor analysis will be performed on the 30 item survey responses to assess reliability and validity. Factor analysis is a data reduction technique that is used to reduce a large set of variables to groups of related variables called factors. Factor analysis is a statistical procedure that is used for the development and evaluation of instruments (Huck, 2014; Pallant, 2013; Warner, 2013).

CHAPTER III

METHODOLOGY

This section will be comprised of subsections that will explain sample selection, procedure, instrumentation, and the data analysis used to explore factors that influence employers disposition to hire and retain persons with disabilities for the development of a scale. A factor analysis was used to aid in the development of a scale. A factor analysis is used to reduce a large set of variables to groups of related variables called factors (Huck, 2014; Warner, 2013). Factor analysis is a statistical procedure that is used for the development and evaluation of instruments (Huck, 2014; Pallant, 2013; Warner, 2013). This statistical procedure facilitates the classification of items into the corresponding subscale of an instrument and the identification of items that are not in harmony with any factor and thus should be deleted (Huck, 2014; Warner, 2013).

This study raises the following series of research questions and related hypotheses to assess the factor structure and internal consistency of the scale that will assess factors that contribute to employers' disposition to hire and retain persons with disabilities:

Q1: Do the items in the instrument account for a significant amount of variance in the scale?

Hypothesis 1:

Ho: The factor structure of the instrument will account for most of the variability in the construct.

Ha: The factor structure of the instrument will not account for most of the variability in the construct.

Q2: Which, if any of the items in the instrument help identify factors associated with employers' fears and concerns related to hiring persons with disabilities?

Hypothesis 2:

Ho: The instrument will identify factors associated with employer's fears and concerns related to hiring persons with disabilities.

Ha: The instrument will not identify factors associated with employer's fears and concerns related to hiring persons with disabilities.

Q3: Which, if any of the items in the instrument help identify factors associated with knowledge of ADA and government resources that influence employers' disposition to hire and retain persons with disabilities?

Hypothesis 3:

Ho: The instrument will identify factors associated with knowledge of ADA and government resources that influence employers disposition to hire and retain persons with disabilities.

Ha: The instrument will not identify factors associated with knowledge of ADA and government resources that influence employers disposition to hire and retain persons with disabilities.

Q4: Which, if any of the items in the instrument help identify factors associated with knowledge of disability types?

Hypothesis 4:

Ho: The instrument will identify factors associated with knowledge of disability types.

Ha: The instrument will not identify factors associated with knowledge of disability types.

Sample Selection

A purposive sample was utilized for this research. Participants for this research were individuals directly in charge of hiring and were recruited from employers/businesses from the South Texas border region consisting of Cameron and Hidalgo counties. These counties are located along the Texas-Mexican border where the population is estimated to be 90% of Hispanic origin (U.S. Census Bureau, 2016). In addition, participants were required to be 18 years of age or older and must be a U.S. Citizen or Legal Permanent Resident. Employers of all ethnic groups and industries were considered.

Procedure

Subsequent to Internal Review Board (IRB) approval, participants were recruited by the researcher by various means: (a) the researcher personally visited businesses and met with individuals who are directly in charge of hiring. The researcher explained the purpose of the study and advised that participation is voluntary. Employers emails were requested if they chose to participate by taking the survey via email which was sent with a Qualtrics link to respond to the survey. Employers were also advised that upon completion of the survey they would have the opportunity to participate in a raffle if they chose to do so; (b) The researcher offered employers the opportunity to complete the survey by providing a hard copy and advised regarding the opportunity to participate in a raffle which would require they provide their name and phone number or email to be contacted if they were selected. The researcher left the hard copy for completion with the employer and returned 2-3 hours later and in some instances the next day for the completed survey; (c) The researcher disseminated the survey via social media such as LinkedIn and Facebook. Employers were provided informed consent in all instances and advised that their responses were confidential. In all instances, employers were informed that the survey questionnaire consisted of demographic information and 30 items related to factors that influence

employers disposition to hire and retain persons with disabilities. The IRB requirements for informed consent were presented in verbal and written format. Emails were disseminated to employers/businesses that were accessed via Google searches in the Hidalgo and Cameron counties.

A total of 2,142 business emails were obtained from various online resources including the Brownsville, Mission, South Padre Island, Los Fresnos, Mercedes, and Edinburg Chamber of Commerce. In addition, business emails were recruited from schools, hospitals and human resources emails that are of public domain and by the researcher directly visiting businesses in both Cameron and Hidalgo counties. Businesses were invited to participate via email that included a pre-approved email transcript from IRB.

A total of 209 responses were obtained. The total responses obtained via recruitment emails was 99 (47.3%) and the remaining 110 (52.6%) were obtained by meeting in person with employers/business. The response rate for disseminated emails was 4.6 percent. However, 19 of the email responses were not completed and thus were eliminated resulting in a total of 190 valid responses.

Instrumentation

The questionnaire for this study was developed by this researcher based on an extensive review of the literature. Since reliability and validity were not established, three experts in the rehabilitation counseling field were consulted to review and suggest changes to the questionnaire for content validation. To further validate the questionnaire a factor analysis was performed.

This questionnaire included demographic questions consisting of gender, age, ethnicity, current position, years employed in current position, industry type, size of company (number of employees), highest education completed and education background (education discipline). In

addition, the questionnaire consists of 30 items related to factors that contribute to employer's disposition to hire and retain persons with disabilities. Questions included in the survey are related to employer fears and concerns. Some of the questions for example are: *I fear not being able to discipline a person with a disability because of potential law suits*; knowledge about disability, *How would you rate your knowledge about the capabilities of persons with disabilities?*; benefits of hiring persons with disabilities, *I believe that employees with disabilities are as productive as persons without disabilities*; knowledge of the Americans with Disabilities Act (ADA), *How would you rate your knowledge of the ADA?*; perceived benefits of accommodations, *Providing reasonable accommodations is associated with enhanced performance, satisfaction and job tenure*; experience with persons with disabilities (positive or negative), *My experience with employees with disabilities has been positive or negative?*; willingness to hire persons with disabilities, *I am willing to hire a person with a disability*; and knowledge about resources related to employment of persons with disabilities, for example, *Rate your knowledge of government programs that assist with costs of accommodations*. The responses to the 30 items are presented in various formats relevant and tailored to the research designs that answer the research questions that guide this study. Response formats include a four-point Likert scale from strongly agree to strongly disagree, and dichotomous responses poor/good and true/false.

Data Analysis

A factor analysis was used to test the research questions and related hypothesis and assess the factor structure and internal consistency of the scale that will assess factors that contribute to employers' disposition to hire and retain persons with disabilities. Descriptive statistics were used to analyze demographics. Descriptive statistics include the mean, standard deviation and

frequency of responses for the demographic continuous variables. All analyses were computed using the Statistical Package for the Social Science (SPSS) software version 25. There are several extraction methods used in factor analysis, principal components analysis (PCA) is one of the most used (Hinkin, 1995; Huck, 2014; Pallant, 2013) and most appropriate for data reduction (Fabrigar, Wegener, MacCallum, & Strahan, 1999). To assist with the interpretation of the factor structure, the factors were rotated using Varimax rotation. Rotated factors simplify and clarify the interpretation of the factor structure of the data (Huck, 2014; Warner, 2013).

Exploratory factor analysis is a data reduction technique that is included in SPSS (Pallant, 2013). Factor analysis is used to reduce a large set of variables to groups of related variables called factors, the goal is parsimony (Huck, 2014; Warner, 2013). Factor analysis is a statistical procedure that is used for the development and evaluation of instruments (Huck, 2014; Pallant, 2013; Warner, 2013). This statistical procedure facilitates the classification of items into the corresponding subscale of an instrument and the identification of items that are not in harmony with any factor and thus should be deleted (Huck, 2014; Warner, 2013). To determine that the data are suitable for factor analysis, the sample size should be 150 or greater (Hinkin, 1995; Pallant, 2013), and minimally five cases for each variable (Pallant, 2013). The response rate of 190 valid responses obtained for this research satisfies the sample size requirement. In addition, the correlation matrix should demonstrate correlations of $r = .3$ or greater, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy should be .6 or above and Bartlett's chi-square test of sphericity should be statistically significant at $p < .05$ (Pallant, 2013). Once the factorability of the survey items is established the researcher proceeds with factor extraction. Factor extraction is the process of identifying the underlying factors that will represent the subcategories/subscales of the scale. There are several extraction methods used in EFA, principal components analysis

(PCA) is one of the most used (Hinkin, 1995; Huck, 2014; Pallant, 2013) and most appropriate for data reduction (Fabrigar et al., 1999).

The suitability of PCA was determined by conducting the corresponding analyses that assert the assumptions for PCA are satisfied. The correlation matrix indicated that all variables have at least one correlation with another variable greater than $r = .3$, which satisfies the assumption of linearity between all variables (Pallant, 2013). To further assess the assumption of linearity between variables is met, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was performed. The KMO measure is used to assess if there is a linear relationship between the variables and thus the appropriateness of performing a PCA (Kaiser, 1974). Kaiser-Meyer-Olkin measures for individual variables that can be assessed on the SPSS output for PCA. The measures for individual variables are found on the diagonals of the anti-image correlation matrix located in the Anti-image Matrices table. Based on the Anti-Image Correlation Matrices, the measure of sampling adequacy for individual variables ranged from .701 for Q31 to .887 for Q19. Individual KMO measures are all greater than 0.7 classifications of middling to meritorious, indicating adequacy of sampling (Kaiser, 1974). All KMO values are above the minimum requirement of .6 (Pallant, 2013). Bartlett's test of sphericity assesses if there are correlations between variables, a necessary condition to perform a PCA. A significant p -value supports the assumption of sphericity (Rovai, Baker, & Ponton, 2013). Bartlett's test of sphericity was statistically significant at the ($p < .0005$), supporting the factorability of the correlation matrix (Pallant, 2013; Rovai, Baker & Ponton, 2013).

Once the factorability of the survey items was established, the researcher proceeded to perform factor extraction. Factor extraction is the process of identifying the underlying factors that will represent the subcategories/subscales of the scale. There are several extraction methods

used in EFA, principal components analysis (PCA) is one of the most used (Huck, 2014; Pallant, 2013). After performing the PCA, to determine how many components to retain the researcher used Kaiser's criterion by analyzing the Total Variance Explained table that was computed when performing the PCA. Kaiser's criterion indicates that factors that have an eigenvalue of one or more should be retained. The eigenvalue of a factor indicates the total variance explained by that factor (Huck, 2014; Pallant, 2013; Warner, 2013). Principal components analysis revealed the presence of four components with eigen values exceeding one explaining 30.6%, 19.9%, 9.9%, and 6.6% of the variance respectively; for a total of 66.9% of variance. According to Warner (2013), a range of 40% to 70% of variance explained is considered adequate. To further assess what factors to retain, the researcher used Catell's scree test by analyzing the scree plot that is generated when using SPSS software. Only components above the point of inflection are retained (Warner, 2013). Although the point of inflection of the scree plot indicated three components should be retained, the four components solution met the interpretability criterion and thus four components were retained. Factor analysis is a data exploration technique and thus interpretation of the scree plot is based on the researchers' judgment (Fabrigar et al., 1999; Pallant, 2013; Warner, 2013).

To assist with the interpretation of the factor structure, the factors were rotated using Varimax rotation. Rotated factors simplify and clarify the interpretation of the factor structure of the data (Huck, 2014; Warner, 2013). Varimax rotation is an orthogonal rotation method that is used when factors are uncorrelated (Fabrigar et al., 1999; Huck, 2014; Rovai et al., 2013). Varimax rotation minimizes high loadings on each factor simplifying the interpretation of factors (Rovai et al., 2013; Warner, 2013). Due to uncertainty regarding the four components being

uncorrelated, the researcher also performed an oblique rotation that allows the factors to be correlated. The factor structure was identical in both rotation approaches.

The PCA was conducted on the original 30 questions that compose the questionnaire. In analyzing the correlation matrix, five questions did not meet the desired correlation of .3 or greater and thus were removed because this indicates that these questions/variables are not highly correlated with other questions/variables and likely measuring something different (Pallant, 2013). Questions that were removed as a result of not meeting this criterion were: Q25- I view persons with disabilities as another form of diversity; Q33 - Providing reasonable accommodations is associated with enhanced performance, satisfaction and job tenure; Q34 - Most accommodations are not expensive; Q35 - Providing accommodations contributes to retention of qualified employees; Q37 - I am willing to hire a person with a disability. The removal of questions 25,33, 34, 35, and 37 resulted in a questionnaire with 25 items.

Further analysis of the questionnaire resulted in the removal of an additional four questions/variables due to cross-loading on other components which indicates that the item measures several factors and thus should be removed. Questions that were removed as a result of cross-loading: Q12 - Once I hire a person with a disability, I cannot fire him/her because I fear legal reprisals; Q17 - I am concerned that co-workers may be uncomfortable working with a person with a disability; Q22 - Rate your willingness to hire an individual with a mental health disorders (Schizophrenia, Learning Disorders, Bipolar Disorder and Depression)?; Q24 - Rate your willingness to hire an individual with a physical disability (Fibromyalgia, Multiple Sclerosis and Spinal Cord Injuries)?. The removal of questions 12, 17, 22, and 24 resulted in a questionnaire with 21 items.

Finally, five additional questions were removed, two due to redundancy and three because, although relevant, they did not fit into the remaining items in each component. The two questions removed for redundancy were Q28 and Q29. Question Q28 – I believe that employees with disabilities are as productive as persons without disabilities, was removed because of its similarity with Q16 – I am concerned that persons with disabilities cannot meet the performance standards of a job. Both Q28 and Q16 are related to performance of persons with disabilities. Question Q29 was removed because of the similarity with Q19, both are related to absenteeism; Q29 – I believe that absenteeism is the same for persons with and without disabilities, and Q19 – I am concerned that excessive absenteeism will result from persons with disabilities frequent needs for doctor's visits.

The three questions that were removed because they did not fit into the remaining items in each component were Q26, Q27 and Q36; Q26 – Persons with disabilities are committed, loyal and reliable employees, Q27 – I believe that employees with disabilities are role models for persons with and without disabilities, and Q36 – Which statement best describes your experience with employees with disabilities: I have had positive experiences with employees with disabilities, I have had negative experiences with employees with disabilities, and I have had no experiences with employees with disabilities.

In summary, after removing a total of 14 questions due to the aforementioned reasons, the final questionnaire consists of 16 items. The PCA of the 16 remaining items revealed the presence of four components with eigen values exceeding one explaining 30.6%, 19.9%, 9.9%, and 6.6% of the total variance respectively; for a total of 66.9% of variance. A range of 40% to 70% of total variance explained is considered adequate (Warner, 2013). A Varimax orthogonal rotation was used to facilitate interpretability. The rotated solution indicated simple structure

(Rovai et al., 2013; Thurstone, 1947). Component one is labeled ‘Fears and Concerns,’ component two is labeled ‘Employer Resources for Persons with Disabilities,’ component three is labeled ‘ADA Competencies,’ component four is labeled ‘Knowledge of Disability.’ Refer to appendix D for the final 16 item scale questions.

The following chapter provides a detailed explanation of the results obtained from descriptive statistics for demographic information as well as the results for the 16-item scale in relation to reliability and validity of the scale. A detailed narrative description of the questions/items that comprise each of the resulting factors is provided in the following chapter with the corresponding tables that complement the narrative description of the resulting factors that comprise the scale. The following chapter also provides the results for the research questions and corresponding research hypothesis based on the results obtained from the data analysis.

CHAPTER IV

RESULTS

This section is comprised of a detailed explanation of a series of steps that were followed, and the results obtained in assessing the reliability and validity of the 16-item scale that will assess factors that contribute to employers' disposition to hire and retain persons with disabilities. An exploratory factor analysis was performed to test the research questions and related hypotheses and assess the factor structure and internal consistency of the scale. To determine that the data are suitable for factor analysis the sample size should be 150 or greater (Hinkin, 1995; Pallant, 2013), and minimally five cases for each variable (Pallant, 2013). The survey response rate of 190 valid responses obtained for this research satisfies the sample size requirement. In addition, the correlation matrix demonstrated correlations of $r = .3$ or greater, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy for the 16 scale items yielded a measure of .806 which is meritorious on Kaiser's (1974) classification of measure values. Bartlett's chi-square test of sphericity is statistically significant at $p < .0005$, (Pallant, 2013). All requirements that determine that the data are suitable for factor analysis are satisfied. Demographic data was analyzed using descriptive statistics. Descriptive statistics include the mean, standard deviation and frequency of responses. Tables that complement the narrative data results are included. All analyses were computed in the Statistical Package for the Social Science

(SPSS) software version 25. This chapter provides a summary of the scale and corresponding subscales and a brief explanation of its utility.

This study tested the following series of research questions and related hypotheses to assess the factor structure and internal consistency of the scale that assess factors that contribute to employers' disposition to hire and retain persons with disabilities:

Q1: Do the items in the instrument account for a significant amount of variance in the scale?

Hypothesis 1:

Ho: The factor structure of the instrument will account for most of the variability in the construct.

Ha: The factor structure of the instrument will not account for most of the variability in the construct.

Q2: Which, if any of the items in the instrument help identify factors associated with employers' fears and concerns related to hiring persons with disabilities?

Hypothesis 2:

Ho: The instrument will identify factors associated with employer's fears and concerns related to hiring persons with disabilities.

Ha: The instrument will not identify factors associated with employer's fears and concerns related to hiring persons with disabilities.

Q3: Which, if any of the items in the instrument help identify factors associated with knowledge of ADA and government resources that influence employers' disposition to hire and retain persons with disabilities?

Hypothesis 3:

Ho: The instrument will identify factors associated with knowledge of ADA and government resources that influence employers disposition to hire and retain persons with disabilities.

Ha: The instrument will not identify factors associated with knowledge of ADA and government resources that influence employers disposition to hire and retain persons with disabilities.

Q4: Which, if any of the items in the instrument help identify factors associated with knowledge of disability types?

Hypothesis 4:

Ho: The instrument will identify factors associated with knowledge of disability types.

Ha: The instrument will not identify factors associated with knowledge of disability types.

Descriptive Statistics

Participants' demographic information is presented in table 1. The percentages are based on the total sample (N = 190), not the corresponding number of respondents. The sample was comprised of 65 (34.2 %) males and 123 (64.7 %) females. The participants' ages ranged from 19 to 76 years (M= 40.91, SD = 14.054). The majority of respondents, 154 (81.1 %) identified as Hispanic, 29 (15.3%) identified as Caucasian, one respondent identified as African American or Black one respondent identified as Asian or Pacific Islander (.5%), and three reported Other (1.6 %). Due to low response rate for African American, Asian, and Other respondents, these categories were collapsed to reflect Other. Refer to table 1.

Highest education completed was 1.6% less than a high school diploma (n = 3), 25.3% high school diploma/GED (n= 48), 17.9% associates degree (n = 34), 31.6% bachelor's degree (n = 60), 13.2% master's degree (n = 25), 2.6% PhD/doctorate (n = 5) and 6.8% other (n =13). Other was mostly some college but no degree. Due to low response rate for the less than high school diploma, PhD/Doctorate and Other category, the researcher collapsed these three

categories into High School Diploma or less, Associates Degree or Some College and Bachelor or higher, which includes masters and PhD/doctorate level education. Collapsing the highest education variables resulted in three categories. Refer to table 1.

The educational background field reported was 54.7% business (N = 104), 3.7% counseling (n = 7), 2.1% engineering (n = 4), 14.7% education/academia (n = 28), 8.4% health (n = 16), and 14.2% other (n = 27). Due to low responses for participants who indicated an educational background in the counseling and engineering field, the researcher collapsed the variables into three categories: counseling, education and health fields in one category as they all relate to humanities. The engineering category, which had a low response rate was collapsed with the Other classification. Refer to table 1.

The current employment position for participants was, 16.8% owners (n = 32), 69.5% manager/supervisor (n = 132), 6.3% HR representative (n = 12) and 6.8% other (n = 13). Years employed in current position ranged from one to 37 years (M = 7.49, SD = 7.54).

The majority of participants indicated the industry type they were employed in was sales (n = 112, 58.9%). Participants employed in the lodging industry were 3.2% (n = 6), in food service .5 % (n = 1), in amusement/recreation 1.1% (n = 2), in production 2.1% (n = 4), and other 33.2% (n = 63). The majority of those who selected Other pertain to the service industry. Due to the low response rate for lodging, amusement/recreation and production, these industries were collapsed to Other and the original responses in Other were changed to reflect the service industry based on the fact that the majority of responses pertain to this industry. Refer to table 1.

Table 1: *Participant Demographics*

<i>Identified Demographic</i>	<i>n</i>	<i>%</i>
Gender		
Male	65	34.2
Female	123	64.7
Ethnicity		
Caucasian	29	15.3
Hispanic	154	81.1
Other	5	2.6
Highest Education Completed		
High School Diploma or Less	51	26.8
Associates Degree or Some College	46	24.2
Bachelor or higher education	91	47.9
Educational Background field		
Business	104	54.7
Counseling-Education-Health	51	26.8
Other	31	16.3
Industry Type		
Service	63	33.2
Sales	112	58.9
Other	13	6.8
Current Position		
Owner	32	16.8
Manager/Supervisor	132	69.5
HR Representative	12	6.3
Other	13	6.8

Note: The percentages are based on the total sample (N = 190), not the corresponding number of respondents for each item. Age, years employed in current position and size of company are not included in this table.

Exploratory Factor Analysis

Factor analysis is a data reduction technique that is included in SPSS (Pallant, 2013).

Factor analysis is used to reduce a large set of variables to groups of related variables called factors, the goal is parsimony (Huck, 2014; Warner, 2013). Factor analysis is a statistical

procedure that is used for the development and evaluation of instruments (Huck, 2014; Pallant, 2013; Warner, 2013). This statistical procedure facilitates the classification of items into the corresponding subscale of an instrument and the identification of items that are not in harmony with any factor and thus should be deleted (Huck, 2014; Warner, 2013). To determine that the data are suitable for factor analysis the sample size should be 150 or greater (Hinkin, 1995; Pallant, 2013), and minimally five cases for each variable (Pallant, 2013). The response rate of 190 valid responses obtained for this research satisfies the sample size requirement. In addition, the correlation matrix should demonstrate correlations of $r = .3$ or greater, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy should be .6 or above and Bartlett's chi-square test of sphericity should be statistically significant at $p < .05$ (Pallant, 2013). Once the factorability of the survey items is established the researcher proceeds with factor extraction. Factor extraction is the process of identifying the underlying factors that will represent the subcategories/subscales of the scale. There are several extraction methods used in EFA, principal components analysis (PCA) is one of the most used (Hinkin, 1995; Huck, 2014; Pallant, 2013) and most appropriate for data reduction (Fabrigar et al., 1999).

A PCA was conducted on the 16 items scale that measure factors that contribute to employer's disposition to hire and retain persons with disabilities. The suitability of PCA was determined by conducting the corresponding analyses that assert the assumptions for PCA are satisfied. The correlation matrix indicated that all variables have at least one correlation with another variable greater than $r = .3$, which satisfies the assumption of linearity between all variables (Pallant, 2013). To further assess the assumption of linearity between variables is met, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was performed. The KMO measure is used to assess if there is a linear relationship between the variables and thus the

appropriateness of performing a PCA (Kaiser, 1974). Kaiser-Meyer-Olkin measures for individual variables can be assessed on the SPSS output for PCA. The measures for individual variables are found on the diagonals of the anti-image correlation matrix located in the Anti-image Matrices table. Based on the Anti-Image Correlation Matrices, the measure of sampling adequacy for individual variables ranged from .701 for Q31 to .887 for Q19. Individual KMO measures are all greater than 0.7 classifications of middling to meritorious indicating adequacy of sampling (Kaiser, 1974). All KMO values are above the minimum requirement of .6 (Pallant, 2013). The KMO for the 16 remaining items yielded a measure of .806 which is meritorious on Kaiser’s (1974) classification of measure values. Refer to table 2.

Table 2: KMO and Bartlett’s Test

<i>KMO and Bartlett's Test</i>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.806
Bartlett's Test of Sphericity	Approx. Chi-Square	1340.336
	df	120
	Sig.	.000

Bartlett's test of sphericity assesses if there are correlations between variables, a necessary condition to perform a PCA. A significant p-value supports the assumption of sphericity (Rovai, Baker and Ponton, 2013). Bartlett’s test of sphericity was statistically significant at the ($p < .0005$), supporting the factorability of the correlation matrix (Pallant, 2013; Rovai, Baker & Ponton, 2013). Refer to table 2.

Once the factorability of the survey items was established the researcher proceeded to perform factor extraction. Factor extraction is the process of identifying the underlying factors that will represent the subcategories/subscales of the scale. There are several extraction methods used in EFA, principal components analysis (PCA) is one of the most used (Huck, 2014; Pallant, 2013). After performing the PCA, to determine how many components to retain the researcher

used Kaiser’s criterion by analyzing the Total Variance Explained table that was computed when performing the PCA. Kaiser’s criterion indicates that factors that have an eigenvalue of one or more should be retained. The eigenvalue of a factor indicates the total variance explained by that factor (Huck, 2014; Pallant, 2013; Warner, 2013).

Principal components analysis revealed the presence of four components with eigen values exceeding one explaining 30.6%, 19.9%, 9.9%, and 6.6% of the variance respectively and 66.9% of the total variance. Refer to table 3. According to Warner (2013), a range of 40% to 70% of variance explained is considered adequate.

Table 3: Total Variance Explained

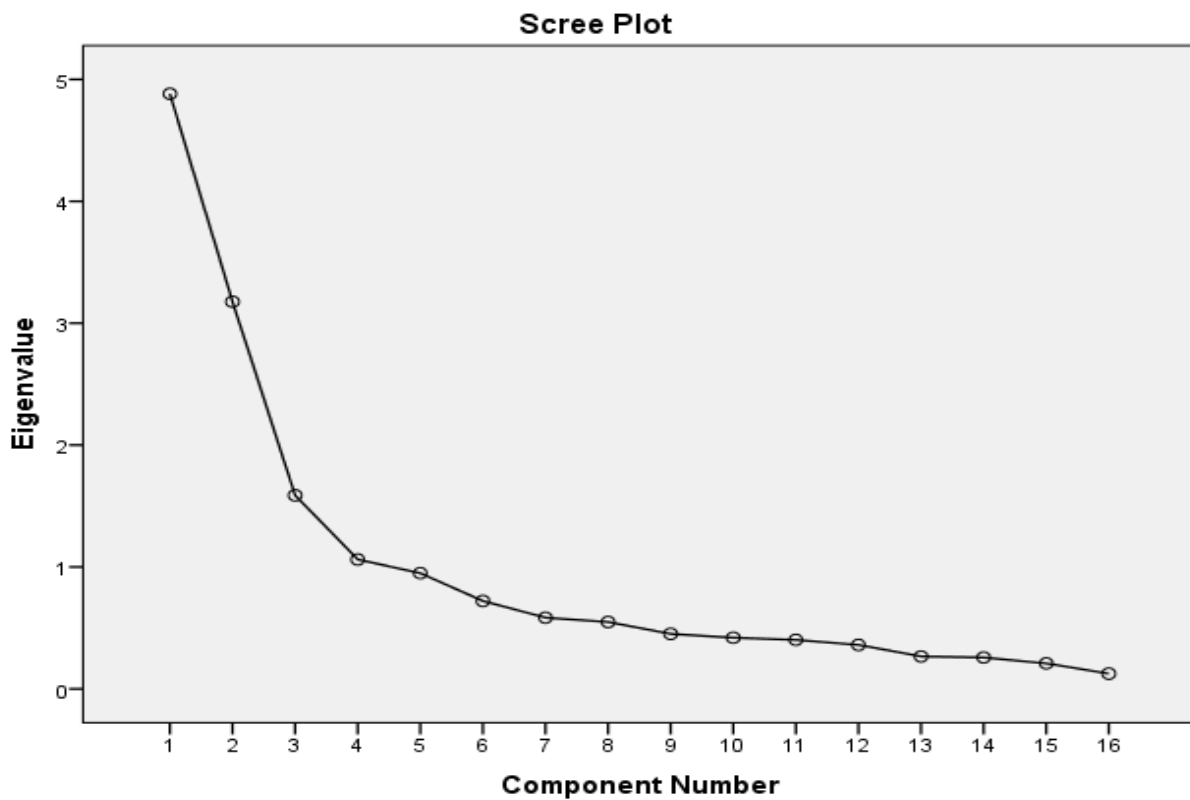
Total Variance Explained:

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	Variance	Cumulative %	Total	Variance	Cumulative %	Total	Variance	Cumulative %
1	4.882	30.511	30.511	4.882	30.511	30.511	3.890	24.314	24.314
2	3.176	19.852	50.363	3.176	19.852	50.363	2.447	15.295	39.609
3	1.588	9.923	60.286	1.588	9.923	60.286	2.440	15.253	54.862
4	1.062	6.635	66.921	1.062	6.635	66.921	1.930	12.059	66.921
5	.949	5.932	72.853						
6	.721	4.507	77.360						
7	.584	3.651	81.011						
8	.548	3.428	84.439						
9	.451	2.819	87.257						
10	.419	2.621	89.879						
11	.402	2.512	92.391						
12	.360	2.253	94.644						
13	.266	1.664	96.307						
14	.257	1.609	97.917						
15	.209	1.305	99.222						
16	.125	.778	100.000						

NOTE: The Extraction Method used was Principal Component Analysis.

To further assess what factors to retain the researcher used Catell's scree test by analyzing the scree plot that is generated when using SPSS software. Only components above the point of inflection are retained (Warner, 2013). Refer to figure 1. Although the point of inflection of the scree plot indicated three components should be retained, the four components solution met the interpretability criterion and thus four components were retained. Factor analysis is a data exploration technique and thus interpretation of the scree plot is based on the researchers' judgment (Fabrigar et al., 1999; Pallant, 2013; Warner, 2013).

Figure 1: Catell's Scree Plot



To assist with the interpretation of the factor structure, the factors were rotated using Varimax rotation. Rotated factors simplify and clarify the interpretation of the factor structure of the data (Huck, 2014; Warner, 2013). Varimax rotation is an orthogonal rotation method that is used when factors are uncorrelated (Fabrigar et al., 1999; Huck, 2014; Rovai et al., 2013).

Varimax rotation minimizes high loadings on each factor simplifying the interpretation of factors (Rovai et al., 2013; Warner, 2013). The rotated solution indicated simple structure (Rovai et al., 2013; Thurstone, 1947). Due to uncertainty regarding the four components being uncorrelated, the researcher also performed an oblique rotation that allows the factors to be correlated. The factor structure was identical in both rotation approaches.

The rotated component matrix indicates the factor loadings on each variable and the retained components. Refer to table 4. Only loadings above .4 are retained, values below .4 are considered low and should be removed from the scale (Clark & Watson, 1995; Hinkin, 1995; Rovai et al., 2013). Communalities are also presented in table 4. Communalities indicate how much of the variance is explained in each item explained by all factors (Pallant, 2013; Rovai et al., 2013). Communalities with values lower than .3 are undesirable because this indicates that the item does not belong in the component and should be removed. All communalities on the component matrix indicate values above .4 indicating the items fit well with other items on same component (Pallant, 2013). Component one is labeled 'Fears and Concerns', component two is labeled 'Employer Resources for Persons with Disabilities', component three is labeled 'ADA Competencies', component four is labeled 'Knowledge of Disability'.

Table 4: Rotated Component Matrix

Rotated Component Matrix:

	Component				Communality
	1	2	3	4	
Q15 I fear hiring persons with disabilities will increase health insurance costs.	.853				.740
Q14 I fear costs associated with additional training required for an employee with a disability.	.793				.637
Q19 I am concerned that excessive absenteeism will result from persons with disabilities frequent needs for doctor visits.	.748				.594
Q13 I am concerned about the cost of accommodations.	.743				.568
Q18 I am concerned that a person with a disability will require more of my time which will take away from my other responsibilities.	.727				.578
Q16 I am concerned that persons with disabilities cannot meet the performance standards of a job.	.682				.522
Q11 I fear not being able to discipline a person with a disability because of potential law suits.	.588				.417
Q39 Rate your knowledge of internet resources that inform regarding incentives available to employers for hiring persons with disabilities.		.892			.827
Q40 Rate your knowledge about The Job Accommodations Network (JAN) and how you can benefit as an employer from the information on this website.		.871			.802
Q38 Rate your knowledge of government programs that assist with costs of accommodations.		.843			.795
Q31 How would you rate your knowledge of Title 1 of The Americans with Disabilities Act (ADA)?			.886		.889
Q30 How would you rate the training you have received regarding implications of Title 1 of The Americans with Disabilities Act (ADA)?			.820		.731
Q32 How would you rate your ability to apply the Title 1 of The Americans with Disabilities Act (ADA)?			.816		.777
Q20 How would you rate your knowledge about the capabilities of persons with disabilities?				.762	.657
Q21 How would you rate your knowledge about mental health disorders (Schizophrenia, Learning Disorders, Bipolar Disorder and Depression)?				.741	.590
Q23 How would you rate your knowledge about physical disabilities (Fibromyalgia, Multiple Sclerosis and Spinal Cord Injuries)?				.722	.582

NOTE: The Extraction Method used is Principal Component Analysis with Varimax rotation.

A reliability analysis was performed using Cronbach’s alpha. Cronbach’s alpha is utilized to measure internal consistency. It is used to determine to what extent the items on a scale are measuring the same underlying dimension. A Cronbach’s alpha coefficient above .7 indicates adequate reliability (Nunnally, 1978; Pallant, 2013). However, there is research in support of the appropriateness of Cronbach’s alpha coefficient being above .6 as was the case for component four labeled as ‘Knowledge of Disability’ which had an internal consistency of .665 (Hinkle, Wiersma & Jurs, 2003; Hinton, Brownlow, & McMurray 2014; Rovai et al., 2013). The reliability analysis was performed on the 16-item scale and the four retained components independently. The internal consistency for the 16-item scale yielded a .709. The results for Cronbach’s Alpha Reliability Analyses for the 16-item scale as well as the four components are presented in table 5.

Table 5: Cronbach’s Alpha Reliability Analyses

Cronbach’s Alpha Reliability Analyses:

	<i>Cronbach’s Alpha</i>	<i>N of Items</i>
16-Item Scale	.709	16
C1 - Fears and Concerns	.859	7
C2 – Employers Resources for Persons with Disabilities	.862	3
C3 – ADA Competence	.881	3
C4 – Knowledge of Disability	.665	3

Note: C1 = Component one, C2 = Component 2, C3 = Component 3, and C4 = Component 4

Component one labeled as ‘Fears and Concerns’ had an internal consistency of .859 and accounted for 30.6% of the variance. Component one is comprised of seven items: Q11 - I fear not being able to discipline a person with a disability because of potential law suits; Q13 - I am concerned about the cost of accommodations; Q14 - I fear costs associated with additional

training required for an employee with a disability; Q15 - I fear hiring persons with disabilities will increase health insurance costs; Q16 - I am concerned that persons with disabilities cannot meet the performance standards of a job; Q18 - I am concerned that a person with a disability will require more of my time which will take away from my responsibilities; Q19 - I am concerned that excessive absenteeism will result from persons with disabilities frequent needs for doctor visits.

Component two labeled as 'Employer Resources for Persons with Disabilities' had an internal consistency of .862 and accounted for 19.9% of the variance. Component two is comprised of three items: Q38 - Rate your knowledge of government programs that assist with costs of accommodations; Q39 - Rate your knowledge of internet resources that inform regarding incentives available to employers for hiring persons with disabilities; Q40 - Rate your knowledge about The Job Accommodations Network (JAN) and how you can benefit as an employer from the information on this website.

Component three labeled as 'ADA Competence' had an internal consistency of .881 and accounted for 9.9% of the variance. Component three is comprised of three items: Q30 - How would you rate the training you have received regarding implications of Title 1 of The Americans with Disabilities Act (ADA?; Q31 - How would you rate your knowledge of Title 1 of The Americans with Disabilities Act (ADA)?; Q32 - How would you rate your ability to apply the Title 1 of The Americans with Disabilities Act (ADA)?.

Component four labeled as 'Knowledge of Disability' had an internal consistency of .665 and accounted for 6.6% of the variance. Component four is comprised of three items: Q20 - How would you rate your knowledge about the capabilities of persons with disabilities? ; Q21 - How would you rate your knowledge about mental health disorders (Schizophrenia, Learning

Disorders, Bipolar Disorder and Depression)?; Q23 - How would you rate your knowledge about physical disabilities (Fibromyalgia, Multiple Sclerosis and Spinal Cord Injuries)?.

The results are presented for the research questions and corresponding research hypothesis:

Q1: Do the items in the instrument account for a significant amount of variance in the scale?

Hypothesis 1:

Ho: The factor structure of the instrument will account for most of the variability in the construct.

Ha: The factor structure of the instrument will not account for most of the variability in the construct.

Research question number one, do the items in the instrument account for a significant amount of variance in the scales? is supported by the resulting four components solution which explains 66.9% of the total variance. According to Warner (2013), a range of 40% to 70% of total variance explained is considered adequate. Refer to table 3.

Q2: Which, if any of the items in the instrument help identify factors associated with employers' fears and concerns related to hiring persons with disabilities?

Hypothesis 2:

Ho: The instrument will identify factors associated with employer's fears and concerns related to hiring persons with disabilities.

Ha: The instrument will not identify factors associated with employer's fears and concerns related to hiring persons with disabilities.

Research question number two, which, if any of the items in the instrument help identify factors associated with employers' fears and concerns related to hiring persons with disabilities?

is supported by seven items that comprise factor one “Fears and Concerns” of the scale. Refer to table 6. Factor one had an internal consistency of .859 and accounted for 30.6% of the variance.

Table 6: Fears and Concerns Associated with Hiring Persons with Disabilities

Factor 1: Fears and Concerns Associated with Hiring Persons with Disabilities

	Mean	Std. Deviation	N
Q11 I fear not being able to discipline a person with a disability because of potential law suits.	2.85	.752	183
Q13 I am concerned about the cost of accommodations.	2.93	.688	183
Q14 I fear costs associated with additional training required for an employee with a disability.	3.08	.642	183
Q15 I fear hiring persons with disabilities will increase health insurance costs.	3.05	.661	183
Q16 I am concerned that persons with disabilities cannot meet the performance standards of a job.	3.01	.730	183
Q18 I am concerned that a person with a disability will require more of my time which will take away from my other responsibilities.	2.93	.723	183
Q19 I am concerned that excessive absenteeism will result from persons with disabilities frequent needs for doctor visits.	2.87	.707	183

Q3: Which, if any of the items in the instrument help identify factors associated with knowledge of ADA and government resources that influence employers’ disposition to hire and retain persons with disabilities?

Hypothesis 3:

Ho: The instrument will identify factors associated with knowledge of ADA and government resources that influence employers disposition to hire and retain persons with disabilities.

Ha: The instrument will not identify factors associated with knowledge of ADA and government resources that influence employers disposition to hire and retain persons with disabilities.

Research question number three, which, if any of the items in the instrument help identify factors associated with knowledge of ADA and government resources that influence employers’

disposition to hire and retain persons with disabilities? is supported by three items for factor two “Employer knowledge of Resources for hiring Persons with Disabilities” (Refer to table 7) which had an internal consistency of .862 and accounted for 19.9% of the variance; and three items for factor three “ADA Competence” (Refer to table 8) that had an internal consistency of .881 and accounted for 9.9% of the variance of the scale.

Table 7: Factor 2: Employer Knowledge of Resources for Hiring Persons with Disabilities

Factor 2: Employer Knowledge of Resources for Hiring Persons with Disabilities

	Std.		N
	Mean	Deviation	
Q38 Rate your knowledge of government programs that assist with costs of accommodations.	1.77	.424	180
Q39 Rate your knowledge of internet resources that inform regarding incentives available to employers for hiring persons with disabilities.	1.72	.449	180
Q40 Rate your knowledge about The Job Accommodations Network (JAN) and how you can benefit as an employer from the information on this website.	1.83	.374	180

Table 8: Factor 3: ADA Competence

Factor 3: ADA Competence

	Std.		N
	Mean	Deviation	
Q30 How would you rate the training you have received regarding implications of Title 1 of The Americans with Disabilities Act (ADA)?	1.55	.498	184
Q31 How would you rate your knowledge of Title 1 of The Americans with Disabilities Act (ADA)?	1.54	.499	184
Q32 How would you rate your ability to apply the Title 1 of The Americans with Disabilities Act (ADA)?	1.50	.501	184

Q4: Which, if any of the items in the instrument help identify factors associated with knowledge of disability types?

Hypothesis 4:

Ho: The instrument will identify factors associated with knowledge of disability types.

Ha: The instrument will not identify factors associated with knowledge of disability types.

Research question number four, which if any of the items in the instrument help identify factors associated with knowledge of disability types? is supported by three items that comprise factor four “Knowledge of Disability” (Refer to table 9) that had an internal consistency of .665 and accounted for 6.6% of the variance of the scale.

Table 9: Factor 4: Knowledge of Disability Types

Factor 4: Knowledge of Disability Types

	Mean	Std. Deviation	N
Q20 How would you rate your knowledge about the capabilities of persons with disabilities?	1.30	.461	188
Q21 How would you rate your knowledge about mental health disorders (Schizophrenia, Learning Disorders, Bipolar Disorder and Depression)?	1.39	.490	188
Q23 How would you rate your knowledge about physical disabilities (Fibromyalgia, Multiple Sclerosis and Spinal Cord Injuries)?	1.51	.501	188

In summary, the exploratory factor analysis performed on the 16-item scale provides evidence of the reliability and validity of the newly developed scale. The uniqueness of this scale is evident in that it assesses factors that can contribute to employers’ disposition to hire and retain persons with disabilities that go beyond employer attitudes towards employees with disabilities. This scale also assesses knowledge about ADA, physical and mental disability as

well as knowledge of resources and incentives that can influence employers' decision to hire and or retain employees with disabilities.

The scale consists of four subscales. The first subscale is labeled 'Fears and Concerns' and assesses employers' attitudes in relation to situations/circumstances that can influence employers' decision to hire and or retain a person with a disability. The second subscale is labeled 'Employer Resources for Persons with Disabilities' and assesses employers' knowledge of available resources and incentives that can also influence employers' decisions to hire and retain persons with disabilities. The third subscale is labeled 'ADA Competencies' that assesses the training, knowledge and ability to apply ADA in situations related to employees with disabilities. The fourth subscale is labeled 'Knowledge of Disability' and assesses employers knowledge of both physical and mental disabilities as well as knowledge about capabilities of persons with disabilities. This scale can be easily administered to employers and provides immediate feedback that indicates what, if any areas, need to be addressed by means of education on the areas that can potentially pose barriers to employment of persons with disabilities.

This scale guides in the development of an educational intervention plan that assists with the removal of barriers to employment for persons with disabilities. There is research in support of the effectiveness of an educational intervention in changing attitudes towards persons with disabilities. Hunt and Hunt (2004) found that an educational intervention significantly impacted participant's knowledge and attitudes in relation to persons with disabilities. Hiring managers need to be educated regarding the misconceptions of employing persons with disabilities in order to reduce barriers to hiring persons with disabilities (Kulkarni & Lengnick-Hall, 2013).

This chapter provides evidence that is in support of the research questions and related hypothesis as evidenced by the results obtained with the PCA. A detailed explanation is provided for each step in the process of performing a PCA that satisfy the requirements that indicate the data is suitable for factor analysis. An explanation of the results obtained in assessing the reliability and validity of the 16-item scale that will assess factors that contribute to employers' disposition to hire and retain persons with disabilities is provided.

The following chapter provides a general discussion related to the results obtained as well as the relevance and utility of the scale. Limitations that embody the development of the scale are also discussed. The following chapter ends with recommendations for future research that will be considered by this researcher and possibly by other researchers that have an interest in leveling the playing field for persons with disabilities in terms of equal opportunities for employment.

CHAPTER V

DISCUSSION

The purpose of this study was to survey and explore factors that influence employers' disposition to hire and retain persons with disabilities and devise a scale that highlights construct/factors that will guide professionals involved directly and indirectly in removing barriers and facilitating employment for persons with disabilities that is reliable and valid. To assess factors that influence employers' disposition to hire and retain persons with disabilities, a survey instrument was developed based on a comprehensive review of the literature. Items developed for the survey instrument are related to attitudes towards hiring and retaining persons with disabilities and other factors that research indicates influence employers' decision to hire and retain persons with disabilities. The survey instrument that was created was intended to capture a holistic inclusion of the areas that may have an impact on employers' disposition to hire and retain persons with disabilities that goes beyond attitudes. Because the survey instrument is new, reliability and validity were not assessed. To test the research questions and related hypotheses and assess the factor structure and internal consistency of the scale an exploratory factor analysis was performed on the survey response items to establish reliability and validity. Factor analysis is a data reduction technique that is used to reduce a large set of variables to groups of related variables called factors. Factor analysis is a statistical procedure

that is used for the development and evaluation of instruments (Huck, 2014; Pallant, 2013; Warner, 2013).

The exploratory factor analysis performed on the 16-item scale provides evidence of the reliability and validity of the newly developed scale. The scale is unique in that it assesses employer attitudes, knowledge about ADA, physical and mental disability as well as knowledge of resources and incentives that can influence employers' decision to hire and or retain employees with disabilities in the same scale.

The four research questions and hypotheses of this study were supported indicating construct validity of a scale that measures factors that contribute to employers' disposition to hire and retain persons with disabilities. The scale is short and practical to utilize. The scale assesses four areas that previous researchers have explored that impact employers' disposition to hire and or retain persons with disabilities. There is a plethora of literature that substantiates the relevance of the four factors/subscales that encompass this scale; employers' fears and concerns (component #1) when hiring persons with disabilities is associated with cost of accommodations (Houtenville & Kalargyrou, 2012; Kay et al., 2011; Peck & Kirkbride, 2001), fear potential law suits (Fraser et al., 2011; Henry et al., 2013), and lack of knowledge on how to address the needs of persons with disabilities (Houtenville & Kalargyrou, 2012; Kay et al., 2011). Similarly, employer knowledge of resources for persons with disabilities (component #2) has been studied (Fraser et al., 2010; JAN Web Team, 2015; Mcloughlin, 2002). Americans with Disabilities Act (ADA) competence (Component #3) related to lack of education/knowledge regarding the implications of the ADA when hiring persons with disabilities has also been studied extensively (Fraser et al., 2011; Hernandez et al., 2003). Finally, knowledge of disability (Component #4)

has also been studied with results indicating that stereotypes and discrimination vary by disability type (Dalgin & Bellini, 2008; Gouvier et al., 2003; Ren et al., 2008).

These subcategories are determinants of employer's willingness to hire and retain persons with disabilities. This instrument can be used by professionals who are directly involved in facilitating employability for persons with disabilities. This instrument can indicate employer's areas of concern and thus serve as a baseline for the development of an educational intervention strategy that will address factors that create barriers to hiring and or retaining persons with disabilities. Hiring managers need to be educated regarding the misconceptions of employing persons with disabilities in order to reduce barriers to hiring persons with disabilities (Kulkarni & Lengnick-Hall, 2013). Hunt and Hunt (2004) found that an educational intervention significantly impacted participant's knowledge and attitudes in relation to persons with disabilities. Moreover, this scale will serve as a guide for professionals who are directly involved with employing persons with disabilities to enhance employers' knowledge of ADA and resources that can assist/guide in the process of hiring or retaining persons with disabilities by reducing fears associated with lack of knowledge and misconceptions related to hiring and retaining persons with disabilities.

Limitations of the study

Several limitations can be noted for this study. Primarily, a purposive sample was used from the border region of South Texas which is comprised of Hidalgo and Cameron counties. The majority of participants (n = 154, 81.1%) self-identified as Hispanic, 15.3 % self-identified as Caucasian and 2.6% as other. Participant responses and resulting scale factors are therefore representative of the Hispanic population in the border region of South Texas and may not be generalizable to Hispanics in other regions.

Self-reporting and providing socially acceptable responses is also a possible limitation. Participants may have provided socially acceptable responses due to the nature of the study in terms of associating persons with disabilities as individuals who possess governmental/legal support. This became evident when employers were asked if they wanted to participate in a survey that had questions regarding hiring persons with disabilities. Some employers stated, “we do not want any problems”, “corporate does not allow us to respond to surveys related to persons with disabilities because this could result in a conflict”, “I do not want to have anything to do with persons with disabilities” to mention a few. Despite the survey not asking for any personal identifiers such as name of respondent or name of business you are employed by, employers expressed hesitation and in many instances denial to respond to the survey instrument.

Another limitation was accessing those in hiring positions to respond to the survey via email therefore most of the responses for this survey were gathered by in person visitation to businesses. When in person visitation to businesses was performed, participants self-identified as persons directly in charge of hiring, proof was not required or requested. Similarly, when participants responded via email there is no assurance that the person in charge of hiring actually responded to the survey. Generally, persons in charge of hiring have busy schedules and thus they may have rushed through the responses.

Limitations also resulted from the lack of scales/instruments that assess factors that influence employers disposition to hire and retain persons with disabilities beyond the scope of attitudes that could have been used as a base line.

Recommendations for Future Research

The exploratory factor analysis conducted for this study is based on quantitative response survey items. Employer verbal/qualitative responses are not the focus of this study and thus a

follow up qualitative research could yield information that will provide a phenomenological perspective of employers' concerns when hiring persons with disabilities.

Based on this researcher's review of the literature, many surveys and instruments have been created to assess attitudes towards hiring persons with disabilities from different perspectives and with a specific disability population in mind. Employer knowledge about the capabilities and employment potential for different disability types needs to be explored. Although the Job Accommodations Network provides guidance related to accommodations for specific disabilities and is accessible to anyone wanting to know what is necessary and appropriate, more guidance is required in relation to the implications of disability in terms of employment potential. Vocational rehabilitation agencies whose goal is to employ persons with disabilities provide free disability sensitivity trainings to employers about implication of disability in relation to employment potential. However, are employers utilizing this resource? Are vocational rehabilitation agencies promoting this resource? If employers are utilizing this resource and vocational rehabilitation agencies are promoting this service, then what is lacking? Future research would benefit from exploring these inquiries to better understand where we are at and what needs to be done to address the areas of concern and or weaknesses that constitute a potential barrier to the employment for persons with disabilities.

Future research would benefit from testing this scale with employers from other regions using confirmatory factor analysis to assess if the same factor structure is supported and further establish validity. Results of future research performed with this scale can also benefit vocational rehabilitation education programs in terms of knowing what factors influence employers disposition to hire and retain persons with disabilities. Vocational rehabilitation programs are directly related to enhancing the employability of persons with disabilities and can incorporate

training modules that address employers' areas of concern, such as disability sensitivity training, ADA training as well as knowledge about resources that can prepare the new generations of vocation rehabilitating professionals to educate employers and minimize if not eradicate the misconceptions regarding the employment potential of persons with disabilities.

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APPENDIX A

APPENDIX A

RECRUITMENT EMAIL

University of Texas Rio Grande Valley (UTRGV)

Hello and Good Day to You!

My name is Javier N. Rodriguez MS, CRC, LCDC, LPC, I am a doctoral student from the Department of School of Rehabilitation Services and Counseling at the University of Texas Rio Grande Valley (UTRGV). I would like to invite you to participate in my research study to explore factors that influence employers disposition to hire and retain persons with disabilities.

This research study has been reviewed and approved by the Institutional Review Board for the Protection of Human Subjects (IRB) at the University of Texas Rio Grande Valley.

In order to participate in this study you must be 18 years of age or older, and must be a U.S. Citizen or Legal Permanent Resident. You must also be directly in charge of hiring. Participation in this research is completely voluntary, you may choose not to participate without penalty.

As a participant, you will be asked to complete an online survey which should take about 10-15 minutes to complete. All data will be collected anonymously with no identifying information collected.

Payment for Participation: By completing this online survey you will be eligible to enter in a raffle to win 1 of 4 \$50 gift cards. A second survey link will be provided at the end of this research survey for raffle purposes. Compensation for participation in this study will be provided to you by me, the researcher, not by the University of Texas Rio Grande Valley. Please note that any payment(s) you receive for participation in this study is considered income for tax purposes.

If you would like to participate in this research study, please click on the survey link below and read the consent page carefully. If you would like to complete the survey, click on "I agree". If not, simply exit the web browser or click on "I do not want to participate".

Survey Link: https://utrgv.co1.qualtrics.com/jfe/form/SV_eDL3bTEkBrC7qBv

If you have questions related to the research, please contact me by telephone at 956-343-3860 or by email at javier.n.rodriguez01@utrgv.edu.

If you have any questions regarding your rights as a participant, please contact the Institutional

Review Board (IRB) by telephone at (956) 665-2889 or by email at irb@utrgv.edu.

Thank you for your cooperation!

Javier N. Rodriguez MS, CRC, LCDC, LPC

APPENDIX B

APPENDIX B

INFORMED CONSENT FORM

Exploring Factors that Influence Employers Disposition to Hire and Retain Persons with Disabilities

This survey is being conducted by Javier N. Rodriguez MS, CRC, LCDC, LPC from the School of Rehabilitation Services and Counseling at The University of Texas Rio Grande Valley (email: javier.n.rodriguez01@utrgv.edu).

The purpose of this study is to explore factors that influence employers disposition to hire and retain persons with disabilities.

This survey should take about 10-15 minutes to complete.

Participation in this research is completely voluntary.

Participants can skip any question that makes them uncomfortable.

In order to participate in this study you must be 18 years of age or older, and must be a U.S. Citizen or Legal Permanent Resident. You must also be directly in charge of hiring.

All survey responses that we receive will be treated confidentially and stored on a secure server. However, given that the surveys can be completed from any computer (e.g., personal, work, school), we are unable to guarantee the security of the computer on which you choose to enter your responses. As a participant in our study, we want you to be aware that certain technologies exist that can be used to monitor or record data that you enter and/or websites that you visit.

De-identified data may be shared with other researchers in the future, but will not contain information about your individual identity.

Payment for Participation: By completing this online survey you will be eligible to enter in a raffle to win 1 of 4 \$50 gift cards. A second survey link will be provided at the end of this research survey for raffle purposes. Compensation for participation in this study will be provided to you by me, the researcher, not by the University of Texas Rio Grande Valley. Please note that any payment(s) you receive for participation in this study is considered income for tax purposes.

This research has been reviewed and approved by the Institutional Review Board for Human Subjects Protection (IRB). If you have any questions about your rights as a participant, or if you feel that your rights as a participant were not adequately met by the researcher, please contact the IRB at (956) 665-2889 or irb@utrgv.edu.

By clicking the arrows button below you are confirming that you have read the consent statement above and voluntarily consent to complete the following survey.

If you do not wish to complete the survey, please close the browser by clicking on the red X button located at the top right corner.

APPENDIX C

APPENDIX C

INITIAL SURVEY INSTRUMENT

Survey instrument that was completed by participants. Survey instrument includes demographic questions and 30 items that were developed based on the review of the literature.

Q1 Agreement to participate:

- Agree (1)
- Disagree (2)

Q2 Gender:

- Male (1)
- Female (2)

Q3 Age:

- What is your age: (1) _____

Q4 Ethnicity:

- American Indian or Alaskan Native (1)
- African American or Black (2)
- Asian or pacific Islander (3)
- Caucasian (4)
- Hispanic (5)
- Other: (6) _____

Q5 Current Position:

- Owner (1)
- Manager/Supervisor (2)
- HR Representative (3)
- Other: (4) _____

Q6 Years Employed in Current Position:

- How many years have you been employed in current position? (1)

Q7 What type of Industry are you employed in:

- Lodging (1)
- Sales (2)
- Food Service (3)
- Amusement/Recreation (4)
- Production (5)
- Other (6) _____

Q8 Size of company:

- How many employees in your company? (1) _____

Q9 Highest Education Completed:

- Less than High School Diploma (1)
- HS Diploma/GED (2)
- Associates Degree (3)
- Bachelor's Degree (4)
- Masters Degree (5)
- PhD/Doctorate (6)

Other: (7) _____

Q10 Which best describes your educational background field:

Business (1)

Counseling (2)

Engineering (3)

Education/Academia (4)

Health (5)

Other: (6) _____

Q11 I fear not being able to discipline a person with a disability because of potential law suits.

Strongly agree (1)

Agree (2)

Disagree (3)

Strongly disagree (4)

Q12 Once I hire a person with a disability, I cannot fire him/her because I fear legal reprisals.

Strongly agree (1)

Agree (2)

Disagree (3)

Strongly disagree (4)

Q13 I am concerned about the cost of accommodations.

Strongly agree (1)

Agree (2)

Disagree (3)

Strongly disagree (4)

Q14 I fear costs associated with additional training required for an employee with a disability.

- Strongly agree (1)
- Agree (2)
- Disagree (3)
- Strongly disagree (4)

Q15 I fear hiring persons with disabilities will increase health insurance costs.

- Strongly agree (1)
- Agree (2)
- Disagree (3)
- Strongly disagree (4)

Q16 I am concerned that persons with disabilities cannot meet the performance standards of a
job.

- Strongly agree (1)
- Agree (2)
- Disagree (3)
- Strongly disagree (4)

Q17 I am concerned that co-workers may be uncomfortable working with a person with a
disability.

- Strongly agree (1)
- Agree (2)
- Disagree (3)
- Strongly disagree (4)

Q18 I am concerned that a person with a disability will require more of my time which will take away from my other responsibilities.

- Strongly agree (1)
- Agree (2)
- Disagree (3)
- Strongly disagree (4)

Q19 I am concerned that excessive absenteeism will result from persons with disabilities frequent needs for doctor visits.

- Strongly agree (1)
- Agree (2)
- Disagree (3)
- Strongly disagree (4)

Q20 How would you rate your knowledge about the capabilities of persons with disabilities?

- Good (1)
- Poor (2)

Q21 How would you rate your knowledge about mental health disorders (Schizophrenia, Learning Disorders, Bipolar Disorder and Depression)?

- Good (1)
- Poor (2)

Q22 Rate your willingness to hire an individual with a mental health disorders (Schizophrenia, Learning Disorders, Bipolar Disorder and Depression)?

- Good (1)
- Poor (2)

Q23 How would you rate your knowledge about physical disabilities (Fibromyalgia, Multiple Sclerosis and Spinal Cord Injuries)?

- Good (1)
- Poor (2)

Q24 Rate your willingness to hire an individual with a physical disability (Fibromyalgia, Multiple Sclerosis and Spinal Cord Injuries)?

- Good (1)
- Poor (2)

Q25 I view persons with disabilities as another form of diversity.

- True (1)
- False (2)

Q26 Persons with disabilities are committed, loyal and reliable employees.

- True (1)
- False (2)

Q27 I believe that employees with disabilities are role models for persons with and without disabilities.

- True (1)
- False (2)

Q28 I believe that employees with disabilities are as productive as persons without disabilities.

- True (1)
- False (2)

Q29 I believe that absenteeism is the same for persons with and without disabilities.

- True (1)

False (2)

Q30 How would you rate the training you have received regarding implications of Title 1 of The Americans with Disabilities Act (ADA)?

Good (1)

Poor (2)

Q31 How would you rate your knowledge of Title 1 of The Americans with Disabilities Act (ADA)?

Good (1)

Poor (2)

Q32 How would you rate your ability to apply the Title 1 of The Americans with Disabilities Act (ADA)?

Good (1)

Poor (2)

Q33 Providing reasonable accommodations is associated with enhanced performance, satisfaction and job tenure.

True (1)

False (2)

Q34 Most accommodations are not expensive.

True (1)

False (2)

Q35 Providing accommodations contributes to retention of qualified employees.

True (1)

False (2)

Q36 Which statement best describes your experience with employees with disabilities:

- I have had positive experiences with employees with disabilities. (1)
- I have had negative experiences with employees with disabilities. (2)
- I have had no experiences with employees with disabilities. (3)

Q37 I am willing to hire a person with a disability.

- True (1)
- False (2)

Q38 Rate your knowledge of government programs that assist with costs of accommodations.

- Good (1)
- Poor (2)

Q39 Rate your knowledge of internet resources that inform regarding incentives available to employers for hiring persons with disabilities.

- Good (1)
- Poor (2)

Q40 Rate your knowledge about The Job Accommodations Network (JAN) and how you can benefit as an employer from the information on this website.

- Good (1)
- Poor (2)

APPENDIX D

APPENDIX D

FINAL 16 ITEM SCALE QUESTIONS

1. Q15 I fear hiring persons with disabilities will increase health insurance costs.
2. Q14 I fear costs associated with additional training required for an employee with a disability.
3. Q19 I am concerned that excessive absenteeism will result from persons with disabilities frequent needs for doctor visits.
4. Q13 I am concerned about the cost of accommodations.
5. Q18 I am concerned that a person with a disability will require more of my time which will take away from my other responsibilities.
6. Q16 I am concerned that persons with disabilities cannot meet the performance standards of a job.
7. Q11 I fear not being able to discipline a person with a disability because of potential law suits.
8. Q39 Rate your knowledge of internet resources that inform regarding incentives available to employers for hiring persons with disabilities.
9. Q40 Rate your knowledge about The Job Accommodations Network (JAN) and how you can benefit as an employer from the information on this website.
10. Q38 Rate your knowledge of government programs that assist with costs of accommodations.

11. Q31 How would you rate your knowledge of Title 1 of The Americans with Disabilities Act (ADA)?
12. Q30 How would you rate the training you have received regarding implications of Title 1 of The Americans with Disabilities Act (ADA)?
13. Q32 How would you rate your ability to apply the Title 1 of The Americans with Disabilities Act (ADA)?
14. Q20 How would you rate your knowledge about the capabilities of persons with disabilities?
15. Q21 How would you rate your knowledge about mental health disorders (Schizophrenia, Learning Disorders, Bipolar Disorder and Depression)?
16. Q23 How would you rate your knowledge about physical disabilities (Fibromyalgia, Multiple Sclerosis and Spinal Cord Injuries)?

BIOGRAPHICAL SKETCH

Javier Nazario Rodriguez is originally from Cerralvo, Nuevo Leon, Mexico. He obtained a Licensure in Psychology from Universidad Mexico-Americana del Norte (UMAN), in Reynosa, Tamaulipas, Mexico in 2003. He earned a Master of Science in Rehabilitation Counseling from the University of Texas Pan American in 2007. Javier holds a license as a Professional Counselor (LPC), is a Licensed Chemical Dependency Counselor (LCDC), and is a Certified Rehabilitation Counselor (CRC). Recently, Javier has satisfied all requirements and fulfillments to obtain a Doctor of Philosophy (Ph.D.) in Rehabilitation Counseling from The University of Texas Rio Grande Valley (UTRGV).

Javier's work experience includes working as a vocational rehabilitation counselor for over 9 years in a state vocational rehabilitation agency. Javier has also provided alcohol and other drugs (AOD) counseling services on a contractual basis for over 4 years to youth with substance abuse problems and at-risk. Javier enjoys working with people with different disabilities, physical, mental and developmental, providing services to both English and Spanish speaking clients of which many are monolingual. Javier has been an invited lecturer at the undergraduate level for UTRGV and also for UMAN. Javier has attended multiple conferences and has received training in Gestalt therapy, and therapeutic uses of Hypnosis, among other specialized training. Javier can be reached at alua33@sbcglobal.net for further information.