Perceptions of Employers and Rehabilitation Counselors Toward Hiring Individuals who Stutter

by

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Abstract

The purpose of this study was to investigate the perceptions of employers and rehabilitation counselors toward hiring people who stutter. Ninety-two employers and rehabilitation counselors completed the Employer and Rehabilitation Counselor Perceptions of Individuals who Stutter Questionnaire. Overall, participants perceived software developer-applications as the most appropriate occupation for a person who stutters. Participants conversely perceived biological science teacher-postsecondary as the least appropriate occupation for a person who stutters. Participants were most likely to agree with the statement that people who stutter can benefit from speech therapy and were least likely to agree with the statement that stuttering and intelligence are related. The results showed that employers and rehabilitation counselors did not view hiring individuals who stutter differently nor did they view stuttering differently. In addition, the findings of the study revealed that there is no one or precise definition of stuttering.

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Chapter 1

Introduction

While discussing the disability rights movement, President Barack Obama stated that "Americans living with disabilities are still measured by what [people] think they cannot do, instead of what we know they can do" (White House, 2010b). The President generally concluded by saying that "…each of us has a role to play in our economy. Each of us has something to contribute to the American society" (White House, 2010b). With these statements, President Obama acknowledged that perceptions about disability are a barrier to full participation and equal opportunity in our society for people with disabilities, particularly in employment where employers may perceive people with disabilities to lack certain skills (e.g., communication) needed to be effective employees. These statements also highlight that there is often a misalignment of perception and reality with respect to the abilities of individuals with disabilities. America and its economy flourishes the most when all people are fully included, so it is important to understand how perceptions affect people with disabilities, as perceptions influence how people relate to one another.

The Basics of Perceptions

Perception is reality. As stated by Robbins and Judge (2008), "…people's behaviors are based on their perceptions of what reality is, not on reality itself" (p.52). Because a person's interpretation of reality involves a number of factors, such as characteristics of the perceiver (e.g., attitudes, past experiences, expectations) and the target (e.g., background, similarity), as well as characteristics of the situation (e.g., work or social setting), there may be much dissimilarity between what is seen and what exists (Robbins & Judge, 2008). Consequently, two people may see the same thing, or person, but have diverse perceptions (Robbins & Judge,

2008). Additionally, when making judgements, individuals may employ various shortcuts in attempt to save time and effort; however, such shortcuts may or may not accurately represent reality (Robbins & Judge, 2008). For example, stereotyping is an often used shortcut in judging people, yet stereotypes about entire groups of people are seldom perfect (Robbins & Judge, 2008). These shortcuts, along with other common biases and errors in decision-making, may result in grave distortions of reality and from rationality (Robbins & Judge, 2008). Therefore, a key to bringing perception and reality closer together is acknowledging and understanding that decisions are rarely made in a vacuum (Robbins & Judge, 2008).

Perceptions of Disability

Throughout time, people with disabilities have been on the fringes of society. Human history is filled with numerous examples of how people with disabilities were segregated from and oppressed by society, including institutionalization, sterilization, exile, imprisonment, use as entertainment, and death (see Jaeger & Bowman, 2005 for a review). Also, not too long ago, people with disabilities had separate school and work systems (Vash & Crewe, 2004). Today, people with disabilities still lack full and equal access to many spheres of life, such as education, transportation, and employment. The unjust treatments and limited opportunities that people with disabilities have faced, and continue to face, are largely due to the negative perceptions of disability. According to Henderson and Bryan (as cited in Gandy, Martin, & Hardy, 1999), people with disabilities are commonly perceived to be inferior, totally impaired, less intelligent, and in need of charity; another common perception is that they want to be with others who have disabilities. These perceptions are “misperceptions of reality” (Gandy, Martin & Hardy, 1999, p.11). Nonetheless, attitudes are formed from these perceptions and are sometimes more restricting than the limitations that stem from the actual physical or mental impairment or the

environment (Gandy, Martin, & Hardy, 1999). Attitudinal barriers, in fact, were one of the catalysts for passing the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 (Gandy, Martin, & Hardy, 1999). Thus, the societal marginalization and exclusion of people with disabilities is based on, and strengthened by, social classifications of disability (e.g., outsiders, valueless, objects) and social reactions to disability (e.g., discomfort) (Jaeger & Bowman, 2005).

Theoretical and Empirical Framework

There may be various sources of the negative perceptions of people with disabilities and reasons why such perceptions and the resulting attitudes are difficult to conquer. For example, the social classifications of, and social responses toward, people with disabilities may be linked with various theoretical models of disability, such as the medical model (Jaeger & Bowman, 2005). According to the medical model, disability is a medical or biological problem within the person and medical treatment is needed to remove the disability; an example of views and actions that stem from this model is the eugenics movement (Jaeger & Bowman, 2005).

Additionally, stigma theory and spread phenomenon help explain perceptions of people with disabilities and how disability begins to define one's identity. Per Goffman's 1963 stigma theory, people with disabilities will have a spoiled identity and therefore be seen as deficient in every area of life because of the perceptions of one characteristic (i.e., disability). Stated differently, people with disabilities are devalued and discredited as a total person simply because of one characteristic, disability. According to spread phenomenon, negative perceptions of a disability spread to perceptions of the whole person (Wright, 1960). For example, a person with only one disability (e.g., blindness) is inaccurately perceived to have other disabilities (e.g., deafness) as well. These theories, along with other biases such as confirmation bias (i.e., seeking,

interpreting, and creating information that verifies existing beliefs) and belief perseverance (i.e., sticking to initial beliefs even after they have been discredited) lead to the continuation of stereotypes, prejudice, and discrimination (Brehm, Kassin, & Fein, 2005).

With respect to the field of rehabilitation, an overarching concern is the unemployment of people with disabilities, especially given that a basic purpose of rehabilitation is to help people with disabilities to become productive (Gandy, Martin, & Hardy, 1999). Historically, people with disabilities have encountered inequality in the pursuit of employment (Ju, Roberts, & Zhang, 2013). Currently, the gap between the employment rates of people with disabilities and those without disabilities is quite significant; in fact, there is a 39 percentage point gap in favor of people without disabilities (Erickson, Lee, & von Schrader, 2015; Kessler Foundation/ National Organization on Disability, 2010). This gap does not exist because people with disabilities do not want to work. According to Ali, Schur, and Blanck (2011), many people with disabilities who are not currently working desire to work. Therefore, the employment disparities between people with and without disabilities are likely due to factors outside of the person, such as negative perceptions and attitudes about disability. For example, it is a myth that people with disabilities will not be as productive as employees without disabilities; another myth is that people with disabilities will not meet performance standards (Virginia Commonwealth University-Rehabilitation Research and Training Center, 2005). However, in a literature review of studies published from 1999-2012 about employer attitudes toward workers with disabilities, Ju, Roberts, and Zhang (2013) found that employers had concerns about workers with disabilities regarding their productivity, job performance, and lack of employability and skill. They also found that relative to people without disabilities, people with disabilities were disadvantaged in terms of job performance ratings and hiring decisions. They further found that employers had

negative attitudes when asked to compare job candidates with and without disabilities or when asked about their preferences for specific disabilities. Moreover, the National Council on Disability (2007) noted that employer discrimination, reluctance to hire, culture, fear of accommodations, and ignorance are barriers to the employment of people with disabilities. Such rejection and fear is based on the negative perceptions of disability.

In 1996, Stone and Collela developed a model that described various factors that affect how people with disabilities are treated at work. The model, created to spur disability research among management/organizational researchers, was grounded on concepts (e.g., stigma) from various fields such as social and rehabilitation psychology (Stone & Colella, 1996). According to Stone and Collela (1996), people with disabilities encounter problematic, unequal employment situations because observers (e.g., supervisors, recruiters) categorize persons with disabilities and then make inferences about them based on stereotypes (e.g., incompetent). Based on the stereotyping, observers form expectations (e.g., cannot perform the job) about the person. These expectations then influence how the observer responds (e.g., discomfort) to the person with the disability. Finally, the categorization, stereotyping, expectancies, and responses collectively impact how persons with disabilities are treated (e.g., receipt of negative performance evaluations) in work settings. Thus, the model explains the role that perceptions play in establishing and maintaining barriers to employment for people with disabilities.

Statement of Research Problem

America's largest minority group is people with disabilities based on data from the United States Census Bureau (Brault, 2012; Ennis, Ríos-Vargas, & Albert, 2011; Rastogi, Johnson, Hoeffel, & Drewery, 2011). Approximately 56.7 million Americans have a disability (Brault, 2012). This group is composed of people with all types of disabilities, including

physical, mental, cognitive, and sensory disabilities. Great strides have been made to include all people with disabilities in every aspect of daily life, but progress is not complete, particularly in employment. Although there may be many specific areas of employment that need to be addressed in order to have a fully inclusive labor force, communication is perceived to be important in an ever-changing workforce. According to the Office of Disability Employment Policy (n.d.), “Communication is an essential part of participating in today's workforce.” However, there are negative perceptions regarding the employability of individuals with communication disabilities, including those who stutter (Allard & Williams, 2008). With respect to stuttering, many people who stutter report experiencing problems at various stages of the employment process, including hiring and promotion (e.g., Blumgart, Tran, & Craig, 2010; Klompas & Ross, 2004), and most vocational advice for people who stutter, from non-employment professionals, involves pursuing jobs that are perceived to require low speaking demands (e.g., Gabel, Blood, Tellis, & Althouse, 2004; Logan & O’Connor, 2012). Therefore, the focus of this study was the lack of information related to the perceptions of employers and rehabilitation counselors toward hiring people who stutter.

Purpose of the Study

The purpose of this study was to investigate the perceptions of employers and rehabilitation counselors toward hiring people who stutter. The purpose of the study was further defined by the following four research questions.

Research Questions

1. What are the demographic characteristics of employers and rehabilitation counselors who participated in this study?

2. What are the descriptive statistics associated with each item on the Employer and Rehabilitation Counselor Perceptions of Individuals who Stutter Questionnaire?
3. To what extent is there a difference in perceptions of employers and rehabilitation counselors related to hiring people who stutter?
4. To what extent is there a difference in the general perceptions of employers and rehabilitation counselors about stuttering?

Hypotheses

The following null hypotheses were formulated for this study.

1. Hypothesis: There is no statistically significant difference in perceptions of employers and rehabilitation counselors related to hiring individuals who stutter.
2. Hypothesis: There is no statistically significant difference in the general perceptions of employers and rehabilitation counselors related to stuttering.

Terms

1. An employer is "a legal entity that controls and directs a servant or worker under an express or implied contract of employment and pays (or is obligated to pay) him or her salary or wages in compensation" (Business Dictionary, n.d.).
2. Stuttering is traditionally perceived "as a disorder in which the 'rhythm' or fluency of speech is impaired by interruptions, or blockages" (Bloodstein & Bernstein Ratner, 2008, p.1). However, there is no operational definition of stuttering (Bloodstein & Bernstein Ratner, 2008).
3. Rehabilitation counselors are counselors who "help people with emotional and physical disabilities live independently. They work with clients to overcome or manage the

personal, social, and professional effects of disabilities on employment or independent living" (United States Department of Labor, Bureau of Labor Statistics, 2015).

Limitations

This study was limited to:

1. Employers and rehabilitation counselors in Alabama who help make hiring decisions or who serve individuals with disabilities respectively.
2. The extent that stuttering can be generally described as interruptions or blockages during the fluency of speech (Bloodstein & Bernstein Ratner, 2008).
3. The extent that the research instrument accurately reflects a representative sample of the top 40 occupations from 2012 to 2022 (Alabama Department of Labor, 2012) for which all individuals with the appropriate education may be hired or referred.

Assumptions

The following assumptions applied to this study:

1. Participants understand the questionnaire items.
2. Participants are knowledgeable of stuttering to the extent that they can recognize when stuttering is evident.
3. Participants' responses will be based on their real or true perceptions of individuals who stutter and placement of those individuals in occupations.
4. Participants constitute a representative sample of employers and rehabilitation counselors.

Methods and Procedures

Sources of Data

The target population for this study was employers and rehabilitation counselors in Alabama. The sample for this study was the top 150 employers in Alabama in 2014 who are listed on the Alabama Department of Labor website (Alabama Department of Labor, 2012) and all 131 rehabilitation counselors employed by the Alabama Department of Rehabilitation Services (ADRS).

Data Collection Procedures

The researcher mailed a flyer, an information letter, the questionnaire, and a stamped envelope to each of the 150 employers. The researcher contacted the Vocational Rehabilitation Services Assistant Commissioner at ADRS. The Assistant Commissioner agreed to assist with disseminating the survey instrument to 131 rehabilitation counselors. The research instrument was entered into Survey Monkey and an information letter, which included the link to the survey instrument, was sent to the Assistant Commissioner for dissemination. The researcher had an existing account with Survey Monkey.

Instrumentation

The researcher-developed instrument, the Employer and Rehabilitation Counselor Perceptions of Individuals who Stutter Questionnaire, investigated perceptions of employers and rehabilitation counselors toward hiring people who stutter. The researcher modified the Vocational Advice Scale (VAS), which was developed by Gabel, Blood, Tellis, and Althouse (2004); the VAS has been used in studies (e.g., Irani, Gabel, Hughes, Swartz, & Palasik, 2009; Swartz, Gabel, Hughes, & Irani, 2009) to determine perceptions of career appropriateness of people who stutter and people who do not stutter. However, given that the VAS utilized top

occupations starting in the 1990s, some of the occupational items were no longer relevant. Therefore, the researcher updated some of the VAS items to reflect current Labor Market Information (i.e., occupational projections for 2012-2022) from the Alabama Department of Labor. The researcher-developed questionnaire was a two-part instrument. Part I was the Demographic Information Sheet. Part I included nine demographic items, such as race, gender, and job title. Part II was the Employer and Rehabilitation Counselor Perceptions of Individuals who Stutter Questionnaire. Part II included 40 items. All of the 39 closed-ended items on Part II of the questionnaire were based on a 5-point Likert-type scale, ranging from 5 (Strongly Agree) to 1 (Strongly Disagree).

The first 30 items on Part II of the instrument asked respondents to indicate the extent to which they agree that a person who stutters could be hired for specific occupations. These items were based on the Hot 40 Demand Occupations from 2012 to 2022 in Alabama (Alabama Department of Labor, 2012). Occupations that were projected to have 100 or more average annual openings were included on the instrument (Alabama Department of Labor, 2012). The items were designed to measure the perceptions of employers and rehabilitation counselors about appropriate career choices, given that individuals who stutter meet the educational requirements. An individual score for the first 30 items on Part II ranged from 150 (strongly agree for all items) to 30 (strongly disagree for all items). The higher the total agreement score, the more favorable an individual who stutters was viewed.

The next nine items on Part II of the researcher-developed instrument addressed participants' general perceptions related to stuttering. Two items (i.e., item 40 and item 42) were adapted from the true-false items on the Alabama Rehabilitation Counselors' Attitudes Toward Stuttering Inventory (ARCATS) (M. A. Hurst & Cooper, 1983). Three items (i.e., items 43, 45,

and 46) were adopted from the attitudinal items on the ARCATS. In addition, one item (i.e., item 47) was adapted from the Employer Attitudes Toward Stuttering Inventory (EATS) (M. I. Hurst & Cooper, 1983) and three items (i.e., items 41, 44, and 48) were adopted from the EATS. The researcher was granted permission by M. A. Hurst to use the ARCATS and by M. I. Hurst to use the EATS.

Eight of the nine items (i.e., items 40 through 44 and items 46 through 48) related to general perceptions were interpreted such that a response of strongly disagree indicated a positive perception. For these items, an individual score ranged from 40 (strongly agree) to 8 (strongly disagree). The lower the overall perception score for these eight items, the more positive the perception was related to stuttering. For Item 45, an individual score ranged from 5 (strongly agree) to 1 (strongly disagree). The final item was an open-ended question that asked participants how they personally defined stuttering.

The instrument was validated by a panel of experts. The panel of experts included one employment expert, two rehabilitation counseling experts, and a research methodologist. These were individuals with expertise and experience with a range of disabilities and possible employment issues related to people with disabilities. Content and face validity involves subjectivity (qualitative input) from individuals who are competent in the subject being studied (Ary, Jacobs, & Sorensen, 2010).

A copy of the instrument was provided to each member on the panel in person by the researcher. The researcher informed panel members of the purpose of the study and the research questions. To establish content validity, the researcher verbally instructed panel members to assess each item as to its usefulness in answering the research questions. Panel members were instructed to assess the appropriateness and representativeness of items related to hiring

individuals who stutter and perceptions of stuttering. To establish face validity, panel members were instructed to assess the overall appearance of the instrument itself in terms of the directions, format, style, clarity, readability, and feasibility of the items. Comments from the panel members relevant to content validity were to be written on the instrument itself, as were comments on the face validity of the instrument.

After one week, the researcher collected the edited survey instruments from the panel members and incorporated their suggestions into the final instrument. A panel member suggested that means and standard deviations be calculated for each closed-ended item on Part II of the instrument. For items related to perceptions of stuttering, two panel members suggested that two items (item 40 and item 42) be rescaled from true-false items to a 5-point Likert-type scale to be consistent with scaling on the other seven items in that section. The panel made no suggestions for specific content of any of the items on hiring an individual who stutters. As noted previously, all of these items (30 items) listed an occupation projected to have 100 or more average annual openings based on the Alabama Department of Labor. The panel also made no suggestions for specific content of any of the items related to perceptions of stuttering. Panel members agreed unanimously that all items were relevant, appropriate, and representative of useful content to answer the research questions. Since there was no disagreement among panel members, the researcher retained all of the items on the survey instrument.

Data Analysis Procedures

Data from useable surveys were entered into an IBM-SPSS spreadsheet for statistical analysis. Descriptive statistics were computed to examine demographic information given by respondents. Descriptive statistics were also computed to examine each of the survey items. A one-way Analysis of Variance (ANOVA) statistical procedure was performed to examine

whether significant group (employers; rehabilitation counselors) differences existed related to hiring individuals who stutter. A one-way ANOVA statistical procedure was performed to examine whether significant group (employers; rehabilitation counselors) differences existed regarding general perceptions related to stuttering.

Need for the Study

When considering job candidates, employers believe that the ability to communicate verbally is an important job skill (National Association of Colleges and Employers, 2012, 2013, 2015). Given that stuttering involves "disturbances in the normal fluency and time patterning of speech…" (American Psychiatric Association, 2013, p.45), it may impact employers' perceptions of qualified job applicants or employees. In fact, people who stutter report experiencing problems at various stages of the employment process. For example, people who stutter report encountering issues during hiring (e.g., Klompas & Ross, 2004), evaluation (e.g., Rice & Kroll, 1997), and promotion (e.g., Bricker-Katz, Lincoln, & Cumming, 2013). Some people reported job termination as a result of stuttering (Blumgart, Tran, & Craig, 2010). There are some court cases that support termination on the basis of stuttering claim, such as *Andresen v. Fuddruckers, Inc*. (2004). In a study of employers' perceptions of stuttering, 85% of 644 employers agreed that stuttering decreases an individual's employability (M. I. Hurst & Cooper, 1983). However, the Hurst and Cooper study asked employers to respond to only seven questions and statements that gathered respondents' general perceptions of stuttering and employment.

Stuttering also appears to impact perceptions of career appropriateness. According to research on vocational advice for people who stutter, occupations that were perceived to have low speaking demands were typically viewed as most suitable for people who stutter (e.g., Gabel, Blood, Tellis, & Althouse, 2004; Logan & O'Connor, 2012). However, most of the

research involved participants who were not employment or rehabilitation professionals, such as college students. It has been suggested that future research should include other groups such as employers and employment counselors (Gabel, Hughes, & Daniels, 2008). Gabel, Blood, Tellis, and Althouse (2004) also suggested that a more current study of employer perceptions related to specific jobs may be beneficial.

There have been some studies on rehabilitation counselors' perceptions of stuttering and employment, but no recent studies have been identified and most investigated counselors' general perceptions of the impact of stuttering on employment, as opposed to their perceptions of particular jobs or occupations. For example, Goldin (1965) found that only 3.6% of counselors preferred to work with speech and hearing cases. When asked about their reasons for certain case preferences, most counselors indicated that they preferred to work with particular disability types because of the speed and ease of success in achieving vocational rehabilitation (38.3%) and because of their experience with and knowledge of disability (24.7%) (Goldin, 1965). M. A. Hurst and Cooper (1983) found that Alabama rehabilitation counselors believe that stuttering can impact employment. For instance, 70% of 152 respondents believed that persons who stutter may encounter bias from employers. Therefore, there is a need to obtain a more current and detailed understanding of the perceptions of employers and rehabilitation counselors of the impact of stuttering on employment.

Significance

This study provided an examination of how perceptions of stuttering may impact the employment process. The findings may add to the knowledge base and update the literature on stuttering as it relates to the perceptions of employers and rehabilitation counselors. The results may provide information on how employers and rehabilitation counselors view the employability of people who stutter. There may be some value to employers who may not be familiar with

hiring or working with people with disabilities, including those who stutter. This research may be advantageous for rehabilitation counselors who may serve consumers who stutter. Results of this research may benefit educators and students in rehabilitation, communication disorders, and business as they examine their own perceptions about people who stutter in classrooms, workplaces, or during outreach and service. Finally, through a better understanding of stuttering, results of this study may benefit people who stutter with respect to preparation, planning, obtaining, maintaining, and advancing in employment. Thus, individuals who stutter may be able to prepare for occupations in which they are interested and secure employment for their chosen occupation.

Chapter 2

Introduction

This chapter was divided into four major sections and presents a review of literature relevant to perceptions of employers and rehabilitation counselors toward hiring individuals who stutter. For the first major section, background information on people with disabilities is provided. A brief overview of stuttering is provided in the second major section. Subsequently, research related to the treatment of people who stutter in employment is provided. Finally, information about predictors of the treatment of people who stutter in employment is provided.

A Brief Synopsis on Decision-Making in Employment

In the workplace, personnel decisions are not always the result of formal scientific and technical practices (Muchinsky, 2006). Decisions are affected by a number of factors, including organizational characteristics (e.g., values about hiring qualified applicants), social or cultural forces (e.g., the desire for fair assessments of ability and diversification in the workforce), and the legal system (e.g., fair employment laws) (Muchinsky, 2006). Perceptions can also impact the decision-making process and perception is often reality. As stated by Robbins and Judge (2008), "…people's behaviors are based on their perceptions of what reality is, not on reality itself" (p.52). Because a person's interpretation of reality involves various components, such as characteristics of the perceiver (e.g., attitudes, past experiences, expectations) and the target (e.g., background, similarity), as well as characteristics of the situation (e.g., work or social setting), there may be much dissimilarity between what is seen and what exists (Robbins & Judge, 2008). Consequently, two people may see the same thing, or person, but have diverse perceptions (Robbins & Judge, 2008).

Additionally, when making judgments, individuals may employ various shortcuts in attempt to save time and effort; however, such shortcuts may or may not accurately represent reality (Robbins & Judge, 2008). For example, stereotyping is an often used shortcut in judging people, yet stereotypes about entire groups of people are seldom perfect (Robbins & Judge, 2008). For example, appraisals of an employee's job performance may be related to inferences, possibly based on stereotypes, about the employee that may not be associated with actual job performance; moreover, these inferences may or may not be correct (Muchinsky, 2006). As a consequence, other personnel decisions (e.g., salary, promotion, discharge) may be impacted (Muchinsky, 2006). In order to bring perception and reality closer together, one must acknowledge and understand that decisions are rarely made in a vacuum (Robbins & Judge, 2008). Therefore, it is important to understand the judgments of employees in the workplace, especially employees who are members of legally protected groups such as people with disabilities, due to the history of unequal treatment of certain groups in employment and because of the significance of work in society.

Background on People with Disabilities

People with disabilities are America's largest minority group based on data from the United States Census Bureau (Brault, 2012; Ennis, Ríos-Vargas, & Albert, 2011; Rastogi, Johnson, Hoeffel, & Drewery, 2011). According to the 2010 Survey of Income and Program Participation, there are approximately 56.7 million people with disabilities in America (Brault, 2012). This group is composed of people with all types of disabilities, including physical, mental, cognitive, and sensory disabilities. Of this group, more than half have a severe disability (Brault, 2012). The nation's largest minority group also has a high amount of poverty and unemployment and low levels of educational attainment. Per the 2013 American Community

Survey (ACS), 28.2% of people with disabilities age 21 to 64 were living below the poverty line compared to 12.5% of their peers without disabilities, a 16 percentage point gap (Erickson, Lee, & von Schrader, 2015). In addition, the national employment rate for people with disabilities ages 16-64 was 33.7% while the employment rate for their counterparts without disabilities was 72.2%; that is a 39 percentage point gap (Erickson, Lee, & von Schrader, 2015). Finally, with respect to educational attainment, 13.5% of people with disabilities ages 21 to 64 have a bachelor's degree or higher contrary to 32.1% of people without disabilities; that is a 19 percentage point gap (Erickson, Lee, & von Schrader, 2015). Thus, it appears that people with disabilities have limited access to areas of life, particularly employment, which can increase one's chances of experiencing upward social mobility.

Vocational Rehabilitation

The Rehabilitation Services Administration (RSA) executes various programs and projects to help people with disabilities become employed and live independently (United States Department of Education, 2015). The State Vocational Rehabilitation Services Program is one such program and it provides "a wide range of services designed to help individuals with disabilities prepare for and engage in gainful employment consistent with their strengths, resources, priorities, concerns, abilities, capabilities, interests, and informed choice" (United States Department of Education, 2014). People with disabilities are eligible for services if they "are those individuals who have a physical or mental impairment that results in a substantial impediment to employment, who can benefit from vocational rehabilitation (VR) services for employment, and who require VR services" (United States Department of Education, 2014). The State Vocational Rehabilitation Services Program serves about one million Americans with disabilities (United States Government Accountability Office, 2012). Given that 16.2 million

people age 18 to 64 reported a disability affecting employment in 2014 based on the Current Population Survey (von Schrader & Lee, 2015), the State Vocational Rehabilitation Services Program only serves a portion of Americans with disabilities each year.

State Vocational Rehabilitation Services programs may employ rehabilitation counselors (United States Department of Labor, 2015). Rehabilitation counselors assist people with disabilities in experiencing productivity, independence, and inclusion in the community. According to the Commission on Rehabilitation Counselor Certification (CRCC) (n.d.), "Rehabilitation counselors are the only professional counselors educated and trained at the graduate level specifically to serve individuals with disabilities." The Code of Professional Ethics for Rehabilitation Counselors states that "rehabilitation counselors are committed to facilitating the personal, social, and economic independence of individuals with disabilities" (CRCC, 2009, p.1). To serve people with disabilities and thereby assist them with achieving their employment or independent living goals, rehabilitation counselors may perform diverse duties such as educating employers on how to support people with disabilities in the workplace and engaging in advocacy so that people with disabilities can work and reside in the communities of their choice (United States Department of Labor, Bureau of Labor Statistics, 2015). Specific techniques noted in the Scope of Practice Statement include vocational counseling, case management, service coordination, job placement services, and interventions to remove barriers (i.e., environmental, employment, attitudinal) that prevent people with disabilities from attaining their aspirations (CRCC, n.d.). Thus, rehabilitation counselors help people with disabilities to realize their potential and gain access to the various spheres of life.

There are some basic philosophical tenets of rehabilitation that should be existent in rehabilitation systems and its practitioners (Martin, 2008). For example, rehabilitation

practitioners should support equality of opportunity; essentially, this means that people with disabilities have a right to equality of opportunity in areas such as employment and education and disability should not affect access to those areas (Gandy, Martin, & Hardy, 1999; Martin, 2008). Rehabilitation practitioners should also respect the holistic nature of people; in other words, to understand the uniqueness of each person with a disability, rehabilitation practitioners must view the various aspects (e.g., vocational, educational, economic) of a person collectively (Gandy, Martin, & Hardy, 1999; Martin, 2008). Further, rehabilitation practitioners should focus on the assets of people with disabilities, meaning that rehabilitation practitioners need to focus on the abilities of the person (Gandy, Martin, & Hardy, 1999; Martin, 2008). Another tenet involves shaping the environment and attempting to facilitate change in the community for people with disabilities by being aware of existing barriers (e.g., attitudinal) and engaging in advocacy to eliminate those barriers (Martin, 2008). Finally, rehabilitation practitioners should have concern for individuals; this fundamentally means that rehabilitation practitioners should view each person with a disability as an individual and understand that because the experience of disability varies by person, then the rehabilitation process must be individualized (Gandy, Martin, & Hardy, 1999; Martin, 2008). Belief in the basic philosophical tenets of rehabilitation should result in effective professional relationships that assist people with disabilities in fully participating in the community.

Rehabilitation counselors must also be aware of the models of disability. There are several theoretical models that attempt to describe disability (Jaegar & Bowman, 2005). However, there are two major models of disability, the medical model and the social model (World Health Organization [WHO], 2002). The medical model "views disability as a feature of the person, directly caused by disease, trauma or other health condition, which requires medical

care provided in the form of individual treatment by professionals" (WHO, 2002, p.8). The goal is to remove disability via medical cures (Jaegar & Bowman, 2005). External factors are not considered under the medical model (Jaegar & Bowman, 2005).

Conversely, society may play a role in disability. The social model of disability highlights the role that perceptions and attitudes play in disenfranchising people with disabilities. The social model recognizes disability as a "socially-created problem"; it is the result of attitudes that lead to inaccessible environments (WHO, 2002, p.9). Thus, external factors produce disability (Jaegar & Bowman, 2005) and therefore a political, rather than medical, response is needed (WHO, 2002).

Although the medical model and the social model may be the most prominent models of disability, the biopsychosocial model views disability as a complex phenomenon that is the interaction between biological and external factors; therefore, it is a combination of the medical and social model (WHO, 2002). The International Classification of Functioning, Disability, and Health (ICF) of the WHO is based on this model and therefore includes biological, social, and individual perspectives (WHO, 2002). According to the ICF, disability is the outcome of the interaction between health conditions (e.g., diseases, disorders, injuries) and contextual factors which include environmental factors (e.g., attitudes, architectural characteristics) and personal factors (e.g., coping styles) (WHO, 2002). Thus, to address disability, medical care may be needed, along with political action and public education (WHO, 2002). The ICF is purported to be a useful framework for evaluating vocational rehabilitation outcomes (Chan et al., 2009). Rehabilitation counselors may encounter models of disability in practice (e.g., during eligibility determination, reasons for advocacy) and therefore need to be knowledgeable of their purposes and perspectives (Parker & Patterson, 2012).

The Employment Situation of People with Disabilities

Given that a basic purpose of rehabilitation is to help people with disabilities to become productive (Gandy, Martin, & Hardy, 1999), an overarching concern for rehabilitation counselors is the unemployment, as well as the underemployment, of people with disabilities. Historically, people with disabilities have encountered inequality in the pursuit of employment (Ju, Roberts, & Zhang, 2013). To level the playing field, a number of state and federal initiatives and laws have been implemented over the years. For example, in 1920, President Woodrow Wilson signed the Smith-Fess Act; this law, called the Civilian Vocational Rehabilitation Act, established the Vocational Rehabilitation program in the United States that assists people with disabilities in obtaining employment (United States Department of Labor, 2015). In 1945, via a congressional resolution signed by President Harry Truman, the first week in October was declared "National Employ the Physically Handicapped Week" to inform the community that people with disabilities can be assets in the workplace (United States Department of Labor, 2015). After some changes, that week is now National Disability Employment Awareness Month (Library of Congress, n.d.).

In 1973, President Richard Nixon signed into the law the Rehabilitation Act, which advanced the civil rights of people with disabilities; perhaps most noteworthy was Section 504, which prohibits discrimination against people with disabilities in entities receiving federal funds (Gandy, Martin, & Hardy, 1999). In 1990, the Americans with Disabilities Act (ADA), the most comprehensive, disability-related, anti-discrimination legislation in history, was signed by President George H. W. Bush; ADA was based on the Civil Rights Act of 1964 and Section 504 of the Rehabilitation Act and prevents discrimination in employment, as well as public services, public accommodations, and telecommunications (Gandy, Martin, & Hardy, 1999; United States

Department of Labor, 2015). The Work Opportunity Tax Credit program started in 1996 to provide federal tax credit to employers who hire from groups (e.g., people with disabilities) who experience difficulties in securing employment (United States Department of Labor, 2008, 2015). In 2010, President Barack Obama signed Executive Order 13548 to increase the employment rate of people with disabilities by making the federal government, America's largest employer, a model employer of people with disabilities (The White House, 2010a). The 2014 Workforce Innovation and Opportunity Act, signed into law by President Obama, amended a number of laws and therefore reformed a number of programs to help job seekers, including those with disabilities, access the workforce (United States Department of Labor, 2015). Thus, the implementation of the aforementioned initiatives and laws, and many others, illustrates the continual struggle people with disabilities face in the search for employment.

Employment rate. Currently, the gap between the employment rate of people with disabilities and those without disabilities is quite significant. In fact, according to the 2010 Survey of Americans with Disabilities, 21% of people with disabilities age 18 to 64 reported employment; conversely, 59% of people without disabilities age 18 to 64 reported employment (Kessler Foundation/National Organization on Disability, 2010). That is a 38 percentage point gap. As noted earlier, based on statistics from the 2013 American Community Survey, the national employment rate for people with disabilities ages 16 to 64 was 33.7% while the employment rate for their counterparts without disabilities was 72.2% (Erickson, Lee, & von Schrader, 2015). That is a 39 percentage point gap. For Alabama, the state employment rate for people with and without disabilities age 16 to 64 was 26.5% and 68.3% respectively (Erickson, Lee, & von Schrader, 2015). That is a 42 percentage point gap. Per the monthly Current Population Survey, for December 2015, the national employment-population ratio for persons 16

years old and over with a disability was 17.2% compared to 65% for persons without a disability (United States Department of Labor, 2016). That is a 48 percentage point gap. Those ratios did not change significantly from the previous year; the national employment-population ratio for persons 16 years old and over with a disability was 18% compared to 64.6% for persons without a disability in December 2014 (United States Department of Labor, 2016). Clearly, there are some barriers to employment for people with disabilities.

Possible barriers to employment. The gap in the employment rate does not exist solely because people with disabilities do not want to work. According to Ali, Schur, and Blanck (2011), many people with disabilities who are not currently working desire to work. In addition, based on findings from the 2015 National Employment and Disability Survey, many individuals with disabilities who are not currently working are preparing for and searching for employment (Kessler Foundation, 2015). For example, many individuals with disabilities are using a combination of job preparation methods (e.g., obtaining rehabilitation, receiving assistance from friends and family, attending college) and job search methods (e.g., applying for jobs online, directly contacting employers) to secure employment (Kessler Foundation, 2015). Therefore, not all unemployed people with disabilities desire to remain out of the workforce.

There are a number of factors contributing to the employment disparities between people with and without disabilities. For example, some reported barriers to employment for people with disabilities include lack of education or training, lack of transportation, lack of job counseling and one's own disability (United States Department of Labor, 2013). Other reported barriers include the inability to locate employment in one's line of work, the inability to receive appropriate accommodations, and fear of losing one's benefits (Kessler Foundation/National Organization on Disability, 2010). The National Council on Disability (2007) noted that people

with disabilities may incur additional costs with respect to obtaining and maintaining employment such as expenses related to medical equipment and attendant care and that they may need flexible work schedules for medical care and transportation issues.

Another contributor to the unemployment of people with disabilities is negative perceptions and attitudes about disability. For example, it is a myth that people with disabilities will not be as productive as employees without disabilities; that people with disabilities will not meet performance standards; and that accommodations for people with disabilities are expensive (Virginia Commonwealth University-Rehabilitation Research and Training Center, 2005). In addition, people with disabilities do not have more absences or accidents than their peers without disabilities, according to a DuPont study (United States Department of Labor, 2010). However, in a literature review of studies published from 1999-2012 about employer attitudes toward workers with disabilities, Ju, Roberts, and Zhang (2013) found that employers had concerns about workers with disabilities regarding their productivity, job performance, and lack of employability and skill. They also found that relative to people without disabilities, people with disabilities were disadvantaged in terms of job performance ratings and hiring decisions. They further found that employers had negative attitudes when asked to compare job candidates with and without disabilities or when asked about their preferences for specific disabilities. Moreover, the National Council on Disability (2007) noted that employer discrimination, reluctance to hire, culture, fear of accommodations, and ignorance are barriers to the employment of people with disabilities.

Kaye, Jans, and Jones (2011) also found that employer unawareness was a barrier to employment for people with disabilities. They surveyed over 450 human resource professionals and supervisors employed by employers who were reluctant to hire or accommodate people with

disabilities and abide by the Americans with Disabilities Act. After surveying these individuals about reasons why employers do not hire people with disabilities, the research team found that 81% of respondents believed that employers do not hire people with disabilities because they fear the costs of accommodations. Eighty percent of respondents believed employers fear lawsuits due to disciplining or terminating workers with disabilities for inadequate performance. Also, 69% of respondents believed that employers do not hire people with disabilities because they are afraid that they will not measure up to the same standards as employees without disabilities. In addition, 56% of respondents believed that employers do not hire people with disabilities because they think that people with disabilities cannot perform the basic functions of the job. The Office of Disability Employment Policy (ODEP) of the United States Department of Labor conducted the Survey of Employer Perspectives on the Employment of People with Disabilities in 2008 (Domzal, Houtenville, & Sharma, 2008). Based on responses from approximately 3800 employers regarding challenges to hiring people with disabilities, 73% of employers cited the nature of the work. With respect to concerns about hiring people with disabilities, 58% of employers believed that accommodating workers with disabilities is expensive; 49% of employers believed that workers with disabilities lack the skills and experience to do the job; and 46% of employers believed that workers with disabilities may not be as safe and productive as other workers. In addition, only 19% of employers reported employing people with disabilities.

Fraser, Ajzen, Johnson, Hebert, and Chan (2011) used focus groups to develop an employer survey to understand the intentions of employers related to hiring people with disabilities. Themes from the focus groups revealed that small and mid-size companies were worried about the productivity of people with disabilities; these companies also believed that

there was a lack of contact from vocational rehabilitation agencies and that if there was contact, ineffective recruitment would result. Mid-size companies were also concerned about negative reactions from managers and coworkers toward hiring workers with disabilities. Large companies were concerned that working with vocational rehabilitation would not be efficient and effective.

Even the President of the United States recognizes that negative perceptions and attitudes about disability continue to restrict employment opportunities for people with disabilities. While discussing the disability rights movement, President Obama stated that "Americans living with disabilities are still measured by what [people] think they cannot do, instead of what we know they can do" (White House, 2010b). The President generally concluded by saying that "…each of us has a role to play in our economy. Each of us has something to contribute to the American society" (White House, 2010b). With these statements, President Obama acknowledged that perceptions about disability are a barrier to full participation and equal opportunity in our society for people with disabilities, particularly in employment where employers may perceive people with disabilities to lack certain skills (e.g., communication) needed to be effective employees. These statements also highlight that there is often a misalignment of perception and reality with respect to the abilities of individuals with disabilities. America and its economy flourishes the most when all people are fully included, so it is important to understand how perceptions affect people with disabilities, as perceptions influence how people relate to one another.

Perceptions of Disability

Throughout time, people with disabilities have been on the fringes of society. Human history is filled with numerous examples of how people with disabilities were segregated from and oppressed by society, including institutionalization, sterilization, exile, imprisonment, use as

entertainment, and death (see Jaeger & Bowman, 2005 for a review). Also, not too long ago, people with disabilities had separate school and work systems (Vash & Crewe, 2004). Today, as noted earlier, people with disabilities still lack full and equal access to many spheres of life, such as education, transportation, and employment. The unjust treatments and limited opportunities that people with disabilities have faced, and continue to face, are largely due to the negative perceptions of disability. According to Henderson and Bryan (as cited by Gandy, Martin, & Hardy, 1999), people with disabilities are commonly perceived to be inferior, totally impaired, less intelligent, and in need of charity; another common perception is that they want to be with others who have disabilities. These perceptions are "misperceptions of reality" (Gandy, Martin & Hardy, 1999, p.11). Nonetheless, attitudes are formed from these perceptions and are sometimes more restricting than the limitations that stem from the actual physical or mental impairment or the environment (Gandy, Martin, & Hardy, 1999). Attitudinal barriers, in fact, were one of the catalysts for passing the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 (Gandy, Martin, & Hardy, 1999). Thus, the societal marginalization and exclusion of people with disabilities is based on, and strengthened by, social classifications of disability (e.g., outsiders, valueless, objects) and social reactions to disability (e.g., discomfort) (Jaeger & Bowman, 2005).

Models of disability. There may be various sources of the negative perceptions of people with disabilities and reasons why such perceptions and the resulting attitudes are difficult to conquer. For example, the social classifications of, and social responses toward, people with disabilities may be linked with various theoretical models of disability, such as the medical model (Jaeger & Bowman, 2005). As noted, according to the medical model, disability is a medical or biological problem within the person and medical treatment is needed to remove the

disability; an example of views and actions that stem from this model is the eugenics movement (Jaeger & Bowman, 2005). Per the productivist model, people with disabilities are viewed in terms of their ability to work; in other words, people who are not capable of working are excluded because they will be unproductive (Griffo, 2014). Employer resistance and the resulting limited inclusion of people with disabilities in the workforce may stem from this model (Griffo, 2014). Thus, the unequal outlook of people with disabilities in society may spring from theoretical perspectives on disability.

Societal values. Negative perceptions of people with disabilities may also be rooted in societal values. Societies have various values, with physical ability and intellect being treasured by many societies across time (Rubin & Roessler, 2008). Independence and self-sufficiency, work and productivity, and attractive physical appearance are valued in the United States (Rubin & Roessler, 2008). People who do not meet these standards are perceived to be inferior to those who do. For example, employment is often equated to social worth; therefore, people who are unemployed are perceived to have less value than people who are employed (Rubin & Roessler, 2008). Also, disability is frequently considered unattractive (Rubin & Roessler, 2008). Research by Wong, Chan, Cardoso, Lam, and Miller (2004) explored the attitudes of rehabilitation counseling students regarding people with disabilities. They examined the students' preferences for associating with people with disabilities in three contexts (i.e., volunteer mentor, coworker, personal friend). They found that disability type, education, age, and ethnicity significantly influenced attitude formation across the three contexts. In addition, students generally preferred people with physical disabilities more than those with intellectual or psychiatric disabilities; employed people with disabilities more than unemployed people with disabilities; college graduates with disabilities more than non-college graduates with disabilities; young adults with

disabilities more than middle-aged or older adults with disabilities; women with disabilities more than men with disabilities; and European Americans with disabilities more than other races or ethnicities with disabilities. Hence, people with disabilities may encounter negative perceptions and attitudes as a result of societal ideals.

Limited contact. Negative perceptions and attitudes may also result from limited interaction with people with disabilities given their marginal status in society. However, according to the contact hypothesis, also known as intergroup contact theory, by Allport (1954), positive, direct contact between in-groups and out-groups under certain conditions (i.e., equal status between groups; common goals; intergroup cooperation; support of authorities, law or custom) will reduce prejudice. Although varying opinions have resulted from the large research database on intergroup contact, Pettigrew, Tropp, Wagner, and Christ (2011) determined after a review of recent advances and research on the topic that generally intergroup contact reduces prejudice and is related to other outcomes (e.g., reduced anxiety and threat; increased empathy and trust); that the positive effects exist for many stigmatized groups (e.g., people with disabilities); that even indirect contact can lessen prejudice; and that the optimal conditions are not necessary to reduce prejudice. However, Pettigrew, Tropp, Wagner, and Christ (2011) did note that there are negative intergroup contact effects, particularly in situations where contact is non-voluntary and threatening. Because of competition, the authors noted that work may be such an environment.

Perceptions related to the disability. The perceived cause, threat, and responsibility of the disability also influence responses toward people with disabilities (Rubin & Roessler, 2008). The course of treatment of disability has been dictated by whether disability has been perceived to be the result of supernatural, medical, natural, or societal causes; for example, disabilities

attributed to demonic possession often led to inhumane treatment or death (see Rubin & Roessler, 2008 for a review). Societal actions have also been determined by whether people with disabilities have been perceived to be threats to personal safety in terms of possible contagion or physical violence or threats to economic well-being in terms of exhausting the financial resources of the nation and employers; for example, disabilities attributed to infectious diseases often led to exclusion (see Rubin & Roessler, 2008 for a review). In addition, societal responses have been guided by whether the individual or society is responsible for the disability; for example, people who are perceived as responsible for their disabilities (e.g., people with addiction disorders) are often viewed more negatively than people who are not perceived to be responsible for their disabilities (e.g., people with developmental disabilities) (see Rubin & Roessler, 2008). Research by Sprong, Dallas, Upton, and Bordieri (2015) examined the impact of causal attribution of disability on rehabilitation counseling students' recommendations for rehabilitation services using the Recommendations for Vocational Rehabilitation Services Scale. They found that students provided more recommendations for rehabilitation services when the hypothetical consumer acquired his/her spinal cord injury from a vehicular accident with a drunk driver (external cause of disability) than when the hypothetical consumer acquired his/her spinal cord injury from a vehicular accident where he or she was the drunk driver (internal cause of disability).

Research by Chan, McMahon, Cheing, Rosenthal, and Bezyak (2005) used an Equal Employment Opportunity Commission (EEOC) database to explore employment discrimination against people with disabilities. They analyzed 35,763 allegations of discrimination filed by people with disabilities under Title I (employment) of the Americans with Disabilities Act. Impairments perceived to be uncontrollable but stable (e.g., spinal cord injury) were compared to

impairments perceived to be controllable but unstable (e.g., HIV/AIDS). Individuals with impairments perceived to be controllable but unstable filed more allegations than individuals with impairments perceived to be uncontrollable but stable; therefore, that group had higher levels of perceived workplace discrimination. With respect to actual discrimination, individuals with HIV/AIDS had the highest rate of merit resolution (positive finding of discrimination). In addition, these individuals had the highest merit resolution rate when the allegation involved hiring, intimidation, terms and conditions, and reasonable accommodation.

Master status. Moreover, disability is a master status (see Jaeger & Bowman, 2005). In other words, this classification has the most importance in terms of defining an individual; it supersedes any other identities and therefore shapes perceptions and expectations of the person (Jaeger & Bowman, 2005). For example, an ivy league law student with a physical disability is likely to be seen primarily in terms of his/her disability and likely will not be expected to engage in any empowering activities such as employment (Jaeger & Bowman, 2005). In essence, disability is emphasized first and every other characteristic is secondary (Jaeger & Bowman, 2005).

Language describing disability. Language has power. Acceptable, or non-acceptable, language is a reflection of societal attitudes (Jaegar & Bowman, 2005). People with disabilities are often referred to as the disabled, the handicapped, and other disempowering terms. When person first language is not used, negative images of people with disabilities are created (Gandy, Martin, & Hardy, 1999), stereotypes are maintained (Vash & Crewe, 2004), and people with disabilities remain isolated from their peers without disabilities (Gandy, Martin, & Hardy, 1999). People with disabilities may also internalize the low expectations that stem from such belittling language (Martin, 2008). Members of Congress recognized the impact of language on the

position of people with disabilities in society and in 2010, President Obama signed Rosa's Law which removed mental retardation from all federal health, education, and labor laws and replaced it with intellectual disability (The White House, 2010b). A comment from Nick Marcellino, the brother of Rosa Marcellino, may best explain the power of language: "What you call people is how you treat them. If we change the words, maybe it will be the start of a new attitude towards people with disabilities" (The White House, 2010b).

Stigma and spread. Stigma theory and spread phenomenon help explain perceptions of people with disabilities and how disability begins to define one's identity. Per Goffman's 1963 stigma theory, people with disabilities will have a spoiled identity and therefore be seen as deficient in every area of life because of the perceptions of one characteristic (i.e., disability). Stated differently, people with disabilities are devalued and discredited as a total person simply because of one characteristic, disability. According to spread phenomenon, negative perceptions of a disability spread to perceptions of the whole person (Wright, 1960). For example, a person with only one disability (e.g., blindness) is inaccurately perceived to have other disabilities (e.g., deafness) as well. Research that examined employment discrimination charges of people with a record of disability but no current disability (Draper, Hawley, McMahon, & Reid, 2012) and people regarded as having a disability but no medical record of disability (Draper, Reid, & McMahon, 2011) suggests that stigma, rather than functional differences in worker capability, is the basis for employment discrimination. Both groups had significantly higher merit resolution rates than their comparison group (i.e., people with actual documented disabilities). The authors noted that the results support the stigma theory. The individuals in these studies did not have a current disability or a disability at all but had become associated with disability and because of the stigma linked to disability, they experienced some adverse action in employment. The

authors noted that these results indicate that there is a continuing need to challenge stereotypes about disability and employment.

Confirmation bias. Stigma theory and spread phenomenon, along with other biases such as confirmation bias (i.e., seeking, interpreting, and creating information that verifies existing beliefs) and belief perseverance (i.e., sticking to initial beliefs even after they have been discredited) lead to the continuation of stereotypes, prejudice, and discrimination (Brehm, Kassin, & Fein, 2005). Research by Strohmer (1995) found evidence of confirmation bias and belief perseverance among rehabilitation counselors. Rehabilitation counselors reviewed a case summary of a fictitious client with a physical disability. The case summary included equal amounts of positive information that was consistent with the client's ability to engage in self-control and negative information that was inconsistent with the client's ability to engage in self-control. When asked to identify information that supported their determination of whether the client had self-control or lacked self-control, rehabilitation counselors identified more negative information about the client than positive information regardless of whether the client was determined to have self-control or not. In addition, more experienced rehabilitation counselors were more likely to identify less positive information than less experienced rehabilitation counselors. Also, the authors found that identification of more negative information was significantly related to lower ratings of the client's psychosocial functioning and that the identification of positive information was significantly associated with higher estimates of the amount of progress the client would make in rehabilitation counseling. These findings confirmed the results of earlier studies on confirmation bias.

For example, research by Strohmer and Shivy (1994) found evidence of confirmation bias among counselors based on two experiments. In the first experiment, experienced

counselors holding doctorates were asked to test the clinical hypothesis that a client lacked self-control. To do so, counselors were asked to recall the most important information about a coached client who had visited their clinical setting and who provided equal amounts of confirmatory and disconfirmatory information. Counselors were more likely to recall confirmatory information related to the hypothesis that the client lacked self-control than disconfirmatory information. In the second experiment, master's students in counseling and psychology were asked to test the clinical hypothesis that a client lacked self-control by reviewing a client's case folder, which included a client intake summary that provided equal amounts of confirmatory and disconfirmatory information. As in the first experiment, students provided more confirmatory information related to the hypothesis that the client lacked self-control than disconfirmatory information, even when students were aware that they would be held accountable for their selections. Results from a follow-up experiment with student counselors were consistent with the findings from the second experiment. The authors noted that confirmation bias could lead to errors in clinical judgment.

Combination of factors. Negative perceptions of and reactions to people with disabilities may stem from multiple, complex factors. To understand perceptions of and reactions to people with disabilities in organizational settings, Stone and Colella (1996) created a model that integrated a vast array of research and theory related to disability. The model described various factors that affect how people with disabilities are treated at work. The model was grounded on concepts (e.g., stigma) from various fields such as social and rehabilitation psychology (Stone & Colella, 1996). In fact, the model is based on much of the information (e.g., master status, perceived cause of disability, intergroup contact, social values) discussed in the preceding paragraphs. According to Stone and Collela (1996), people with disabilities encounter

problematic, unequal employment situations because observers (e.g., supervisors, recruiters) categorize persons with disabilities and then make inferences about them based on stereotypes (e.g., incompetent). Based on the stereotyping, observers form expectations (e.g., cannot perform the job) about the person. These expectations then influence how the observer responds (e.g., discomfort) to the person with the disability. Finally, the categorization, stereotyping, expectancies, and responses collectively impact how persons with disabilities are treated (e.g., receipt of negative performance evaluations) in work settings.

Perceptions of Communication Ability

Great strides have been made to include all people with disabilities in every aspect of daily life, but progress is not complete, particularly in employment. Although there may be many specific areas of employment that need to be addressed in order to have a fully inclusive labor force, communication is perceived to be important in an ever-changing workforce. According to the Office of Disability Employment Policy (n.d.), "Communication is an essential part of participating in today's workforce." The National Association of Colleges and Employers (NACE) (2013) conducted a survey for its Job Outlook 2014 report to discover qualities that employers desire in job candidates. The ability to verbally communicate with persons inside and outside the organization was ranked as the third most important job candidate skill or quality alongside of the ability to plan, organize, and prioritize work (NACE, 2013). That same communication skill was ranked first, followed by the ability to work in a team structure, in the Job Outlook 2013 report (NACE, 2012). For the Job Outlook 2016 report, 69% of employers reported that verbal communication skills was an attribute that they seek on a candidate's resume (NACE, 2015). Given the perceived importance of communication in employment, examining

perceptions related to an employee's ability to communicate appears to be critical, particularly in the age of more service-oriented jobs.

Disabilities impacting speech. Mitchell, McMahon, and McKee (2005), who utilized a database from the Equal Employment Opportunity Commission (EEOC), examined allegations of employment discrimination by comparing the charges of people with speech impairments to the charges of people with orthopedic and visual impairments. They found significant differences between groups, particularly in regards to hiring. In other words, there were more allegations of workplace discrimination in hiring from people with speech impairments than from people with orthopedic and visual impairments. The research team further found that the top five allegation issues for people with speech impairments were discharge, harassment, hiring, terms and conditions, and reasonable accommodation and that most allegations were from the services industry. In their discussion, the authors noted that negative perceptions of people with speech impairments could result in negative employment decisions related to hiring and harassment.

Research by Allard and Williams (2008) supports the existence of negative perceptions of individuals with communication disorders. After university students rated an articulation disorder, a fluency disorder, a voice disorder, a language disorder, or no communication disorder on nine trait pairs, the researchers found that the no disorder condition was perceived more favorably regarding several traits, including employability, reliability, and decisiveness, than the conditions with communication disorders. This research suggests that there is a need to understand the workforce experiences of employees with communication disabilities and how judgments of communication ability are related to personnel decisions.

Stuttering is one condition that can affect a person's ability to communicate. Based on case law examples in the United Kingdom, stuttering was listed among the 10 conditions that

employers might overlook as a disability regarding disability discrimination (Simpson, 2014). This may be the case in America. Some courts in the United States have found that stuttering could be a disability under the Americans with Disabilities Act (ADA) and that some individuals have experienced discrimination based on stuttering. For example, in *Andresen v. Fuddruckers, Inc*. (2004), the court found that Andresen, who stuttered and had been employed by Fuddruckers for over 15 years with no complaints until new management arrived, "submitted sufficient evidence to create a genuine issue of fact that her stuttering was severe and that it substantially limited her ability to speak and therefore a genuine issue of fact existed regarding whether her stuttering constituted a 'disability' under the ADA" (at *8); it also found that "a triable issue of fact exist[ed] as to whether Andresen was qualified to do her job at Fuddruckers" and that Andresen submitted "sufficient evidence that she was terminated because of her stuttering to survive summary judgment" (at *8). In *Medvic v. Compass Sign Co., LLC* (2011), the court found that Medvic, who stuttered and who had been employed as a sheet metal mechanic by Compass Sign until he was laid off reportedly due to the economy, had "produced sufficient evidence to create a genuine issue of fact on the issue of whether his stuttering substantially limits his ability to communicate" (at *7); it also found that Medvic "presented sufficient evidence to survive summary judgment regarding [being otherwise qualified to perform the job]" (at *7) and that there was enough evidence "to create a genuine issue of material fact that the employer's proffered reason for the employment decision was a pretext for discrimination" (at *9). Further, research on the perceptions of people who stutter indicates that stuttering may impact various aspects of the employment process such as promotion (e.g., Klein & Hood, 2004; Rice & Kroll, 2006). Based on this information, perceptions about stuttering may play a role in various employment determinations regarding people who stutter and thus, the

possibility of employment discrimination is an issue for this population. In order to ensure the fair treatment of people who stutter in employment, research that highlights how perceptions of stuttering affect attitudes and behaviors toward individuals who stutter in work organizations is warranted.

Therefore, information presented in the present paper will strive to explore how perceptions of stuttering may adversely affect the employment outcomes of persons who stutter. This exploration will be done by exploring how some of the concepts, ideas, and theories (e.g., spread phenomenon) noted in the disability-related literature are applicable to the literature on stuttering. For example, Stone and Colella (1996), as previously noted, developed a model on predictors of the treatment of people with disabilities in work settings as a guide for research. These researchers developed this model to describe various factors that affect how people with disabilities are treated at work; they did so because of the employment problems experienced by people with disabilities and the sparse research on disability issues in the management or organizational behavior literature (Stone & Colella, 1996). The creators of this framework suggested that the processes underlying perceptions and attitudes towards disability, and treatment issues experienced by people with disabilities in the workplace need research attention (Stone & Colella, 1996). Thus, the model explains the role that perceptions play in establishing and maintaining barriers to employment for people with disabilities (see model for more information). Given that this model is based on a range of disability-related research and theory, it will be used as a general backdrop for describing any related research on stuttering and employment and understanding the experiences of job applicants and/or employees who stutter.

It is important to note that the model, although developed to spur disability research among management/organizational researchers, was grounded on concepts (e.g., stigma,

intergroup contact theory) from various fields such as social psychology (Stone & Colella, 1996). Essentially, the researchers posited that the treatment of people with disabilities in the workforce is influenced by environmental, organizational, and person factors (Stone & Colella, 1996). More specifically, environmental factors (i.e., legislation) influence organizational characteristics (e.g., norms, policies), which then influence employee' attributes (e.g., nature of disability, performance level) and the attributes (e.g., demographics) of observers (e.g., colleagues, supervisors, recruiters) as well as the nature of the job (e.g., ability requirements) (Stone & Colella, 1996). These factors influence the psychological consequences (e.g., stereotyping) for observers (Stone & Colella, 1996). These consequences, as well as the job-related expectations (i.e., expected contact and expected outcomes) of observers in relation to the employee with the disability, influence the treatment (e.g., ratings, pay, promotion, inclusion) of employees with disabilities and their subsequent responses toward that treatment; in turn, the responses of employees with disabilities affect factors previously mentioned, such as legislation (Stone & Colella, 1996). By reporting on research regarding stuttering and employment with respect to this model and other disability-related concepts, ideas, and theories, the present author will endeavor to produce a picture that illustrates how perceptions impact opportunities for people who stutter to obtain and maintain employment and that identifies research that is necessary to reduce disability discrimination and facilitate the full participation of those who stutter in the workplace.

Overview of Stuttering

There is no operational definition of stuttering (Bloodstein & Bernstein Ratner, 2008). According the Diagnostic and Statistical Manual of Mental Disorders (5th ed.; DSM-5), stuttering that begins in the early developmental period, and is not due to another medical condition or

disorder, is now diagnosed as childhood-onset fluency disorder (American Psychiatric Association [APA], 2013). Diagnostic criteria include "disturbances in the normal fluency and time patterning of speech that are inappropriate for the individual's age and language skills…" (p.45); this disturbance is the main feature of the disorder (APA, 2013). The disturbances are characterized by at least one of the following speech dysfluencies: sound and syllable repetitions, sound prolongations, broken words, blocking, circumlocutions, physical tension with word production, and monosyllabic whole-word repetition (APA, 2013). These dysfluencies occur frequently and anxiety about speaking can develop (APA, 2013). Such anxiety is not only a feature of childhood-onset fluency disorder, but it can worsen dysfluency (APA, 2013). Severity can vary by situation, with increased severity typically stemming from increased demands to communicate (APA, 2013). Although the DSM-5 classifies the disorder as a neurodevelopmental disorder because of its early onset, it can persist into adolescence and adulthood and result in lasting functional impairments, affecting academic or occupational performance and social participation (APA, 2013).

Statistics

There is some disparity in published research regarding the exact figures for age of onset, incidence, and prevalence of developmental stuttering, as well as for naturally recovering from developmental stuttering and for risk factors; there are many reasons for this, including differing research methodology and the associated procedural weaknesses of studies conducted over the years (see Yairi & Ambrose, 2013 for a review). Based on a review of recent studies by Yairi and Ambrose (2013), the age of onset for developmental stuttering is about 33 months, and 95% have occurred by age 4. As for incidence and prevalence, it has traditionally been reported that the lifetime incidence of stuttering is 5% and the lifespan prevalence is 1% (Yairi & Ambrose,

2013). More recent research has challenged these figures somewhat, and based on a review of such research, Yairi and Ambrose (2013) concluded that the incidence is about 8% and the overall prevalence is about 0.72%. Regarding natural recovery, the DSM-5 notes that 65-85% of children recover from developmental stuttering (APA, 2013). Yairi and Ambrose (2013) concluded that the recovery rate could be as high as 91% based on recent studies and the updated incidence and prevalence rates. Finally, concerning risk factors, recent information on race, ethnicity, and culture, including bilingualism, is sparse and therefore it is questionable if these characteristics are risk factors for developmental stuttering; as for socioeconomic status (SES), there is some recent research, although contradictory, that suggests that SES may influence stuttering (Yairi & Ambrose, 2013). Genetics, however, play a role in the development of developmental stuttering (Yairi & Ambrose, 2013). Per the DSM-5, "the risk of stuttering among first-degree biological relatives of individuals with childhood-onset fluency disorder is more than three times the risk in the general population" (APA, 2013, p. 47).

Associated Features

There is an array of secondary symptoms that may occur with stuttering such as movements of different parts of the body (e.g., head jerking, wrinkling of the forehead, frowning, quivering nostrils) (Bloodstein & Bernstein Ratner, 2008). A person may also exhibit other behaviors such as rapid eye blinking or quivering lips (National Institute on Deafness and Other Communication Disorders [NIDCD], 2010) or tics or fist clenching (APA, 2013). Other visible secondary symptoms may include the interjection of words or phrases; vocal abnormalities (e.g., inflections, changes in pitch); and other physical reactions such as flushing or sweating (Bloodstein & Bernstein Ratner, 2008). Further, some secondary symptoms are more subjective;

for example, a person may experience feelings of frustration, muscular tension, and various affective reactions such as apprehension or exasperation (Bloodstein & Bernstein Ratner, 2008).

Acquired Stuttering

Acquired stuttering is stuttering that has non-developmental origins or begins after the development of speech and language skills (Van Borsel, 2014). Acquired stuttering can have different etiologies, yet sometimes it has no clear cause (Van Borsel, 2014). For example, stuttering that has sudden onset in adulthood and typically is a result of brain injury is known as neurogenic stuttering; it is less common than developmental stuttering and can be associated with stroke, brain tumor, brain surgery, drug-induced brain dysfunction, or degenerative neurological conditions (Bloodstein & Bernstein Ratner, 2008). There is not complete agreement in the literature on whether the features of neurogenic stuttering are distinguishable from developmental stuttering (Ward, 2010). Some stuttering cases with later onsets may be linked to stress and/or anxiety from a significant traumatic event; this stuttering is referred to as psychogenic stuttering (Ward, 2010) and is rare (NIDCD, 2010). The DSM-5 does not include adult-onset fluency disorders as a diagnosis (APA, 2013).

Treatment

Although there is no cure for stuttering, treatment options exist such as therapy, assistive technology, and support groups (NIDCD, 2010). For instance, there are all sorts of treatment methods for the alleviation of stuttering, such as suggestion, relaxation, and psychotherapy (Bloodstein & Bernstein Ratner, 2008). Behavior therapies also exist, some of which are based on classical conditioning (e.g., systematic desensitization), while some are based on operant conditioning (e.g., time-out, token economy); there are other behavioral therapies as well, such as modification of speech pattern and hybrid approaches (Bloodstein & Bernstein Ratner, 2008).

Medicinal products have been tried such as tranquilizers, reuptake inhibitors, and beta blockers (Bloodstein & Bernstein Ratner, 2008). Assistive devices may help stuttering; for example, there are devices that alter auditory feedback (e.g., delayed auditory feedback, masking noise); devices that provide biofeedback; and metronomes (Bloodstein & Bernstein Ratner, 2008). Support groups for stuttering exist worldwide and there are national organizations in many countries (Bloodstein & Bernstein Ratner, 2008). A survey by the National Stuttering Association (NSA) (2009) found that of its adult and adolescent survey respondents, 90% had received speech therapy; a third had received alternative treatments (e.g., hypnosis, prescription medication, and herbal remedies); and a small percentage had acquired assistive devices (e.g., SpeechEasy). Respondents to the 2009 NSA survey reported speech therapy to be more effective than alternative treatments; in regard to assistive devices, 75% of respondents who had these devices reported that they rarely used them. Blumgart, Tran, and Craig (2010) found, after conducting a retrospective assessment using a population group cohort design, that the spending domains with the highest mean dollars spent were treatment (i.e., alternative treatment, speech treatment, and re-treatment), conferences, self-help, and technology respectively.

Quality of Life

Stuttering may impact quality of life (NIDCD, 2010). Craig, Blumgart, and Tran (2009) explored how stuttering affects quality of life using a population group cohort design. To assess quality of life, they compared 200 adults who stutter to 200 adults who do not stutter on different measures (e.g., Medical Outcomes Study Short Form-36). The research team found that in comparison to participants who do not stutter, participants who stutter had lower quality of life scores in the domain of vitality and the domain related to social function. Participants also had lower quality of life scores in the domains related to emotional function and mental health than

participants who do not stutter. In their discussion, the authors compared these findings to other studies and described how stuttering, based on their findings, has a similar impact on certain quality of life domains as does neurotrauma (e.g., traumatic brain injury), diabetes mellitus, or coronary heart disease.

In 2010, Yaruss utilized the Overall Assessment of the Speaker's Experience of Stuttering (OASES) to understand how stuttering affects the quality of life of people who stutter. The OASES is built on the International Classification of Functioning, Disability, and Health (ICF) from the World Health Organization and this framework addresses the components of body function and structure and activities and participation and considers personal and environmental contextual factors. The OASES has four sections, each assessing a component of the ICF. The last section, which was the focus of this study, addressed restrictions in participation and environmental contextual factors, or quality of life, and consisted of 25 items and five subsections (i.e., quality of life, satisfaction with communication, relationships, employment, and others aspects of life experience). One hundred seventy-three people who stutter were participants in the final validation trial for this section. The study found that overall stuttering resulted in a moderate negative impact on quality of life. More specifically, on three subsections, 28% of respondents reported that their quality of life was affected "a lot" or "completely." Concerning satisfaction with communication, only 9% of respondents reported that their communication satisfaction in general, at work, or in social situations was not affected by stuttering. With respect to employment, 21% of participants indicated that their employment was affected by stuttering "a lot" or "completely." The authors concluded that "Stuttering can affect far more than just a person's ability to produce words with appropriate rate, rhythm, and smoothness" (p.197).

Using a population group cohort design, Blumgart, Tran, Yaruss, and Craig (2012) provided an Australian normative dataset for the OASES. Again, the OASES consists of four sections: General Information, Reactions to Stuttering, Communication in Daily Situations, and Quality of Life. There is already an American version and a Dutch version. Based on the scores of 200 Australians who stutter, the authors found that stuttering had a moderate impact on various aspects of the person's life and that the Australian dataset was similar to the American and Dutch datasets. For Australia and America, people who stutter experienced the most impact in the Reactions to Stuttering section, which pertains to the speaker's affective, behavioral, cognitive reactions to stuttering.

Speaker's Reactions to Stuttering

People who stutter have varied reactions to their stuttering. Joseph Sheehan, a clinical psychologist and a person who stuttered, stated,

> Your stuttering is like an iceberg. The part above the surface, what people see and hear, is really the smaller part. By far the larger part is the part underneath—the shame, the fear, the guilt, all those other feelings that come to us when we try to speak a simple sentence and can't (Stuttering Foundation of America [SFA], 2008, p.31).

Klompas and Ross (2004) discovered that stuttering affected self-esteem, self-image, or self-identity. Of their 16 interview participants, 14 reported that stuttering had an effect on self-esteem, self-image, or self-identity. Examples of subthemes in this area were lack of confidence, feeling stupid, and self-hatred and feeling different. Also, one negative emotion experienced by 50% of the participants was frustration; examples of other negative emotions experienced were anger, shame, and embarrassment.

A mixed methods study of 10 couples with one partner who stuttered by Beilby, Byrnes, Meagher, and Yaruss (2013) revealed that the fluent partners of people who stutter reacted to stuttering with anxiety, embarrassment, and frustration; they also were protective of their partners. The partners who stutter reported that their experience with their stuttering included avoidance, such as avoidance of words, people, and social situations, and social anxiety. The authors noted that avoidance and social anxiety were the most reported experiences of the investigation. The partners who stutter also reported embarrassment, fear, frustration, withdrawal, and even denial of the extent of stuttering. Each member of the couple often described similar feelings in regards to stuttering.

Plexico, Manning, and Levitt (2009) used grounded theory and investigated the coping responses of people who stutter. They found that in response to stuttering, people often experience a number of negative emotions and utilize escape and avoidance strategies (e.g., word and situation avoidance, repression, substance abuse, self-distraction) to not only protect themselves, but the listener as well. It was found that such methods may provide respite for the person who stutters but miscommunication and limited opportunities may also ensue, in addition to potentially affecting one's quality of life.

Finally, Bricker-Katz, Lincoln, and McCabe (2010) found that stuttering continues to have an impact as one ages. The research team employed focus groups of people who stutter, age 55 and older. When asked how speech impacts their communication, one theme was the fear of speaking, which included fear of talking on the phone. Another theme was stigma, which described fear of negative evaluation, including fear of being perceived as having an intellectual disability and/or mental illness. Additionally, some participants reported experiencing the same or more impact as when they were younger. For those reporting their stuttering impacted them

the same as when they were younger, a subtheme was vigilance about anticipating stuttering and concerns about the unpredictability of stuttering. For those who reported that their stuttering impacted them less than when they were younger, it was noted that this was mostly because they were retired from the workforce.

Thus, people who stutter may have negative reactions to their stuttering. Their partners may experience negative emotions as well. Given that society prizes ability (Rubin & Roessler, 2008), the negative emotions of these individuals may stem from the perceived inability to meet societal standards. In addition, these negative emotions may also result from the effects of stigma and spread phenomenon, both of which essentially purport that because of the negative perceptions one characteristic (i.e., disability), then the entire person is perceived to be flawed (Goffman, 1963; Wright, 1960). Because of the importance of others' perceptions in multiple spheres of life (e.g., employment), few people desire to be seen as inadequate and hence negative emotions about perceived imperfections may develop.

Vocational Rehabilitation

In 1965, Goldin explored the views of rehabilitation counselors about their profession. The author surveyed 114 rehabilitation counselors who were employed by New England State Rehabilitation Agencies. With respect to case preferences, most counselors preferred to work with cases concerning amputations (25%), visual impairments (21.4%), and mental illness (20.2%). Only 3.6% of counselors preferred to work with speech and hearing cases. Goldin stated,

> The fact that only 3.6% of the counselors preferred to rehabilitate speech and hearing cases can be considered cause for some concern since communication defect is one of the

> most disabling and frustrating of handicaps to the patient not only physically but emotionally as well (p.19).

When asked about their reasons for certain case preferences, most counselors indicated that they preferred to work with particular disability types because of the speed and ease of success in achieving vocational rehabilitation (38.3%) and because of their experience with and knowledge of disability (24.7%). The author noted that the main issue with case preferences is whether such preferences influence the determination of eligibility for services.

In 1971, Daniel, Alston, and Sheldon surveyed members of the National Rehabilitation Counseling Association about the degree of handicap of speech disorders. Respondents were asked to rate the degree of handicap of 10 conditions (e.g., spinal cord injury, hearing loss, amputations) using a scale from one to seven. Speech disorders received a mean rating of 3.93 and thus the results indicated that speech disorders were perceived to be "mildly handicapping" to "moderating handicapping." Using the same scale, respondents were asked to rate the degree of handicap of six selected speech disorders (e.g., voice defects, speech affected by cleft palate). Stuttering received a mean rating of 3.73, indicating it was perceived as a "mildly to moderately handicapping" speech disorder. Respondents were also asked to estimate the degree of success persons with the six speech disorders could achieve after participating in speech therapy. This scale ranged from one to seven as well. Stuttering received a mean rating of 4.50, which indicated that persons who stutter could achieve "moderate success" to "more than moderate success" after participating in speech therapy. After considering their findings in light of the results of the 1965 Goldin study, which found that 3.6% of counselors preferred to work with speech and hearing cases, this research team stated that "…rehabilitation counselors' lack of

preference for clients with speech disorders is for reasons other than their perception of the degree of handicap imposed" (p.725).

The final study in the literature that appears to employ rehabilitation counselors as participants is a study by M. A. Hurst and Cooper (1983). Using the Alabama Rehabilitation Counselors' Attitudes Toward Stuttering (ARCATS) Inventory, Hurst and Cooper surveyed 152 rehabilitation counselors in Alabama to examine their knowledge and attitudes toward stuttering. Overall, more than 50% of the participants answered 19 of the 25 knowledge statements correctly. With respect to the 15 attitudinal statements, Hurst and Cooper found that rehabilitation counselors believe that stuttering can impact employment. For example, 78% of respondents disagreed with the statement that stuttering does not appear to be vocationally handicapping and 50% agreed that of the various speech disorders, stuttering appears to be one of the most vocationally handicapping. Also, 64% of respondents agreed that people who stutter generally are perceived as being good candidates for vocational rehabilitation. The importance of experience with stuttering can be seen as analyses revealed that rehabilitation counselors who had more cases concerning speech disorders and stuttering in their caseloads were significantly more likely to agree with the statement about stuttering being one of the most vocationally handicapping speech disorders. The results of this study slightly differ from the results of Daniel, Alston, and Sheldon (1971) that found that rehabilitation counselors perceived speech disorders as only mildly to moderately handicapping. Hurst and Cooper also found that rehabilitation counselors believed that the public views stuttering negatively because 62% of respondents agreed that the public tends to react more negatively to stuttering behavior than to other aberrant speech behaviors and that 88% agreed that most individuals experience feelings of discomfort when conversing with a person who stutters. Rehabilitation counselors in Alabama further

believed that persons who stutter may encounter bias from employers as 70% of respondents disagreed with the statement that employers do not appear to discriminate on the basis of speech handicaps alone.

M. I. Hurst and Cooper (1983) studied the attitudes of employers toward stuttering. The authors surveyed personnel and industrial relations directors in five southeastern states using the Employer Attitudes Toward Stuttering (EATS) Inventory and a total of 644 employers responded to the survey. Hurst and Cooper found that employers perceived various aspects of employment to be somewhat affected by stuttering. For example, 85% of respondents agreed that stuttering decreases an individual's employability; 40% agreed that stuttering interferes with promotion possibilities; 44% agreed that people who stutter should seek employment which requires little speaking; and 30% agreed that stuttering interferes with job performance. Additionally, 62% of respondents disagreed, while 29% were undecided, with the following statement: If two individuals who are equally qualified in all respects with the exception that one stutters and the other speaks normally apply for employment, the person who stutters should be hired. Lastly, 59% of employers agreed that people who stutter make them feel uncomfortable. These results appear to support the findings of the previous M. A. Hurst and Cooper (1983) study that found that stuttering is perceived to negatively affect employment.

Thus, rehabilitation counselors and employers perceive stuttering to impact employment opportunities. Goldin (1965) found that only 3.6% of rehabilitation counselors preferred to work with speech and hearing cases and that case preferences were based on the perceived ease and success in achieving vocational rehabilitation outcomes. Although rehabilitation counselors may be under pressure to achieve successful case closures (Vash & Crewe, 2004), that job responsibility does not negate their responsibility to support the philosophical tenets of

rehabilitation (e.g., focus on assets). Based on the Daniel, Alston, and Sheldon (1971) study, rehabilitation counselors believed that people who stutter could be successful after participating in speech therapy. This belief may be based on the medical model of disability, which asserts that disability can be removed through medical cures (Jaegar & Bowman, 2005; WHO, 2002). However, many of the findings (e.g., many rehabilitation counselors believed that employers discriminate against people who stutter) of the M. A. Hurst and Cooper (1983) study may be rooted in belief in the social model of disability, which claims that external factors, such as attitudes, lead to disability and therefore political action is needed (Jaegar & Bowman, 2005; WHO, 2002). Thus, it may be easy to see how understanding disability via the biopsychosocial model is necessary given that it integrates both the medical and social model (WHO, 2002). Finally, the majority of employers in the M. I. Hurst and Cooper (1983) study believed that stuttering negatively affects employability. This belief may be linked to the prevalent myths about workers with disabilities, including workers with disabilities will not meet performance standards, (Virginia Commonwealth University-Rehabilitation Research and Training Center, 2005) or the common misperceptions of people with disabilities (e.g., people with disabilities are less intelligent) (as cited in Gandy, Martin, & Hardy, 1999).

Treatment of People who Stutter in Employment

As noted, the model by Stone and Colella (1996) will be used as a general backdrop for describing any related research on stuttering and employment and understanding the experiences of job applicants and/or employees who stutter. According to Stone and Colella (1996), there are a number of predictors of the treatment of people with disabilities in work settings. Some of the treatment issues noted involve job suitability ratings, job assignments, pay increases, training opportunities, and inclusion in workgroups and social activities; the researchers indicated that

people with disabilities could experience other treatment issues in employment that were not specified in the model (Stone & Colella, 1996). For people who stutter, research has shown that some of the treatment issues may involve hiring, termination, performance appraisals, and promotions. Thus, to understand the magnitude of how perceptions of communication can impact employment, it may be useful to begin with research related to the beliefs and employment experiences of people who stutter. Research related to predictors of this treatment will follow.

Research Involving People who Stutter

Survey research. Studies suggest that stuttering impacts the perceptions of people who stutter regarding their workplace experiences. Stuttering, therefore, may be viewed as problematic in the workplace as it appears that such disfluency influences personnel decisions, including hiring, job selection, performance appraisals, and promotions. For example, Rice and Kroll (1994) surveyed over 250 Canadians who stutter about bias in performance evaluations, hiring and promotion, career choices, and changes in job responsibilities and found that respondents experienced discrimination in employment. Respondents reported that their performance evaluations and their supervisors' perceptions of their abilities had been negatively affected as a result of their stuttering and respondents reported that others had told them that their hiring chances would be affected as a consequence of their stuttering (as cited in Klein & Hood, 2004). Such findings are in line with the results of another study by Rice and Kroll. Rice and Kroll (1997) surveyed over 550 North Americans who stutter regarding employment opportunities, job promotion and responsibilities, performance appraisals, and social alienation at work and found that respondents were negatively affected in all of these areas, particularly those with more severe stuttering. Rice and Kroll found that many respondents reported that they would have a better job if they did not stutter and more than half indicated that their career

choice had been hindered given that they reported that they selected careers that did not require much speaking (as cited in Gabel, Blood, Tellis, & Althouse, 2004). Similarly, in 1997, Opp, Hayden, and Cottrell surveyed over 150 persons who stutter; some respondents reported working in careers that did not require a high level of speaking/communication and reported experiencing bias during the hiring process (as cited in Gabel, Blood, Tellis, & Althouse, 2004).

Via a postal questionnaire with over 300 adult respondents from the United Kingdom, Hayhow, Cray, and Enderby (2002) found that stuttering impacts career choice and promotion. Eighty-four percent of respondents reported that their choice of occupation had been affected by stuttering and 52% provided examples including selecting an unwanted career, working in jobs that required less communication such as less telephone work or verbal presentations, and being informed by others that stuttering will affect promotions. Research has found that people who stutter have difficulty using the telephone and that this difficulty can affect employment. James, Brumfitt, and Cudd (1999) explored telephone use of people who stutter and any related attitudes and impacts. Over 200 individuals who stutter were surveyed and when asked if there were any effects of having telephoning issues, most responses were related to career effects, such as missed promotions, avoidance of duties, and less efficiency due to issues with telephoning.

A number of more recent studies have corroborated these findings. Klein and Hood (2004) surveyed 232 adults who stutter. Participants were associates of the National Stuttering Association in America. The results revealed that stuttering is perceived to impact hiring, promotion, performance, and perceptions of ability. For example, 71% of respondents agreed that stuttering decreases an individual's chances of being hired; 70% agreed that stuttering interferes with promotion possibilities; and 53% agreed that employers believe that stuttering interferes with job performance. Results also indicated that stuttering impacts job selection as

50% of respondents agreed that they have sought employment that requires little speaking. The quantitative results were further supported by comments from 27% of the respondents, as some comments were related to how stuttering has affected career choice, how job performance would be better without stuttering and the discriminatory actions of others in the workplace.

Rice and Kroll (2006) replicated the 2004 Klein and Hood study. However, Rice and Kroll utilized an international sample of people who stutter and added more survey questions; additionally, participants were members and non-members of self-help groups. A total of 412 individuals who stutter from 32 countries (e.g., from Britain, Canada, Australia, India) completed an online survey about their beliefs and employment experiences. Results were consistent with Klein and Hood (2004) with respect to promotion and job performance. Regarding promotion, this research team found that 60% agreed that they would be promoted if they did not stutter and 28% agreed that they have been refused a promotion because of stuttering. As for job performance, 86% of respondents agreed that stuttering has impacted their job performance; 75% agreed that they would be better at their jobs if they did not stutter; 68% agreed that their capabilities have been misjudged by supervisors; and 39% reported that stuttering has negatively impacted performance appraisals. Results were also consistent with the previous study regarding the impact stuttering has on job choice. For example, Rice and Kroll found that 64% of respondents agreed that they have sought employment that requires little speaking. The researchers further found that there were changes in job responsibilities due to stuttering given that 47% of respondents reported that they have been asked to not perform certain speaking tasks that are typically required of that position. This appears to be in line with findings from the 1997 Rice and Kroll study. Finally, the impact of stuttering was greater for persons with more severe stuttering.

Participants in a study by Blumgart, Tran, and Craig (2010) also reported that stuttering impacts different components of employment. Of 200 Australian adults who stutter, 50% reported that they had experienced difficulties in securing employment as a consequence of their stuttering. Thirty-eight percent experienced difficulties with obtaining job promotions and 7.5% reported job termination as a result of stuttering. Thus, based on these primarily quantitative studies, stuttering can have an adverse effect on employment outcomes.

Qualitative research. Studies of people who stutter that employ mainly qualitative methods have also shown that stuttering can impact experiences at the workplace. After semi-structured interviews with 14 adults who stutter, Crichton-Smith (2002) found that education and employment had been impacted by stuttering. Work was especially important to participants. Twelve of 14 participants indicated that stuttering limited their employment. For example, some participants indicated that stuttering had influenced job choices and some avoided public speaking (e.g., using the telephone, participating in meetings) at work. Respondents, however, noted that avoidance of tasks may lead to negative outcomes with respect to promotions and perceptions about abilities. The author stated that a major theme of this study was limitation.

Klompas and Ross (2004) interviewed 16 adults who stutter from South Africa. This research team found that occupational choice, the ability to secure employment, job performance and promotion, and relationships with supervisors and colleagues were affected by stuttering. Four participants believed stuttering affected their occupational choice; one of these participants commented that companies perceive good communication as important. Securing employment was reported to be affected by stuttering for four participants; two of these individuals reported that the interviews were problematic. Six participants indicated that stuttering affects job performance and three participants had mixed feelings. Seven participants believed their

dysfluency impacted relationships with supervisors and five participants reported that relationships with coworkers were affected. As for promotion opportunities, six of the eight participants who this section applied to believed that promotions were affected by stuttering. One participant commented that difficulty with telephoning hampers his chances of promotion.

Bricker-Katz, Lincoln, and Cumming (2013) explored the work experiences of people who stutter by using semi-structured interviews with nine people who had stuttered since childhood. After analyses were completed, there were four major themes: *stuttering is always there; stuttering at work reveals a problem; stuttering impacts communication;* and *stuttering limits occupational progression.* Under the theme of *stuttering is always there*, some participants mentioned how stuttering had influenced their career choices and how some used various methods to hide their stuttering at work. Under the theme of *stuttering at work reveals a problem*, some participants mentioned fear of being perceived as atypical, unintelligent, or even incompetent at work as a consequence of stuttering and how stuttering negatively affects their self-confidence on the job sometimes. Under the theme of *stuttering impacts communication*, some participants noted their frustration with stuttering. For example, participants reported frustration with having the answer to a problem but not supplying it due to stuttering. Also under this theme, participants noted how they limit communication at work and how they are thus limited in demonstrating their capabilities. Under the last theme of *stuttering limits occupational progression*, participants reported how they do not apply for promotions or change jobs for fear of interviews or greater speaking demands. Some also noted that stuttering prevented them from being offered promotions. The authors concluded that the participants mainly feared being perceived negatively by others at work and also the negative reactions based on this perception.

The authors stated that “This study highlights the possibility of PWS experiencing discrimination in the workplace as a result of public stereotypes about stuttering” (p.352).

In summary, people who stutter believe that the employment experience can be hampered by stuttering, as shown in Table 1. Sometimes, the employment experience may be affected by the actions of the person who stutters, such as in situations where there is task avoidance. People who stutter may feel as if they do not measure up to societal standards about ability and therefore select unwanted careers or decline job promotions; they may even believe some of the myths related to workers with disabilities or internalize the low expectations that can result from pejorative language about disability. Other times, negative employment experiences are the result of the actions of others, such as in employment decisions about hiring and termination. Employers and supervisors, perhaps due to limited experience with people with disabilities, may also believe the myths about workers with disabilities or the common misperceptions of people with disabilities and due to judgment biases such as confirmation bias and belief perseverance, personnel decisions are negatively impacted. Thus, with respect to the model by Stone and Colella (1996), the preceding research involving people who stutter has shown that there are a variety of treatment issues that people who stutter may encounter in the workplace, which may be the result of the perceptions of others.

Table 1

Employment Studies of People who Stutter

Author	Participants	Location	Method	Employment Decisions Impacted by Stuttering
Rice and Kroll (1994)	282 PWS	Canada	Survey	Hiring; perception of abilities; performance evaluations; promotion
Rice and Kroll (1997)	586 PWS	North America	Survey	Career choice; hiring; job responsibilities; performance

				evaluations; promotion; social participation
Opp, Hayden, and Cottrell (1997)	166 PWS	Unknown	Survey	Career choice; hiring
Hayhow, Cray, and Enderby (2002)	332 PWS	United Kingdom	Survey	Career choice; promotion
Klein and Hood (2004)	232 PWS	America	Survey	Career choice; hiring; job performance; promotion
Rice and Kroll (2006)	412 PWS	International	Survey	Job choice; job responsibilities; job performance; promotion
Blumgart, Tran, and Craig (2010)	200 PWS	Australia	Interview with surveys	Obtaining employment, termination, promotion
Crichton-Smith (2002)	14 PWS	United Kingdom	Semi-structured interviews	Job choice; public speaking
Klompas and Ross (2004)	16 PWS	South Africa	Interviews	Job performance; occupational choice; obtaining employment; promotion; relationships with colleagues
Bricker-Katz, Lincoln, and Cumming (2013)	9 PWS	Australia	Semi-structured in-depth interviews	Career choice; perceptions of ability; promotion

Note. People who Stutter (PWS)

Predictors of the Treatment of People who Stutter in Employment

Legislation

As noted earlier, Stone and Colella (1996) suggest that the treatment of people with disabilities in the workforce is influenced by environmental, organizational, and person factors. One environmental factor is legislation, especially the Americans with Disabilities Act of 1990 (Stone & Colella, 1996). The Americans with Disabilities Act or ADA prohibits discrimination in employment decisions on the basis of disability (Muchinsky, 2006). More specifically, under Title I of the ADA, qualified individuals with disabilities are protected from discrimination in

"job application procedures, the hiring, advancement, or discharge of employees, employee compensation, job training, and other terms, conditions, and privileges of employment" (ADA, 42 U.S.C. §12112(a)). Thus, because of its requirements, the ADA impacts the treatment of people with disabilities in work organizations (Stone & Colella, 1996). Stone and Colella note that legislation does not always alter people's affective reactions toward individuals with disabilities; that negative reactions toward people with disabilities may ensue if they are perceived to be receiving preferential treatment at work; and that legal compliance can preserve stereotypes about people with disabilities, which can result in treatment issues in employment. They postulate that if organizations use preferential treatment, then people with disabilities will experience treatment issues related to job assignments, promotion, performance evaluations, or inclusion in workgroup activities. A thorough review of the literature did not reveal any research on stuttering that is directly related to the effects of legislation on how people who stutter are perceived and treated in work settings. However, the study by Kaye, Jans, and Jones (2011), that was mentioned earlier, may be applicable given that many human resource professionals and supervisors who worked for employers known to reluctantly abide by the ADA believed that those employers did not hire people with disabilities for various reasons such as fear of the costs of accommodations, lawsuits, and workers with disabilities not performing the essential functions of the job. Although these are myths about people with disabilities, such falsehoods may be common among employers.

Organizational Characteristics

According to the model, legislation influences organizational characteristics (e.g., values and policies) and organizational characteristics influence other factors in the model such as the nature of the job (Stone & Colella, 1996). For example, Stone and Colella (1996) theorize that

the treatment of people with disabilities at work will vary depending on the organizational values and norms; that is, if organizations believe in social justice, flexibility, cooperation and related values and norms, as opposed to conformity, standardization or impersonalization, then people with disabilities will experience less treatment issues related to perceptions about job qualification, inclusion in workgroup activities, and opportunities for mentoring and promotion. The researchers explain that the norms and values of an organization impact its policies and practices, which impact employment functions such as evaluation procedures and reward systems (Stone & Colella, 1996). Although a thorough search of the literature did not reveal any research on stuttering directly related to the effects of organizational norms, values, policies, or practices on how people who stutter are perceived and treated in work settings, research by the Kessler Foundation and the National Organization on Disability may be applicable. The Kessler Foundation/National Organization on Disability (2010) conducted the 2010 Survey of Employment of Americans with Disabilities with over 400 human resource managers and senior executives and found that 19% believed that recruiting, training, and retaining workers with disabilities was an important issue for their company. In addition, 29% of respondents reported that their company had a policy or program specifically designed for hiring people with disabilities; 19% reported that their company had a specific person or department responsible for hiring people with disabilities; and 18% reported that their company offers an information or education program to help managers and employees learn to work with people with disabilities. Fifty-six percent of respondents reported that their company has hired people with disabilities in the past three years; however, the majority of respondents estimated that the percentage of new hires with disabilities in the past three years was 2% for their company.

The technology of the organization will also affect how people with disabilities are perceived and treated in employment; it is proposed that if the technology of the organization hampers job flexibility, then people with disabilities may not be viewed as qualified or suitable for the job (Stone & Colella, 1996). A thorough search of the literature did not reveal any research on stuttering directly related to the effects of technology on how people who stutter are perceived and treated in work settings. If many developed societies live in the Information Age and many workplaces consequently use, or may have the option to use, multiple, alternative forms of communication (e.g., email, PowerPoint, instant messaging), then one may suspect that people who stutter should not be significantly limited in employment. However, research on how technology may improve the employment situation of people who stutter appears to be scare or even nonexistent. Nonetheless, 12.3% of unemployed people with disabilities age 16 to 64 reported that the need for special features at the job was a barrier to employment (United States Department of Labor, 2013); in addition, 24% of job seekers reported that they would need a personal computer with adaptations and 21% reported that they would need a cell phone with specialized features as possible work accommodations (Kessler Foundation, 2015). Also, assistive technology has been cited as a helpful hiring and retention strategy by employers (Domzal, Houtenville, & Sharma, 2008).

Nature of the Job

The nature of the job (i.e., ability requirements, degree of interdependence, reward systems) influences the psychological consequences (e.g., stereotyping) for coworkers, supervisors, and other decision-makers and the job-related expectations (i.e., expected contact and expected outcomes) of colleagues in relation to the employee with the disability (Stone & Colella, 1996). Stone and Colella (1996) proposed that the nature of the job and the nature of the

disability, as well as other personal characteristics (e.g., skills), impact perceptions about job performance. In other words, perceptions of job suitability are influenced by ideas about the ability level of a person with a disability and ideas about the ability requirements of the job; thus, job match determinations are based on prototypes of jobs and stereotypes of disability (Stone & Colella, 1996). The researchers posit that people with disabilities will not be assigned jobs, experience inclusion in workgroup activities, nor have opportunities for mentoring or promotion once it has been decided that they cannot perform the job (Stone & Colella, 1996). There is some support of this in the literature on stuttering regarding perceptions of career appropriateness.

Gabel, Blood, Tellis, and Althouse (2004) measured people's perceptions of appropriate careers for people who stutter and those who do not. Participants, 385 students from three universities, were randomly assigned to advise either a male who stutters or a male who does not stutter on 43 different career choices by completing the Vocational Advice Scale (VAS). Statements on the questionnaire inform participants that either advisee would have the necessary educational requirements for each career. The authors found that stuttering impacts perceptions of appropriate career choices. Mean scores on the VAS for individuals who stutter were significantly lower than the mean scores for individuals with fluent speech. Results further revealed that individuals who stutter were significantly less likely to be advised to choose 20 of the 43 careers. Examples of the careers that participants were less likely to perceive as appropriate for people who stutter were speech language pathologist, minister, employment counselor, parole officer, psychologist, meteorologist, and hospital administrator. Careers as an attorney or judge were the careers that participants were least likely to advise a person who stutters to perform. The authors speculated that participants could have perceived these 20 careers to warrant a high level of public speaking. In other words, perhaps participants did not

perceive a match between the ability level of the person and the ability requirements of the job. Results also revealed that careers as a biologist, computer systems analyst, agricultural scientist, or computer programmer were the careers that participants were most likely to advise a person who stutters to perform. The authors concluded that stuttering appears to lead to role entrapment in the form of vocational stereotyping.

Gabel, Hughes, and Daniels (2008) studied stuttering and vocational stereotyping as well, yet they wanted to also know if stuttering severity and therapy involvement had any effect on perceptions. Participants, 260 students from one university, completed the VAS about a male who stutters mildly and attends speech therapy; a male who stutters mildly and does not attend therapy; a male who stutters severely and attends therapy; or a male who stutters severely and does not attend therapy. Results revealed that 74% of participants were unsure or had no opinion about the effect of stuttering on employability in the 43 careers, while 26% did not believe stuttering impacted employment in these careers. Further, based on the scores of each career, participants were found to be less sure about the appropriateness of 27 of the 43 careers, whereas participants perceived 16 of the 43 careers to be appropriate career choices for people who stutter. Examples of the 16 careers were astrologer, actuary, statistician, mathematician, and motion picture editor. Similar to the previous study, participants could have perceived these 16 careers to be more advisable for a person who stutters because such careers may not require a high level of public speaking. In other words, perhaps participants perceived a match between the ability level of the person and the ability requirements of the job. Careers as an attorney, judge, minister, or employment counselor were the careers that participants were least likely to advise a person who stutters to perform, also consistent with the last study. The authors also found that the severity of stuttering did not significantly impact perceptions of the

appropriateness of any career. Involvement in therapy did not affect perceptions of the appropriateness of the careers on the questionnaire either, with the exception of the career of speech therapist; participants were more likely to advise a person who stutters to choose this career if the person was involved in speech therapy. The authors noted that based on these findings, stuttering does not appear to lead to role entrapment in the form of vocational stereotyping for most careers. On the other hand, the results of this study could be interpreted differently, as the authors suggested, given that a large percentage of participants were unsure about the effect of stuttering on employability. This study did not examine participants' reasons for their choices.

The previous studies surveyed university students about career appropriateness and vocational stereotyping for people who stutter. Irani, Gabel, Hughes, Swartz, and Palasik (2009) surveyed professionals. Participants, 204 K-12 teachers from every American state, completed the VAS and were randomly assigned to advise either a person who stutters or a person who does not stutter on 43 different career choices. Overall, there were no significant differences between the mean scores on the VAS for people who stutter and those who do not. The authors stated that stuttering does not appear to lead to role entrapment in the form of vocational stereotyping for most careers. Yet, results revealed that individuals who stutter were significantly less likely to be advised to choose 10 of the 43 careers. Examples of the careers that participants were less likely to perceive as appropriate for people who stutter were judge, attorney, speech language pathologist, employment counselor, parole officer, psychologist, and hospital administrator, which is similar to the previous two studies. In the two preceding studies, participants were not asked to explain their responses. This study included an open-ended question to gather that information. There were 55 responses from participants who were assigned to advise a person

who stutters and most responses (62%) revealed that participants perceived certain careers to be inappropriate because of the person's stuttering; in other words, stuttering would impact job performance. Said another way, perhaps participants did not perceive a match between the ability level of the person and the ability requirements of the job.

Swartz, Gabel, Hughes, and Irani (2009) followed similar procedures as the prior study but their sample consisted of 158 speech language pathologists (SLPs) and they also explored the impact of educational and professional experience with stuttering. Results were similar to previous studies in that the careers of attorney and judge were viewed as being the least appropriate careers and that the careers of biologist and computer programmer were viewed as the most appropriate careers for a male who stutters. Overall, however, there were no significant differences between scores on the VAS for males who stutter and males who do not stutter indicating that SLPs had generally positive attitudes toward their employability in the 43 careers. There were only two careers that males who stutter were significantly less likely to be advised to choose: attorney and speech language pathologist. Thus, there was role entrapment in the form of vocational stereotyping for only two careers. As far as the effect of educational and professional experience with stuttering on scores, results revealed only an effect for professional reading in stuttering; the careers of judge, hospital administrator, employment counselor, attorney, and physician were perceived as more appropriate for a male who stutters if the SLP had engaged in professional reading in stuttering. For the open-ended question, there were 24 responses from participants who were assigned to advise a male who stutters and 10 responses indicated that participants perceived certain careers to be inappropriate because of the male's stuttering.

Logan and O'Connor (2012) had participants who speak fluently listen to actual samples of speech. There were two experiments. In the first experiment, 58 college students listened to an

audio recording that either contained non-fluent speech that was more severe or less severe and then identified instances of non-fluent speech and completed a number of scales. For example, to gather information on occupational ratings of 32 occupations, participants completed a Speaking Demands Scale, an Educational Requirements Scale, and an Occupational Advice Scale. Sample severity did not significantly affect ratings on the Occupational Advice Scale. Results also revealed that participants rated high speaking demand occupations less favorably than low speaking demand occupations; rated high speaking plus low education occupations as less appropriate than all other combinations of high or low speaking demands plus high or low educational requirements; and perceived low speaking occupations, irrespective of educational requirements, as more suitable than high speaking occupations for people who stutter. Analyses further revealed that the speaking demands of an occupation influenced the ratings of participants more than its educational requirements.

In the second experiment, 58 college students listened to an audio recording that contained fluent speech or non-fluent speech and then identified instances of non-fluent speech and completed the same scales as in the first experiment. Results revealed that participants perceived the speaker who spoke fluently as having better communication skills than the speaker who did not speak fluently. Participants also perceived low speaking occupations as more suitable than high speaking occupations for the speaker who stutters. Low speaking plus low education occupations were perceived more favorably by participants who heard the speaker who did not speak fluently than by participants who listened to the speaker who spoke fluently. Educational requirements of an occupation appeared to be of greater importance for the speaker who spoke fluently than the speaking demands. Thus, findings from both experiments suggested that the perception of suitability or appropriateness of an occupation for a person who stutters is

largely based on its perceived speaking demands. Therefore, participants presumably did not perceive a match between the ability level of the person and the ability requirements of the job. The authors noted that the results also support the possibility that people who stutter experience occupational stereotyping.

The previous research provides some support for the proposal by Stone and Colella (1996) that the nature of the job (e.g., ability requirements) and the nature of the disability can impact perceptions about job performance or suitability. A summary of this research is provided in Table 2. General disability-related research also provides some support for this proposal. For example, as noted earlier, 73% of employers who responded to the 2008 Survey of Employer Perspectives on the Employment of People with Disabilities cited the nature of the work as a challenge to hiring people with disabilities; when analyzed by industry, more than 75% of employers in construction, manufacturing, retail trade, transportation and warehousing, leisure and hospitality, wholesale trade, and public administration cited the nature of the work as a barrier to employing people with disabilities (Domzal, Houtenville, & Sharma, 2008). Other components of the nature of the job that may influence how people with disabilities are treated at work are the job's degree of task interdependence and its reward system; for instance, employees with disabilities may experience more negative treatment if tasks are interdependent and if there are competitive reward systems (Stone & Colella, 1996). This is because coworkers may inaccurately believe that employees with disabilities cannot perform the job and that this will result in negative outcomes for all involved.

Table 2

Research Related to Vocational Advice for People who Stutter

Author	Participants	Location	Method	Job Appropriateness or Suitability Results
Gabel, Blood, Tellis, and Althouse (2004)	385 college students	America	Survey (VAS)	PWS were significantly less likely to be advised to choose 20 of the 43 careers
Gabel, Hughes, and Daniels (2008)	260 college students	America	Survey (VAS)	Participants were less certain about the appropriateness of 27 of the 43 careers for PWS
Irani, Gabel, Hughes, Swartz, and Palasik (2009)	204 K-12 teachers	America	Survey (VAS)	PWS were significantly less likely to be advised to choose 10 of the 43 careers
Swartz, Gabel, Hughes, and Irani (2009)	158 speech language pathologists	America	Survey (VAS)	PWS were significantly less likely to be advised to choose two of the 43 careers
Logan and O'Connor (2012)	Experiment 1: 58 college students Experiment 2: 58 college students	America	Experiment 1: Listened to audio recording and completed scales Experiment 2: Listened to audio recording and completed scales	Regarding 32 occupations, Experiment 1: High speaking demand occupations were rated less favorably than low speaking demand occupations Experiment 2: Low speaking occupations perceived as more suitable than high speaking occupations

Note. Vocational Advice Scale (VAS)

Job Expectancies of Observers

Per the model by Stone and Colella (1996), colleagues' expected contact and outcomes of interacting with employees with disabilities will affect how individuals with disabilities are treated at work. That is, if increased contact with employees with disabilities is expected to be positive, then people with disabilities will experience less treatment issues involving inclusion in

workgroup activities and opportunities for mentoring and promotion (Stone & Colella, 1996). Also, if positive work, personal, or interpersonal outcomes are expected to result from interactions with employees with disabilities, then people with disabilities will experience less treatment issues involving inclusion in workgroup activities and opportunities for mentoring (Stone & Colella, 1996). A thorough literature review was conducted but there does not appear to be any research on stuttering directly related to the effects of positive or negative contact or expected outcomes on how people who stutter are perceived and treated in work settings. However, as mentioned earlier, Pettigrew, Tropp, Wagner, and Christ (2011) determined that direct and indirect contact between in-groups and out-groups can reduce prejudice. Research about contact and attitudes towards people with intellectual disabilities (Walker & Scior, 2013) and people with hearing impairments (LaBelle, Booth-Butterfield, & Rittenour, 2013) generally support the theory that contact, particularly quality contact (McManus, Feyes, & Saucier, 2010), is linked with positive attitudes about people with disabilities. Nonetheless, Pettigrew, Tropp, Wagner, and Christ (2011) noted that negative intergroup contact is possible and can result in increased prejudice, but that this is typically limited to situations where contact is non-voluntary and threatening, such as in the work environment where there is frequent competition. This is important because it appears that employers may be concerned about the attitudes or responses of coworkers and/or supervisors with respect to hiring people with disabilities (Domzal, Houtenville, & Sharma, 2008; Fraser et al., 2011; Kessler/NOD, 2010). For example, research revealed that employers may be concerned the supervisors will be uncomfortable or unsure about managing, evaluating, and disciplining people with disabilities (Domzal, Houtenville, & Sharma, 2008). Such concerns may pose as a barrier to employment opportunities for people with disabilities.

Psychological Consequences for Observers

The psychological consequences for observers (e.g., coworkers, supervisors) will influence the treatment (e.g., promotion, inclusion) of employees with disabilities in the workplace (Stone & Colella, 1996). Stone and Colella (1996) proposed that the attributes of the target person with a disability and the observer impact the psychological processes (i.e., categorization, stereotyping, expectancies, and affective responses) of the observer. In other words, based on the qualities of the target person, observers assign him or her to a category (e.g., neurological impairment) (Stone & Colella, 1996). After the person is categorized, then the observer makes inferences about that person based on stereotypes; these stereotypes may be about the person's social or interpersonal competence; task competence; concern for others; integrity; emotional adjustment; or strength (Stone & Colella, 1996). As a result of categorization and stereotyping, observers form expectancies or anticipatory beliefs (e.g., person will not be able to perform, interact with others, comply with norms) about the target person (Stone & Colella, 1996). These expectations influence affective responses, such as sympathy, revulsion, discomfort, anxiety, frustration, to the target person with the disability (Stone & Colella, 1996). Given that the psychological consequences for the observer are a significant piece in the model, it is perhaps important to now review some of the research on stereotypes and expectancies associated with stuttering and the literature on responses to stuttering.

Stuttering stereotypes. As noted, assumptions about the characteristics, such as abilities and personality, of a person with a disability are based on stereotypes (Stone & Colella, 1996). There are a number of misconceptions about stuttering, including myths about the intelligence and personality of those who stutter (Stuttering Foundation of America [SFA], 2009). Perceptions of people who stutter have been studied for more than forty years, and negative

stereotypes about these individuals have been found across various groups of people (e.g., teachers, speech language pathologists, and healthcare workers) (as cited in Betz, Blood, & Blood, 2008). With respect to intelligence, it is a myth that people who stutter also have low intelligence (SFA, 2009). The SFA (2009) states that there is evidence that people who stutter are as intelligent as people with fluent speech. The British Stammering Association (2014) states that the "…speed of speech should not be confused with speed of thought" ("Myths about stammering," para. 3). Yet, Allard and Williams (2008) found that after university students rated an articulation disorder, a fluency disorder (i.e., stuttering), a voice disorder, a language disorder, or no disorder on nine trait pairs, the no disorder condition was perceived more favorably regarding intelligence than the conditions with communication disorders. Susca and Healey (2001) studied listeners' perceptions of three different levels of simulated stuttering and three different levels of fluent speech and found that listeners perceived the sample with the most stuttering as less competent than the sample with completely fluent speech. The authors noted that as disfluency increased, listeners described the speaker negatively; examples of comments were "low intelligence" and "not very educated." It is important to note that people with disabilities in general, not only those who stutter, are commonly perceived to be less intelligent than people without disabilities per Henderson and Bryan (as cited in Gandy, Martin, & Hardy, 1999).

Although people who stutter have a range of personality traits similar to those in the general population, there is a misbelief that people who stutter are also nervous, fearful, or shy (SFA, 2009). In Australia, Craig, Tran, and Craig (2003) interviewed 502 people who had not had contact with a person who stutters and participants believed that persons who stutter are shy, self-conscious, less confident, and anxious. In Kuwait, Al-Khaledi, Lincoln, McCabe, Packman,

and Alshatti (2009) found that 73% of 424 Arab parents of pre-school and school age children believed that people who stutter are shy or fearful. In a study already mentioned, Allard and Williams (2008) found that the no disorder condition was perceived more favorably regarding emotional stability and social adjustment, as well as self-esteem, ambition, reliability, decisiveness, and employability, than the articulation, language, fluency, and voice disorder conditions by over 400 college students. Results also revealed that the no disorder condition was rated significantly higher in self-esteem and social adjustment than the fluency condition (i.e., stuttering).

Regarding perceptions of children who stutter, Betz, Blood, and Blood (2008) found that college students from three universities viewed pre-school and kindergarten age children who stutter more negatively than their peers who do not stutter. For instance, participants perceived children age 3, 4, 5, and 6 who stutter as more guarded, afraid, avoiding, self-derogatory, and quiet than their counterparts who do not stutter (Betz, Blood, & Blood, 2008). As for perceptions of adults who stutter, Dorsey and Guenther (2000) studied the perceptions of 91 college professors and students about the personality traits of college students who stutter. Of 20 traits, professors rated a hypothetical student who stutters more negatively on 15 traits than a hypothetical student who does not stutter. Students rated a hypothetical student who stutters more negatively on 13 traits than a hypothetical student who does not stutter. Analyses further revealed that professor participants were more likely to provide negative ratings of the hypothetical student who stutters than the student participants. Finally, Lass et al. (1995) studied the perceptions of people who stutter about others who stutter by asking participants to list adjectives that describe a man and woman who stutter as well as a boy and girl who stutter. Participants listed 210 traits and many (68%) were negative and most (78%) were related to

personality. Participants most often described the hypothetical persons who stutter as shy; examples of other traits frequently reported were sensitive, withdrawn, timid, and insecure.

Formation of the stuttering stereotype. Mackinnon, Hall, and MacIntyre (2007) investigated stereotype formation about stuttering or, in other words, why and how stereotypes about stuttering occur. To do so, one group of college students either rated a hypothetical male who stutters (trait stuttering) or a hypothetical male who speaks fluently, then briefly stutters, and then returns to fluency (state disfluency). The second group of college students rated a hypothetical male who does not stutter. Students rated the hypothetical males on a semantic differential scale with 25 items that used Likert scales of bipolar adjectives. Results revealed that students rated the male who does not stutter more positively on 15 items than the male who experiences trait stuttering. The male with trait stuttering was statistically significantly more afraid, fearful, nervous, tense, anxious, self-conscious, shy, withdrawn, quiet, reticent, avoiding, passive, hesitant, insecure, and self-derogatory. After comparing the male with trait stuttering to the male with state disfluency, correlations revealed that students rated the two similar and in instances of significant differences, the male with state disfluency was viewed as more afraid, fearful, nervous, tense, anxious, introverted and unpleasant than the male with trait stuttering. Therefore, students perceived the male with state disfluency more negatively than the male with trait stuttering. “Participants seem to be inferring that trait stutterers have adapted to the stuttering experience, but typically fluent speakers, being accustomed to fluency, react to a greater degree when experiencing disfluency” (p.305). These results supported the anchoring-adjustment hypothesis about the roots of the stuttering stereotype. More specifically, the results suggested that “people actually use their feelings during temporary state disfluency as an anchor

and adjust from that experience when making a personality judgment about a person with stuttering" (p.305).

Expectancies. According to Stone and Colella (1996), expectancies or anticipatory beliefs about a person with a disability stem from categorization and stereotypes. For instance, stereotypes may produce expectations that a person with a disability will not be able to perform or interact with others; is not qualified for the job; or is threatening, unpredictable, or disruptive (Stone & Colella, 1996). There is some support for this in the literature on stuttering. Silverman and Paynter (1990) explored how stuttering affects perceptions of occupational competency. To do so, 48 college undergraduates rated a factory worker, a factory worker who stutters, a lawyer, and a lawyer who stutters on 81 semantic differential scales. Results revealed differences between a factory worker and a factory worker who stutters on 16 scales. For example, respondents perceived a factory worker who stutters as more insecure, cowardly, and weak, with more unnatural and hesitant speech, than the factory worker who did not stutter; the factory worker who stutters was also perceived to be less sociable, affluent, and confident than the factory worker who did not stutter. Results also revealed differences between a lawyer and a lawyer who stutters on 34 scales. For example, respondents perceived a lawyer who stutters as more tense, lazy, discontented, uncomfortable, and naïve than a lawyer who did not stutter; the lawyer who stutters was further perceived to be less employable, mature, competent, intelligent, alert, and stable, with more unintelligible and unpleasant speech, than a lawyer who did not stutter. The authors noted that many of those scales were directly related to occupational competency. They stated that although stuttering influenced the perceptions of occupational competence for both the factory worker and lawyer who stutter, the impact appeared to be greater for the lawyer perhaps due the frequency of contact with the public.

Silverman and Bongey (1997) explored the attitudes of potential colleagues of people who stutter. Participants were 20 nurses who were asked to rate a physician who does not stutter and physician who stutters on a 20-scale semantic differential measure. Results revealed differences between a physician who does not stutter and a physician who stutters on 12 scales. For example, respondents perceived a physician who stutters as more afraid, nervous, and aggravating than a physician who did not stutter; the physician who stutters was further perceived to be less intelligent, reputable, competent, and educated than the physician who did not stutter. These results corroborate the findings of Silverman and Paynter (1990).

A study by Zhang, Saltuklaroglu, Hough, and Kalinowski (2009) found that students with fluent speech believed stuttering would affect employability and relationships with others in the workplace. The researchers surveyed 91 college students and asked 44 participants to assume the mindset of someone who stutters and complete the Stutter Scale. The other 47 participants completed the Fluent Scale and responded based on their typical way of speaking. Results revealed that participants believed that stuttering presents a barrier to employment. There were significant differences between the two groups of participants on 7 of the 10 statements that were related to employment. For example, findings indicated that stuttering was believed to affect employment as a police officer, a physician, and a lawyer. It was also perceived to affect salary and promotion and treatment from bosses and coworkers.

Findings from a study by Hughes, Gabel, Irani, and Schlagheck (2010) were in line with the results of the 2009 Zhang et al. study. This research team employed a mixed methods approach to understand the impact of stuttering. Participants, 146 university students who did not stutter, were first asked a general question, which was to describe the effects of stuttering. Then they were asked a personal question, which was to describe how stuttering would affect their

lives if they were a person who stuttered. Over 800 statements were provided. With respect to the personal question, 38% of the responses pertained to the theme of *the life effects of stuttering are broad and encompass social, academic, and occupational opportunities.* Some participants thought that their opportunities for careers in fields like teaching, medicine, journalism, and business would be limited if they stuttered and thus would possibly have to choose another career. Participants also believed that if they stuttered, then they would face problems during interviews and with customers. Results from all of these studies suggest that stereotypes about stuttering can obscure expectations about the work abilities, skills, and knowledge of the person who stutters and are a good example of Goffman's stigma theory and Wright's spread phenomenon at work given that negative perceptions about other qualities of the person (e.g., competence) stem from negative perceptions about one quality of the person (i.e., stuttering) (Schlagheck, Gabel, & Hughes, 2009). In addition, these expectations are not exclusive to people who stutter. People with disabilities in general are commonly perceived to be totally impaired (as cited in Gandy, Martin, & Hardy, 1999). Given that disability is a master status (see Jaegar & Bowman, 2005), people often cannot see beyond the disability to appreciate the other qualities, identities, or potentials of the person.

Responses to stuttering. The model by Stone and Colella (1996) explains how anticipatory beliefs about a person with a disability leads to affective responses (e.g., fear, resentment, guilt, stress) toward the person with the disability. Responses to stuttering are important to understand given that such reactions can affect both the speaker and the listener. For example, McDonald and Frick (1954) surveyed 50 store clerks from various stores in three towns about their reactions toward a person who stutters. The person, whose stuttering was described as severe, had been instructed to ask the store clerk a question. The clerks least often reported

feelings of repulsion, amusement, or impatience. Results further indicated that feelings of pity, sympathy, curiosity, surprise, and embarrassment were expressed in different amounts by the clerks. Rosenberg and Curtiss (1954) studied listeners' behavioral reactions to the stuttering of others and to the fluent speech of others. They found that listener behavior was affected by stuttering; listeners lost eye contact longer and initiated body movements less often during the conversations that involved stuttering than those that involved only fluent speech. There was also less conversation with the person who stutters than with the person who spoke fluently.

Guntupalli, Kalinowski, Nanjundeswaran, Saltuklaroglu, and Everhart (2006) studied listeners' psychophysiological responses to stuttering and fluent speech by measuring skin conductance and heart rate. Participants were 15 college students who spoke fluently. Participants randomly watched three samples with fluent speech and three samples with severe stuttering. The authors found that, in reaction to stuttering, participants experienced a significant increase in skin conductance, suggesting emotional arousal, and a significant decrease in heart rate, suggesting feelings of unpleasantness, than when compared to fluent speech. Results also suggested that participants were more attentive to stuttering than to the fluent speech. The authors noted that "Listeners are not to be blamed for their response as they are only reacting at a very basic physiological level to a speakers' atypical speech behavior" (p.7). Based on their findings, they also speculated on how stereotypes and attitudes about stuttering form. They stated "…these stereotypes do not manifest because of what stuttering does to the stutterer. Instead, they appear to arise because of what stuttering does to the listener, beginning with simple involuntary autonomic arousal" (p.6).

Guntupalli, Everhart, Kalinowski, Nanjundeswaran, and Saltuklaroglu (2007) further explored the physiological and emotional responses of listeners to severe stuttering and fluent

speech. In this study, there were 20 participants and 2 samples of fluent speech and two samples with stuttering. Skin conductance and heart rate were measured. Participants also completed a self-assessment to gather affective valence and arousal ratings and a questionnaire of nine bipolar adjectives to gather subjective feelings. The physiological findings were similar to the preceding study in that participants experienced a significant increase in skin conductance and a significant decrease in heart rate in response to stuttering than to fluent speech. Regarding valence and arousal, participants were more unpleasant/unhappy and more aroused/excited in reaction to stuttering than to fluent speech. With respect to the bipolar adjectives, participants reported that they were more annoyed, uncomfortable, avoiding, nervous, tense, embarrassed, sad, and unpleasant during stuttering than during fluent speech. Similar to the prior study, the authors discussed the formation of stuttering stereotypes and stated "…as listeners report being emotionally aroused, unhappy, nervous, uncomfortable, sad, tensed, unpleasant, avoiding, embarrassed, and annoyed while in the presence of stuttering, they could be imparting some or all of these feelings upon the person who is stuttering" (p.126).

Again, it is important to note that the responses toward people who stutter are not unique to this population. These responses generally apply to all people with disabilities. People with disabilities have been feared, avoided, and ridiculed for centuries (see Jaegar & Bowman, 2005; Rubin & Roessler, 2008 for a review). Given that people with disabilities have encountered these responses for so long, it should not be surprising that this population, which includes people who stutter, struggles with equal access to employment and other important life domains.

Attributes of People with Disabilities

As mentioned, in addition to environmental and organizational factors, there are person factors that influence the treatment of people with disabilities in the workforce (Stone & Colella,

1996). Person factors can influence the psychological processes of the observer; one person factor is the attributes of the person with the disability and the other person factor is the attributes of the observer (Stone & Colella, 1996). Regarding the attributes of the person with a disability, Stone and Colella (1996) postulate that various characteristics (e.g., nature of the disability, performance level, gender, race) of the target person will influence the categorization and stereotyping of that individual, as well as expectations and treatment of the individual in employment. For example, based on the nature of the disability, a key determinant of perceptions and treatment, target persons are assigned to one of six categories of disability and depending on the category, various stereotypes and job-related expectations are formed (Stone & Colella, 1996). Stone and Colella did not specifically mention speech impairments as a category, but they did list neurological impairments, as well as sensory impairments, learning impairments, addiction disorders, physical disability, and mental illness. Then, within each category, perceptions and treatment of an individual will vary according to aesthetic qualities, origin, course, concealability, and disruptiveness of the disability, and perceived level of contagion or danger (Stone & Colella, 1996). Research related to the perceived nature of the disability has shown that perceptions can influence the provision of services (Sprong, Dallas, Upton, & Bordieri, 2015) and personnel decisions (Chan, McMahon, Cheing, Rosenthal, & Bezyak, 2005).

Origin of the disability. Concerning the origin of disability, Stone and Colella (1996) suggest that if a person is viewed as personally responsible for his or her disability, then this will result in more negative responses from observers than if the person was not perceived as being personally responsible for his or her disability. They specifically hypothesize that employees who are viewed as personally responsible for their disabilities will be given job assignments with low responsibility; receive negative performance appraisals; and will not be included in informal

workgroup activities (Stone & Colella, 1996). Although a thorough search of the literature did not reveal any research on stuttering that directly test these particular hypotheses, there is some support for this component of the model in the literature on stuttering with respect to negative reactions based on the perceived cause of stuttering.

Boyle, Blood, and Blood (2009) investigated the stuttering stereotype and causal attribution. To do so, 204 college students were randomly assigned to read one of four descriptions about a male who spoke fluently or a male whose stuttering was attributed to psychological problems, genetics, or unknown causes. Participants completed a social distance scale and a bipolar adjective scale. Participants provided significantly higher social distance ratings and negative adjective ratings for the male whose stuttering was attributed to psychological problems than for the male who spoke fluently, whose stuttering was attributed to unknown causes, and whose stuttering was attributed to genetics. Participants who rated the vignette that described stuttering as having a psychological cause wanted more social distance on all seven items (e.g., renting a room in your home to someone like this person; working on the same job with someone like this person) on the scale than participants who rated the vignettes in all other conditions. Participants who rated this vignette also perceived their hypothetical male more negatively on 14 of 25 adjective pairs than participants in the other three groups. For example, they perceived their hypothetical male to be more guarded, nervous, shy, self-conscious, tense, anxious, and withdrawn than how the participants in the other conditions perceived their hypothetical males. The authors stated that “these data suggest a relationship may exist between the stuttering stereotype and perceptions about the cause of the disorder” (p.211).

It is important to note the widespread stigma associated with mental illness (Hinshaw & Stier, 2008). Research has shown that there appears to be a hierarchy of preference or social

distance, with people preferring more distance from those with mental illness than other disability types (Tringo, 1970) and this hierarchy appears to have remained quite stable over the years (Thomas, 2000). Given research that indicates that some people believe that stuttering has psychological or emotional origins (e.g., Al-Khaledi et al. 2009; de Britto Pereira, Rossi, & Van Borsel, 2008), the desire for social distance from stuttering may be quite pronounced. Even when the origin of stuttering is not considered, research has shown that some individuals still want more social distance from people who stutter than from those who do not stutter (McKinnon, Hess, & Landry, 1986) and from those with disabilities such as asthma, diabetes, and cancer (Westbrook, Legge, & Pennay, 1993).

Disruptiveness of the disability. Stone and Colella (1996) posit that the more disruptive the disability, the more it will result in negative responses. They specifically mention stuttering because it disrupts the flow of communication and they suggest that due to its disruptiveness, observers will experience negative responses such as anxiety (Stone & Colella, 1996). They postulate that employees with more disruptive disabilities will experience more treatment issues involving job assignments that require interaction, inclusion in workgroup activities, or opportunities for mentoring or promotion given that "…supervisors are likely to infer that individuals with disruptive disabilities have poor social or communication skills, are emotionally maladjusted, or are less capable of performing jobs requiring teamwork or coordination" (Stone & Colella, 1996, p.365). There is support for this in the literature on stuttering with respect to the experience of negative reactions to stuttering (e.g., Guntupalli, Everhart, Kalinowski, Nanjundeswaran, & Saltuklaroglu, 2007) and treatment issues (e.g., Rice & Kroll, 1997).

Attributes of the Observer

The other person factor that influences the treatment of people with disabilities in employment is the attributes of the observer (Stone & Colella, 1996). The attributes of the observer affect the psychological consequences for the observer (Stone & Colella, 1996). That is, the observer's demographics (e.g., occupation, education), personality characteristics, and previous contact with people with disabilities will influence his or her perceptions of and treatment toward people with disabilities (Stone & Colella, 1996). For instance, Stone and Colella (1996) posit that in comparison to observers who have not had contact with people with disabilities, those observers with previous extensive contact with people with disabilities will have more positive responses toward people with disabilities. In relation to treatment in work organizations, they hypothesize that people with disabilities are likely to be perceived as qualified for the job; be recommended for challenging job assignments; be included in workgroup activities; and be mentored when observers have had previous contact with people with disabilities (Stone & Colella, 1996). Although a thorough review of the literature did not reveal any research on stuttering that directly tests all of these particular hypotheses, there is some support for this component of the model in the literature on stuttering with respect to how contact with people who stutter affects perceptions of people who stutter.

Studies have explored the effects of familiarity or contact with people who stutter. Klassen (2001) studied stereotypes about stuttering by surveying over 100 people who knew someone who stutters. Six people who stutter provided the names and address of their closest relatives, friends, and coworkers. After comparing results with other studies that surveyed people from the general population, Klassen found that close associates of people who stutter stereotyped those who stutter less than the general population. While colleagues rated the speech

of the person who stutters as more abnormal than family members or friends did, the person who stutters rated his or her own speech as more abnormal than many of his or her associates. Betz, Blood, and Blood (2008) found similar results as Klassen; these authors found that people who were familiar with someone who stutters perceived them more positively than those who were unfamiliar with people who stutter. Therefore, this research lends some support to Allport's intergroup contact theory which proposes that contact can reduce negative attitudes towards a negatively stereotyped group.

In a study by Schlagheck, Gabel, and Hughes (2009), participants were asked to describe people who stutter and there were 340 total comments; most were negative (182) but many were positive (147) and a few were neutral (11). There were no significant differences between the types of comments. Participants who did not know someone who stutters provided more negative comments (i.e., had higher ratio of negative comments to total comments) than participants who knew someone who stutters. Yet, 73% of participants who reported that they knew someone who stutters thought that stuttering would affect employability, whereas 93% of participants who did not know someone who stutters believed the same. Also, with respect to unsuitable careers, the most frequent responses for people who knew someone who stutters were any career that is uncomfortable; public speaking careers, and speaking-oriented careers respectively. The most frequent responses for people who did not know someone who stutters were public speaking careers, career as a teacher, and career as a salesman respectively. Thus, there are some studies that have found that familiarity or personal contact does not appear to completely alter perceptions of people who stutter (e.g., Allard & Williams, 2008).

Responses of People with Disabilities

Several factors in the model (e.g., organizational characteristics) by Stone and Colella (1996), including any biased treatment received in employment, will influence the responses of people with disabilities. Their responses in turn affect other factors already described in the model, such as legislation (Stone & Colella, 1996). Per Stone and Colella, people with disabilities can respond to discriminatory treatment in the workplace in a variety of ways, which may be proactive or reactive. For example, there may be affective and behavioral responses such as feelings of alienation and job dissatisfaction and decreases in performance (Stone & Colella, 1996). Other responses include legal actions, impression management strategies, and strategies to change oneself (Stone & Colella, 1996). Some of these strategies will be discussed in the succeeding paragraphs with respect to stuttering.

Legal responses. People with disabilities may respond to employment discrimination with legal actions such as lawsuits (Stone & Colella, 1996). Due to costs, legal responses may lead organizations to change any discriminatory policies and practices. Although a thorough review of the literature did not reveal any research on stuttering directly related to the effects of legal responses from people who stutter on organizational policies and practices, there are examples of people who stutter responding to unfair treatment in employment with legal action. In a study already referred to, Mitchell, McMahon, and McKee (2005) utilized a database from the EEOC to examine allegations of employment discrimination for people with speech impairments (e.g., stuttering). Allegations of people with speech impairments were compared to the allegations of individuals with orthopedic impairments and visual impairments combined. Only allegations closed under Title I of the ADA and closed by the EEOC were examined. The dataset included resolutions from July 27, 1992 (i.e., the date Title I of the ADA became

effective) to September 30, 2003. Results revealed that the top five allegation issues for people with speech impairments were discharge (26%), harassment (12%), hiring (12%), terms and conditions (10%), and reasonable accommodation (9%). The largest differences between persons with speech impairments and persons with orthopedic impairments and visual impairments combined pertained to issues of hiring (12% compared to 5%); harassment (12% compared to 7%); promotion (5% compared to 2%); reasonable accommodation (9% compared to 24%); and discharge (26% compared to 29%). Such results are fairly consistent with the findings of studies discussed earlier that have collectively found that people who stutter may experience difficulties in various areas of employment. Also, Mitchell, McMahon, and McKee noted that these findings are in line with studies that have found negative perceptions of people with speech impairments.

Regarding the employer region, most allegations were from the South for both groups. Forty-six percent of allegations for people with speech impairments were from the South compared to 36% of allegations for people with orthopedic impairments and visual impairments combined. With respect to employer size, most allegations for persons with speech impairments were from employers with 15 to 100 employees, whereas most allegations for people with orthopedic impairments and visual impairments combined were from employers with 500 or more employees. This is an interesting finding given what M. I. Hurst and Cooper (1983) found in relation to employer size. For example, further analyses by Hurst and Cooper revealed that employers with larger numbers of employees were less likely to agree with statements about stuttering interfering with job performance, stuttering affecting promotions, and people who stutter seeking employment that requires little speaking.

For both groups, Mitchell, McMahon, and McKee also found that most allegations were from the services industry; twenty-nine percent of allegations were from persons with speech

impairments compared to 28% of allegations from people with orthopedic impairments and visual impairments for this industry. Regarding resolutions, there were no significant differences between groups. However, within group comparisons of merit resolutions for people with speech impairments by employer region revealed significant differences. There were more merit resolutions for the North (36%), Territories (36%), and Midwest (27%) than for the West (22%) and South (22%). Given this information, it may be helpful to have a further, more current understanding of the perceptions of stuttering in the South, from employers of smaller companies, and from establishments in the service industry.

As noted earlier, the courts in the United States have found that stuttering could be a disability under the ADA and that some individuals have experienced discrimination based on stuttering (e.g., *Andresen v. Fuddruckers, Inc*., 2004; *Medvic v. Compass Sign Co., LLC,* 2011). A decision (i.e., *Manning v. United States Postal Service,* 2004) by the EEOC also found that stuttering could be a disability (Gilman, 2012). This has not always been the case however. There have been court cases (e.g., *Preacely v. Schulte Roth & Zabel*, 2001; *Zhong v. Tallahatchie General Hospital and Extended Care Facility*, 1999) in which the court found that stuttering was not a disability, primarily because the plaintiffs stated that their stuttering did not substantially limit them (Gilman, 2012). Nevertheless, people who stutter have taken legal action against perceived wrongs in employment.

Impression management strategies. Stone and Colella (1996) explained that people with disabilities may use impression management strategies (e.g., concealment, acknowledgment of the disability, requests for help) to address unequal treatment in employment and to change perceptions. There have only been a few studies on the effects of acknowledging stuttering on perceptions (e.g., Collins & Blood, 1990; Healey, Gabel, Daniels, & Kawai, 2007; Lee &

Manning, 2010). When people who stutter acknowledge their stuttering, others who do not stutter prefer to interact with them more than those who do not acknowledge their stuttering (Collins & Blood, 1990). Also, the perceptions of individuals who acknowledge their stuttering are more positive than the perceptions of individuals who do not acknowledge their stuttering (Collins & Blood, 1990; Lee & Manning, 2010). However, participants in both studies (i.e., Collins & Blood, 1990; Lee & Manning, 2010) had the opportunity to experience an acknowledgement and a non-acknowledgement situation and this is not likely to happen in everyday life. Thus, Lee and Manning (2010) concluded that acknowledgement of stuttering may not lead to positive listener responses in a non-experimental situation. In the study by Healey, Gabel, Daniels, and Kawai (2007), participants only experienced one condition (i.e., acknowledgment of stuttering at the beginning of a monologue; at the end of a monologue; or no acknowledgment of stuttering at all during a monologue). The research team did not find many significant differences across the three conditions.

Strategies to change the self. In response to negative treatment, people with disabilities may use strategies to protect themselves, such as restricting their social comparisons, or change themselves, such as utilizing methods to correct their disabilities (Stone & Colella, 1996). The former strategy may result in lowered expectations and limited career options and the latter strategy may result in acceptance of discrimination (Stone & Colella, 1996). With respect to stuttering, there are some studies that indicate that people who stutter may limit their job choices to jobs that require little speaking (e.g., Klein & Hood, 2004; Rice & Kroll, 2006). As for corrective methods, which are consistent with the medical model of disability, there are a few studies in the literature on stuttering that may support this component of the model.

Gabel (2006) examined the effect of stuttering severity and therapy involvement on perceptions of people who stutter. Participants, 260 college students with fluent speech, were randomly assigned to one of four conditions. Participants rated either a male who stutters severely or mildly and either had chosen to attend speech therapy or had not chosen to attend speech therapy. Gabel found that stuttering severity and therapy involvement affected perceptions. Participants rated people who stutter mildly more favorably than those who stutter severely. Participants also rated people who stutter and chose to attend speech therapy more favorably relative to those who did not chose therapy. Participants perceived the person with therapy involvement as more secure, confident, calm, cooperative, approaching, friendly, pleasant, daring, flexible, and perfectionistic compared to the person without therapy involvement. The authors noted that the results were in line with the results of a study by Craig and Calver (1991).

In a study by Craig and Calver (1991), employers were asked to complete a survey about the communication effectiveness of employees who stuttered. Employers were informed that employees had received treatment for stuttering (treatment group) or had not received treatment (control group). The authors found that perceptions of employees in the treatment group were significantly enhanced after treatment while perceptions of employees in the control group remain the same. Employers also offered positive comments, which the authors noted were unsolicited, about employees in the treatment group after they completed the speech program. Additionally, Hearne, Packman, Onslow, and Quine (2008) conducted a qualitative study with 13 adolescents and young adults who stutter and results revealed that one reason for seeking treatment was not stuttering alone but the anticipation of eventually securing employment.

Hence, therapy involvement appears to affect perceptions of stuttering and people who stutter may participate in therapy to try to alter others' perceptions in this regard.

Conclusion

Based on this review, it is possible that perceptions about stuttering are negatively affecting the employment experience of people who stutter. There appears to be much public stigma (e.g., Gabel, Blood, Tellis, & Althouse, 2004; M. I. Hurst & Cooper,1983), as well as self-stigma (e.g., Bricker-Katz, Lincoln, & McCabe, 2010; Klompas & Ross, 2004) related to stuttering in the workplace. Because employment can impact one's livelihood and can be a source of enjoyment and other benefits, then understanding the employment issues related to stuttering should continue to be a research and education priority. According to Klompas and Ross (2004), there is a need for education about stuttering in employment settings "to enhance the quality of life of people who stutter by creating work environments which are conducive to better performance at work and which afford chances for promotion" (p.299). Therefore, to help people who stutter to be more successful in all employment domains, including career selection, hiring, job performance, and promotion, then researchers must persist in expanding the scope of knowledge on stuttering and employment. Even though stuttering may only affect a small percentage of people, this does not mean that it should not be given research attention, particularly in the area of enhancing and sustaining employment opportunities.

Chapter 3: Methods of Study and Instrumentation

Introduction

The focus of this research study was the perceptions of employers and rehabilitation counselors toward hiring people who stutter. Chapter 1 provided an introduction for this study, theoretical and empirical framework, statement of the research problem, purpose of the study, research questions, hypotheses, definition of terms, limitations, assumptions, need for the study, and significance of the study. Chapter 2 included a review of the literature related to the perceptions of employers and rehabilitation counselors toward hiring people who stutter. The literature review was organized around topics such as background on people with disabilities, overview of stuttering, treatment of people who stutter in employment, and predictors of the treatment of people who stutter in employment. This chapter includes the methods and procedures used for the study. The design of the study, sources of data, instrumentation, data collection procedures, and data analyses are discussed.

Methods and Procedures

Design of the Study

This was a survey research study to explore employers' perceptions toward hiring people who stutter. This study also explored rehabilitation counselors' perceptions toward hiring people who stutter. The dependent variables were the scores of the employers and rehabilitation counselors on the Employer and Rehabilitation Counselor Perceptions of Individuals who Stutter Questionnaire. The independent variable was group affiliation (employer, rehabilitation counselor, or other).

Sources of Data

Population and Sample. The target population for this study was employers and rehabilitation counselors in Alabama. The sample for employers was the top 150 employers in Alabama in 2014 who were listed on the Alabama Department of Labor website (Alabama Department of Labor, 2012). The top employers were those that employed the largest number of individuals in various kinds of jobs. For example, the top employers in Alabama included Alabama Power Company, Blue Cross Blue Shield of Alabama, Alabama Department of Human Resources, Honda Manufacturing of Alabama, and Mobile Board of Education. The sample for rehabilitation counselors was all 131 rehabilitation counselors employed full time by the Alabama Department of Rehabilitation Services (ADRS).

Instrumentation

The data were gathered using a two-part survey instrument developed by the researcher. Instrument items were gleaned from a thorough review of the related literature on stuttering, especially research relevant to the impact of stuttering on the employment of individuals who stutter. Results of the review revealed that a previously developed scale, the Vocational Advice Scale (VAS), could be appropriately modified for this study. In addition, items from the Alabama Rehabilitation Counselors' Attitudes Toward Stuttering Inventory (ARCATS) and the Employer Attitudes Toward Stuttering Inventory (EATS) were used. Therefore, the final bank of items for the researcher-developed questionnaire was organized into a two-part instrument.

Part I of the instrument was nine demographic items addressing (a) job title, (b) years of experience, (c) gender, (d) age, (e) race and ethnicity, (f) knowledge of anyone who stutters, (g) experience working with someone who stutters, (h) whether or not employers have hired

someone who stutters, and (i) whether or not rehabilitation counselors have helped someone who stutters prepare for, enter, engage in, or retain employment.

Part II of the instrument was the Employer and Rehabilitation Counselor Perceptions of Individuals who Stutter Questionnaire. For this study, the researcher modified the Vocational Advice Scale (VAS), which was developed by Gabel, Blood, Tellis, and Althouse (2004) to determine perceptions of career appropriateness of people who stutter and people who do not stutter. Per Gabel, Blood, Tellis, and Althouse (2004), "Test content [of the VAS] may be reproduced and used for non-commercial research and educational purposes without seeking written permission." Given that the VAS utilized top occupations starting in the 1990s, some of the occupational items were no longer relevant. Therefore, the researcher updated some of the VAS items to reflect current Labor Market Information (i.e., occupational projections for 2012-2022) from the Alabama Department of Labor.

Part II included 40 items. All closed-ended items on Part II of the questionnaire were based on a 5-point Likert-type scale, ranging from 5 (Strongly Agree) to 1 (Strongly Disagree). The first 30 items on Part II of the instrument asked respondents to indicate the extent to which they agree that a person who stutters could be hired for specific occupations. An individual score for the first 30 items ranged from 150 (strongly agree for all items) to 30 (strongly disagree for all items).

The next nine items on Part II of the instrument addressed general perceptions related to stuttering. Two items (item 40: Stuttering and intelligence are related and item 42: People who stutter exhibit certain identifiable personality traits) were adapted from the true-false items on the Alabama Rehabilitation Counselors' Attitudes Toward Stuttering Inventory (ARCATS) (M. A. Hurst & Cooper, 1983). Three items (item 43: The public tends to react negatively to stuttering;

item 45: People who stutter can benefit from speech therapy; and item 46: Most individuals experience discomfort when conversing with a person who stutters) were adopted from the attitudinal items on the ARCATS.

In addition, one item (item 47: Stuttering decreases an individual's employability) was adapted from the Employer Attitudes Toward Stuttering Inventory (EATS) (M. I. Hurst & Cooper, 1983). Three items (item 41: Stuttering interferes with job performance; item 44: Stuttering interferes with promotion possibilities; and item 48: People who stutter should seek employment which requires little speaking) were adopted from the EATS. The researcher was granted permission by M. A. Hurst to use the ARCATS and by M. I. Hurst to use the EATS (see Appendix A).

Eight items (i.e., items 40 through 44 and items 46 through 48) related to general perceptions were interpreted such that a response of strongly disagree indicated a positive perception. For these items, an individual score ranged from 40 (strongly agree) to 8 (strongly disagree). For Item 45, an individual score ranged from 5 (strongly agree) to 1 (strongly disagree). The final item was an open-ended question that asked participants how they personally defined stuttering.

The instrument was validated by a panel of experts. The panel of experts included one employment expert, two rehabilitation counseling experts, and a research methodologist. These were individuals with expertise and experience with a range of disabilities and possible employment issues related to people with disabilities. Content and face validity involves subjectivity (qualitative input) from individuals who are competent in the subject being studied (Ary, Jacobs, & Sorensen, 2010).

A copy of the instrument was provided to each member on the panel in person by the researcher. The researcher informed panel members of the purpose of the study and the research questions. To establish content validity, the researcher verbally instructed panel members to assess each item as to its usefulness in answering the research questions. Panel members were instructed to assess the appropriateness and representativeness of items related to hiring individuals who stutter and perceptions of stuttering. To establish face validity, panel members were instructed to assess the overall appearance of the instrument itself in terms of the directions, format, style, clarity, readability, and feasibility of the items. Comments from the panel members relevant to content validity were to be written on the instrument itself, as were comments on the face validity of the instrument.

After one week, the researcher collected the edited survey instruments from the panel members and incorporated their suggestions into the final instrument. A panel member suggested that means and standard deviations be calculated for each closed-ended item on Part II of the instrument. For items related to perceptions of stuttering, two panel members suggested that two items (item 40 and item 42) be rescaled from true-false items to a 5-point Likert-type scale to be consistent with scaling on the other seven items in that section. The panel made no suggestions for specific content of any of the items on hiring an individual who stutters. As noted previously, all of these items (30 items) listed an occupation projected to have 100 or more average annual openings based on the Alabama Department of Labor. The panel also made no suggestions for specific content of any of the items related to perceptions of stuttering. Panel members agreed unanimously that all items were relevant, appropriate, and representative of useful content to answer the research questions. Since there was no disagreement among panel members, the

researcher retained all of the items on the survey instrument. A copy of the instrument is in Appendix B.

Data Collection Procedures

Permission to conduct the study was obtained from the Institutional Review Board for Human Subjects of Auburn University. Also, the researcher secured permission from the Alabama Department of Rehabilitation Services to conduct the study. Copies of these permission letters are in Appendix C.

One Information Letter for employers and one Electronic Information Letter for rehabilitation counselors were prepared by the researcher. Both letters included information about the purpose of the research, risks of the study, the voluntary participation of participants, and the confidentiality and anonymity of the data being collected for the study. Contact information for the researcher, her major professor, and the Institutional Review Board was provided in case participants had questions about the study. Copies of the Information Letters are in Appendix D.

The researcher prepared individual survey packets to be mailed to employers. Each packet included a flyer asking for their participation, an information letter for employers, the 49-item Employer and Rehabilitation Counselor Perceptions of Individuals who Stutter Questionnaire, and a stamped envelope for participants to return completed survey forms to the researcher. Packages included a total of seven pages. Survey packets were mailed to all 150 employers. In instances where employers had national corporate offices, such as Walmart, the researcher mailed survey packets to local offices to represent the north, south, west, east, and central regions of Alabama.

The researcher prepared an email invitation for an online survey for rehabilitation counselors. The Information Letter for rehabilitation counselors, which included the link to the survey, was attached to the email. Individuals who did not wish to participate could close their browser window. This information was forwarded to the Assistant Commissioner for Vocational Rehabilitation Services at ADRS for dissemination to all 131 rehabilitation counselors employed at ADRS.

Data Analysis Procedures

Data collected from employers via mailed questionnaires and data collected from rehabilitation counselors electronically were analyzed using IBM-SPSS (version 23) for Windows. Employers' responses to the questions were entered into a SPSS spreadsheet by the researcher and verified for completeness and accuracy. The researcher used Survey Monkey to collect data from the rehabilitation counselors. Depending on a customer's subscription, Survey Monkey can record responses into an Excel spreadsheet. Rehabilitation counselors' responses were imported into an SPSS spreadsheet from an Excel spreadsheet. Descriptive statistics were computed to organize, summarize, and describe the data. The first research question addressed demographic information about the participants. The first research question was analyzed using descriptive statistics to calculate frequency counts and percentages. For the second research question, participants were asked to respond to items indicating their perceptions related to hiring individuals who stutter and their perceptions related to stuttering. The mean score, standard deviation, and minimum and maximum scores were calculated for the second research question. Descriptive statistics serve a useful purpose by summarizing all the data in the form of a simple numerical expression (Ary, Jacobs, & Sorensen, 2010). The third research question was analyzed using an Analysis of Variance (ANOVA) procedure to test the null hypothesis of no difference in

employer and rehabilitation counselor perceptions of hiring individuals who stutter. Also, the fourth research question was analyzed using an ANOVA procedure to test the null hypothesis of no difference in employer and rehabilitation counselor general perceptions of stuttering. Null hypotheses for research questions three and four were tested at the 0.05 alpha level. The last question on the survey instrument asked participants to personally define stuttering. Responses were organized into categories.

Summary

This chapter discussed the methods and procedures used for this study. The design of the study, sources of data, instrumentation, data collection procedures, and data analyses were presented. The results of the analyses are presented in Chapter 4.

Chapter 4: Data Analysis and Results

Introduction

The purpose of this study was to investigate perceptions of employers and rehabilitation counselors toward hiring people who stutter. In general, employers were defined as individuals employed in positions to influence hiring decisions; rehabilitation counselors were defined as counselors who assist people with disabilities with employment or independent living goals. Chapter 1 provided an introduction, theoretical and empirical framework for this study, statement of the research problem, purpose of the study, research questions, hypotheses, definition of terms, limitations, assumptions, need for the study, and significance of the study. Chapter 2 presented a review of research and related literature relevant to perceptions of employers and rehabilitation counselors toward hiring people who stutter. The literature review was organized around topics such as background on people with disabilities, overview of stuttering, treatment of people who stutter in employment, and predictors of the treatment of people who stutter in employment. Chapter 3 discussed the methods and procedures used for the study. Design of the study, sources of data, instrumentation, data collection procedures, and data analyses were discussed. Chapter 4 focuses on the results of the data analyses.

Data Analysis

The sample included 150 employers and 131 rehabilitation counselors, for a combined total of 281 employment professionals. The overall response rate was 33% for this study. The response rate for the 150 employers was 25 percent (N = 37). The initial mailed questionnaire to employers yielded a response rate of 15% (N = 22). A follow-up questionnaire to employers yielded an additional 10% (N = 15). This 25 percent includes two individuals who marked Other as their job title. The response rate for the 131 rehabilitation counselors was 42 percent (N = 55).

This 42 percent includes five individuals who marked Other as their job title. Two cases were removed from the dataset due to incomplete and non-useable data.

Descriptive data were calculated and summarized using SPSS version 23 for job title, years of experience, gender, age, race and ethnicity, knowledge of anyone who stutters, experience working with someone who stutters, whether or not employers have hired someone who stutters, and whether or not rehabilitation counselors have helped someone who stutters prepare for, enter, engage in, or retain employment. Results are presented based on each research question. Research question one was answered using demographic information.

Results for Research Question One

The first research question was: What are the demographic characteristics of employers and rehabilitation counselors who participated in this study?

The total number of employers, rehabilitation counselors, and those individuals who classified themselves as Other who participated in this study was 92. Thirty-five of all participants were employers, managers, or human resource professionals (38%); 50 participants were rehabilitation counselors or unit supervisors (54.3%); and seven participants classified themselves as Other (7.6%). For those who classified themselves as Other, two individuals were business relations consultants. Job titles for the remaining individuals were VRA, rehabilitation specialist, state coordinator, LPC, and special education coordinator.

The majority of all participants had more than 10 years of experience (n = 56; 60.9%). The majority of participants were also female (n = 63; 68.5%). The most common age category was 41-64 and the least common age category was 65 or older. Most participants identified themselves as White or Caucasian (n = 72; 78.3%). Nineteen participants (20.7%) identified themselves as Black or African American. No individuals identified themselves as American

Indian or Alaskan Native, Asian, Native Hawaiian or Pacific Islander, or Hispanic or Latino. One person identified as Other. The majority of participants reported that they have known someone who stutters (*n* = 86; 93.5%). The majority of participants also reported that they have worked with someone who stutters (*n* = 69; 75%). These data are reported in Table 3.

Table 3

Demographic Information of Survey Participants (*N* = 92)

Variable	Frequency	Percent
Job Title		
Employer, manager, or human resource professional	35	38
Rehabilitation counselor or unit supervisor	50	54.3
Other	7	7.6
Years of Experience		
Less than 5 years	16	17.4
5-10 years	20	21.7
More than 10 years	56	60.9
Gender		
Female	63	68.5
Male	29	31.5
Age		
Less than 40	27	29.3
41-64	61	66.3

65 or older	4	4.3
Race and Ethnicity		
White or Caucasian	72	78.3
Black or African American	19	20.7
Other	1	1.1
Have you ever known anyone who stutters?		
Yes	86	93.5
No	6	6.5
Have you ever worked with someone who stutters?		
Yes	69	75
No	23	25

Most participants who were employers had more than 10 years of experience (*n* = 25; 71.4%). Most employers were female (*n* = 22; 62.9%); selected the age category of 41-64 (*n* = 24; 68.6%); and identified as White or Caucasian (*n* = 28; 80%). The majority of employers reported that they have known someone who stutters (*n* = 32; 91.4%) and have worked with someone who stutters (*n* = 26; 74.3 %). The number of employers who reported that they have hired someone who stutters was fairly evenly distributed. Sixteen employers (45.7%) reported that they have hired someone who stutters, while 19 employers (54.3%) reported that they have not hired someone who stutters. These data are reported in Table 4.

Table 4

Demographic Information for Employers (*N* = 35)

Variable	Frequency	Percent
Years of Experience		
Less than 5 years	4	11.4
5-10 years	6	17.1
More than 10 years	25	71.4
Gender		
Female	22	62.9
Male	13	37.1
Age		
Less than 40	8	22.9
41-64	24	68.6
65 or older	3	8.6
Race and Ethnicity		
White or Caucasian	28	80
Black or African American	7	20
Other	0	0
Have you ever known anyone who stutters?		
Yes	32	91.4
No	3	8.6
Have you ever worked with		

someone who stutters?		
Yes	26	74.3
No	9	25.7
Have you ever hired someone who stutters?		
Yes	16	45.7
No	19	54.3

Most participants who were rehabilitation counselors had more than 10 years of experience (*n* = 28; 56%). Most rehabilitation counselors were female (*n* = 38; 76%); selected the age category of 41-64 (*n* = 32; 64%); and identified as White or Caucasian (*n* = 39; 78%). The majority of rehabilitation counselors reported that they have known someone who stutters (*n* = 48; 96%) and have worked with someone who stutters (*n* = 36; 72%). There were 38 rehabilitation counselors (76%) who reported that they have helped someone who stutters prepare for, enter, engage in, or retain employment. These data are reported in Table 5.

Table 5

Demographic Information for Rehabilitation Counselors (*N* = 50)

Variable	Frequency	Percent
Years of Experience		
Less than 5 years	11	22
5-10 years	11	22
More than 10 years	28	56
Gender		

Female	38	76
Male	12	24
Age		
Less than 40	17	34
41-64	32	64
65 or older	1	2
Race and Ethnicity		
White or Caucasian	39	78
Black or African American	10	20
Other	1	2
Have you ever known anyone who stutters?		
Yes	48	96
No	2	4
Have you ever worked with someone who stutters?		
Yes	36	72
No	14	28
Have you ever helped someone who stutters prepare for, enter, engage in, or retain employment?		
Yes	38	76

No	12	24

As for the seven participants who classified themselves as Other, six had at least five years of experience, four were males, five were between the ages of 41 and 64, and five identified as White or Caucasian. All seven participants who classified themselves as Other reported that they have known someone who stutters and have worked with someone who stutters.

Results for Research Question Two

The second research question was: What are the descriptive statistics associated with each item on the Employer and Rehabilitation Counselor Perceptions of Individuals who Stutter Questionnaire? Descriptive statistics include the number of individuals responding to an item, the minimum and maximum response score for an item, and the mean score and standard deviation for all cases by item.

Results for all participants. The occupation with the highest mean score was software developer, applications (M = 4.6087; SD = 0.64547) followed by computer systems analyst (M = 4.5761; SD = 0.74471). The occupation with the lowest mean score was biological science teacher, postsecondary (M = 3.5870; SD = 1.07061) followed by health specialties teacher, postsecondary (M = 3.6413; SD = 1.05436). Therefore, survey participants perceived software developer, applications as the most appropriate occupation for a person who stutters. Survey participants conversely perceived biological science teacher, postsecondary as the least appropriate occupation for a person who stutters. These data are reported in Table 6.

Table 6

Descriptive Statistics for All Participants for Perceptions Related to Hiring by Occupation

Item No.	Occupation	N	Minimum	Maximum	Mean	Standard Deviation
16.	Software Developer, Applications	92	1.00	5.00	4.6087	.64547
15.	Computer Systems Analyst	92	1.00	5.00	4.5761	.74471
35.	Carpenter	92	1.00	5.00	4.5543	.68523
37.	Computer-Controlled Machine Tool Operator, Metal and Plastic	91	1.00	5.00	4.5495	.71901
24.	Software Developer, Systems Software	92	1.00	5.00	4.5435	.68601
33.	Industrial Machinery Mechanic	92	1.00	5.00	4.5109	.76308
19.	Logistician	91	1.00	5.00	4.5055	.68918
32.	Engine and Other Machine Assembler	92	1.00	5.00	4.4891	.79136
18.	Cost Estimator	92	1.00	5.00	4.4674	.71792
36.	Team Assembler	92	1.00	5.00	4.4674	.74791
28.	Medical and Clinical Laboratory Technician	91	1.00	5.00	4.3956	.84168
17.	Management Analyst	92	1.00	5.00	4.3913	.79775
22.	Computer and Information Systems Manager	92	1.00	5.00	4.3261	.79984
25.	Physical Therapist Assistant	92	1.00	5.00	4.2391	.85639
12.	Physical Therapist	92	1.00	5.00	4.2283	.75743
21.	Construction Manager	92	1.00	5.00	4.1848	.75490
26.	Dental Hygienist	91	1.00	5.00	4.1648	.88523
23.	General and Operations Manager	92	1.00	5.00	4.1413	.80631
13.	Pharmacist	92	1.00	5.00	4.1087	.85750

20.	Medical and Health Services Manager	92	1.00	5.00	4.0870	.89752
34.	Medical Secretary	92	1.00	5.00	4.0761	.98599
38.	Personal Care Aide	91	1.00	5.00	4.0330	.95975
39.	Home Health Aide	91	1.00	5.00	4.0220	.95427
30.	Computer User Support Specialist	92	1.00	5.00	3.9891	1.16255
29.	Licensed Practical and Licensed Vocational Nurse	92	1.00	5.00	3.9348	1.00334
14.	Healthcare Social Worker	92	1.00	5.00	3.9239	.95196
31.	First-Line Supervisor of Construction Trades and Extraction Workers	90	1.00	5.00	3.9111	1.04553
27.	Registered Nurse	92	1.00	5.00	3.8370	1.10222
11.	Health Specialties Teacher, Postsecondary	92	1.00	5.00	3.6413	1.05436
10.	Biological Science Teacher, Postsecondary	92	1.00	5.00	3.5870	1.07061

Survey participants were most likely to agree with the statement that people who stutter can benefit from speech therapy (M = 3.9888; SD = 0.97111) followed by the statement that the public tends to react negatively to stuttering (M = 3.7045; SD = 0.85982). Participants were least likely to agree with the statement that stuttering and intelligence are related (M = 1.5056; SD = 1.03489) followed by the statement that people who stutter exhibit certain identifiable personality traits (M = 1.8090; SD = 0.82402). These data are reported in Table 7.

Table 7

Descriptive Statistics for All Participants for Perceptions Related to Stuttering

Item No.	**Statement**	**N**	**Minimum**	**Maximum**	**Mean**	**Standard Deviation**
45.	People who stutter can benefit from speech therapy.	89	1.00	5.00	3.9888	.97111
43.	The public tends to react	88	1.00	5.00	3.7045	.85982

	negatively to stuttering.					
47.	Stuttering decreases an individual's employability.	89	1.00	5.00	3.0225	1.03328
44.	Stuttering interferes with promotion possibilities.	89	1.00	5.00	2.9663	1.02746
46.	Most individuals experience discomfort when conversing with a person who stutters.	92	1.00	5.00	2.9022	1.30139
41.	Stuttering interferes with job performance.	88	1.00	4.00	2.4432	.96916
48.	People who stutter should seek employment which requires little speaking.	89	1.00	5.00	2.2921	1.04666
42.	People who stutter exhibit certain identifiable personality traits.	89	1.00	4.00	1.8090	.82402
40.	Stuttering and intelligence are related.	89	1.00	5.00	1.5056	1.03489

Results for employers. Both occupations of computer systems analyst and software developer, applications (*M* = 4.5714; *SD* = 55761) were perceived by employers to be the most appropriate occupation for a person who stutters. Employers perceived biological science teacher, postsecondary (*M* = 3.4000; *SD* = 0.97619) as the least appropriate occupation for a person who stutters followed by health specialties teacher, postsecondary (*M* = 3.5143; *SD* = 0.91944). These data are reported in Table 8.

Table 8

Descriptive Statistics for Employers' Perceptions Related to Hiring by Occupation

Item No.	**Occupation**	**N**	**Minimum**	**Maximum**	**Mean**	**Standard Deviation**
15.	Computer Systems Analyst	35	3.00	5.00	4.5714	.55761
16.	Software Developer, Applications	35	3.00	5.00	4.5714	.55761
24.	Software Developer, Systems Software	35	3.00	5.00	4.5143	.56211
19.	Logistician	34	3.00	5.00	4.4706	.61473

37.	Computer-Controlled Machine Tool Operator, Metal and Plastic	34	3.00	5.00	4.4412	.61255
35.	Carpenter	35	3.00	5.00	4.4286	.60807
18.	Cost Estimator	35	3.00	5.00	4.4000	.65079
17.	Management Analyst	35	3.00	5.00	4.3429	.59125
32.	Engine and Other Machine Assembler	35	2.00	5.00	4.3143	.83213
33.	Industrial Machinery Mechanic	35	2.00	5.00	4.3143	.83213
36.	Team Assembler	35	3.00	5.00	4.3143	.63113
28.	Medical and Clinical Laboratory Technician	34	2.00	5.00	4.2941	.87141
22.	Computer and Information Systems Manager	35	3.00	5.00	4.2000	.63246
25.	Physical Therapist Assistant	35	2.00	5.00	4.1429	.73336
12.	Physical Therapist	35	2.00	5.00	4.0857	.61220
21.	Construction Manager	35	3.00	5.00	4.0857	.61220
23.	General and Operations Manager	35	3.00	5.00	4.0571	.63906
26.	Dental Hygienist	35	2.00	5.00	4.0571	.76477
34.	Medical Secretary	35	1.00	5.00	4.0571	.96841
13.	Pharmacist	35	2.00	5.00	4.0000	.80440
14.	Healthcare Social Worker	35	2.00	5.00	3.9429	.72529
29.	Licensed Practical and Licensed Vocational Nurse	35	2.00	5.00	3.9429	.87255
38.	Personal Care Aide	34	1.00	5.00	3.9412	.98292
20.	Medical and Health Services Manager	35	1.00	5.00	3.9143	.81787
30.	Computer User Support Specialist	35	1.00	5.00	3.9143	1.12122
39.	Home Health Aide	34	1.00	5.00	3.9118	.96508

27.	Registered Nurse	35	1.00	5.00	3.8286	1.07062
31.	First-Line Supervisor of Construction Trades and Extraction Workers	35	2.00	5.00	3.8286	.95442
11.	Health Specialties Teacher, Postsecondary	35	2.00	5.00	3.5143	.91944
10.	Biological Science Teacher, Postsecondary	35	2.00	5.00	3.4000	.97619

Employers were most likely to agree with the statement that people who stutter can benefit from speech therapy (*M* = 4.0000; *SD* = 0.77850) followed by the statement that the public tends to react negatively to stuttering (*M* = 3.7879; *SD* = 0.69631). Employers were least likely to agree with the statement that stuttering and intelligence are related (*M* = 1.7941; *SD* = 1.24996) followed by the statement that people who stutter exhibit certain identifiable personality traits (*M* = 1.9706; *SD* = 0.79717). These data are reported in Table 9.

Table 9

Descriptive Statistics for Employers' Perceptions Related to Stuttering

Item No.	**Statement**	**N**	**Minimum**	**Maximum**	**Mean**	**Standard Deviation**
45.	People who stutter can benefit from speech therapy.	34	3.00	5.00	4.0000	.77850
43.	The public tends to react negatively to stuttering.	33	2.00	5.00	3.7879	.69631
47.	Stuttering decreases an individual's employability.	34	1.00	5.00	2.9706	.99955
44.	Stuttering interferes with promotion possibilities.	34	1.00	4.00	2.9412	.91920
46.	Most individuals experience discomfort when conversing with a person who stutters.	35	2.00	5.00	2.8571	1.26358
41.	Stuttering interferes with job performance.	34	1.00	4.00	2.4118	.95719
48.	People who stutter should seek employment which	34	1.00	4.00	2.4118	1.10420

	requires little speaking.					
42.	People who stutter exhibit certain identifiable personality traits.	34	1.00	3.00	1.9706	.79717
40.	Stuttering and intelligence are related.	34	1.00	5.00	1.7941	1.24996

Results for rehabilitation counselors. Rehabilitation counselors perceived the occupation of industrial machinery mechanic (*M* = 4.6200; *SD* = 0.72534) as the most appropriate occupation for a person who stutters, followed by software developer, applications (*M* = 4.600; *SD* = 0.72843) and carpenter (*M* = 4.600; *SD* = 0.75593). Rehabilitation counselors perceived biological science teacher, postsecondary (*M* = 3.6200; *SD* = 1.10454) as the least appropriate occupation for a person who stutters followed by health specialties teacher, postsecondary (*M* = 3.6400; *SD* = 1.12050). These data are reported in Table 10.

Table 10

Descriptive Statistics for Rehabilitation Counselors' Perceptions Related to Hiring

Item No.	**Occupation**	**N**	**Minimum**	**Maximum**	**Mean**	**Standard Deviation**
33.	Industrial Machinery Mechanic	50	1.00	5.00	4.6200	.72534
16.	Software Developer, Applications	50	1.00	5.00	4.6000	.72843
35.	Carpenter	50	1.00	5.00	4.6000	.75593
32.	Engine and Other Machine Assembler	50	1.00	5.00	4.5800	.78480
37.	Computer-Controlled Machine Tool Operator, Metal and Plastic	50	1.00	5.00	4.5800	.81039
15.	Computer Systems Analyst	50	1.00	5.00	4.5400	.88548
36.	Team Assembler	50	1.00	5.00	4.5400	.83812
24.	Software Developer, Systems Software	50	1.00	5.00	4.5200	.78870
19.	Logistician	50	1.00	5.00	4.4800	.76238

18.	Cost Estimator	50	1.00	5.00	4.4600	.78792
28.	Medical and Clinical Laboratory Technician	50	1.00	5.00	4.4600	.78792
17.	Management Analyst	50	1.00	5.00	4.3600	.94242
22.	Computer and Information Systems Manager	50	1.00	5.00	4.3400	.91718
12.	Physical Therapist	50	1.00	5.00	4.2600	.85261
25.	Physical Therapist Assistant	50	1.00	5.00	4.2400	.95959
26.	Dental Hygienist	49	1.00	5.00	4.1837	.97197
13.	Pharmacist	50	1.00	5.00	4.1600	.88893
21.	Construction Manager	50	1.00	5.00	4.1600	.84177
20.	Medical and Health Services Manager	50	1.00	5.00	4.1000	.95298
23.	General and Operations Manager	50	1.00	5.00	4.1000	.90914
38.	Personal Care Aide	50	1.00	5.00	4.1000	.93131
39.	Home Health Aide	50	1.00	5.00	4.1000	.93131
30.	Computer User Support Specialist	50	1.00	5.00	4.0400	1.17734
34.	Medical Secretary	50	1.00	5.00	4.0400	.98892
29.	Licensed Practical and Licensed Vocational Nurse	50	1.00	5.00	3.9600	1.02936
31.	First-Line Supervisor of Construction Trades and Extraction Workers	48	1.00	5.00	3.8958	1.13437
14.	Healthcare Social Worker	50	1.00	5.00	3.8800	1.06215
27.	Registered Nurse	50	1.00	5.00	3.8800	1.06215
11.	Health Specialties Teacher, Postsecondary	50	1.00	5.00	3.6400	1.12050
10.	Biological Science Teacher, Postsecondary	50	1.00	5.00	3.6200	1.10454

Rehabilitation counselors were most likely to agree with the statement that people who stutter can benefit from speech therapy (*M* = 3.9792; *SD* = 1.10106) followed by the statement that the public tends to react negatively to stuttering (*M* = 3.5833; *SD* = 0.94155). Rehabilitation counselors were least likely to agree with the statement that stuttering and intelligence are related (*M* = 1.3333; *SD* = 0.85883) followed by the statement that people who stutter exhibit certain identifiable personality traits (*M* = 1.7917; *SD* = 0.84949). These data are reported in Table 11.

Table 11

Descriptive Statistics for Rehabilitation Counselors' Perceptions Related to Stuttering

Item No.	Statement	N	Minimum	Maximum	Mean	Standard Deviation
45.	People who stutter can benefit from speech therapy.	48	1.00	5.00	3.9792	1.10106
43.	The public tends to react negatively to stuttering.	48	1.00	5.00	3.5833	.94155
47.	Stuttering decreases an individual's employability.	48	1.00	4.00	3.0625	1.07992
44.	Stuttering interferes with promotion possibilities.	48	1.00	5.00	2.9583	1.09074
46.	Most individuals experience discomfort when conversing with a person who stutters.	50	1.00	5.00	2.9200	1.33768
41.	Stuttering interferes with job performance.	47	1.00	4.00	2.4468	.97375
48.	People who stutter should seek employment which requires little speaking.	48	1.00	5.00	2.2917	.98841
42.	People who stutter exhibit certain identifiable personality traits.	48	1.00	4.00	1.7917	.84949
40.	Stuttering and intelligence are related.	48	1.00	5.00	1.3333	.85883

Results for participants who identified as Other. Those who classified themselves as Other perceived the following 12 occupations to be most appropriate for a person who stutter: (1)

computer systems analyst; (2) software developer, applications; (3) management analyst; (4) cost estimator; (5) logistician; (6) medical and health services manager; (7) construction manager; (8) computer and information systems manager; (9) general and operations manager; (10) software developer, systems software; (11) carpenter; and (12) computer-controlled machine tool operator, metal and plastic. The mean score (4.8571) and standard deviation (0.37796) was identical for these 12 occupations. This group perceived registered nurse (*M* = 3.5714; *SD* = 1.61835) as the least appropriate occupation for a person who stutters followed by licensed practical and licensed vocational nurse (*M* = 3.7143; *SD* = 1.49603). These data are reported in Table 12.

Table 12

*Descriptive Statistics for Perceptions Related to Hiring by Occupation for Individuals Classified as Other**

Item No.	**Occupation**	**N**	**Minimum**	**Maximum**	**Mean**	**Standard Deviation**
15.	Computer Systems Analyst	7	4.00	5.00	4.8571	.37796
16.	Software Developer, Applications	7	4.00	5.00	4.8571	.37796
17.	Management Analyst	7	4.00	5.00	4.8571	.37796
18.	Cost Estimator	7	4.00	5.00	4.8571	.37796
19.	Logistician	7	4.00	5.00	4.8571	.37796
20.	Medical and Health Services Manager	7	4.00	5.00	4.8571	.37796
21.	Construction Manager	7	4.00	5.00	4.8571	.37796
22.	Computer and Information Systems Manager	7	4.00	5.00	4.8571	.37796
23.	General and Operations Manager	7	4.00	5.00	4.8571	.37796
24.	Software Developer, Systems Software	7	4.00	5.00	4.8571	.37796
35.	Carpenter	7	4.00	5.00	4.8571	.37796

37.	Computer-Controlled Machine Tool Operator, Metal and Plastic	7	4.00	5.00	4.8571	.37796
12.	Physical Therapist	7	4.00	5.00	4.7143	.48795
25.	Physical Therapist Assistant	7	4.00	5.00	4.7143	.48795
32.	Engine and Other Machine Assembler	7	4.00	5.00	4.7143	.48795
33.	Industrial Machinery Mechanic	7	4.00	5.00	4.7143	.48795
36.	Team Assembler	7	4.00	5.00	4.7143	.48795
26.	Dental Hygienist	7	3.00	5.00	4.5714	.78680
28.	Medical and Clinical Laboratory Technician	7	2.00	5.00	4.4286	1.13389
31.	First-Line Supervisor of Construction Trades and Extraction Workers	7	3.00	5.00	4.4286	.78680
34.	Medical Secretary	7	2.00	5.00	4.4286	1.13389
10.	Biological Science Teacher, Postsecondary	7	2.00	5.00	4.2857	1.11270
11.	Health Specialties Teacher, Postsecondary	7	2.00	5.00	4.2857	1.11270
13.	Pharmacist	7	3.00	5.00	4.2857	.95119
14.	Healthcare Social Worker	7	2.00	5.00	4.1429	1.21499
30.	Computer User Support Specialist	7	2.00	5.00	4.0000	1.41421
38.	Personal Care Aide	7	2.00	5.00	4.0000	1.15470
39.	Home Health Aide	7	2.00	5.00	4.0000	1.15470
29.	Licensed Practical and Licensed Vocational Nurse	7	1.00	5.00	3.7143	1.49603
27.	Registered Nurse	7	1.00	5.00	3.5714	1.61835

* Individuals who did not identify as an employer or rehabilitation counselor

Those who classified themselves as Other were most likely to agree with the statement that the public tends to react negatively to stuttering (*M* = 4.1429; *SD* = 0.89974) followed by the statement that people who stutter can benefit from speech therapy (*M* = 4.0000; *SD* = 1.00000). This group was least likely to agree with the statement that people who stutter exhibit certain identifiable personality traits (*M* = 1.1429; *SD* = 0.37796) followed by the statement that stuttering and intelligence are related (*M* = 1.2857; *SD* = 0.75593). These data are reported in Table 13.

Table 13

*Descriptive Statistics for Perceptions Related to Stuttering for Individuals Classified as Other**

Item No.	Statement	N	Minimum	Maximum	Mean	Standard Deviation
43.	The public tends to react negatively to stuttering.	7	3.00	5.00	4.1429	.89974
45.	People who stutter can benefit from speech therapy.	7	2.00	5.00	4.0000	1.00000
44.	Stuttering interferes with promotion possibilities.	7	2.00	5.00	3.1429	1.21499
46.	Most individuals experience discomfort when conversing with a person who stutters.	7	2.00	5.00	3.0000	1.41421
47.	Stuttering decreases an individual's employability.	7	2.00	4.00	3.0000	1.00000
41.	Stuttering interferes with job performance.	7	1.00	4.00	2.5714	1.13389
48.	People who stutter should seek employment which requires little speaking.	7	1.00	4.00	1.7143	1.11270
40.	Stuttering and intelligence are related.	7	1.00	3.00	1.2857	.75593
42.	People who stutter exhibit certain identifiable personality traits.	7	1.00	2.00	1.1429	.37796

* Individuals who did not identify as an employer or rehabilitation counselor

Results for Research Question Three

The third research question was: To what extent is there a difference in perceptions of employers and rehabilitation counselors related to hiring people who stutter?

The first null hypothesis was formulated to answer the third research question:

H_{01}: There is no statistically significant difference in perceptions of employers and rehabilitation counselors related to hiring individuals who stutter.

A one-way Analysis of Variance (ANOVA) statistical procedure was performed to examine whether significant group (employers; rehabilitation counselors) differences existed in regard to the amount of agreement or disagreement for hiring an individual who stutters. An individual score for the first 30 items on Part II of the survey instrument ranged from 150 (strongly agree for all items) to 30 (strongly disagree for all items). The higher the total agreement score, the more favorable an individual who stutters was viewed. The mean total agreement score for employers was 123.2000 and the standard deviation was 16.55259. For rehabilitation counselors, the mean total agreement score was 126.8000 and the standard deviation was 21.65499. For those classified as Other, the mean total agreement score was 136.0000 and the standard deviation was 13.60147. There were no statistically significant differences among groups ($F\ (2, 89)$ = 1.339; p = 0.27). Table 14 displays the number in each group and the respective mean score and standard deviation.

Table 14

Descriptive Statistics for Perceptions Related to Hiring Individuals who Stutter

Job Title	**N**	**Mean**	**Standard Deviation**
Employer	35	123.2000	16.5525
Rehabilitation	50	126.8000	21.6549

Counselor			
Other	7	136.0000	13.6014

Results for Research Questions Four

The fourth research question was: To what is extent is there a difference in the general perceptions of employers and rehabilitation counselors about stuttering?

The second null hypothesis was formulated to answer the fourth research question:

H_{02}: There is no statistically significant difference in the general perceptions of employers and rehabilitation counselors related to stuttering.

A one-way ANOVA statistical procedure was performed to examine whether significant group (employers; rehabilitation counselors) differences existed regarding general perceptions related to stuttering. For these nine items (items 40 to 48), an individual score could range from 45 (strongly agree) to 9 (strongly disagree). The lower the overall perception score, the more positive the perception was related to stuttering. The mean overall perception score for employers was 24.4000 (*SD*=4.91815); for rehabilitation counselors was 23.4600 (*SD*=5.80362); and for those classified as Other was 24.000 (*SD*=2.76887). There were no statistically significant differences among groups ($F\ (2, 89) = 0.324$; $p = 0.724$). The number in each group and the mean score and standard deviation are shown in Table 15.

Table 15

Descriptive Statistics for Perceptions Related to Stuttering

Job Title	**N**	**Mean**	**Standard Deviation**
Employer	35	24.4000	4.9181
Rehabilitation	50	23.4600	5.8036

Counselor			
Other	7	24.0000	2.7688

Results for Definitions of Stuttering

The last question on the survey instrument asked participants to personally define stuttering. There were 83 responses. There were 31 responses from employers and 47 responses from rehabilitation counselors. There were five responses from those participants who classified themselves as Other. The researcher organized responses into 10 categories to represent different aspects and impacts of stuttering based on the diagnostic criteria for stuttering that begins in the early developmental period (American Psychiatric Association, 2013) and related literature (e.g., Bloodstein & Bernstein Ratner, 2008; Van Borsel, 2014). These categories are (1) general descriptions of stuttering; (2) speech dysfluencies; (3) anxiety; (4) how stuttering varies by situation or person; (5) the impact stuttering can have on employment, education, or social participation; (6) origins or cause of stuttering; (7) possible treatment; (8) reactions to stuttering; (9) classifications of stuttering; and (10) intelligence. Responses could fall into multiple categories. A list of the responses is provided in Appendix E.

Results for employers. Fourteen employers provided general descriptions of stuttering, including noting that stuttering involved disturbances in the fluency or time pattern of speech. For example, one employer responded, “A difficulty in verbalizing words in a timely and flowing pattern without interruptions.” Seventeen employers provided descriptions of stuttering in terms of dysfluencies. For example, one employer responded, “Talk with continued involuntary repetition of sounds.” Four employers mentioned anxiety in their responses. For example, one employer responded, “Difficulty in articulating thoughts verbally. Repeated

consonants/syllables, stammering over specific sounds. Being nervous often exacerbates the problem." Four employers noted that stuttering can vary by situation or by person. For example, one employer responded, "Verbal difficulty in expressing idea in communicating with others. Causes and degree of difficulty vary widely and are unique between individuals." Three employers mentioned the possible origins or causes of stuttering. For example, one employer responded, "An involuntary vocal tic that may have root in anything from a neurological to a psychiatric case." Three employers mentioned possible stuttering treatments. For example, one employer responded, "Physical problem requiring careful and thorough professional therapy to remedy." Finally, five employers described stuttering by classifying it (e.g., communication disorder). For example, one employer responded, "A speech disorder marked by stammering/repeating a syllable or word."

Results for rehabilitation counselors. Twenty-two rehabilitation counselors provided general descriptions of stuttering, including noting that stuttering involved disturbances in the fluency or time pattern of speech. For example, one rehabilitation counselor responded, "Stuttering is when someone has difficulty communicating their thoughts verbally." Fourteen rehabilitation counselors provided descriptions of stuttering in terms of dysfluencies. For example, one rehabilitation counselor responded, "An involuntary repetition of sounds." Three rehabilitation counselors mentioned anxiety in their responses. For example, one rehabilitation counselor responded, "Stuttering is caused by anxiety that a person experiences when speaking." Four rehabilitation counselors noted that stuttering can vary by situation or by person. For example, one rehabilitation counselor responded, "Repetition of sounds especially when starting a sentence. Stressful situations can cause the stuttering to become worse." Four rehabilitation counselors mentioned that stuttering could impact education, employment, or social

participation. For example, one rehabilitation counselor responded, “A difficulty that an individual faces which in most, if not all cases, is a barrier to employment due to the perception others have regarding it.” Two rehabilitation counselors mentioned the possible origins or causes of stuttering. For example, one rehabilitation counselor responded, “Stuttering is a temporary lapse/pause/stumble in speaking due to various causes.” Two rehabilitation counselors mentioned possible stuttering treatments. For example, one rehabilitation counselor responded, “A communications disorder which can be improved by therapy and/or assistive technology.” Two rehabilitation counselors described possible reactions to stuttering. For example, one rehabilitation counselor responded, “Frequently a barrier to social and communication opportunities and which often results in anxiety, avoidance of communication, bullying, and negative self-image.” Twelve rehabilitation counselors described stuttering by classifying it (e.g., communication disorder). For example, one rehabilitation counselor responded, “A speech impediment that prohibits an individual from clearly articulating speech.” Two rehabilitation counselors mentioned that stuttering and intelligence are not associated. For example, one rehabilitation counselor responded, “Stuttering is a physical response when speaking and isn't linked to intelligence.” Finally, one individual stated that he or she was unsure as to how to define stuttering.

The five responses from individuals who identified as Other provided general descriptions of stuttering, mentioned dysfluencies, noted origins or causes, and classified stuttering.

Reliability of the Survey Instrument

Cronbach’s alpha for the 30 items related to perceptions of hiring individuals who stutter and the nine items related to perceptions of stuttering resulted in a high level of internal

consistency (alpha = 0.956). Cronbach's alpha for the first 30 items related to perceptions of hiring individuals who stutter was 0.971, which indicated a very high level of internal consistency. Cronbach's alpha for the nine items related to perceptions of stuttering was 0.733, which indicated an acceptable level of internal consistency for exploratory research, especially for a scale with only nine items.

Summary

This chapter discussed the results of the data analyses. Descriptive data presented in this chapter summarized the demographic characteristics of the employers and rehabilitation counselors who participated in this study. The results of a one-way ANOVA statistical procedure did not yield a statistically significant difference in perceptions of employers and rehabilitation counselors related to hiring individuals who stutter. Also, the results of a one-way ANOVA statistical procedure did not yield a statistically significant difference in the perceptions of employers and rehabilitation counselors related to stuttering. Various definitions of stuttering that were suggested by participants were included. An overview of this study, summary of results, limitations, conclusions, implications and practical applications, recommendations for future research, and summary of the chapter are presented in Chapter 5.

Chapter 5

Introduction

The purpose of this study was to investigate the perceptions of employers and rehabilitation counselors toward hiring people who stutter. In general, employers were defined as individuals employed in positions to influence hiring decisions; rehabilitation counselors were defined as counselors who assist people with disabilities with employment or independent living goals. Chapter 1 provided an introduction, theoretical and empirical framework for the study, statement of the research problem, purpose of the study, research questions, hypotheses, definition of terms, limitations, assumptions, need for the study, and significance of the study. Chapter 2 presented a review of research and related literature relevant to perceptions of employers and rehabilitation counselors toward hiring people who stutter. The literature review was organized around topics such as background on people with disabilities, overview of stuttering, treatment of people who stutter in employment, and predictors of the treatment of people who stutter in employment. Chapter 3 discussed the methods and procedures used for the study. Design of the study, sources of data, instrumentation, data collection procedures, and data analyses were discussed. Chapter 4 focused on the results of the data analyses. This chapter will present an overview of the study, summary of results by research question, limitations, conclusions, implications and practical applications, recommendations for future research, and summary of the chapter.

Discussion

Overview of the Study

Communication is perceived to be important in an ever-changing workforce. According to the Office of Disability Employment Policy (n.d.), “Communication is an essential part of

participating in today's workforce." Employers perceive verbal communication skills as an important job candidate skill or attribute (National Association of Colleges and Employers, 2012, 2013, 2015). However, negative perceptions regarding the employability of individuals with communication disabilities, including those who stutter, appear to exist (Allard & Williams, 2008). With respect to stuttering, many people who stutter report experiencing problems at various stages of the employment process, including hiring and promotion (e.g., Blumgart, Tran, & Craig, 2010; Klompas & Ross, 2004), and most vocational advice for people who stutter, from non-employment professionals, involves pursuing jobs that are perceived to require low speaking demands (e.g., Gabel, Blood, Tellis, & Althouse, 2004; Logan & O'Connor, 2012).

Therefore, the focus of this study was the lack of information related to the perceptions of employment professionals (i.e., employers and rehabilitation counselors) toward hiring people who stutter. Perceptions toward hiring people who stutter were examined in relation to Labor Market Information (i.e., occupational projections for 2012-2022) from the Alabama Department of Labor (2012). General perceptions related to stuttering were examined in relation to items from Alabama Rehabilitation Counselors' Attitudes Toward Stuttering Inventory (M. A. Hurst & Cooper, 1983) and the Employer Attitudes Toward Stuttering Inventory (M. I. Hurst & Cooper, 1983).

Data for the study were collected from employers identified as the top 150 employers in Alabama in 2014 (Alabama Department of Labor, 2012) and from the 131 rehabilitation counselors employed at the Alabama Department of Rehabilitation Services. The researcher prepared individual survey packets to be mailed to employers. Each packet included a flyer asking for their participation, an information letter for employers, the 49-item Employer and Rehabilitation Counselor Perceptions of Individuals who Stutter Questionnaire, and a stamped

envelope for participants to return completed survey forms to the researcher. The researcher prepared an email invitation for an online survey for rehabilitation counselors. The Information Letter for rehabilitation counselors, which included the link to the Employer and Rehabilitation Counselor Perceptions of Individuals who Stutter Questionnaire, was attached to the email. This information was forwarded to the Assistant Commissioner for Vocational Rehabilitation Services at ADRS for dissemination.

The findings of this study may add to the knowledge base and update the literature on stuttering as it relates to the perceptions of employers and rehabilitation counselors. The results may provide information on how employers and rehabilitation counselors view the employability of people who stutter. Through a better understanding of stuttering, results of this study may benefit people who stutter with respect to preparation, planning, obtaining, maintaining, and advancing in employment.

Summary of Results

The following research questions were investigated in this study: (1) What are the demographic characteristics of employers and rehabilitation counselors who participated in this study? (2) What are the descriptive statistics associated with each item on the Employer and Rehabilitation Counselor Perceptions of Individuals who Stutter Questionnaire? (3) To what extent is there a difference in perceptions of employers and rehabilitation counselors related to hiring people who stutter? (4) To what is extent is there a difference in the general perceptions of employers and rehabilitation counselors about stuttering?

First research question. The first research question addressed demographic information about the participants. This question was analyzed using descriptive statistics to calculate frequency counts and percentages. The total number of employers, rehabilitation counselors, and

those individuals who classified themselves as Other who participated in this study was 92. Thirty-five of all participants were employers, managers, or human resource professionals (38%); 50 participants were rehabilitation counselors or unit supervisors (54.3%); and seven participants classified themselves as Other (7.6%). The majority of all participants had more than 10 years of experience (n = 56; 60.9%). The majority of participants reported that they have known someone who stutters (n = 86; 93.5%). The majority of participants also reported that they have worked with someone who stutters (n = 69; 75%). Sixteen employers (45.7%) reported that they have hired someone who stutters, while 19 employers (54.3%) reported that they have not hired someone who stutters. There were 38 rehabilitation counselors (76%) who reported that they have helped someone who stutters prepare for, enter, engage in, or retain employment.

Second research question. For the second research question, participants were asked to respond to items indicating their perceptions related to hiring individuals who stutter and their perceptions related to stuttering. The mean score, standard deviation, and minimum and maximum scores were calculated for the second research question. Overall, participants perceived software developer-applications as the most appropriate occupation for a person who stutters. Participants conversely perceived biological science teacher-postsecondary as the least appropriate occupation for a person who stutters. Participants were most likely to agree with the statement that people who stutter can benefit from speech therapy and were least likely to agree with the statement that stuttering and intelligence are related.

With respect to employers, both occupations of computer systems analyst and software developer-applications were perceived to be the most appropriate occupation for a person who stutters while the occupation of biological science teacher-postsecondary was perceived to be the least appropriate occupation. These results were similar to the results for all survey participants.

Also consistent with the results for all survey participants, employers were most likely to agree with the statement that people who stutter can benefit from speech therapy and least likely to agree with the statement that stuttering and intelligence are related.

For rehabilitation counselors, the occupation of industrial machinery mechanic was perceived as the most appropriate occupation for a person who stutters. Similar to the results for all survey participants and employers, the occupation of biological science teacher-postsecondary was perceived by rehabilitation counselors as the least appropriate occupation for a person who stutters. Also consistent with the results for all survey participants and employers, rehabilitation counselors were most likely to agree with the statement that people who stutter can benefit from speech therapy and least likely to agree with the statement that stuttering and intelligence are related.

For the seven individuals who identified as Other, there were 12 occupations (e.g., computer systems analyst; software developer-applications; logistician; general and operations manager; carpenter) that were perceived to be most appropriate for a person who stutters. Inconsistent with the results for all survey participants, employers, and rehabilitation counselors, individuals who identified as Other perceived the occupation of registered nurse as the least appropriate occupation for a person who stutters.

Third research question. The third research question was analyzed using an Analysis of Variance (ANOVA) procedure to test the null hypothesis of no difference in employer and rehabilitation counselor perceptions of hiring individuals who stutter. Null hypothesis for the third research question was tested at the 0.05 alpha level. There was no statistically significant difference between groups.

Fourth research question. The fourth research question was analyzed using an ANOVA procedure to test the null hypothesis of no difference in employer and rehabilitation counselor general perceptions of stuttering. Null hypothesis for the fourth research question was tested at the 0.05 alpha level. There was no statistically significant difference between groups.

Definition of stuttering. The last question on the survey instrument asked participants to personally define stuttering. There were 31 responses from employers, 47 responses from rehabilitation counselors, and five responses for individuals who identified as Other. Responses were organized into 10 categories to represent different aspects and impacts of stuttering based on the diagnostic criteria for stuttering that begins in the early developmental period (American Psychiatric Association, 2013) and related literature (e.g., Bloodstein & Bernstein Ratner, 2008; Van Borsel, 2014). These categories were (1) general descriptions of stuttering; (2) speech dysfluencies; (3) anxiety; (4) how stuttering varies by situation or person; (5) the impact stuttering can have on employment, education, or social participation; (6) origins or cause of stuttering; (7) possible treatment; (8) reactions to stuttering; (9) classifications of stuttering; and (10) intelligence. Some responses fell into multiple categories. It is important to note that there is no operational definition of stuttering (Bloodstein & Bernstein Ratner, 2008).

Most employers provided descriptions of stuttering in terms of dysfluencies (e.g., repetitions). Many employers also provided general descriptions of stuttering. Most rehabilitation counselors provided general descriptions of stuttering. Many rehabilitation counselors also provided descriptions of stuttering in terms of dysfluencies and described stuttering by classifying it (e.g., communication disorder).

Limitations

The results of this study were based on responses from employers and rehabilitation counselors in Alabama. Therefore, the results may not be representative of employers and rehabilitation counselors in other states within the United States. Another limitation is the small sample size for employers (n = 37) and rehabilitation counselors (n = 55). A larger sample might yield different results. The results should be interpreted with caution because of the self-reported nature of the responses. Self-reported data depend on the ability, willingness, and truthfulness of the respondents to provide accurate and honest input to the questions. Therefore, respondents may have provided some responses that are perceived to be socially desirable. The items related to hiring individuals who stutter were based only on Labor Market Information (i.e., occupational projections for 2012-2022) from the Alabama Department of Labor. Therefore, these items may not be representative of occupational projections in other states or other time periods. Similar to other studies (e.g., Gabel, Blood, Tellis, & Althouse, 2004), this study did not provide a definition of stuttering. The related literature (e.g., Bloodstein & Bernstein Ratner, 2008) reports no one or precise definition of stuttering. Consequently, participants may not have had a clear understanding of stuttering. The nine items on the instrument that identified general perceptions of stuttering may not have captured their true perceptions of stuttering.

Conclusions

Earlier research suggested that the perceptions of various groups should be explored regarding employment and people who stutter (e.g., Gabel, Hughes, & Daniels, 2008). The present study surveyed employers and rehabilitation counselors to investigate their perceptions of hiring individuals who stutter. The perceptions of these groups are important because these individuals can directly influence hiring decisions. The results of this study are generally

inconsistent with research that suggests that people who stutter may encounter barriers to employment (e.g., Blumgart, Tran, & Craig, 2010; Klompas & Ross, 2004).

In the present study, most of the 30 occupations (23 of 30 occupations) had a mean score of 4.0 or greater on a 5-point Likert-type scale, which suggests that participants strongly agreed or agreed that a person who stutters could be hired for that occupation. For all respondents, the two occupations with the highest mean scores were software developer-applications and computer systems analyst respectively. Nine items were included on the survey instrument to identify general perceptions related to stuttering. Respondents generally agreed with the statement that the public tends to react negatively to stuttering. However, they were less likely to agree with the following statements: Stuttering decreases an individual's employability; stuttering interferes with promotion possibilities; most individuals experience discomfort when conversing with a person who stutters; stuttering interferes with job performance; and people who stutter should seek employment which requires little speaking. They also generally disagreed that people who stutter exhibit certain identifiable personality traits and that stuttering and intelligence are related. These findings collectively suggest that employers and rehabilitation counselors generally do not perceive stuttering as a barrier to employment opportunities. In addition, there was no statistically significant difference between groups regarding perceptions of hiring individuals who stutter, which suggests that employers and rehabilitation counselors did not view hiring individuals who stutter differently. Also, there was no statistically significant difference between groups regarding general perceptions of stuttering, which suggests that employers and rehabilitation counselors did not view stuttering differently.

Perceptions related to hiring. However, occupations with a mean score of 4.0 or higher may have been perceived by respondents to require less speaking demands than the occupations

with a mean score less than 4.0. There were seven occupations with a mean score less than 4.0 but higher than 3.0. An occupation with a mean score less than 3.0 would undoubtedly suggest that respondents did not agree that a person who stutters should be hired for that occupation. It is interesting to note that those occupations with a mean score between 3.0 and 4.0, indicating a response of neutral to agree, are occupations that generally require effective speaking skills. These occupations are (1) computer user support specialist; (2) licensed practical and licensed vocational nurse; (3) healthcare social worker; (4) first-line supervisor of construction trades and extraction workers; (5) registered nurse; (6) health specialties teacher-postsecondary; and (7) biological science teacher-postsecondary. The two occupations with the lowest mean scores were biological science teacher-postsecondary and health specialties teacher-postsecondary respectively. These two occupations may have been perceived to require a high level of speaking; therefore, some respondents agreed that a person who stutters should not be hired for those occupations. Researchers investigating career appropriateness for people who stutter have found that careers that may be perceived to require higher levels of communication have received lower mean scores (e.g., Gabel, Blood, Tellis, & Althouse, 2004; Gabel, Hughes, & Daniels, 2008). However, none of the occupations in the present study had a mean score less than 3.0. It is possible that respondents truly did not perceive any of the 30 occupations to be extremely undesirable for people who stutter.

It is interesting to note that the occupations with the highest mean scores, software developer-applications and computer systems analyst respectively, are occupations related to technology. The career with the highest mean score in studies investigating career appropriateness was computer programmer, which is also related to technology (Gabel, Blood, Tellis, & Althouse, 2004; Gabel, Hughes, & Daniels, 2008; Irani, Gabel, Hughes, Swartz, &

Palasik, 2009; Swartz, Gabel, Hughes, & Irani, 2009). Perhaps respondents thought that people who stutter will be most successful in technology-related occupations, as similarly speculated by Gabel, Hughes, and Daniels (2008). The occupations with the lowest mean scores in the present study were biological science teacher-postsecondary and health specialties teacher-postsecondary respectively. These occupations are related to education. The careers with the lowest mean scores in studies investigating career appropriateness were attorney and judge, which are related to law (Gabel, Blood, Tellis, & Althouse, 2004; Gabel, Hughes, & Daniels, 2008; Irani, Gabel, Hughes, Swartz, & Palasik, 2009; Swartz, Gabel, Hughes, & Irani, 2009). Given that respondents generally disagreed or strongly disagreed with the statements that stuttering and intelligence are related and people who stutter exhibit certain identifiable personality traits, perhaps respondents thought that stuttering would affect others' perceptions of competence in these occupations. Silverman and Paynter (1990), as well as Silverman and Bongey (1997), found that stuttering influenced perceptions of occupational competence, particularly for individuals in occupations that have frequent contact with the public.

Perceptions related to stuttering. With respect to the nine items included on the survey instrument to identify general perceptions related to stuttering, findings from the present study were somewhat contradictory with findings from previous research. For example, M. A. Hurst and Cooper (1983) found that 88% of respondents agreed that most individuals experience discomfort when conversing with a person who stutters; although the present study employed a 5-point Likert-type scale, respondents in the current study generally were neutral with respect to that statement based on the mean score of 2.9022. In addition, 57% of respondents in the M. A. Hurst and Cooper (1983) study incorrectly believed that people who stutter exhibit certain identifiable personality traits; respondents in the present study generally disagreed with that

statement based on the mean score of 1.8090. However, 92% of respondents in the M. A. Hurst and Cooper (1983) study correctly reported that stuttering and intelligence are not related; respondents in the present study generally disagreed or strongly disagreed with the statement that stuttering and intelligence are related based on the mean score of 1.5056. Also, many respondents in the M. A. Hurst and Cooper (1983) study agreed that people who stutter can benefit from speech therapy (76%) and that the public tends to react negatively to stuttering (62%); respondents in the present study generally agreed with those statements based on the mean scores of 3.9888 and 3.7045 respectively.

M. I. Hurst and Cooper (1983) found that 85% of respondents agreed that stuttering decreases an individual's employability; in the present study, that statement had a mean score of 3.02, generally indicating a response of neutral. Some respondents in the M. I. Hurst and Cooper (1983) study agreed that people who stutter should seek employment which requires little speaking (44%); that stuttering interferes with job performance (29%); and that stuttering interferes with promotion possibilities (40%). Respondents in the present study either generally disagreed or were generally neutral with respect to those statements based on the mean scores of 2.2921, 2.4432, and 2.9663 respectively. Overall, perceptions of stuttering were generally favorable based on the results of these nine items. However, it is possible that because these nine items followed the items related to hiring, respondents could have chosen responses perceived to be socially desirable.

Definitions of stuttering. Respondents generally provided an array of definitions of stuttering. As noted earlier, responses were organized into 10 categories to represent different aspects and impacts of stuttering. Given that there is no operational definition of stuttering (Bloodstein & Bernstein Ratner, 2008), respondents' definitions could not be judged to be

wholly correct or incorrect. However, these varied responses do confirm the idea that no one or precise definition of stuttering exists. They also support the notion that stuttering is an abstract construct, as presented by Bloodstein and Bernstein Ratner (2008).

Implications and Practical Applications

Findings from this study generally imply that there are positive perceptions toward hiring individuals who stutter and that there are favorable general perceptions of stuttering. Stuttering did not appear to be associated with any stereotypes, stigma, spread phenomenon, or negative expectations. Also, contrary to the myths about workers with disabilities, people who stutter were generally perceived to be capable of meeting job performance requirements. Therefore, it appears that employers would hire a person who stutters and that rehabilitation counselors would support hiring a person who stutters. Although people who stutter have reported difficulties during the employment experience (e.g., Hayhow, Cray, & Enderby, 2002; Rice & Kroll, 1994; Rice & Kroll, 2006), the findings from the current study generally imply that individuals who stutter are perceived to be on an even par with their counterparts who do not stutter in the workplace. They further imply that individuals who stutter and who experience issues in employment may encounter problems for reasons other than stuttering. Similarly, Daniel, Alston, and Sheldon (1971) found that members of the National Rehabilitation Counseling Association perceived stuttering as a "mildly to moderately handicapping" speech disorder; after considering these findings in light of the results of the 1965 Goldin study, which found that 3.6% of counselors preferred to work with speech and hearing cases, this research team stated that "…rehabilitation counselors' lack of preference for clients with speech disorders is for reasons other than their perception of the degree of handicap imposed" (p.725).

However, given that many of the occupations with high mean scores may be perceived to require low levels of communication, these findings also presumably imply that service providers, such as rehabilitation counselors, should discuss perceptions about speaking demands with consumers who stutter and strategies to counter any negative perceptions. Ju, Roberts, and Zhang (2013) suggest that self-determination and self-advocacy skills are important skills for people with disabilities when interacting with employers. Draper, Reid, and McMahon (2011) and Draper, Hawley, McMahon, and Reid (2012) also suggest that people with disabilities learn to be proactive and negate any negative perceptions with self-advocacy statements and evidence of occupational competence. In addition, people who stutter may want to be frank about their stuttering with employers as some studies have shown that people who stutter and who acknowledge their stuttering (e.g., Collins & Blood, 1990; Lee & Manning, 2010) or who have received treatment (e.g., Craig & Calver, 1991; Gabel, 2006) may be perceived favorably. Moreover, rehabilitation counselors may want to address any potential attitudinal barriers by educating employers and related staff. Mitchell, McMahon, and McKee (2005) found that most work discrimination allegations from people with speech impairments were from the South, from employers of smaller companies, and from employers in the service industry. Although this study took place in the South with the largest employers in Alabama representing an array of industries, rehabilitation counselors may want to provide more focused education to employers of smaller companies and employers in the service industry. Thus, it may be quite useful to view stuttering through the biopsychosocial model of disability given that it views disability as the result of interaction between multiple factors.

Finally, the findings from this study generally imply that the perceptions of employers and rehabilitation counselors may have changed somewhat since the 1983 M. A. Hurst and

Cooper study and the 1983 M. I. Hurst and Cooper study. In the present study, these groups generally did not perceive stuttering as a barrier to employment. Thus, people who stutter may have more equality of opportunity in employment. This may be because employers and rehabilitation counselors are more informed about stuttering; for example, respondents in the present study generally disagreed that people who stutter exhibit certain identifiable personality traits. Employers and rehabilitation counselors also may be more experienced with people who stutter; for example, many respondents reported that they have known someone who stutters and have worked with someone who stutters. Regardless, these employment professionals, most of whom had more than 10 years of experience, generally perceived stuttering as a non-limiting factor in employment and therefore, people who stutter can be more confident in their pursuit of employment.

Recommendations for Future Research

Future research should replicate this study with a larger group of employers and rehabilitation counselors and a comparison group (i.e., people who do not stutter). Further research could also replicate this study in other states using their labor market information. Participants also could be provided with a demonstration of stuttering, real or simulated. Future studies could explore the severity of stuttering and its impact on perceptions of employers and rehabilitation counselors toward hiring individuals who stutter. Participants could be provided more information about the nature of the job. For example, information about each occupation could be included based on systems of occupational information such as the Occupational Information Network (O*NET). Future studies could probe deeper into relationships between participants' backgrounds, including characteristics of their work organizations, and perceptions

of stuttering. The perceptions of other groups, such as supervisors or hiring managers employed in the specific occupations included on the survey instrument, could be explored.

Moreover, future research could survey people who stutter to examine their perceptions of stuttering and their perceptions toward hiring individuals who stutter. People who stutter could be asked to provide their personal definitions of stuttering in future studies; those definitions could be explored in relation to the impact of stuttering on employment. In addition, future research could explore how the lack of an operational definition of stuttering impacts public perceptions of employing people who stutter. Future studies could seek to determine other characteristics of people who stutter that could influence perceptions related to employment. Finally, future research could seek to identify the employment and unemployment rates of people who stutter. Table 16 displays a summary of conclusions, implications, and recommendations for future research.

Table 16

Summary of Conclusions, Implications, and Recommendations for Future Research

Conclusion	**Possible Implication and Practical Application**	**Recommendation for Future Research**
This study is generally inconsistent with research that suggests that people who stutter may encounter barriers to employment.	There are positive perceptions toward hiring individuals who stutter. Also, there are favorable general perceptions of stuttering. Therefore, it appears that employers would hire a person who stutters and that rehabilitation counselors would support hiring a person who stutters.	Future research should replicate this study with a larger group of employers and rehabilitation counselors. Further research could also replicate this study in other states using their labor market information.
Generally, employers and rehabilitation counselors do not currently perceive stuttering as a barrier to employment opportunities.	Individuals who stutter are perceived no differently than individuals who do not stutter. Individuals who stutter and who experience issues in	Replicate this study with a comparison group (i.e., people who do not stutter). Participants could be provided with a demonstration of stuttering. Future studies could

	employment may be encountering problems for reasons other than stuttering.	probe deeper into participants' backgrounds, including characteristics of their work organizations. Develop a study to determine other characteristics of people who stutter that could influence perceptions related to employment.
Employers and rehabilitation counselors may have perceived certain occupations to require higher speaking demands. Therefore, they may have perceived these occupations as less fitting for an individual who stutters relative to occupations that were perceived to have lower speaking demands.	Rehabilitation counselors should discuss perceptions about speaking demands with consumers who stutter and strategies to counter any negative perceptions.	Future studies could include more information about the nature of the job. Future research could use similar instruments to survey people who stutter to examine their perceptions of stuttering and their perceptions toward hiring individuals who stutter.

Summary

The focus of this study was the lack of information related to the perceptions of employers and rehabilitation counselors toward hiring people who stutter. The study found generally positive perceptions of hiring individuals who stutter. It also found favorable general perceptions of stuttering. The results showed that employers and rehabilitation counselors did not view hiring individuals who stutter differently nor did they view stuttering differently. In addition, the findings of the study revealed that there is no one or precise definition of stuttering.

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Appendix A

Permission from Authors

Michele Martin, M.S. CCC/SLP
martinmi@musc.edu
Infant Toddler Specialist
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1 Carriage Lane, Unit J
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From: Melissa Sylvester <sylveme@tigermail.auburn.edu>
Date: Thursday, June 4, 2015 at 4:02 PM
To: MUSC User <martinmi@musc.edu>
Subject: Article

Hello Mrs. Martin,

I am a student at Auburn University and I am trying to locate the authors of the following article: Hurst, M. A., & Cooper, E. B. (1983). Vocational rehabilitation counselors' attitudes toward stuttering. *Journal of Fluency Disorders, 8*, 13-27.

If you are one of the authors, then please let me know. Your help will be greatly appreciated.

Thanks in advance for your assistance.

Very Respectfully,

Melissa Sylvester

Re: Article

Martin, Michele <martinmi@musc.edu>

Thu 6/4/2015 5:35 PM

To:Melissa Sylvester <sylveme@tigermail.auburn.edu>;

Cc:Melanie Greene <twinslp@hotmail.com>;

Melissa, I'm glad you were able to find me! I'd be happy to give you permission to use information from my work if you'll cite my publication in your references. Yes, Melanie I. Hurst is my twin sister and you can contact her at twinslp@hotmail.com. Please stay in touch and keep me updated about your research results. Good luck!

Sent from my iPhone

On Jun 4, 2015, at 4:36 PM, "Melissa Sylvester" <sylveme@tigermail.auburn.edu> wrote:

> This is great news! I used Google extensively to find you. The article provides where you worked in 1983 and I compared this to information on your LinkedIn profile. I am very excited to find you.
>
> I am a doctoral candidate in the Department of Special Education, Rehabilitation, and Counseling at Auburn University and I would like permission to use a few of the items from your inventory in my dissertation. Also, I would like to know if you are any relation to Melanie I. Hurst. I would like permission to use a few of the items from the inventory that she used in the article below as well, but I do not have contact information for her.
>
> Hurst, M. I., & Cooper, E. B. (1983). Employer attitudes toward stuttering. *Journal of Fluency Disorders, 8*, 1-12.
>
> Thank you so much for your response. Words cannot explain how elated I am about corresponding with you.
>
> Melissa

From: Martin, Michele <martinmi@musc.edu>
Sent: Thursday, June 04, 2015 3:10 PM
To: Melissa Sylvester
Subject: Re: Article

Hi Melissa,
Yes, that article was my published thesis. Wow! I'd be interested to know how you found me. The research was done a long time ago, but I'd be glad to help you if I can.

Re: Article

Melissa Sylvester

Thu 6/4/2015 8:48 PM

To:twinslp@hotmail.com <twinslp@hotmail.com>;

Thank you very much! I promise to update you both!
With gratitude,
Melissa

Sent from my Verizon 4G LTE Smartphone

------ Original message------
From: Melanie Greene
Date: Thu, Jun 4, 2015 8:40 PM
To: Melissa Sylvester;
Subject: Re: Article

Hi Melissa,
You are welcome to use information from my thesis research! Good luck with your dissertation, and please let me know when your work is published. I'd love to read it at some point! I am still working part time as a speech-language pathologist for a private practice. I have enjoyed this profession for almost 35 years now.
Thanks for your inquiry!
Melanie I. Greene, MS, CCC-SLP
Speech-Language Pathologist

Sent from my iPad

On Jun 4, 2015, at 7:10 PM, Melissa Sylvester <sylveme@tigermail.auburn.edu> wrote:

> Hello Mrs. Greene,
>
> I apologize for the late email. I have been in contact with your sister, Michele, today about the research you completed regarding stuttering. I would like to ask for permission to use a few items from your 1983 Employer Attitudes Toward Stuttering Inventory in my dissertation. I will certainly cite your work if you allow me to use it.
>
> Thanks in advance for your assistance. My day has been absolutely amazing because I was able to locate and speak with both of you!
>
> Best regards,
>
> Melissa

Appendix B

Survey Instrument

Employer and Rehabilitation Counselor Perceptions of Individuals who Stutter Questionnaire

Part I: Demographic Information Sheet

Please provide the following information.

1. Job Title
   - ☐ Employer, manager, or human resource (HR) professional
   - ☐ Rehabilitation counselor or unit supervisor
   - ☐ Other (please specify) _____

2. Years of Experience
   - ☐ Less than 5 years
   - ☐ 5-10 years
   - ☐ More than 10 years

3. Gender
   - ☐ Male
   - ☐ Female

4. Age
   - ☐ Less than 40
   - ☐ 41-64
   - ☐ 65 or older

5. Race and Ethnicity
   - ☐ American Indian or Alaskan Native
   - ☐ Asian
   - ☐ Native Hawaiian or Pacific Islander
   - ☐ White or Caucasian
   - ☐ Black or African American
   - ☐ Hispanic or Latino
   - ☐ Other (please specify) _____

6. Have you ever known anyone who stutters?
   - ☐ Yes
   - ☐ No

7. Have you ever worked with someone who stutters?
   - ☐ Yes
   - ☐ No

8. If you are an employer/manager/HR professional, have you ever hired someone who stutters? (Rehabilitation counselors please skip this item.)
   - ☐ Yes
   - ☐ No

9. If you are a rehabilitation counselor or unit supervisor, have you ever helped someone who stutters prepare for, enter, engage in, or retain employment? (Employers please skip this item.)
    - ☐ Yes
    - ☐ No

Part II: Employer and Rehabilitation Counselor Perceptions of Individuals who Stutter Questionnaire

Instructions for items 10-48.

- This questionnaire asks you to share your perceptions about people who stutter.
- Please read the questionnaire items carefully. Place a check mark (✓) in the appropriate space that indicates your perception. There are no right or wrong responses.
    - Strongly Agree
    - Agree
    - Neither Agree Nor Disagree
    - Disagree
    - Strongly Disagree
- While completing items 10-39 of the questionnaire, you should assume that individuals who stutter would have the necessary education (i.e., elementary, middle school, high school, or higher academic requirements) for each occupation. The occupations were selected from Alabama's Hot 40 Demand Occupations from 2012 to 2022 (Alabama Department of Labor, 2012).
- Thanks for your participation.

Please place a check mark (✓) in the appropriate space to indicate the extent to which you agree that a person who stutters could be hired for that specific occupation.

	Place a check mark (✓) in the appropriate space	**Strongly Agree**	**Agree**	**Neither Agree Nor Disagree**	**Disagree**	**Strongly Disagree**
10.	Biological Science Teacher, Postsecondary					
11.	Health Specialties Teacher, Postsecondary					
12.	Physical Therapist					
13.	Pharmacist					
14.	Healthcare Social Worker					

15.	Computer Systems Analyst					
16.	Software Developer, Applications					
17.	Management Analyst					
18.	Cost Estimator					
19.	Logistician					
20.	Medical and Health Services Manager					
21.	Construction Manager					
22.	Computer and Information Systems Manager					
23.	General and Operations Manager					
24.	Software Developer, Systems Software					
25.	Physical Therapist Assistant					
26.	Dental Hygienist					
27.	Registered Nurse					
28.	Medical and Clinical Laboratory Technician					
29.	Licensed Practical and Licensed Vocational Nurse					
30.	Computer User Support Specialist					
31.	First-Line Supervisor of Construction Trades and Extraction Workers					
32.	Engine and Other Machine Assembler					
33.	Industrial Machinery Mechanic					
34.	Medical Secretary					
35.	Carpenter					
36.	Team Assembler					

37.	Computer-Controlled Machine Tool Operator, Metal and Plastic					
38.	Personal Care Aide					
39.	Home Health Aide					

An additional nine items are provided to further gather your perceptions related to stuttering. Please place a check mark (✓) in the appropriate space to indicate the extent to which you agree with the following statements.

	Place a check mark (✓) in the appropriate space	**Strongly Agree**	**Agree**	**Neither Agree Nor Disagree**	**Disagree**	**Strongly Disagree**
40.	Stuttering and intelligence are related.					
41.	Stuttering interferes with job performance.					
42.	People who stutter exhibit certain identifiable personality traits.					
43.	The public tends to react negatively to stuttering.					
44.	Stuttering interferes with promotion possibilities.					
45.	People who stutter can benefit from speech therapy.					
46.	Most individuals experience discomfort when conversing with a person who stutters.					
47.	Stuttering decreases an individual's employability.					
48.	People who stutter should seek employment which requires little speaking.					

Please answer the following question.

49. How would you personally define stuttering?

Thank You For Your Participation!

Appendix C

Institutional Review Board Approal and Other Permission

AUBURN UNIVERSITY INSTITUTIONAL REVIEW BOARD for RESEARCH INVOLVING HUMAN SUBJECTS

REQUEST FOR EXEMPT CATEGORY RESEARCH

For Information or help completing this form, contact: **THE OFFICE OF RESEARCH COMPLIANCE**, 115 Ramsay Hall
Phone: 334-844-5966 **e-mail:** IRBAdmin@auburn.edu **Web Address:** http://www.auburn.edu/research/vpr/ohs/index.htm

Revised 2/1/2014 **Submit completed form to IRBsubmit@auburn.edu or 115 Ramsay Hall, Auburn University 36849.**

Form must be populated using Adobe Acrobat / Pro 9 or greater standalone program (do not fill out in browser). Hand written forms will not be accepted.

Project activities may not begin until you have received approval from the Auburn University IRB.

1. PROJECT PERSONNEL & TRAINING

PRINCIPAL INVESTIGATOR (PI):

Name Melissa Sylvester **Title** Graduate Student **Dept./School** SERC

Address 215 S. Donahue Dr. Auburn, AL 36849 **AU Email** sylveme@auburn.edu

Phone [redacted] **Dept. Head** Dr. Everett Martin

FACULTY ADVISOR (if applicable):

Name Dr. Everett Martin **Title** Department Head **Dept./School** SERC

Address 2084 Haley Center Auburn, AL 36849

Phone 334-844-7685 **AU Email** martiev@auburn.edu.

KEY PERSONNEL: **List Key Personnel (other than PI and FA).** Additional personnel may be listed in an attachment.

Name	Title	Institution	Responsibilities
Dr. Marie Kraska	Professor	Auburn University	research design, analysis, and reporting

The Auburn University Institutional Review Board has approved this document for use from 8/29/15 to 8/28/18 Protocol # 15-329 EX 1508

KEY PERSONNEL TRAINING: **Have all Key Personnel completed CITI Human Research Training (including elective modules related to this research) within the last 3 years?** ☑ YES ☐ NO

TRAINING CERTIFICATES: **Please attach CITI completion certificates for all Key Personnel.**

2. PROJECT INFORMATION

Title: Perceptions of Employers and Rehabilitation Counselors Toward Hiring Individuals who Stutter

Source of Funding: ☑ Investigator ☐ Internal ☐ External

List External Agency & Grant Number: N/A

List any contractors, sub-contractors, or other entities associate with this project.

N/A

List any other IRBs associated with this project (including those involved with reviewing, deferring, or determinations).

N/A

FOR ORC OFFICE USE ONLY

DATE RECEIVED IN ORC: _____ by _____
DATE OF IRB REVIEW: _____ by _____
DATE OF ORC REVIEW: _____ by _____
DATE OF APPROVAL: _____ by _____
COMMENTS:

APPROVAL # _____
APPROVAL CATEGORY: _____
INTERVAL FOR CONTINUING REVIEW : _____

3. PROJECT SUMMARY

a. Does the research involve any special populations?

- ☐ YES ☑ NO Minors (under age 19)
- ☐ YES ☑ NO Pregnant women, fetuses, or any products of conception
- ☐ YES ☑ NO Prisoners or Wards
- ☐ YES ☑ NO Individuals with compromised autonomy and/or decisional capacity

b. Does the research pose more than minimal risk to participants? ☐ YES ☑ NO

Minimal risk means that the probability and magnitude of harm or discomfort anticipated in the research are not greater in and of themselves than those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests. 42 CFR 46.102(i)

c. Does the study involve any of the following?

- ☐ YES ☑ NO **Procedures subject to FDA Regulation** Ex. Drugs, biological products, medical devices, etc.
- ☐ YES ☑ NO Use of school records of identifiable students or information from instructors about specific students
- ☐ YES ☑ NO Protected health or medical information when there is a direct or indirect link that could identify the participant
- ☐ YES ☑ NO Collection of sensitive aspects of the participant's own behavior, such as illegal conduct, drug use, sexual behavior or use of alcohol
- ☐ YES ☑ NO Deception of participants

If you checked "YES" to any response in Question #3 STOP. It is likely that your study does not meet the "EXEMPT" requirements. Please complete a PROTOCOL FORM for Expedited or Full Board Review.
You may contact IRB Administration for more information. (Phone: 334-844-5966 or Email: IRBAdmin@auburn.edu)

4. PROJECT DESCRIPTION

a. **Subject Population** (Describe, include age, special population characteristics, etc.)

The population for this study will be the top 150 employers in Alabama in 2014 who are listed on the Alabama Department of Labor website (Alabama Department of Labor, 2012) and all rehabilitation counselors employed by the Alabama Department of Rehabilitation Services (ADRS). There are approximately 131 rehabilitation counselors. Employers and rehabilitation counselors will be age 19 or older.

b. Describe, step by step, all procedures and methods that will be used to consent participants.

☐ N/A (Existing data will be used)

This study will use an anonymous mail survey for employers. It will use an anonymous online survey for rehabilitation counselors. The information requested is non-invasive and non-sensitive. Therefore, employers will be mailed a hard copy of the Information Letter for Adults and rehabilitation counselors will be emailed the Electronic Information Letter for Adult Participants from the Assistant Commissioner of ADRS. If participants decide to take the survey, the data that they provide will serve as their agreement to participate in the study.

c. **Brief summary of project.** (Include the research question(s) and a brief description of the methodology, including recruitment and how data will be collected and protected.)

The purpose of this study is to investigate perceptions of employers and rehabilitation counselors about the employability of people who stutter. Research questions: What are the demographic characteristics of employers and rehabilitation counselors who participated in this study; what are the descriptive statistics associated with each item on the questionnaire; to what extent is there a difference in perceptions of employers and rehabilitation counselors about employment in various occupations of people who stutter; to what is extent is there a difference in the general perceptions of employers and rehabilitation counselors about stuttering; and how do employers and rehabilitation counselors define stuttering.

The "Employer and Rehabilitation Counselor Perceptions of Individuals who Stutter Questionnaire" will be used to collect data. The researcher will mail each employer the Participant Recruitment Flyer, the Information Letter for Adults, the questionnaire, and a self-addressed stamped return envelope. For rehabilitation counselors, the researcher will contact the Assistant Commissioner, James Myrick, at the Alabama Department of Rehabilitation Services (ADRS) via email to request that he disseminate the Email Invitation and the Electronic Information Letter for Adult Participants, which will include the survey link, to all rehabilitation counselors employed by ADRS.

This study does not collect identifiable data. This study will use an anonymous mail survey for employers. It will use an anonymous online survey via SurveyMonkey for rehabilitation counselors. Data will be reported in aggregate form only. Hard copies of survey forms returned by employers will be stored in the researcher's locked office in a locked file cabinet. Electronic data from rehabilitation counselors will be stored on the researcher's and Dr. Kraska's individual password protected computers in their locked offices. Only the researcher and the office manager at the Center for Disability Research and Service (CDRS) have a key to the researcher's office and file cabinet.

d. **Waivers. Check any waivers that apply and describe how the project meets the criteria for the waiver.**

- ☐ **Waiver of Consent (Including existing de-identified data)**
- ☑ **Waiver of Documentation of Consent (Use of Information Letter)**
- ☐ **Waiver of Parental Permission (for college students)**

This study does not collect identifiable data; it will use an anonymous mail survey for employers. It will use an anonymous online survey for rehabilitation counselors and will not collect email or IP addresses and will use SSL encryption. The information requested is non-invasive and non-sensitive. Data will be reported in aggregate form only. If participants decide to take the survey, the data they provide will serve as their agreement to participate.

e. **Attachments.** Please attach Informed Consents, Information Letters, data collection instrument(s), advertisements/recruiting materials, or permission letters/site authorizations as appropriate.

Signature of Investigator Melissa Sylvester Date 7/27/15

Signature of Faculty Advisor [signature] Date 7/27/2015

Signature of Department Head [signature] Date 7/27/2015

3 of 3

RE: Auburn University IRB Application

Myrick, James (Rehab) <James.Myrick@rehab.alabama.gov>

Tue 7/21/2015 3:13 PM

Inbox

To: Melissa Sylvester <sylveme@tigermail.auburn.edu>;

Hello Melissa, we will be happy to assist you in this study and good luck. I will be out of the office until Thursday, July 30th.

From: Melissa Sylvester [mailto:sylveme@tigermail.auburn.edu]
Sent: Tuesday, July 21, 2015 1:07 PM
To: Myrick, James (Rehab)
Subject: Auburn University IRB Application

Hello Mr. Myrick,

I hope all is well with you. I am preparing my Institutional Review Board (IRB) Research Request Form, as required by Auburn University, to conduct my doctoral research. As you may recall, the purpose of my study is to investigate perceptions of employers and rehabilitation counselors about the employability of people who stutter. I would like your assistance with distributing the survey form. If I send you the Email Invitation and the IRB-approved Information Letter about the study, which will include a link to the survey, could you send it out electronically to all of the rehabilitation counselors employed by the Alabama Department of Rehabilitation Services? I need a written response from you to meet the IRB requirements so that I can include your response in my IRB application. Your response to this email will be sufficient.

Thank you for your support and assistance. I greatly appreciate your willingness to help in my research.

Very Respectfully,
Melissa Sylvester

Melissa Sylvester, M.Ed., CRC
Graduate Student
Department of Special Education, Rehabilitation, and Counseling
Auburn University

Appendix D

Information Letters

AUBURN
UNIVERSITY
DEPARTMENT OF
SPECIAL EDUCATION,
REHABILITATION, AND COUNSELING

(NOTE: DO NOT AGREE TO PARTICIPATE UNLESS IRB APPROVAL INFORMATION WITH CURRENT DATES HAS BEEN ADDED TO THIS DOCUMENT.)

INFORMATION LETTER
for a Research Study entitled
" Perceptions of Employers and Rehabilitation Counselors Toward Hiring Individuals who Stutter "

You are invited to participate in a research study to investigate perceptions of employers and rehabilitation counselors about the employability of people who stutter. The study is being conducted by Melissa Sylvester, graduate student, under the direction of Dr. Everett Martin, department head and professor, in the Auburn University Department of Special Education, Rehabilitation, and Counseling (SERC). You are invited to participate because you are a rehabilitation counselor employed by the Alabama Department of Rehabilitation Services and you are age 19 or older.

What will be involved if you participate? Your participation is completely voluntary. If you decide to participate in this research study, you will be asked to take an anonymous online survey through Survey Monkey. Your total time commitment will be approximately 5 to 10 minutes.

Are there any risks or discomforts? Your participation in this study is completely anonymous and voluntary. There are no foreseeable risks or discomforts if you participate in this study.

Are there any benefits to yourself or others? You will receive no direct benefits. However, through a better understanding of stuttering, results of this study may benefit people who stutter with respect to preparation and planning for obtaining and maintaining employment.

Will you receive compensation for participating? You will receive no compensation for your participation in this study.

Are there any costs? There will be no costs to you for your participation.

If you change your mind about participating, you can withdraw at any time by closing your browser window. Once you have submitted anonymous data, it cannot be withdrawn since it will be unidentifiable. Your decision about whether or not to participate or to stop participating will not jeopardize your future relations with Auburn University, the Department of Special Education, Rehabilitation, and Counseling (SERC), or the Alabama Department of Rehabilitation Services.

Any data obtained in connection with this study will remain anonymous. We will protect your privacy and the data you provide by not collecting email or IP addresses, by using Secure Sockets Layer (SSL) encryption, and by reporting data in aggregate form only. Information collected through your participation may be used to fulfill an educational requirement, published in a professional journal, and/or presented at a professional meeting.

If you have questions about this study, please contact Melissa Sylvester at sylveme@auburn.edu or Dr. Everett Martin at martiev@auburn.edu.

If you have questions about your rights as a research participant, you may contact the Auburn University Office of Research Compliance or the Institutional Review Board by phone (334) 844-5966 or e-mail at IRBadmin@auburn.edu or IRBChair@auburn.edu.

HAVING READ THE INFORMATION ABOVE, YOU MUST DECIDE IF YOU WANT TO PARTICIPATE IN THIS RESEARCH PROJECT. IF YOU DECIDE TO PARTICIPATE, PLEASE CLICK ON THE LINK BELOW. YOU MAY PRINT A COPY OF THIS LETTER TO KEEP.

Melissa Sylvester 7/27/15

Investigator Date

The Auburn University Institutional Review Board has approved this document for use from _____ to _____. Protocol #_____

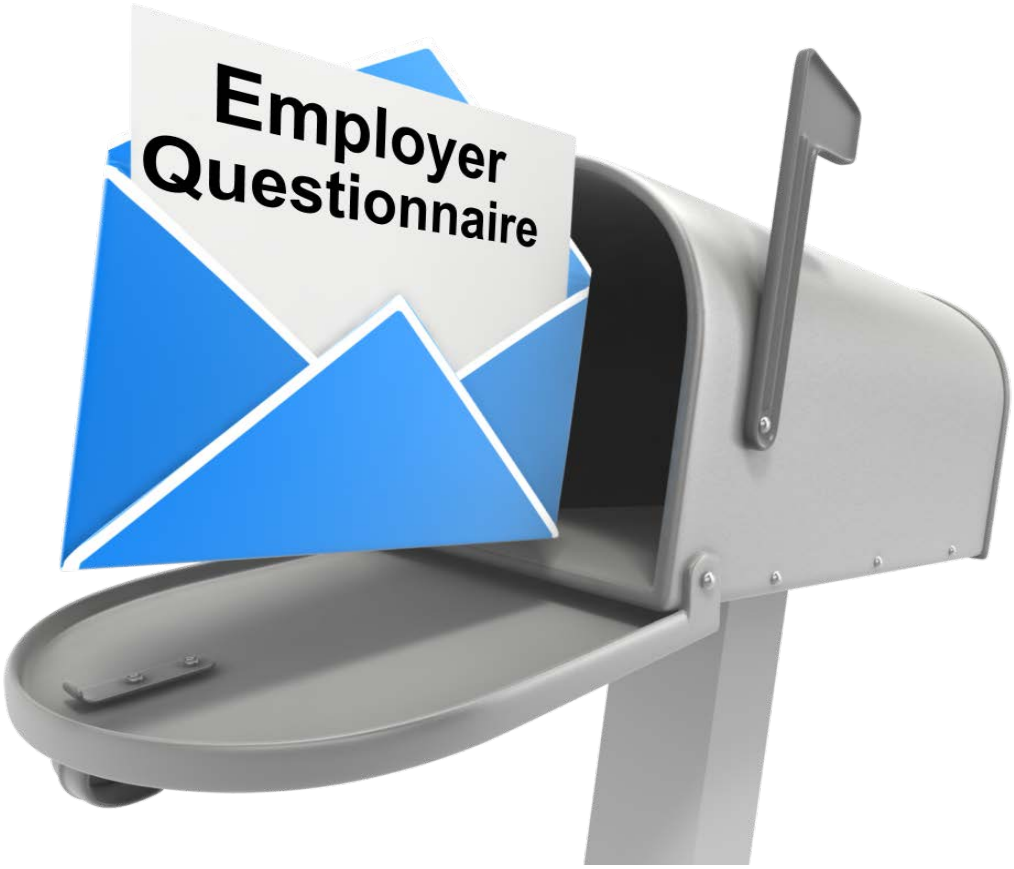
Please click on the link below if you agree to participate in the study.

https://www.surveymonkey.com/r/AUfall2015

The Auburn University Institutional Review Board has approved this document for use from 8/29/15 to 8/28/18 Protocol # 15-329 EX 1508

Help Needed With Research Study

The purpose of this study is to investigate perceptions of employers and rehabilitation counselors about the employability of people who stutter.



Your participation in this study is entirely anonymous and voluntary.

There are no costs and no foreseeable risks associated with this study.

If you have questions about this study, please contact **Melissa Sylvester** at sylveme@auburn.edu or **Dr. Everett Martin** at martiev@auburn.edu.

THANK YOU FOR YOUR TIME!

AUBURN
UNIVERSITY

DEPARTMENT OF
SPECIAL EDUCATION,
REHABILITATION, AND COUNSELING

(NOTE: DO NOT AGREE TO PARTICIPATE UNLESS AN IRB APPROVAL STAMP WITH CURRENT DATES HAS BEEN APPLIED TO THIS DOCUMENT.)

INFORMATION LETTER
for a Research Study entitled
"Perceptions of Employers and Rehabilitation Counselors Toward Hiring Individuals who Stutter"

You are invited to participate in a research study to investigate perceptions of employers and rehabilitation counselors about the employability of people who stutter. The study is being conducted by Melissa Sylvester, graduate student, under the direction of Dr. Everett Martin, department head and professor, in the Auburn University Department of Special Education, Rehabilitation, and Counseling (SERC). You are invited to participate because you are listed on the Alabama Department of Labor website as one of the top 150 employers in Alabama in 2014 and you are age 19 or older.

What will be involved if you participate? Your participation is completely voluntary. If you decide to participate in this research study, you will be asked to complete the questionnaire enclosed in the envelope and return the survey using the enclosed self-addressed stamped envelope. Your total time commitment will be approximately 5 to 10 minutes.

Are there any risks or discomforts? Your participation in this study is completely anonymous and voluntary. There are no foreseeable risks or discomforts if you participate in this study.

Are there any benefits to yourself or others? You will receive no direct benefits. However, through a better understanding of stuttering, results of this study may benefit people who stutter with respect to preparation and planning for obtaining and maintaining employment.

Will you receive compensation for participating? You will receive no compensation for your participation in this study.

Are there any costs? There will be no costs to you for your participation.

If you change your mind about participating, you can discard the survey form. Your decision about whether or not to participate or to stop participating will not jeopardize your future relations with Auburn University, the Department of Special Education, Rehabilitation, and Counseling (SERC), or the Alabama Department of Labor.

Any data obtained in connection with this study will remain anonymous. We will protect your privacy and the data you provide by reporting data in aggregate form only. Information collected through your participation may be used to fulfill an educational requirement, published in a professional journal, and/or presented at a professional meeting.

If you have questions about this study, please contact Melissa Sylvester at sylveme@auburn.edu or Dr. Everett Martin at martiev@auburn.edu.

If you have questions about your rights as a research participant, you may contact the Auburn University Office of Research Compliance or the Institutional Review Board by phone (334)-844-5966 or e-mail at IRBadmin@auburn.edu or IRBChair@auburn.edu.

HAVING READ THE INFORMATION PROVIDED, YOU MUST DECIDE IF YOU WANT TO PARTICIPATE IN THIS RESEARCH PROJECT. IF YOU DECIDE TO PARTICIPATE, THE DATA YOU PROVIDE WILL SERVE AS YOUR AGREEMENT TO DO SO. THIS LETTER IS YOURS TO KEEP.

Melissa Sylvester 7/27/15

Investigator's signature Date

Melissa Sylvester

Print Name

The Auburn University Institutional Review Board has approved this document for use from 8/29/15 to 8/28/18

Protocol # 15-329 EX 1508

Appendix E

Participant Responses

Employers' Definitions of Stuttering

1. Speech pattern that repeats phrasing in some cases or with certain sounds

2. The inability to articulate speech without hesitation due to impediment

3. Having a hard time completing a sentence. Can't get the words out without difficulty

4. A speech impediment that is impacted by emotions or circumstances

5. Hard time getting words out

6. Difficulty in conversing

7. I would define stuttering as a person who repeats things over and over. Sometimes there is a pause between the stuttering. Some stuttering only occurs when a person is nervous and in others it is more often. Just depends on the person.

8. When someone has difficulty producing a word on the first attempt and they have to try again or use a different word altogether

9. Repeating syllables; difficulty increases when in stressful situations - it seems

10. An involuntary vocal tic that may have root in anything from a neurological to a psychiatric case

11. Communication disorder -I also believe anxiety has more to do with the stuttering cases that I have seen. I started stuttering after a traumatic head injury resulting in PTSD. Through behavioral therapy I have overcome most of the issues.

12. A speech disorder marked by stammering/repeating a syllable or word

13. Repetitive sounds when speaking

14. Flow of words/speech is interrupted frequently

15. Interruption of speech - or trouble getting words out - (pause) between words

16. Stuttering to me is when it takes a person more effort, multiple efforts or longer to say words or sentences.

17. One who has difficulty speaking and communicating, marked by an apparently involuntary repetition of certain sounds, but who may improve with the use of certain therapies

18. Halting speech requiring or interrupted by repetition. We have a engineer in our facilities group with the disorder

19. Talk with continued involuntary repetition of sounds

20. A difficulty in verbalizing words in a timely and flowing pattern without interruptions

21. People who speak with involuntary repetition of certain letters or sounds

22. Repetition of words or stopping in middle sentence to concentrate on finishing the word or sentence

23. The inability to verbalize thoughts as fluid as they may be in an individual's mind

24. Difficulty in articulating thoughts verbally-repeated consonants/syllables, stammering over specific sounds. Being nervous often exacerbates the problem

25. Difficulty forming and expressing words

26. The inability to fluidly articulate thoughts via speech

27. To speak with pause

28. A speech disorder of repeated sounds, words, sometimes syllables which disrupts the normal flow of speech

29. Stuttering is the inability to deliver speech without hesitation

30. Physical problem requiring careful and thorough professional therapy to remedy

31. Verbal difficulty in expressing idea on communicating with others. Causes and degree of difficulty vary widely and are unique between individuals.

Rehabilitation Counselors' Definitions of Stuttering

1. When a person has a hard time pronouncing or projecting the words he/she would like to express or they repeat simple phrases or words unintentionally.

2. A person who has difficulty with the fluency of speech.

3. Stuttering is a communication disorder which is perceived to be vocationally limiting but it does not "have" to be.

4. Broken breath and words making it difficult to communicate.

5. Not sure

6. A challenge with speaking in which a person is difficulty completing a word.

7. Inability to verbalize thoughts with fluidity of speech or without hesitations

8. Just another problem to overcome in helping people who do not work with this disability learn more about it and accept it.

9. Stuttering is sometimes a repetition of a certain sound on the part of the speaker. Not all people stutter for the same reason.

10. Stuttering is a physical response when speaking and isn't linked to intelligence.

11. Frequently a barrier to social and communication opportunities and which often results in anxiety, avoidance of communication, bullying, and negative self-image.

12. Limitation of speech

13. A person's inability to state what they wish to say, they know exactly what they want to say and it has absolutely nothing what so ever to do with intelligence.

14. Stuttering is a temporary lapse/pause/stumble in speaking due to various causes.

15. Someone who has difficulty in a flow of speech.

16. Delayed speech

17. Someone who struggles with getting words to come out on the first try. Someone who struggles with finding the correct word in a situation.

18. Delayed or repetitive speech

19. Having difficulty getting words to come out, but some who stutter do great if they are giving a lecture or speech.

20. A speech impediment that prohibits an individual from clearly articulating speech.

21. A speech impediment that requires concentration to be able to speak the words clearly. It is like tripping over your tongue trying to convey thoughts.

22. Inability to express oneself clearly

23. Someone's ability to communicate with some difficulty in quickly stating information. This is not an issue for me. We need patience for them to state their information to us.

24. Stuttering is caused by anxiety that a person experiences when speaking.

25. Repetition of sounds especially when starting a sentence. Stressful situations can cause the stuttering to become worse.

26. An involuntary repetition of sounds.

27. A speech disorder that causes an interruption in verbal expression.

28. A trait in which a person has difficulty uttering statements because he gets caught up at a particular word or phrase.

29. Disability

30. Difficulty speaking that involves repetition of sounds and words.

31. A communications disorder which can be improved by therapy and/or assistive technology

32. Someone who speaks with hesitation, prolongation or repetition of sounds.

33. To repeat certain syllables with little control.

34. A condition of a person's speech that uses long pauses, repeated letters, or drawn out letters during their conversations

35. A difficulty verbally expressing one's self. I have been told that it is the brain thinking faster than the mouth can process.

36. Stuttering is when someone has difficulty communicating their thoughts verbally.

37. A speech impediment

38. A difficulty that an individual faces which in most, if not all cases, is a barrier to employment due to the perception others have regarding it.

39. Stuttering is a disorder of communication that is complex but treatable and manageable.

40. An individual who have difficulties getting information out clearly and understandable at times.

41. The inability to legibly verbalize statements fluently. As Rehab. Counselors we know there is technology out there they can help with this. However it is the consumers choice whether or not they want help because they may view it as not disabling and apart of who they are and do not what to change to appease others. I had a client to refuse assistive technology of speak easy and that was ok. It was his choice. I think if I stuttered, I would want the assistance of assistive technology. I would feel I could speak with confidence instead of avoiding conversations. I feel like I would have a better opportunity for advancement in employment. I also find it amazing in some cases, people can sing fluently and never stutter.

42. Intermittent difficulty in speaking clearly

43. A neurological disorder effecting auditory processing

44. When an individual has pauses or repetition of sounds when trying to pronounce words.

45. Intermittent inability to verbally enunciate syllables while under stress. Possible connection between internal effort to speak, listening to internal speech "echo", and then attempting to speak aloud thru the dissonance.

46. Stuttering is a speaking/communication issues that is a result of impediment.

47. A person who repeats part of the word he or she is attempting to speak.

Definitions of Stuttering from Individuals Classified as Other

1. Someone who is unable to get the words out of their mouth within the normal course of a conversation or someone who significantly repeats or skips the beginning of certain words.

2. Repetition of words

3. Speech interrupted with repetitive sounds when pronouncing a word.

4. A speech impediment that can be caused by various factors.

5. The inability to complete sentences in a fluid manner.