# REDUCING DISABILITY DISCRIMINATION IN THE WORKPLACE

by

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#### **ABSTRACT**

MARTINA SALGE. Reducing Disability Discrimination in the Workplace (Under the direction of Dr. ENRICA RUGGS)

Despite protection form federal legislation, employees with disabilities continue to be discriminated against in the workplace. This study examined the effects of an education and contact intervention on participants' knowledge about disabilities, attitudes toward employees with disabilities, and behavioral intent on hiring applicants with disabilities. When examining participants' behavioral intent, the study explored whether the effectiveness of the education and contact interventions were dependent on the type of disability. The interventions were presented in five-minute long videos. The findings indicated that the education intervention did increase participants' knowledge, however, this was not sustained over time (i.e. one week later). Further, participants the control condition, who viewed a generic diversity video, had more positive attitudes toward employees with disabilities than the education or contact condition. Behavioral intent scores regarding intentions to hire applicants with disabilities did not vary significantly across conditions. The implications of these findings will be discussed.

#### **DEDICATION**

I would like to dedicate my work to Dr. Enrica Ruggs, for her guidance and support throughout this study. She was my source of inspiration and motivated me to explore different topics and I would like to thank her for her commitment and her engaging, humorous, and lively lab meetings. I would also like to dedicate this work to Dr. Alyssa McGonagle and Dr. Linda Shanock for their guiding thoughts, input, and feedback. I would like to thank Kelcie, Isabella, Karoline, Joe, and Matt for their help developing the videos. Finally, I would like to thank my parents for their love, support, and encouragement.

# TABLE OF CONTENTS

LIST OF TABLES	Vii
LIST OF FIGURES	viii
Reducing Disability Discrimination in the Workplace	1
The Americans With Disabilities Act	1
Stigmatization in the Workplace	2
Stereotype Content Model	3
Disability-Dependent Stigmatization	5
Negative Consequences of Disability Discrimination	6
Sources of Disability Stigmatization	6
Reducing Disability Stigmatization	8
Education Intervention	9
Contact Intervention	10
Contact Intervention with Mental Disabilities	12
The Current Study	12
Hypotheses	13
Method	16
Participants	16
Procedure	17
Materials	18
Measures	18
Results	21
Hypothesis Testing	21
Time 1 data analyses	21
Time 2 data analyses	23
Exploratory Analyses	23
Discussion	25
Limitations	30
Implications	31
Conclusion	33
References	34
Tables	34

	Vi
Figures	49
Appendix A	54
Video 1 Education Manipulation	54
Video 2 Contact Manipulation	57
Video 3 Control Manipulation	60
Appendix B	64
Cognitive Items	64
Affective Items	67
Behavioral Intent Items	68
Manipulation Checks	71
Demographic Questions	72

# LIST OF TABLES

Table 1: Means, Standard Deviations, Coefficient Alpha Values, and Correlations of Study Variables

44

# LIST OF FIGURES

Figure 1: Number of correctly answered knowledge items at Time 1 across condition	49
Figure 2: Means of responses to Attitude Item 2 at Time 1 across condition	50
Figure 3: Means of behavioral intent score for the applicant who was obese at Time 1 across condition	51
Figure 4: Means of behavioral intent scores for the applicant who had no identified stigat Time 1 across condition	gma 52
Figure 5: Means of behavioral intent scores for all applicants at Time 1 across conditi	ons
	53

# Reducing Disability Discrimination in the Workplace

In 2015, approximately 12.6% of the total non-institutionalized American population reported having some type of disability (U. S. Census Bureau, 2015). Disability is defined as a physical or mental impairment that substantially limits one or more major life activities for an individual (The Americans With Disabilities Act of 1990, 1990). Types of disabilities commonly include intellectual disabilities (affecting thought processes, learning, communication, memory, judgement making and problem solving), physical disabilities (affecting mobility and motor skills), sensory disabilities (affecting one or more senses) and mental illnesses (affecting thinking, emotions and behavior; Saxena, & Organization, 2012).

#### The Americans With Disabilities Act

To protect the rights of people with disabilities and to prevent discrimination,

Congress enacted the Americans with Disabilities Act (ADA) in 1990. The goal of the

ADA is to prevent discrimination of individuals with disabilities. Title I of the ADA

concerns people with disabilities in the workplace and prevents employers and

organizations with 15 or more full-time employees from discriminating against people

with disabilities in all areas of employment (Popovich, Scherbaum, Scherbaum, &

Polinko, 2003). This includes, but is not limited to hiring, promoting, termination,

compensation, training, and employee benefits. According to Title I of the ADA,

employers cannot discriminate against people with disabilities as long as the person with

a disability is a qualified individual, thus the individual has the necessary prerequisites for
the job and is able to perform the necessary functions of the job. In a hiring situation, the

employer cannot ask job applicants if they have a disability or ask questions about the
nature or severity of a disability (Popovich et al., 2003).

Moreover, Title I of the ADA stipulates that the employer must provide reasonable accommodations for an employee with a disability, if they require it.

According to the Equal Employment Opportunity Commission (EEOC), reasonable accommodations include making modifications to the work environment such that people with disabilities can perform the essential functions of the job. Examples of reasonable accommodations include acquiring or modifying equipment or devices, changing the work schedule, and providing interpreters (United States Equal Employment Opportunity Commission, 2009). The ADA does not provide a list of what reasonable accommodations are, but instead provides general guidelines (Popovich et al., 2003).

#### Stigmatization in the Workplace

Despite the ADA, research shows that people with disabilities are stigmatized in the workplace (Houtenville, Brucker, & Lauer, 2016). People who are stigmatized against are targets of prejudice and stereotypes and are discriminated against by others (Crocker & Major, 1989). Stereotypes are defined as overgeneralized, positive or negative collectively agreed upon beliefs about social groups and their members, in which individual differences of the group members are dismissed (Corrigan, Edwards, Green, Diwan, & Penn, 2001; Stone & Colella, 1996). For example, people with disabilities are stereotyped as being helpless, inferior, benevolent, and unappealing (Fichten & Amsel, 1986). Prejudice, the emotional reaction to stereotypes, are overgeneralized and unjustified attitudes which endorse negative stereotypes toward social groups and their members (Hinshaw, 2009; Rüsch, Angermeyer, & Corrigan, 2005). Discrimination occurs when prejudice is acted upon and leads to individuals being treated unfairly or harmed due their membership in a negatively evaluated group (Corrigan et al., 2001; Stone & Colella, 1996).

Regarding the stigmatization of people with disabilities in the workforce, 34.4% of people with a disability are employed, compared to 75.4% of people without a disability (Houtenville, Brucker, & Lauer, 2016). Similarly, the rate of unemployment for people with a disability lies at 11.3%, whereas the unemployment rate for people without a disability is at 5.1%. Across all age and education groups, people with a disability are less likely to be employed than their nondisabled counterparts (Houtenville et al., 2016). Additionally, people with disabilities are more likely to have a part-time job and to work in service jobs, compared to people without a disability who are more likely to work fulltime jobs and occupy management and professional positions (Houtenville et al., 2016). Furthermore, employees with disabilities earn 21% less than employees without disabilities and are coincidentally overrepresented among the poor (Gunderson & Lee, 2016; Neufeldt & Mathieson, 1995). Employees with disabilities receive less positive feedback from job inquiries and have lower career prospects than their nondisabled counterparts (Hernandez, Brigida, Keys, Christopher, & Balcazar, Fabricio, 2000; Louvet, 2007; Ville & Ravaud, 1998). The Stereotype Content Model provides a possible explanation for these statistics.

#### **Stereotype Content Model**

According to the Stereotype Content Model (Fiske, Cuddy, Glick, & Xu, 2002) many stereotypes are formed along two fundamental dimensions: warmth and competence. Fiske and colleagues (2002) propose that unknown groups are naturally evaluated on their *potential* to harm or benefit others (warmth dimension) and are evaluated on the extent to which they *effectively can* harm or benefit others (competence dimension). Hence, groups are judged to be high or low in both warmth and competence (Fiske et al., 2002). Groups that are viewed as subordinate and noncompetitive such as

the elderly are judged high in warmth and low in competence. As these groups are viewed as incapable of intending and causing harm or benefit, they are treated with pity (Fiske et al., 2002). On the other hand, groups that are viewed as high-status and competitive, such as Asians, are judged low in warmth and high in competence. As this group poses a competitive threat, they are treated with envy. Groups low in competence and low in warmth are viewed as parasitic and are treated with contempt. Groups high in competence and high in warmth comprise the in-group and are admired and treated with pride (Fiske et al., 2002). Employees with disabilities are usually evaluated high in warmth and low competence (Fiske et al., 2002). Therefore, they are treated with pity and sympathy and are not respected which can explain part of the discrimination that employees with disabilities face in the workplace (Coleman, Brunell, & Haugen, 2015; Cuddy, Fiske, & Glick, 2007; Louvet, 2007).

Further research has indicated that employees with disabilities are viewed as incompetent, unproductive, dependent, and helpless (Louvet, 2007; Popovich et al., 2003). They are seen as incapable of competing with employees without disabilities and are thus viewed as workers who do not pull their weight (Gunderson & Lee, 2016; Ren, Paetzold, & Colella, 2008; Robert & Harlan, 2006). They are judged as less desirable employees and are perceived as having potentially higher turnover and accident rates and lower productivity levels (Lester & Caudill, 1987; Ville & Ravaud, 1998). However, people with disabilities are likewise judged highly in conscientiousness, openness, and warmth (Louvet, 2007). Similarly, employers have positive attitudes toward employees with disabilities, but are hesitant to hire them (Hernandez, Brigida et al., 2000). Outside of the workplace, people with disabilities are judged high in warmth; however, they are not judged as competent employees (Bayle, 2002; Louvet, 2007). While people with

disabilities are often discriminated against in the workplace, they especially, benefit from employment. Research has shown that employment offers people with disabilities a positive life change: they gain in self-esteem, confidence, and pride and their quality of life improves (Copeland, Chan, Bezyak, & Fraser, 2010; Dutta, Gervey, Chan, Chou, & Ditchman, 2008; Mcloughlin, 2002).

## **Disability-Dependent Stigmatization**

The stigmatization a person with a disability faces depends on their specific disability (Ren et al., 2008). Research indicates that people with physical disabilities are preferred over people with mental or psychological disabilities when it comes to hiring and promoting decisions, housing offers, and school settings (Bell & Klein, 2001; Dutta et al., 2008; Snyder, Carmichael, Blackwell, Cleveland, & Thornton, 2010; Wong, Chan, Da Silva Cardoso, Lam, & Miller, 2004). When compared to people with physical disabilities, people with mental illnesses are less likely to be hired, less likely to receive a sublease and are more likely to be charged for violent crimes (Ren et al., 2008; Rüsch et al., 2005). A research study by Dutta et al. (2008) revealed that people with a sensory disability (19%) and people with a physical disability (16%) were much more likely to be hired for a professional or technical position than individuals with mental impairments (7%). This can be attributed to the fact that people with mental disabilities are more likely to be viewed as offensive, threatening, unstable, and disruptive which could influence their likelihood of being hired (Bell & Klein, 2001; Stone & Colella, 1996). People with mental disabilities are further seen as responsible for their disability (Albrecht, Walker, & Levy, 1982; Bell & Klein, 2001; Snyder et al., 2010). Comparatively, people with physical disabilities are more likely to be evaluated as courageous and motivated (Stone & Colella, 1996). Despite the more positive perceptions, people with physical disabilities

are still discriminated against in employment, because a person with any type of disability is viewed as an unproductive employee (Gunderson & Lee, 2016; Robert & Harlan, 2006).

### **Negative Consequences of Disability Discrimination**

Discrimination has negative consequences for people with disabilities: It can cause people with disabilities to doubt themselves and to blame themselves for their condition (Holzbauer & Berven, 1996; Schmitt, Branscombe, Postmes, & Garcia, 2014). It further leads to the humiliation of the victims to which they can react with anger and rage (Holzbauer & Berven, 1996). All the listed effects of discrimination, namely self-doubt, self-blame, humiliation, and anger, can cause the targets of discrimination to develop little to no self-worth and to become depressed (Holzbauer & Berven, 1996). Research has indicated that individuals who are discriminated against have lower self-esteem, face social rejection, have higher levels of stress, are more prone to depression, and generally have a lower quality of life (Schmitt et al., 2014; Szeto, & Dobson, 2010)

## **Sources of Disability Stigmatization**

The stigmatization of people with disabilities continues to persist despite research that challenges the majority of stereotypes pertaining to employees with disabilities (Snyder et al., 2010). In contrast to the stereotypes about the incompetence of employees with disabilities, employers usually are pleased with the work and performance of their employees with disabilities (Snyder et al., 2010). Moreover, employees with disabilities have comparable accident and turnover rates as employees without disabilities and have similar levels of performance (Lengnick-Hall, Gaunt, & Kulkarni, 2008; Stone & Colella, 1996). Lengnick-Hall et al. (2008) highlight in their research that performance and

productivity levels of workers with disabilities are on a par with those of workers without disabilities.

The discrimination and negative attitudes that employees with disabilities face can be attributed to the widespread belief in myths about disability, ignorance about disabilities and unease and anxiety of interacting with people with disabilities (Copeland et al., 2010; Fichten, Schipper, & Cutler, 2005; Lester & Caudill, 1987; Mcloughlin, 2002; Pinfold et al., 2003). Peck and Kirkbride (2001) identified three myths that lead employers not to hire employees with disabilities: the myth that accommodations will be costly, the myth that hiring an employee with a disability leads to a loss in productivity and the myth that employees with disabilities are legal liabilities. In reality, accommodation costs are commonly inexpensive and effective, employees with disabilities have similar performance and productivity rates to those of employees without disabilities and do not have higher litigation rates than their nondisabled counterparts (Schartz, Hendricks, & Blanck, 2006; Snyder et al., 2010). Additional research has demonstrated that there is a discrepancy between what employers believe the ADA includes and what the ADA actually covers (Copeland et al., 2010; Popovich et al., 2003). Likewise, prevalent myths about people with disabilities state that people with mental illnesses are unstable, dangerous, and that customers would be dismayed at being assisted by an employee with a disability (Corrigan et al., 2001; Mcloughlin, 2002). In accordance with Peck and Kirkbride (2001), a research study by Kaye, Jans, and Jones (2011) found that employers who were surveyed were opposed to hiring people with disabilities, because they believed that employees with disabilities would add financial, time, and potentially legal burdens on managers, their coworkers, and human resources, who would have to provide accommodations for the employee with a disability. They summarized

that employers' lack of familiarity with the ADA and with employees with disabilities, as well as a lack of contact with employees with disabilities are factors that likely led them to rely on stereotypes, which ultimately leads to discriminatory practices (Kaye et al., 2011).

Moreover, discrimination and negative attitudes about people with disabilities exist due to general unease and anxiety in those without disabilities when interacting with individuals with disabilities. People tend to seek contact and interactions with individuals that they perceive to be similar to themselves, and people with disabilities are usually characterized as opposites of people without disabilities (Fichten & Amsel, 1986). While people without disabilities are labeled as "ambitious", "dominant" and "extraverted", people with disabilities are labeled as "lazy", "submissive" and "introverted" (Fichten & Amsel, 1986). Moreover, people with disabilities are seen as weak, asexual, and dependent, while people without disabilities were associated with independence, physical strength, and attractiveness (Nario-Redmond, 2010).

#### **Reducing Disability Stigmatization**

To prevent stigmatization and to promote a diverse and inclusive work environment, many organizations have implemented diversity trainings (Kulik & Roberson, 2008). The overall goal of diversity trainings is to improve the relationships between different social groups and to reduce stigmatization so that all employees can work effectively with one another (Phillips, Deiches, Morrison, Chan, & Bezyak, 2016). Intergroup relations are improved through the development of social skills and the increase of knowledge pertaining the various social groups (Bezrukova, Jehn, & Spell, 2012; Phillips et al., 2016). The majority of organizations in the United States implement diversity training, yet the focus of these trainings is generally on race, gender, and sexual

orientation (Kulik & Roberson, 2008; Lengnick-Hall et al., 2008). Disability in the workplace has only received limited attention (Bezrukova et al., 2012; Thanem, 2008). Diversity training that includes disability typically provides information about the different types of disabilities, raises awareness about disabilities in the workplace and points out how supervisors can accommodate employees with disabilities (Nafukho, Roessler, & Kacirek, 2010). By incorporating disability education and accommodation into the diversity training, organizations can help eliminate barriers that prevent employees with disabilities from being productive and integrated workers. Research has shown that interventions including education and contact are the most successful at reducing disability stigmatization (Griffiths, Carron-Arthur, Parsons, & Reid, 2014).

#### **Education Intervention**

Various studies have examined the effect of education on people's attitudes toward employees with disabilities (Corrigan & Penn, 1999; Heijnders & Van Der Meij, 2006; Rüsch et al., 2005). Education increases the factual knowledge of employers and employees about fellow employees who might have a disability (Heijnders & Van Der Meij, 2006). Educational interventions aimed at reducing the stigmatization of people with disabilities include information about the disability, its origin and cause, and its treatment. Additionally, educational interventions include common myths about disabilities and provide facts that counter those myths (Corrigan & Penn, 1999; Stone & Colella, 1996). On the same note, Kaye et al. (2011) stressed that disability trainings need to emphasize the fact that employees with disabilities can be productive, reliable, and effective workers.

Moreover, education sessions about disabilities in the workplace frequently include information about the ADA, because many employers do not hire individuals

with disabilities due to their fear of unknown accommodation costs and potential legal problems in the case of improper accommodation (Peck & Kirkbride, 2001). In a survey of roughly 500 employees, Kaye et al. (2011) discovered that even though the majority of organizations do provide ADA resources, managers and supervisors lack the knowledge and strategies of how to provide reasonable accommodations for employees with disabilities and therefore refuse to hire applicants with disabilities (Kaye et al., 2011). Peck and Kirkbride (2001) recommend companywide education on the legal requirements of the ADA and concrete strategies and solutions for accommodation situations.

Educational interventions commonly include presentations, films, books, audiotapes, and discussions (Corrigan & Penn, 1999; Heijnders & Van Der Meij, 2006). Research suggests that such interventions have utility. Discussions, especially, increase the likelihood of participants remembering the new information and thus increase the likelihood of participants rejecting old stereotypes (Corrigan & Penn, 1999). Further, past research indicates that people who are better informed about mental illnesses are less likely to believe in myths, less likely to endorse stereotypes and are more likely to have less negative attitudes toward people with mental illnesses (Brockington, Hall, Levings, & Murphy, 1993; Corrigan & Penn, 1999; Wahl & Yonatan Lefkowits, 1989).

## **Contact Intervention**

In addition to educational programs, research has shown that contact is a successful strategy to reduce stigmatization toward employees with disabilities (Carvalho-Freitas & Stathi, 2017; Corrigan et al. 2001; Fichten et al., 2005). According to the contact theory (Allport, 1954), contact with stigmatized groups can effectively reduce prejudices and improve judgements of stigmatized groups. Allport (1954) stressed that for contact to be effective at reducing prejudice, the following conditions must be met in the

11

contact situation: equal status between the groups, cooperation and common goals, and support from institutions and authorities. More recent research has suggested that Allport's conditions are not essential in order to reduce prejudice via contact (Pettigrew & Tropp, 2006). Prejudice is reduced via contact even in the absence of the four conditions; however, the reduction of prejudice was greater when the four conditions were met (Pettigrew & Tropp, 2006).

According to Corrigan and Penn (1999), contact with a person with a disability challenges the known stereotypes about people with disabilities. Similar to the educational intervention, through increased contact, people without disabilities learn more about the individual with a disability and the newly learned information exposes that the widely held beliefs about people with disabilities are not true. Hence, with increased contact, people with disabilities are seen as individuals rather than members of a stigmatized group (Stone & Colella, 1996). Furthermore, increased contact with people with disabilities reduces the discomfort and fears of people without disabilities which improves their overall attitudes toward people with disabilities (Fichten et al., 2005; Kulkarni & Lengnick-Hall, 2014). Schartz and colleagues (2006) found that managers who had already successfully employed a worker with a disability no longer had fears or negative expectations about employees with disabilities. The positive experience and contact with the employee with a disability dispelled the negative notions the managers had (Schartz et al., 2006). Similarly, Copeland et al. (2010) revealed that employees who have experience in working with employees with disabilities are more likely to think of them as productive workers. On the same note, people who are familiar with mental illnesses through direct contact to a person with a mental illness are less likely to support stereotypes and negative attitudes about people with mental illnesses (Corrigan et al.,

2001). In previous studies, contact was established by having a person with a disability facilitate the intervention and talk about their personal experiences of living with their disability and by having employees with disabilities recount their success stories (Lengnick-Hall et al., 2008; Pinfold et al., 2003).

#### **Contact Intervention with Mental Disabilities**

Research has shown that contact is particularly effective at reducing stigmatization targeted at people with mental disabilities (Thornicroft, Brohan, Kassam, & Lewis-Holmes, 2008). A study examining stigmatization reduction in schools found that students who had personal contact with a person with a mental disability retained more information from a mental disability education workshop than students who did not have contact with a person a disability (Pinfold et al., 2003). Similarly, the majority of police officers, who attended a mental health awareness workshop, rated the personal narratives from people with mental disabilities as the most influential part of the workshop (Pinfold et al., 2003).

#### **The Current Study**

While much research has been conducted on different interventions aimed at reducing disability stigmatization, few studies have examined the benefits of different interventions in the same study (Griffiths et al., 2014; Thornicroft et al., 2016). A study by Corrigan and colleagues (2007) examined both the effects of education and the effects of contact to evaluate which strategy would be more successful at reducing mental illness stigmatization. The study demonstrated that contact with a person with a mental illness was more effective at reducing stigmatization than education about mental illnesses (Corrigan et al., 2007). The current study will aim to build upon the results of Corrigan et al.'s (2007) study by examining the effects of both education and contact on disability

stigmatization reduction at two time point with one week in between and by examining the extent to which these effects differ depending on the type of disability. Previous studies thus far have only examined the effects of interventions on one type of disability. I will be comparing the effects of education and contact on physical disability stigmatization and mental illness stigmatization. The reduction in stigmatization was demonstrated through an increase in knowledge, more positive attitudes, and more positive evaluations. Additionally, according to the Kraiger, Kevin, and Salas (1993) model for evaluating training outcomes, knowledge, attitudes, and behavioral intent were measured to determine the effectiveness of the interventions.

### **Hypotheses**

Previous research on education about disabilities has shown that education decreases the stigmatization of employees with disabilities (Corrigan & Penn, 1999; Heijnders & Van Der Meij, 2006). Therefore, I expect that participants will stigmatize applicants with disabilities less, after they have received education about disabilities.

#### Hypothesis 1

- 1a. Participants who receive education about disabilities will exhibit greater knowledge about people with disabilities than participants who do not receive education about disabilities.
- 1b. Participants who receive education about disabilities will exhibit more positive attitudes toward people with disabilities than participants who do not receive education about disabilities.
- 1c. Participants who receive education about disabilities will exhibit a more positive evaluation of people with disabilities than participants who do not receive education about disabilities.

Previous research has additionally indicated that contact with people with disabilities decreased the stigmatization of employees with disabilities (Carvalho-Freitas & Stathi, 2017; Corrigan et al., 2001; Fichten et al., 2005). Therefore, I expect that participants will stigmatize applicants with disabilities less after they have engaged in contact with people with disabilities.

## Hypothesis 2

- 2a. Participants who have contact with people with disabilities will exhibit greater knowledge about people with disabilities than participants who do not have contact with people with disabilities.
- 2b. Participants who have contact with people with disabilities will exhibit more positive attitudes toward people with disabilities than participants who do not have contact with people with disabilities.
- 2c. Participants who have contact with people with disabilities will exhibit a more positive evaluation toward people with disabilities than participants who do not have contact with people with disabilities.

Finally, previous research has shown that contact with people with disabilities is particularly effective in reducing stigmatization targeted at people with mental disabilities (Corrigan et al., 2007; Pinfold et al., 2003; Thornicroft et al., 2008). Thus, I expect that when participants have contact with a person with a disability instead of receiving education, they will stigmatize applicants with mental disabilities less than applicants with physical disabilities.

# Hypothesis 3

Participants, who have contact with a person with a disability will exhibit a more positive evaluation of people with mental disabilities versus people with physical disabilities than participants who receive education on disabilities.

#### Method

## **Participants**

Participants for the study were recruited through the crowdsourcing Internet marketplace called Amazon Mechanical Turk (MTurk). MTurk allows "requestors" to post work tasks, or in the case of this study, a survey, to be completed by "workers" on the website. "Workers" are awarded a monetary reward for completing tasks on MTurk. Research has found MTurk respondents to generally be younger, better educated, less religious, more likely White or Asian, less likely Black or Hispanic, and higher in conscientiousness than the average U.S. population (Paolacci & Chandler, 2014). I awarded \$2.40 to each participant who completed the online self-report survey at Time 1 and Time 2.

People were recruited to participate in the study at two time points. Two hundred and fifty people participated in the study at Time 1. Of those 250 participants, 26 were removed, because they took less than ten minutes to complete the study. Given that the videos were all approximately five minutes long, the fact that these participants took less than ten minutes suggests that their survey responses were not adequate. An additional 20 participants were removed, because they failed the manipulation check and 31 participants were removed, because they worked less than 20 hours per week. In total 77 participants were removed, hence the sample at Time 1 consisted of 173 participants.

All 173 participants were invited back to compete the survey at Time 2 and 134 participants completed the survey at Time 2. The data of those 134 participants was used in the analyses. Of the 134 participants 57.9% were male and 42.1% were female. 75.9% were White, 9% Black/African American, 1.5% American Indian or Alaskan Native, 7.5% Asian, 3% Other and 3% selected two or more races/ethnicities. The breakdown of highest degree or educational level achieved is as follows: high school (6.1%), some

college (23.5%), Associates (15.9%), Bachelor (42.4%), and Graduate (12.1%). The average age was 38.3 (SD=11.4) and the average hours worked per week was 36.2(SD=9.8). Most participants have face-to-face interaction with other people at work, with 36.1% having a great deal, 24.8% having a lot, 27.8% having a moderate amount, 7.5% having a little and 3.8% having no face-to-face interaction with other people at work. Thirty-nine percent of participants reported being a supervisor. Regarding disabilities, 6.8% stated having some type of disability. Of those participants, who stated they had a disability, 11.1% reported having an intellectual disability, 33.3% a physical disability, 11.1% a sensory disability, 33.3% a mental illness, and 11.1% reported having two or more types of disabilities. The average onset age of disabilities was 16.6 (SD=18.7). Thirty-five percent of participants stated that a family member of close friend has a disability. The breakdown of type of disability of family members and/or close friends was as follows: Intellectual disability (17%), physical disability (25.5%), sensory disability (2.1%), mental disability (17%), two or more disabilities (34.0%), and other (4.3%). The average number of family members and/or close friends with a disability was 2.4 (*SD*=2).

### **Procedure**

At Time 1, participants watched a five-minute long video. Participants were randomly assigned to watch either 1) a video educating viewers on disabilities, 2) a video providing contact to people with a disability or 3) a control video, which included general diversity information. After watching the video, participants were invited to complete a questionnaire, which included cognitive, affective and behavioral intent measures. After a time delay of one week, participants were asked to complete the questionnaire again at Time 2. Participants were awarded \$2.40 for Time 1 and \$2.40 for Time 2.

#### **Materials**

For this study, three videos were created: a video labeled "education", a video labeled "contact", and a video labeled "control". Four research assistants were recruited to serve as actors for these videos. Two white female actors were featured in both the education and contact videos. Two additional actors, a black female and a Hispanic male, were featured in smaller roles in the control video along with the two actors from the experimental videos. The same primary actors were used across all videos to increase the standardization of materials within the study.

The education video informed viewers about the Americans With Disabilities Act and described how employees with disabilities are protected in the workplace and what they are entitled to. The education video further included common myths about employees with disabilities and provided information that countered these myths. The contact video featured two women, one woman who was suffering from bipolar disorder and one women who was paraplegic and sitting in a wheelchair. Both women recounted their experiences living and working with their disabilities. They explained how their disabilities affected their lives, how they managed situations, and where their disability put them at a disadvantage. The control video provided viewers with information on how to behave and work in an inclusive and diverse work environment. The video described what discrimination and harassment looks like and explained why such behavior should be avoided (see Appendix A for complete manuscripts of the videos).

#### Measures

Referring to the Kraiger, Kevin, and Salas, (1993) model for evaluating training outcomes, the effect of the interventions was measured with a cognitive (knowledge),

affective (attitudes) and skilled-based (behavioral intent) measure (see Appendix B for complete questionnaire).

The cognitive scale consisted of ten items assessing participants' knowledge of the Americans With Disabilities Act and about myths and facts regarding employees with disabilities. The questionnaire was adapted from Bradley (2009). An example question is: "To be protected by the ADA, you must:" Response options include: a) "have a disability that limits a major life activity, b) be qualified for the job, c) request an accommodation, d) a and b."

The answers to each of the cognitive measure items were recoded, with 0=incorrect answer and 1=correct answer. The number of correctly answered questions was summed for each participant. Therefore, scores on the cognitive measure ranged from 0-10.

The affective measure is a five-item scale from Schneider (2008), in which participants are asked to indicate their level of agreement with statements about employees with disabilities in the workplace. An example question is "Everyone, regardless of the level or the type of disability, has the capability to do some job." Participants indicated their level of agreement on a five-point Likert-type scale, which ranged from 1 (Strongly disagree) to 5 (Strongly agree). Reliability testing for all the attitude items was 0.66 at Time 1 and 0.54 at Time 2. Given the low reliability in this study, the five attitude items were treated as individual dependent variables (versus a composite attitude variable) in the analyses.

The behavioral intent measure was a vignette, which described a hiring situation.

A hiring setting was selected, because the situation demands the evaluation of applicants to determine job fit and competiveness. The hiring process is an expected context to make judgments. Participants were asked to imagine themselves as hiring managers and were

given information about an open position in the IT department and the requirements for potential candidates. Then, participants were asked to read short biographies of five job applicants, who applied for the position. The first applicant was African American, the second was blind, the third had no identified stigma, the fourth had obsessive compulsive disorder and the fifth was obese. Participants were then asked to indicate their level of agreement with seven statements about the job applicants' work aptitude. An example statement was "To what extent do you believe that John will be successful in this position?". Participants indicated their level of agreement on a five-point Likert-type scale that ranged from 1 (Extremely unlikely) to 5 (Extremely likely). At Time 1, reliability testing for the behavioral intent items for the first job applicant yielded an alpha coefficient of 0.71. For the second job applicant the alpha coefficient was 0.67, for the third job applicant the alpha coefficient was 0.75, for the fourth job applicant the alpha coefficient was 0.74, and for the fifth job applicant the coefficient alpha was 0.78. The coefficient alpha for all the items in the behavioral intent measure was 0.96. At Time 2, the behavioral intent items for the first applicant had an alpha coefficient of 0.72, the second applicant had an alpha of 0.73, the third applicant had an alpha coefficient of 0.81, the fourth applicant had an alpha coefficient of 0.70, and the fifth applicant had an alpha coefficient of 0.79. The coefficient alpha for all the items in the behavioral intent measure at Time 2 was 0.90. Composite scores for each of the five hiring applicants were calculated.

#### **Results**

Means, standard deviations, coefficient alphas and intercorrelations among study variables are reported in Table 1.

### **Hypothesis Testing**

Time 1 data analyses. First, I examined data from Time 1. A one-way between subjects ANOVA was conducted to examine the effect of training condition on participants' knowledge about people with disabilities. Findings showed that there was a significant effect of condition on knowledge, F(2,131) = 20.97, p < 0.05. Post hoc comparisons using the Tukey HSD test indicated that the mean score of the education condition (M=7.78, SD=1.47) was significantly higher than the contact (M=6.32, SD=1.41) or control (M=5.64, SD=1.96) condition (See Figure 1). There was no statistically significant difference between the contact and control condition. These results support Hypothesis 1a which stated that participants who received education about disabilities would exhibit greater knowledge about people with disabilities than participants who did not receive education about disabilities. However, these results do not support Hypothesis 2a which stated that participants who had contact with people with disabilities would exhibit greater knowledge about people with disabilities than participants who did not have contact with people with disabilities.

Next, I examined the effect of condition on each of the five attitude items using a multivariate analysis of variance (MANOVA). Results showed a statistically significant effect of condition on attitude items, Wilk's  $\Lambda$ = 0.84, F(2,131)=2.303, p<0.05. Follow-up ANOVAs showed there was a significant effect of condition on the second item ("Disabled people are more loyal employees than non-disabled employees."), F(2,131)=8.25, p<0.05. Tukey HSD post hoc comparisons indicated that participants in the

education condition were significantly less likely (M=2.67, SD=1.03) to endorse this attitude than participants in the control condition (M=3.47, SD=0.94) or participants in the contact condition (M=3.19, SD=0.85) (See Figure 2). The differences between the contact and control condition were not significant. Based on these findings, Hypothesis 1b, which stated that participants who received education about disabilities would exhibit more positive attitudes toward people with disabilities than participants who did not receive education about disabilities and Hypothesis 2b, which proposed that participants who had contact with people with disabilities would exhibit more positive attitudes toward people with disabilities than participants who did not have contact with people with disabilities were not supported.

Finally, a one-way ANOVA was conducted to compare the effect of condition on participants' behavioral intent toward with people with mental and physical disabilities at Time 1. The results showed that there was no significant effect of condition on behavior intent toward people with mental disabilities, F(2,131) = 0.415, p > 0.05, or toward people with physical disabilities (F(2,131) = 1.135, p > 0.05). These results do not support Hypothesis 1c, which proposed that participants who received education about disabilities would exhibit a more positive evaluation of people with disabilities than participants who did not receive education about disabilities. Based on these results, Hypothesis 2c (Participants who have contact with people with disabilities will exhibit a more positive evaluation toward people with disabilities than participants who do not have contact with people with disabilities) was also not supported. Likewise, Hypothesis 3, which stated that participants, who had contact with a person with a disability would exhibit a more positive evaluation of people with mental disabilities versus people with physical

disabilities than participants who only received education on disabilities, was also not supported.

**Time 2 data analyses**. Next, I examined the effect of condition on participants' knowledge, attitudes, and behavioral intent at Time 2. A one-way between subjects ANOVA showed no significant effect of condition on knowledge, F(2,131) = 0.355, p > 0.05, which did not support Hypotheses 1a and 2a for Time 2.

Results from a MANOVA showed no significant effect of condition on attitude items, Wilk's  $\Lambda$ = 0.95, F(2, 129)=0.609, p>0.05, indicating that at Time 2, condition did not have an effect on participants' attitudes. These results do not support Hypotheses 1b and 2b for Time 2.

Finally, a one-way between subjects ANOVA showed no significant effect of condition on behavior intent toward people with mental disabilities F(2,131) = 1.621, p > 0.05 or toward people with physical disabilities F(2,131) = 0.112, p > 0.05 at Time 2. Thus, Hypotheses 1c, 2c, and 3 were also not supported for Time 2.

# **Exploratory Analyses**

Although significant difference in intentions to hire candidates with a physical and mental disability based on training intervention were not seen, it is possible that participants in different trainings groups made differential evaluations of the other three candidates they rated. Therefore, I ran an ANOVA for each candidate. At Time 1, findings showed significant differences in hiring intentions based on training condition for the applicant who was obese, F(2,131)=4.04, p<0.05, and the applicant who had no identified stigma, F(2,131)=5.332 p<0.05.

For the obese applicant, Tukey HSD post hoc comparisons indicated that participants in the contact condition (M= 3.75, SD=0.53) expressed greater intentions to hire the applicant than participants in the education condition (M= 3.44, SD=0.67). There was no statistically significant difference between the education and control condition (M= 3.75, SD=0.62), nor between the contact and control condition (see Figure 3).

For the applicants with no stigma marker, Tukey HSD post hoc comparisons indicated that participants in the contact condition (M= 4.13, SD=0.44) and control condition (M= 4.13, SD=0.38) expressed greater behavioral intention to hire the applicant than in the education condition (M= 3.88, SD=0.43). The difference between the control and contact condition were not statistically significant. For means of behavioral intent scores for all five applicants across condition at Time 1 see Figure 5.

#### **Discussion**

Several interventions have been examined to reduce the stigmatization that employees with disabilities face. Specifically interventions including education and contact have been successful at reducing disability stigmatization (Griffiths et al., 2014). The current study examined the effects of both an educational and contact intervention and a generic diversity condition, which served as the control, on the stigmatization of employees with disabilities. The effect was measured by assessing knowledge, attitudes, and behavioral intent. Data had been collected at two time points with a week in between the two time points. Results were mixed: Some significant effects were found at Time 1, but no significant effects were found at Time 2.

At Time 1, the educational intervention was effective at increasing participants' knowledge about employees with disabilities, the ADA, and myths about disabilities in the workplace. However, the same was not true for the contact condition. Lack of information about disabilities and working with disabilities has been shown to promote discriminatory behavior (Kaye et al., 2011), therefore, the success of the educational intervention in increasing knowledge could be a first step in reducing disability discrimination. However, the results were not sustained at Time 2. This could be due to the fact that while the information was retained, it was not learned. According to Sweller (1994), the memory is comprised of the sensory, working, and long-term memory. New information first enters through the verbal and visual channel into the sensory memory. Selected information from the sensory memory that is paid attention to goes into the working memory, where it is processed. Due to its limited capacity, information does not stay longer than a few minutes in the working memory. Information in the working memory that is encoded goes into the long-term memory, which has unlimited capacity

and from which encoded information can be retrieved (Sweller, 1994). Participants remembered knowledge from the video long enough to complete the survey, which indicates that the information from the educational intervention was in the working memory. However, the fact that the information could not be retrieved after the one week delay, implies that the information was not encoded into the long-term memory, which signifies that it was not learned. The information may have not been learned due to cognitive load that the viewers of the education video were presented with. According to the Cognitive Load Theory (Sweller, 1994), the cognitive load is comprised of three component: the intrinsic load, the germane load, and the extraneous load (Sweller, 1994). The intrinsic load refers to the level of difficulty of the subject being learned, germane load refers to the level of cognitive activity (construction of schemas) necessary to reach the designated learning goal, and the extraneous load refers to how the information is presented (Sweller, 1994). A lot of information was packed into the five-minute education video, including statistical facts about employees with disabilities, several myths and fact about the ADA, and myths and facts about disability-related stereotypes. The vast amount of information related to disability presented in this video might have led to a high extraneous cognitive load, which could have impeded learning.

Hence, future research should examine different strategies for presenting the material in the educational intervention in such a manner that it reduces the extraneous load and thus facilitates the encoding of the information into the long-term memory. For example, research has shown the beneficial effects of segmenting on viewer engagement (Ibrahim, Antonenko, Greenwood, & Wheeler, 2012; Zhang, Zhou, Briggs, & Nunamaker, 2006). Segmenting in video learning allows viewers to control the flow of information: The video pauses automatically after a section of information, and the

viewer must click a forward button to receive the next section of information. Thus, viewers can segment the amount of information they receive, which can help retain the information (Zhang et al., 2006). Additionally, educational interventions can present material in a conversational style in order to maximize retention of information. In his article on how to design multimedia instruction, Mayer (2008) recommended using a conversation style to increase students' learning rather than using formal language. In contrast to the contact video, the education video used formal language when conveying information; therefore, future education videos might present the material through a dialog between two people.

Moreover, it was hypothesized that participants in the education and contact condition would have more positive attitudes toward people with disabilities as opposed to participants who were in the control condition. The results showed significant differences between the different interventions for the attitude item "Disabled people are more loyal employees than non-disabled employees." Specifically, participants who watched the generic diversity video and participants who had watched the contact intervention endorsed this statement more than participants who had watched the education intervention. Interestingly, while research has shown that employees with disabilities are loyal and reliable workers (Chi & Qu, 2003; Gröschl, 2013), they are not commonly stereotyped as loyal; rather they are stereotyped as helpless, shy, insecure, dependent, and submissive (Fichten & Amsel, 1986). However, due to the fact that participants in the education condition were confronted with many myths about employees with disabilities, they could have perceived this statement to be a myth too, which could have led them to endorse the statement less.

28

In terms of behavioral intentions, the educational intervention and the contact intervention did not have an effect on participants' ratings of the applicants with disabilities. There was no significant difference in hirability ratings for the applicants with disabilities across the three conditions. Similar results were found in a study by Pinfold (2003) in which students participated in two mental illness awareness workshops. While the factual knowledge and attitudes of the students improved, social distance, which was used as an indicator planned behavior, only changed marginally. Due to the lack of a pretest in the current study, it is unknown if the educational and/or contact intervention was effective at improving the hirability ratings of the applicants with disabilities. While the lack of a pretest limits conclusions about the effectiveness of the interventions at improving the hirability ratings, the results do show that the interventions were not associated with more negative evaluations of the applications with disabilities.

While the hirability ratings for the applicants with disabilities did not vary by condition, the evaluations for the applicant, who had no identified stigma and for the applicant who was obese did vary by condition. In the case of the applicant who had no identified stigma, participants in the contact and control condition evaluated him more positively than participants in the education condition. This could be a result of overcompensation on the part of the participants in the education condition. In their intervention, a lot of information was given about employees with disabilities are discriminated against in the workplace. Therefore, they, in comparison to the participants in the other two conditions, might have overcompensated by scoring applicants without disabilities lower. In support of this notion, participants in the education condition gave lower behavioral intent scores than the control and contact condition for the applicant who was African American (although not significant), the applicant who had no identified

stigma and the applicant who was obese. However, when evaluating the applicant with a physical disability and the applicant with mental disability, the behavioral intent scores of the participants in the education condition were on par with those in the contact condition.

As mentioned above, in the case of the applicant who was obese, participants in education condition evaluated him less positively than participants in the contact and control condition. This could be attributed to overcompensating on the part of participants in the education condition as explained above. However, the applicant who was obese also had overall the lowest ratings among all job applicants. It is important to note that obesity stigmatization is pervasive. In the workplace, overweight employees are discriminated during hiring, placement, compensation, promotions, and firing (Puhl & Brownell, 2001; Roehling, 1999). In addition, overweight employees are viewed as lazy and having less competence, skill, and ability than employees who are not perceived as overweight (Puhl & Brownell, 2001). Given the prevalent stigmatization associated with overweight individuals, it is not surprising that the job applicant, who was described as obese, received the lowest overall ratings.

Finally, it was predicted that participants in the contact group would evaluate job applicants with a mental disability more positive than job applicants with a physical disability than participants in either the education or control group. This hypothesis was also not supported at both Time 1 and 2. A possible explanation for the lack of effect of the contact video could be that the contact is filmed rather than in person. According to a meta-analysis conducted by Corrigan, Morris, Michaels, Rafacz, and Rüsch (2012), face-to-face contact had a significantly greater effect for changing attitudes and behavioral intent than did videotaped contact.

#### Limitations

One limitation of this study is that there was no measure of participants' level of knowledge, attitudes, and behavioral intent before the intervention. As a consequence, no conclusions can be drawn if the interventions actually improved participants' knowledge, attitudes or behavioral intent. By using a pre and posttest, it would be possible to measure the direct improvement of knowledge, attitudes, and behavioral intent. This would be especially interesting in the case of the control condition, as they scored highest in almost all the behavioral intent items. Thus, in order to examine if educational and contact interventions actually improve knowledge, attitudes, and planned behavior, future research should examine the effects of these interventions with a pre and posttest.

Participants' pretest scores can then be compared to their posttest scores to examine how their knowledge, attitudes, and planned behaviors changed.

Another limitation may be in the video design. The videos which served as the intervention were only five minutes long, which is considerably shorter than other published disability-related interventions. While other published interventions often included hour-long workshops, research has shown that in the case of educational videos, viewer engagement declines after six minutes (Guo, Kim, & Rubin, 2014). The researchers concluded that educational videos longer than six to nine minutes were wasted effort (Guo et al., 2014). Therefore, it is unlikely that the length of the intervention itself was a strong limitation of this study; however, future research should compare the effects (particularly the long-term effects) of diversity interventions of different lengths. Another potential video-related limitation may have been the content within the intervention videos. Specifically, as noted earlier, there was a wealth of information provided in the education video, which may have been too much give the

amount of time provided to learn the material. Additionally, in the contact video, actors without disabilities were used and played the role of employees with disabilities. These actors told their stories to the camera, but were not shown actually interacting with another individual. These decisions were made to increase standardization of the materials used across conditions within the study; however it may have led to a lack of perceived realism or connection with the stories told by applicants. Future research should examine ways to create greater connections to resemble contact.

#### **Implications**

First, the results of the control showed that even a generic diversity video can have positive effects on viewers' attitudes and planned behaviors towards individuals with disabilities. The control video focused on creating an inclusive environment at work, gave descriptions and examples of discriminatory behaviors, mentioned strategies on how to avoid such behaviors and listed potential consequences of discriminatory actions. The effects of this control video demonstrated that interventions aimed at reducing disability stigmatization do not need to concentrate solely on individuals with disabilities, focusing on stigmatized groups in general and raising awareness of discriminatory behaviors had a positive effect on viewers' planned behaviors and attitudes. Further, the generic diversity video demonstrated that education or contact are not essential in reducing disability stigmatization; the control video did not provide contact with an individual with a disability, nor did it educate the viewers on the ADA and employees with disabilities, however, it still had a positive effect on attitudes and planned behaviors.

Secondly, the findings show that some level of knowledge related to disability law is helpful in increasing knowledge. Therefore, an intervention including a combination of specific stigmatization related information and generic diversity information could be the

most effective at reducing disability discrimination in the workplace. However, providing too much knowledge at once may be overwhelming and lead to a lack of retention.

Attention must be paid to the extraneous load related to short educational videos that aim to give the viewers as much information as possible in a short amount of time. When designing educational videos, strategies should be incorporated that facilitate learning and minimize the extraneous load, such as segmentation and conversational style.

Similarly, organizations should be careful to frame their videos in such a way that viewers do not overcompensate through their actions. The content of the education video did increase viewers' knowledge about employees with disabilities; however, the viewers of the education video rated job applicants without disabilities lower than the participants in the other conditions, which might have been overcompensation on the part of the participants in the education condition.

Third and finally, when using contact to reduce disability stigmatization, attention should be paid to the presentation and format of the contact. The contact used in this intervention was presented in a video and was not as effective as predicted. As previously mentioned, filmed contact might not be as effective as in-person contact (Corrigan et al., 2007). Therefore, when using a contact intervention the mode of presentation should be considered. Additionally, if filmed contact is used, a conversational style on part of the person with the disability might be beneficial in keeping viewer's engagement. Research has shown that compared to formal language, a conversational style is more effective in keeping viewers' engagement (Mayer, 2008). Organizations frequently use videos to communicate their diversity program, which means that employees watch the videos on their own and the video must keep the engagement of the viewers.

#### **Conclusion**

Despite federal legislation that was enacted to protect the rights of people with disabilities, employees with disabilities continue to face stigmatization in the workplace. People with disabilities are seen as incompetent workers and are less likely to be hired, less likely to be promoted and are more likely to have part-time jobs compared to people without disabilities (Gunderson & Lee, 2016; Houtenville et al., 2016). It is imperative for organizations to continue to find ways to reduce this discrimination; one by increasing awareness related to legislation and another by increasing contact and feelings of comfort around people with disabilities. This study has shown that while education does improve people's knowledge about disabilities in the work place, it was not associated with more positive levels of attitudes or more positive evaluations of applicants with disabilities. However, the generic diversity video was associated with more positive attitudes and more positive evaluations. Therefore, disability discrimination in the workplace could probably be most effectively reduced by an intervention including a combination of specific disability information and general diversity information.

#### References

- Albrecht, G. L., Walker, V. G., & Levy, J. A. (1982). Social distance from the stigmatized. *Social Science & Medicine*, *16*(14), 1319–1327. https://doi.org/10.1016/0277-9536(82)90027-2
- Allport, F. H. (1954). The structuring of events: outline of a general theory with applications to psychology. *Psychological Review*, 61(5), 281–303. https://doi.org/10.1037/h0062678
- American Psychiatric Association., Saxena, S., & Organization, W. H. (2012). *Public health aspects of diagnosis and classification of mental and behavioral disorders*[electronic resource]: refining the research agenda for DSM-5 and ICD-11 (1st ed.). Arlington, Va.: American Psychiatric Association.
- Americans With Disabilities Act of 1990, Pub. L. No. 101-336, 104 Stat. 328 (1990).
- Bayle, N. (2002). Proposition d'un modèle étendu de la Théorie du Comportement

  Planifié pour comprendre le comportement des employeurs à l'égard des

  travailleurs handicapés. = Determinants of the employers' behavior towards

  disabled workers. *Cahiers Internationaux de Psychologie Sociale*, 54, 84–100.
- Bell, B. S., & Klein, K. J. (2001). Effect of disability, gender, and job level on ratings of job applicants. *Rehabilitation Psychology Rehabilitation Psychology*, 46(3), 229– 246.
- Bezrukova, K., Jehn, K. A., & Spell, C. S. (2012). Reviewing Diversity Training: Where We Have Been and Where We Should Go. *Academy of Management Learning & Education*, 11(2), 207–227. https://doi.org/10.5465/amle.2008.0090
- Bradley. (2009). Antecedents and outcomes of workplace discrimination as perceived by employees with disabilities. *ProQuest Dissertations Publishing*.

- Brockington, I. F., Hall, P., Levings, J., & Murphy, C. (1993). The community's tolerance of the mentally ill. *The British Journal of Psychiatry*, *162*(1), 93–99. https://doi.org/10.1192/bjp.162.1.93
- Carvalho-Freitas, M. N. de, & Stathi, S. (2017). Reducing workplace bias toward people with disabilities with the use of imagined contact. *Journal of Applied Social Psychology*, 47(5), 256–266. https://doi.org/10.1111/jasp.12435
- Chi, C. G.-Q., & Qu, H. (2003). Integrating Persons with Disabilities into the Work

  Force. *International Journal of Hospitality & Tourism Administration*, 4(4), 59–
  83. https://doi.org/10.1300/J149v04n04\_04
- Coleman, J. M., Brunell, A. B., & Haugen, I. M. (2015). Multiple Forms of Prejudice:

  How Gender and Disability Stereotypes Influence Judgments of Disabled Women and Men. *Current Psychology*, *34*(1), 177–189. https://doi.org/10.1007/s12144-014-9250-5
- Copeland, J., Chan, F., Bezyak, J., & Fraser, R. T. (2010). Assessing Cognitive and Affective Reactions of Employers Toward People with Disabilities in the Workplace. *J Occup Rehabil Journal of Occupational Rehabilitation*, 20(4), 427–434.
- Corrigan, P. W., Edwards, A. B., Green, A., Diwan, S. L., & Penn, D. L. (2001).

  Prejudice, social distance, and familiarity with mental illness. *Schizophrenia Bulletin*, 27(2), 219–225.
- Corrigan, P. W., Larson, J., Sells, M., Niessen, N., & Watson, A. C. (2007). Will Filmed Presentations of Education and Contact Diminish Mental Illness Stigma?

  \*Community Mental Health Journal, 43(2), 171–181.\*

  https://doi.org/10.1007/s10597-006-9061-8

- Corrigan, P. W., Morris, S. B., Michaels, P. J., Rafacz, J. D., & Rüsch, N. (2012).

  Challenging the Public Stigma of Mental Illness: A Meta-Analysis of Outcome Studies. *Psychiatric Services*, *63*(10), 963–973.

  https://doi.org/10.1176/appi.ps.201100529
- Corrigan, & Penn. (1999). Lessons from social psychology on discrediting psychiatric stigma. *The American Psychologist*, *54*(9), 765–776.
- Crocker, J., & Major, B. (1989). Social stigma and self-esteem: The self-protective properties of stigma. *Psychological Review*, *96*(4), 608–630. https://doi.org/10.1037/0033-295X.96.4.608
- Cuddy, A. J. C., Fiske, S. T., & Glick, P. (2007). The BIAS map: Behaviors from intergroup affect and stereotypes. *Journal of Personality and Social Psychology*, 92(4), 631–648. https://doi.org/10.1037/0022-3514.92.4.631
- Dutta, A., Gervey, R., Chan, F., Chou, C.-C., & Ditchman, N. (2008). Vocational
   Rehabilitation Services and Employment Outcomes for People with Disabilities:
   A United States Study. *Journal of Occupational Rehabilitation*, 18(4), 326.
   https://doi.org/10.1007/s10926-008-9154-z
- Fichten, C. S., & Amsel, R. (1986). Trait Attributions About College Students With a Physical Disability: Circumplex Analyses and Methodological Issues1. *Journal of Applied Social Psychology*, *16*(5), 410–427. https://doi.org/10.1111/j.1559-1816.1986.tb01149.x
- Fichten, C. S., Schipper, F., & Cutler, N. (2005). Does Volunteering With Children

  Affect Attitudes Toward Adults With Disabilities? A Prospective Study of

  Unequal Contact. *Rehabilitation Psychology*, *50*(2), 164–173.

  https://doi.org/10.1037/0090-5550.50.2.164

- Fiske, S. T., Cuddy, A. J. C., Glick, P., & Xu, J. (2002). A model of (often mixed) stereotype content: Competence and warmth respectively follow from perceived status and competition. *Journal of Personality and Social Psychology*, 82(6), 878–902. https://doi.org/10.1037/0022-3514.82.6.878
- Griffiths, K. M., Carron-Arthur, B., Parsons, A., & Reid, R. (2014). Effectiveness of programs for reducing the stigma associated with mental disorders. A meta-analysis of randomized controlled trials. *World Psychiatry*, *13*(2), 161–175. https://doi.org/10.1002/wps.20129
- Gröschl, S. (2013). Presumed Incapable: Exploring the Validity of Negative Judgments about Persons with Disabilities and Their Employability in Hotel Operations.

  \*Cornell Hospitality Quarterly, 54(2), 114–123.\*

  https://doi.org/10.1177/1938965512453082
- Gunderson, M., & Lee, B. Y. (2016). Pay discrimination against persons with disabilities:

  Canadian evidence from PALS. *The International Journal of Human Resource Management*, 27(14), 1531–1549.
- Guo, P. J., Kim, J., & Rubin, R. (2014). How Video Production Affects Student

  Engagement: An Empirical Study of MOOC Videos. In *Proceedings of the First*ACM Conference on Learning @ Scale Conference (pp. 41–50). New York, NY,

  USA: ACM. https://doi.org/10.1145/2556325.2566239
- Heijnders, M., & Van Der Meij, S. (2006). The fight against stigma: An overview of stigma-reduction strategies and interventions. *Psychology, Health & Medicine*, 11(3), 353–363.

- Hernandez, Brigida, Keys, Christopher, & Balcazar, Fabricio. (2000). Employer Attitudes

  Toward Workers with Disabilities and their ADA Employment Rights: A

  Literature Review. *Journal of Rehabilitation; Washington, D.C., 66*(4).
- Hinshaw, S. P. (2009). *The Mark of Shame: Stigma of Mental Illness and an Agenda for Change*. Oxford University Press.
- Holzbauer, J. J., & Berven, N. L. (1996). Disability Harassment: A New Term for a Long-Standing Problem. *Journal of Counseling & Development*, 74(5), 478–483.
- Houtenville, A., Brucker, D., & Lauer, E. (2016). Annual Compendium of Disability

  Statistics: 2015. *Institute on Disability*. Retrieved from

  http://scholars.unh.edu/iod\_chhs/21
- Ibrahim, M., Antonenko, P. D., Greenwood, C. M., & Wheeler, D. (2012). Effects of segmenting, signalling, and weeding on learning from educational video.
  Learning, Media and Technology, 37(3), 220–235.
  https://doi.org/10.1080/17439884.2011.585993
- Kaye, H. S., Jans, L. H., & Jones, E. C. (2011). Why Don't Employers Hire and Retain Workers with Disabilities? *Journal of Occupational Rehabilitation*, 21(4), 526–536. https://doi.org/10.1007/s10926-011-9302-8
- Kraiger, K., Kevin, J., & Salas, E. (1993). Application of cognitive, skill-based, and affective theories of learning outcomes to new methods of training evaluation.

  \*Journal of Applied Psychology, 78(2), 311–328. https://doi.org/10.1037/0021-9010.78.2.311
- Kulik, & Roberson. (2008). Diversity initiative effectiveness: What organizations can (and cannot) expect from diversity recruitment, diversity training, and formal

- mentoring programs. *Cambridge Companions to Management. Diversity at Work*, 265–317.
- Kulkarni, M., & Lengnick-Hall, M. L. (2014). Obstacles to Success in the Workplace for
   People With Disabilities: A Review and Research Agenda. *Human Resource* Development Review, 13(2), 158–180. https://doi.org/10.1177/1534484313485229
- Lengnick-Hall, M. L., Gaunt, P. M., & Kulkarni, M. (2008). Overlooked and underutilized: People with disabilities are an untapped human resource. *Human Resource Management*, 47(2), 255–273.
- Lester, R. A., & Caudill, D. W. (1987). The Handicapped Worker: Seven Myths. *Training* & *Development Journal*, 41(8).
- Louvet, E. (2007). Social judgment toward job applicants with disabilities: Perception of personal qualities and competences. *Rehabilitation Psychology*, *52*(3), 297–303. https://doi.org/10.1037/0090-5550.52.3.297
- Mayer, R. E. (2008). Applying the science of learning: Evidence-based principles for the design of multimedia instruction. *American Psychologist*, *63*(8), 760–769. https://doi.org/10.1037/0003-066X.63.8.760
- Mcloughlin. (2002). Barriers to hiring students with disabilities in the workforce. *International Education Journal*, 3(1), 13–23.
- Nafukho, F., Roessler, R., & Kacirek, K. (2010). Disability as a Diversity Factor:

  Implications for Human Resource Practices. *Advances in Developing Human Resources*, 12(4), 395–406.
- Nario-Redmond, M. R. (2010). Cultural stereotypes of disabled and non-disabled men and women: Consensus for global category representations and diagnostic

- domains. *British Journal of Social Psychology*, *49*(3), 471–488. https://doi.org/10.1348/014466609X468411
- Neufeldt, & Mathieson. (1995). Empirical Dimensions of Discrimination Against Disabled People. *Health and Human Rights*, *1*(2), 174–189.
- Paolacci, G., & Chandler, J. (2014). Inside the Turk: Understanding Mechanical Turk as a Participant Pool. *Current Directions in Psychological Science*, 23(3), 184–188. https://doi.org/10.1177/0963721414531598
- Peck, B., & Kirkbride, L. T. (2001). Why businesses don't employ people with disabilities. *Journal of Vocational Rehabilitation*, *16*(2). Retrieved from https://librarylink.uncc.edu/login?url=http://search.ebscohost.com/login.aspx?dire ct=true&db=ehh&AN=5077725&site=ehost-live&scope=site
- Pettigrew, T. F., & Tropp, L. R. (2006). A meta-analytic test of intergroup contact theory.

  \*\*Journal of Personality and Social Psychology, 90(5), 751–783.\*\*

  https://doi.org/10.1037/0022-3514.90.5.751
- Phillips, B. N., Deiches, J., Morrison, B., Chan, F., & Bezyak, J. L. (2016). Disability
  Diversity Training in the Workplace: Systematic Review and Future Directions.
  Journal of Occupational Rehabilitation, 26(3), 264–275.
  https://doi.org/10.1007/s10926-015-9612-3
- Pinfold, V, Huxley, P., Thornicroft, G., Farmer, P., Toulmin, H., & Graham, T. (2003).

  Reducing psychiatric stigma and discrimination: Evaluating an educational intervention with the police force in England. *Social Psychiatry and Psychiatric Epidemiology*, 38(6), 337–344.
- Pinfold, Vanessa, Toulmin, H., Thornicroft, G., Huxley, P., Farmer, P., & Graham, T. (2003). Reducing psychiatric stigma and discrimination: evaluation of educational

- interventions in UK secondary schools. *The British Journal of Psychiatry*, 182(4), 342–346. https://doi.org/10.1192/bjp.182.4.342
- Popovich, P. M., Scherbaum, C. A., Scherbaum, K. L., & Polinko, N. (2003). The Assessment of Attitudes Toward Individuals With Disabilities in the Workplace. *The Journal of Psychology*, 137(2), 163–177.
- Puhl Rebecca, & Brownell Kelly D. (2001). Bias, Discrimination, and Obesity. *Obesity Research*, 9(12), 788–805. https://doi.org/10.1038/oby.2001.108
- Ren, L. R., Paetzold, R. L., & Colella, A. (2008). A meta-analysis of experimental studies on the effects of disability on human resource judgments. *Human Resource*Management Review, 18(3), 191–203. https://doi.org/10.1016/j.hrmr.2008.07.001
- Robert, P. M., & Harlan, S. L. (2006). Mechanisms of Disability Discrimination in Large Bureaucratic Organizations: Ascriptive Inequalities in the Workplace. *The Sociological Quarterly*, 47(4), 599–630.
- Roehling, M. V. (1999). Weight-based Discrimination in Employment: Psychological and Legal Aspects. *PEPS Personnel Psychology*, *52*(4), 969–1016.
- Rüsch, N., Angermeyer, M. C., & Corrigan, P. W. (2005). Mental illness stigma:

  Concepts, consequences, and initiatives to reduce stigma. *European Psychiatry*,

  20(8), 529–539. https://doi.org/10.1016/j.eurpsy.2005.04.004
- Schartz, Hendricks, & Blanck. (2006). Workplace accommodations: evidence based outcomes. *Work*, 27(4), 345–354.
- Schmitt, M., Branscombe, N., Postmes, T., & Garcia, A. (2014). *The Consequences of Perceived Discrimination for Psychological Well-Being: A Meta-Analytic Review* (Vol. 140). https://doi.org/10.1037/a0035754

- Schneider, J. (2008). Supported-employment practice in the UK: Evidence about an emerging occupational group. *Disability and Rehabilitation*, *30*(23), 1819–1828. https://doi.org/10.1080/09638280701661257
- Snyder, L. A., Carmichael, J. S., Blackwell, L. V., Cleveland, J. N., & Thornton, G. C. (2010). Perceptions of Discrimination and Justice Among Employees with Disabilities. *Employee Responsibilities and Rights Journal*, 22(1), 5–19. https://doi.org/10.1007/s10672-009-9107-5
- Stone, D. L., & Colella, A. (1996). A Model of Factors Affecting the Treatment of Disabled Individuals in Organizations. *Academy of Management Review*, 21(2), 352–401. https://doi.org/10.5465/AMR.1996.9605060216
- Sweller, J. (1994). Cognitive load theory, learning difficulty, and instructional design.

  \*Learning and Instruction, 4(4), 295–312. https://doi.org/10.1016/0959-4752(94)90003-5
- Szeto, A, & Dobson, K. (2010). Reducing the stigma of mental disorders at work: a review of current workplace anti-stigma intervention programs, *Applied and Preventive Psychology* (14), 41–56.
- Thanem. (2008). Embodying disability in diversity management research. *Equal Opportunities International*, 27(7), 581–595. https://doi.org/10.1108/02610150810904292
- Thornicroft, G., Brohan, E., Kassam, A., & Lewis-Holmes, E. (2008). Reducing stigma and discrimination: Candidate interventions. *International Journal of Mental Health Systems*, 2, 3. https://doi.org/10.1186/1752-4458-2-3
- Thornicroft, G., Mehta, N., Clement, S., Evans-Lacko, S., Doherty, M., Rose, D., Henderson, C. (2016). Evidence for effective interventions to reduce mental-

- health-related stigma and discrimination. *The Lancet; London*, 387(10023), 1123–1132. http://dx.doi.org/10.1016/S0140-6736(15)00298-6
- United States. Equal Employment Opportunity Commission. (1992). EEOC compliance manual. [Washington, D.C.]: U.S. Equal Employment Opportunity Commission,
- U. S. Census Bureau, D. I. S. (2015). Disability. Retrieved August 31, 2017, from https://www.census.gov/people/disability/
- Ville, I., & Ravaud, J.-F. (1998). Work values: A comparison of non-disabled persons with persons with paraplegia. *Disability and Rehabilitation*, 20(4), 127–137. https://doi.org/10.3109/09638289809166072
- Wahl, O. F., & Yonatan Lefkowits, J. (1989). Impact of a television film on attitudes toward mental illness. *American Journal of Community Psychology*, *17*(4), 521–528. https://doi.org/10.1007/BF00931176
- Wong DW, Chan F, Da Silva Cardoso E, Lam CS, & Miller SM. (2004). Rehabilitation counseling students' attitudes toward people with disabilities in three social contexts: a conjoint analysis. *Rehabilitation Counseling Bulletin*, 47(4), 194–254.
- Zhang, D., Zhou, L., Briggs, R. O., & Nunamaker, J. F. (2006). Instructional video in elearning: Assessing the impact of interactive video on learning effectiveness.

  \*Information & Management, 43(1), 15–27.\*

  https://doi.org/10.1016/j.im.2005.01.004

Tables

Table 1 Means, Standard Deviations, Coefficient Alpha Values, and Correlations of Study Variables Note. N = 134. \*p < .05. T1=Time 1; T2=Time 2, one week later

	M	SD	1	2	3	4	5
1. Attitude1 T1	4.05	1.07	1.00				
2. Attitude2 T1	3.02	1.00	0.10	1.00			
3. Attitude3 T1	4.73	0.69	0.30*	0.07	1.00		
4. Attitude4 T1	4.16	0.91	0.27*	0.20*	0.45*	1.00	
5. Attitude 5 T1	4.67	0.71	0.26*	0.03	0.62*	0.45*	1.00
6. Knowledge T1	6.63	1.81	0.03	-0.24*	0.17*	-0.06	0.12
7. Physical Disability T1	3.76	0.62	0.25*	0.16	0.26*	0.21*	0.22*
8. Mental Disability T1	3.77	0.55	0.27*	0.10	0.28*	0.27*	0.21*
9. African American T1	3.83	0.49	0.33*	0.15	0.36*	0.27*	0.29*
10. No identified stigma T1	4.03	0.43	0.26*	0.19*	0.47*	0.43*	0.28*
11. Obese T1	3.63	0.62	0.26*	0.13	0.28*	0.33*	0.35*
12. Attitude1 T2	4.06	1.02	0.02	-0.03	0.04	0.05	-0.10
13. Attitude2 T2	3.36	0.94	-0.03	0.01	-0.01	0.01	-0.01
14. Attitude3 T2	4.69	0.66	-0.07	-0.03	-0.05	-0.14	-0.11
15 Attitude4 T2	4.19	0.82	0.05	-0.11	0.07	0.08	0.04
16. Attitude 5 T2	4.68	0.61	-0.07	0.11	-0.04	0.02	0.00
17. Knowledge T2	6.50	1.74	0.11	-0.02	0.01	0.07	0.05
18. Physical Disability T2	3.82	0.60	-0.06	-0.08	0.01	0.00	-0.13
19. Mental Disability T2	3.86	0.50	0.07	-0.14	0.06	-0.03	-0.02
20. African American T2	3.82	0.46	-0.20*	-0.13	0.05	0.06	-0.06
21. No identified stigma T2	4.07	0.49	-0.08	.0.01	0.07	0.07	-0.12
22. Obese T2	3.81	0.56	-0.09	0.01	0.05	0.05	-0.10
23. Control Condition			0.09	0.25*	0.06	0.11	0.03
24. Education Condition			-0.20*	-0,32*	-0.09	-0.20*	-0.01
25. Contact Condition			0.12	0.09	0.40	0.10	-0.02

Table 1 Continued

Means, Standard Deviations, Coefficient Alpha Values, and Correlations of Study

Variables Note. N = 134. \*p<.05. T1=Time 1; T2= Time 2, one week later

	O	/	0	9	10	11
1. Attitude1 T1						
2. Attitude2 T1						
3. Attitude3 T1						
4. Attitude4 T1						
5. Attitude 5 T1						
6. Knowledge T1	1.00					
7. Physical Disability T1	0.03	(0.67)				
8. Mental Disability T1	-0.01	0.34*	(0.74)			
9. African American T1	-0.10	0.36*	0.41*	1.00		
10. No identified stigma T1	0.00	0.38*	0.31*	0.44*	1.00	
11. Obese T1	-0.02	0.26*	0.62*	0.42*	0.39*	1.00
12. Attitude1 T2	-0.04	0.07	-0.09	-0.03	0.00	-0.04
13. Attitude2 T2	-0.15	-0.01	0.12	-0.06	0.02	0.10
14. Attitude3 T2	-0.18*	-0.15	-0.10	0.01	-0.11	-0.12
15 Attitude4 T2	-0.01	0.11	0.09	0.05	0.07	-0.01
16. Attitude 5 T2	-0.10	-0.08	-0.07	0.01	0.00	0.02
17. Knowledge T2	-0.10	0.04	0.02	0.00	0.10	0.16
18. Physical Disability T2	-0.03	-0.05	-0.08	-0.15	0.05	-0.01
19. Mental Disability T2	0.10	-0.12	-0.09	-0.08	-0.19*	-0.10
20. African American T2	0.09	-0.03	-0.05	0.00	-0.06	-0.08
21. No identified stigma T2	-0.07	-0.03	-0.03	0.06	-0.01	-0.05
22. Obese T2	-0.05	-0.1	0.05	0.00	-0.06	0.20*
23. Control Condition	-0.35*	0.13	0.08	0.06	0.13	0.11
24. Education Condition	0.47*	-0.07	-0.05	-0.19*	-0.27*	-0.24*
25. Contact Condition	-0.15	-0.05	-0.02	0.14	0.16	0.14

Table 1 Continued

Means, Standard Deviations, Coefficient Alpha Values, and Correlations of Study

Variables Note. N = 134. \*p < .05. T1=Time 1; T2= Time 2, one week later

12 13 14 15 16 17

	12	13	14	15	16	1 /
1. Attitude1 T1						
2. Attitude2 T1						
3. Attitude3 T1						
4. Attitude4 T1						
5. Attitude 5 T1						
6. Knowledge T1						
7. Physical Disability T1						
8. Mental Disability T1						
9. African American T1						
10. No identified stigma T1						
11. Obese T1						
12. Attitude1 T2	1.00					
13. Attitude2 T2	0.01	1.00				
14. Attitude3 T2	0.26*	0.01	1.00			
15 Attitude4 T2	0.07	0.22*	0.28*	1.00		
16. Attitude 5 T2	0.20*	0.08	0.43*	0.24*	1.00	
17. Knowledge T2	0.00	-0.16	0.11	0.02	0.24*	1.00
18. Physical Disability T2	0.28*	0.17	0.26*	0.07	0.24*	0.07
19. Mental Disability T2	0.20*	0.07	0.30*	0.27*	0.25*	-0.01
20. African American T2	0.24*	-0.03	0.22*	0.04	0.16	0.03
21. No identified stigma T2	0.17*	0.07	0.35*	0.24*	0.36*	-0.05
22. Obese T2	0.21*	0.31*	0.35*	0.18*	0.29*	-0.08
23. Control Condition	0.08	0.09	0.08	-0.01	0.07	0.03
24. Education Condition	-0.10	0.02	-0.01	0.01	-0.12	-0.07
25. Contact Condition	0.03	-0.10	-0.07	0.00	0.05	0.04

Table 1 Continued

Means, Standard Deviations, Coefficient Alpha Values, and Correlations of Study

Variables Note. N = 134. \*p < .05. T1=Time 1; T2=Time 2, one week later18 19 20 21 22 23

1. Attitude1 T1						
2. Attitude2 T1						
3. Attitude3 T1						
4. Attitude4 T1						
5. Attitude 5 T1						
6. Knowledge T1						
7. Physical Disability T1						
8. Mental Disability T1						
9. African American T1						
10. No identified stigma T1						
11. Obese T1						
12. Attitude1 T2						
13. Attitude2 T2						
14. Attitude3 T2						
15 Attitude4 T2						
16. Attitude 5 T2						
17. Knowledge T2						
18. Physical Disability T2	(0.73)					
19. Mental Disability T2	0.49*	(0.7)				
20. African American T2	0.43*	0.50*	1.00			
21. No identified stigma T2	0.38	0.37*	0.43*	1.00		
22. Obese T2	0.46*	0.61*	0.47*	0.47*	1.00	
23. Control Condition	0.02	-0.14	-0.14	-0.07	0.05	1.00
24. Education Condition	0.02	0.13	0.10	0.05	-0.05	-0.48*
25. Contact Condition	-0.04	-0.01	0.02	0.02	0.00	-0.45*

Table 1 Continued

Means, Standard Deviations, Coefficient Alpha Values, and Correlations of Study Variables Note. N = 134. \*p<.05. T1=Time 1; T2= Time 2, one week later

24	25	

- 1. Attitude1 T1
- 2. Attitude2 T1
- 3. Attitude3 T1
- 4. Attitude4 T1
- 5. Attitude 5 T1
- 6. Knowledge T1
- 7. Physical Disability T1
- 8. Mental Disability T1
- 9. African American T1
- 10. No identified stigma T1
- 11. Obese T1
- 12. Attitude1 T2
- 13. Attitude T2
- 14. Attitude3 T2
- 15 Attitude4 T2
- 16. Attitude 5 T2
- 17. Knowledge T2
- 18. Physical Disability T2
- 19. Mental Disability T2
- 20. African American T2
- 21. No identified stigma T2
- 22. Obese T2
- 23. Control Condition
- 24. Education Condition 1.00
- 25. Contact Condition -0.58\* 1.00

# Figures

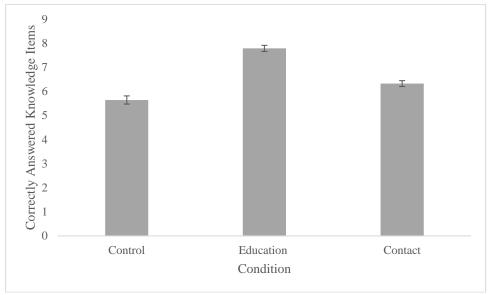


Figure 1. Number of correctly answered knowledge items at Time 1 across condition

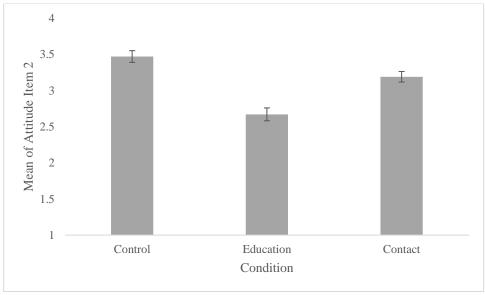


Figure 2. Means of responses to Attitude Item 2 at Time 1 across condition

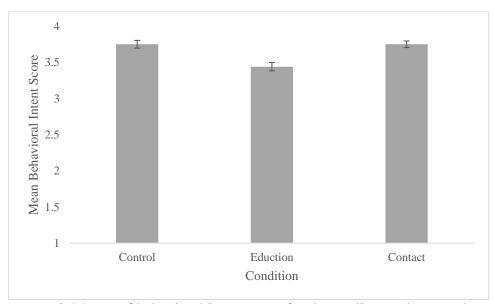


Figure 3. Means of behavioral intent score for the applicant who was obese at Time 1 across condition

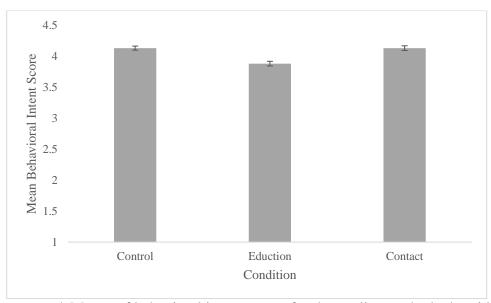


Figure 4. Means of behavioral intent scores for the applicant who had no identified stigma at Time 1 across condition

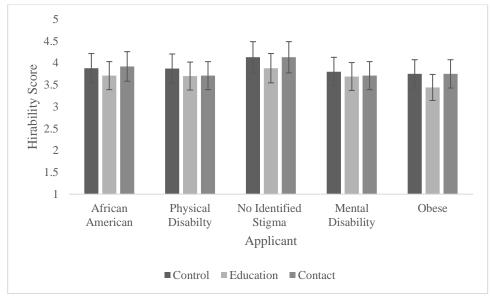


Figure 5. Means of behavioral intent scores for all applicants at Time 1 across conditions

## Appendix A: Manuscripts for Videos

#### **Video 1 Education Manipulation**

Speaker 1: Hello and welcome to this diversity and inclusion video. The United States workplace is becoming an increasingly diverse environment. Approximately 52% of the workforce is comprised of women and 19 % is comprised of racial minorities. In addition to gender and race, employees are different on a variety of characteristics, such as religion, culture, national origin, sexual orientation, and physical and mental ability. A diverse and inclusive workplace respects all employees without regard to such differences. An organization that fosters an inclusive environment benefits by attracting and retaining employees, who all bring their different talents, experiences, knowledge and perspectives to the table. This promotes creativity and innovation. In addition, an organization that celebrates diversity is able to attract and serve a wider customer base and thus remains competitive in the modern business world. Organizations with a diverse workforce and inclusive environment have higher employee morale, higher employee engagement and higher productivity.

Speaker 2: In the remainder of this video, we will focus on diversity related to employees with disabilities. Specifically, we focus on facts and myths related to this group of workers in order to provide knowledge that can help promote greater diversity in the workplace. Individuals with disabilities are protected by the Americans with Disabilities Act or as it is commonly known, the ADA. A person with a disability is an individual with a physical or mental impairment that substantially limits one or more of the person's major life activities. Major life activities include walking, speaking, and learning.

Speaker 1: Title I of the ADA prohibits discrimination against qualified people with disabilities in all areas of employment, such as recruiting, hiring, and firing. For example, the ADA prohibits employers from making disability inquires during the interview and prohibits medical examinations during the recruitment process. Despite federal protection, people with disabilities are still frequently discriminated against in the workplace. In fact, employees with disabilities earn 21% less than employees without disabilities. Only 34% of people with disabilities are employed, compared to 75% of people without a disability. Additionally, the unemployment rate for people with disabilities is twice as high compared to the unemployment rate for people without disabilities.

Speaker 2: One myth about hiring employees with disabilities is that they will not be able to perform the essential job functions. If organizations are using proper selection methods that predict job performance, then this will not be an issue. The ADA is designed to protect qualified individuals with disabilities so that they have the same employment opportunities as people who do not have disabilities. A qualified individual has the necessary skills, experiences, and education for the employment position and can perform the basic functions of the position with or without reasonable accommodations.

Speaker 1: The ADA requires that employers provide reasonable accommodations if an employee needs them to perform job functions. Employers can only refuse to provide accommodations if the accommodations would pose an undue financial hardship or administrative burden to the organization. The aim of the accommodations is to provide an opportunity for a person with a disability to achieve the same level of performance as a person without a disability. Examples of reasonable accommodations include

modifications to the work place, specialized equipment, alternative work schedules, and reserved parking.

Speaker 2: Unfortunately, many people are unfamiliar with the terms of the ADA and are unclear on how to manage employees with disabilities. This is due in part to some common myths about people with disabilities. For instance, one myth is that employers must provide the exact accommodation requested by an employee. As the terms "reasonable accommodation" and "undue hardship" are somewhat ambiguous, managers might be unsure what accommodations they have to provide. According to the ADA, the accommodation must be applicable to the disability; however, it need not necessarily be the exact accommodation the employee requests. For example, an employee may request an extremely expensive piece of equipment; but, the employer can work with them to find a more economical yet effective alternative. Therefore, the decision as to the appropriate accommodation is made on a case-by-case basis. There is not a "one size fits all" approach; rather, employers are able to work with employees and experts from the Equal Employment Opportunity Commission, to develop the best accommodation plan for both the employee and employer.

Speaker 1: Another myth about reasonable accommodations is that they are often costly. This myth is also unfounded, as research has shown that accommodations for employees with disabilities are commonly inexpensive and very effective.

Speaker 2: Yet another myth is that employees with disabilities have lower performance and productivity rates compared to employees without disabilities. But this is not true! Research has shown that employees with disabilities are just as competent workers as employees, who do not have a disability. A final myth is that employees with disabilities

are legal liabilities. Again, this is not true! Employees with disabilities do not have higher litigation rates than their nondisabled counterparts!

Speaker 1: Hopefully, this short video has given you a better idea of employees with disabilities and the ADA and provided information that disconfirms common myths. Our goal is to make the entire workforce more productive and inclusive. This can be achieved by valuing each and every employee.

#### **Video 2 Contact Manipulation**

Speaker 1: Hello and welcome to this diversity and inclusion video. The United States workplace is becoming an increasingly diverse environment. Approximately 52% of the workforce is comprised of women and 19 % is comprised of racial minorities. In addition to gender and race, employees are different on a variety of characteristics, such as religion, culture, national origin, sexual orientation, and physical and mental ability. A diverse and inclusive workplace respects all employees without regard to such differences. An organization that fosters an inclusive environment benefits by attracting and retaining employees, who all bring their different talents, experiences, knowledge and perspectives to the table. This promotes creativity and innovation. In addition, an organization that celebrates diversity is able to attract and serve a wider customer base and thus remains competitive in the modern business world. Organizations with a diverse workforce and inclusive environment have higher employee morale, higher employee engagement and higher productivity. In the remainder of this video, we will focus on diversity related to employees with disabilities.

Speaker 2: Hello, my name is Hannah and I am bipolar. That means: I go on showstopping manic episodes, which are always followed by serious, bleak depressive

episodes. For me, the hardest part about being bipolar is I never know when the depression will strike or when it will get better. I take my meds religiously. I am "doing all the right things" to stabilize my mood. But I never know what my day will be like until I wake up and experience it. I may have a dozen things I would like to do, go to work, hang out with friends or have a day of relaxation and sometimes I wake up in the morning and I can't do any of them. Not a single one. I can eat, feed the cat and get dressed eventually, but that's it. No amount of self-talk or re-framing can get me going. I never know when I am going to have a day when I wake up, ready to go, and get 5 things done before breakfast. I love those days. But I can't count on having them. It's taken a long time to realize that I can't control my general moods. The chemical shenanigans in my head overwhelm me. However, I am thankful that my meds can control the severe highs and the severe lows. By taking my meds, I can get up in the morning, go to work, and have a productive day. I have been working in the marketing industry for the past three years and have performed very well at my job. Although I cannot always control my mood and I do occasionally have to call off work due to my disability, my medication is definitely useful in helping me function in the workplace with minimal disruption. Working my first job in the marketing industry, I have learned that many people with mental illness are labeled. These labels become pretty much impossible to tear away. We, as individuals with bipolar disorder, are labeled as "crazy" or "lunatic" during our highs, and during our lows we are labeled as individuals who "wallow in self-pity". However, with the proper medication and therapy, we can be fully functional members of society. We still have mood swings, but that does not qualify us as lunatics or maniacs. We are people first.

Speaker 1: Hello, my name is Emma and I am a paraplegic. Being in wheelchair has rendered me completely invisible in any conversation. For example, once I went into photo shop to pick up some photos. I was the one who needed the photos, so I asked the shop assistant for help. I was the one, who paid the bill with my credit card. So why then, throughout this transaction, were all questions directed at my friend, who had come with me? All conversation, in fact. Does my wheelchair-bound status render me incapable of speaking for myself, let alone engaging in polite small talk? When looking for jobs, I had a different problem: my job hunts were always a consistent, repetitive cycle: interested inquiry, followed by multiple successful phone interviews, then an in-person interview with obvious surprise and nervousness, usually turning into a not-so-subtle visual examination of my physical appearance. The word pity and that puzzle-pain-horror look on people's faces as they stare at me during interviews, is uncomfortable, but it's something I've gotten used to. I understand that interacting with someone with a disability may be uncomfortable, but I can assure you that many of us are competent, friendly, and fun individuals who want the same opportunities as everyone else. I work in an office, so my paralysis does not prevent me from successfully performing my job. I go to work on time every day, perform the necessary tasks, and enjoy being able to provide for myself. I know many individuals with physical disabilities who are capable of also being successful in the workplace. They just need to be given the opportunity. Speaker 1: So the next time you encounter a person with a disability, remember that their

disability does not define them, they are people first.

#### Video 3 Control

Speaker 1: Hello and welcome to this diversity and inclusion video. The United States workplace is becoming an increasingly diverse environment. Approximately 52% of the workforce is comprised of women and 19 % is comprised of racial minorities. Employees are different on a variety of characteristics, such as race, gender, religion, culture, national origin, sexual orientation, and physical appearance. A diverse and inclusive workplace respects all employees without regard to such differences. A diverse organization that fosters an inclusive environment benefits by attracting and retaining employees, who all bring their different talents, experiences, knowledge and perspectives to the table, which promotes creativity and innovation. In addition, an organization that celebrates diversity is able to attract and serve a wider customer base and thus remains competitive in the modern business world. Organizations with a diverse workforce and inclusive environment have higher employee morale, employee engagement and productivity. Speaker 2: An inclusive work environment can be established by treating coworkers with respect. This includes avoiding behaviors that could hurt or demean others and noticing when our behavior does demean others, and being willing to change, even if the offense was unintentional. Be aware of your own actions and avoid discriminatory behavior. Discrimination can be considered harassment and is illegal. Both organizations and individual employees can be sued for harassment, even if it was unintentional. Take the following situation, for example.

Speaker 4: "Hey, I've just finished setting up the PowerPoint you asked for. I was able to put all the pieces together so that the presentation is ready for the event. What do you think of it? Was this what you had in mind?"

Speaker 3: Yeah sweetie, this looks good. How about we move that image more to the left. Are you wearing a new cologne? You smell really nice! You did a great job honey. Speaker 4: She really is a great boss and does great work. But I feel uncomfortable when she touches me or when she calls me names like honey or sweetie. I do not think that she does it intentionally, but it does make me feel weird and I wish that she would stop. I know she's my boss so I don't want to overstep my boundaries, but I don't think this is appropriate. Am I even allowed to say something to her? Maybe I should just let it go. I hope it doesn't get any worse, though. I already feel uncomfortable enough.

Speaker 2: In this situation, the employee is experiencing sexual harassment, which is illegal. To avoid these types of situations maintain a professional attitude and keep your behavior focused on job-related issues. Inappropriate personal conversations, off-color jokes and inappropriate touching are just a couple of potential issues that could create a hostile work environment.

Speaker 1: Also, an inclusive environment includes respect for the unique perspective and knowledge that each person brings to the table. Making assumptions about people based on stereotypes can lead to uncomfortable situations, hostile environments, biased decision making and even discrimination. With these things in mind, watch the following interaction. Do you notice anything?

Speaker 4: Thank you for joining me in this meeting. I wanted to talk to you, because you applied for a senior position that just opened up.

Speaker 3: Yes, I think it would be a great next step for me.

Speaker 4: Yes, that is true. Actually, we have reviewed all the other applicants and you have more experience and better qualifications than any of them. However, I know that

you are four months pregnant and so maybe one of the other applicants will be better for the position.

Speaker 3: I don't understand. What does me being pregnant have anything to do with it? Speaker 4: Let's just say, I need someone who will be more dedicated to the position. Speaker 1: The decision to pass on promoting the employee, because she is pregnant is not only unethical, but also illegal. It is important for employees to be familiar with antidiscrimination laws and policies, and also for organizations to create an environment that promotes equality. Finally, remember that words can hurt. There are cases, where what we say is not illegal and may not be intended to hurt, however, these words can still contribute to an unwelcoming workplace that cultivates exclusion. Have a look at this

Speaker 4: Hello! It's great to finally meet our newest team member! How are you? Speaker 3: Hello, it's nice to meet you too.

Speaker 4: How are you? Been having a lot of moving stress?

Speaker 3: Actually, yes. I just moved here from Jordon and I haven't gotten around to unpacking all my boxes. My house is still full of boxes.

Speaker 4: Oh, Jordan? Isn't that in the Middle East? How did you make it to the United States? I bet your father is an oil baron.

Speaker 3: Excuse me?!

final interaction.

Speaker 4: Well thank goodness, you don't dress like you are going to blow something up. That would be really weird.

Speaker 1: Making assumptions based on stereotypes often leads to false conclusions, which can hurt your interactions with colleagues. It can also lead to a chilly climate, where people feel excluded and devalued. In the cases above, lack of respect, misguided

assumptions, and mistreatment led to hostile and confusing work environments. If you happen to witness any type of behavior that could prevent an inclusive work environment, speak up! Speak to your supervisor. As a supervisor, speak to the employees who have engaged in hostile behaviors and make it clear that such behaviors aren't tolerated within your workplace. Also be clear that disciplinary sanctions will take place if employees continue engage in discrimination.

# Appendix B : Online questionnaire

## **Cognitive Items**

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1.	To be protected by the ADA, you must:
	a) have a disability that limits a major life activity
	b) be qualified for the job
	c) request an accommodation
	d) a and b
2.	If you satisfy the employer's requirements for the job and you can perform the
	essential functions of the job, you:
	a) are qualified for the job
	b) can be fired from the job
	c) must be hired for the job
	d) do not need ADA protection
3.	An example of a reasonable accommodation is:
	a) a modified schedule
	b) creating a new position
	c) lowering production standards
	d) eliminating an essential job function

4.	Th	e ADA prohibits discrimination in employment practices
	a)	some
	b)	most
	c)	all
	d)	no
5.	Ac	cording to the ADA, during the application process an employer cannot ask
	you	1:
	a)	to take a medical exam before offering you the job
	b)	to demonstrate how you will perform the duties of the job
	c)	explain your qualifications for the job
	d)	a and b
6.	Wl	nat percentage of people with disabilities are employed?
	a)	60%
	b)	51%
	c)	34%
	d)	11%

7.	The unemployment rate for people with disabilities is compared to the
	unemployment rate for people without disabilities?
	a) Three times as high
	b) Twice as high
	c) About the same
	d) Slightly lower
8.	Research has shown that workplace accommodations for people with disabilities
	are commonly
	a) Expensive and effective
	b) Expensive and ineffective
	c) Inexpensive and ineffective

- 9. On average, people with disabilities earn \_\_\_\_\_ in wages compared to those without disabilities.a) 21% less
  - b) 54% less
  - c) 38% less
  - d) 7% less
- 10. Which of the following is true about employees with disabilities?
  - a) They have comparable litigation rates and higher productivity rates compared to employees without disabilities
  - b) They have higher litigation rates and comparable productivity rates compared to employees without disabilities
  - They have higher litigation rates and higher productivity rates compared to employees without disabilities
  - d) They have comparable litigation rates and comparable productivity rates
     compared to employees without disabilities

### Affective Items (Schneider, 2008)

Please indicate your level of agreement with the following statements. Strongly disagree (1), Somewhat disagree (2), Neither agree nor disagree (3), Somewhat agree (4), Strongly agree (5)

11. Everyone, regardless of the level or the type of disability, has the capability to do some job

- 12. Disabled people are more loyal employees than non-disabled employees.
- 13. Disabled people have a right to work.
- 14. Employing disabled people is good for a business's image.
- 15. Disabled people should earn equal wages to co-workers doing similar jobs.

#### **Behavioral Intent Measure**

Imagine the following situation. You are a hiring manager for a local company and you need to fill an open position for a computer programmer. The ideal candidate has a strong background in software development and programming. The ideal candidate is a hard-working individual who has a creative but analytical mindset. He or she should be self-motivated and self-supervised. The position comes with opportunities for advancement within the IT department for the right candidate as well as exceptional benefits and a competitive salary. You've been interviewing candidates for the past two days. Today, you are interviewing five candidates: John. Bob, Dave, Sam, and Tim.

John is a black college graduate, who got a Bachelor degree in computer programming. You have called his previous supervisor from his last internship and he recommends John, saying the he can write-up programs in a variety of computer languages, such as C++ and Java. The supervisor also mentions that John was a bit slow in reporting issues and concerns immediately to the IT manager. Please indicate the extent to which you agree with the following statements about John. Extremely unlikely (1), Somewhat unlikely (2), Neither likely or unlikely (3), Somewhat likely (4), Extremely likely (5)

- 16. To what extent do you believe that John will be successful in this position?
- 17. To what extent do you believe that John should be hired for this position?

- 18. To what extent do you believe that John is adaptable?
- 19. To what extent do you believe that John will do well in training?
- 20. To what extent do you believe that John is competent?
- 21. To what extent do you believe that John will get along well with coworkers?
- 22. To what extent do you believe that John is a liability?

Bob's resume states that he graduated from college with a Bachelors in computer science and that he has worked previously as a software developer. When he comes in, you notice that he is blind and uses a cane to enter the room. He has adequate skills in code and test programming for in-house software programs and good skills for troubleshoot system bugs and issues. Please indicate the extent to which you agree with the following statements about Bob. Extremely unlikely (1), Somewhat unlikely (2), Neither likely or unlikely (3), Somewhat likely (4), Extremely likely (5)

- 23. To what extent do you believe that Bob will be successful in this position?
- 24. To what extent do you believe that Bob should be hired for this position?
- 25. To what extent do you believe that Bob is adaptable?
- 26. To what extent do you believe that Bob will do well in training?
- 27. To what extent do you believe that Bob is competent?
- 28. To what extent do you believe that Bob will get along well with coworkers?
- 29. To what extent do you believe that Bob is a liability?

Dave graduated from college with a degree in computer information systems. During his interview, you learn that in his previous job, Dave has gained respectable knowledge in updating and expanding existing computer programs. From his resume, you also discern that Dave has adequate experience with third-party code libraries and development frameworks. Please indicate the extent to which you agree with the following statements

about Dave. Extremely unlikely (1), Somewhat unlikely (2), Neither likely or unlikely (3), Somewhat likely (4), Extremely likely (5)

- 30. To what extent do you believe that Dave will be successful in this position?
- 31. To what extent do you believe that Dave should be hired for this position?
- 32. To what extent do you believe that Dave is adaptable?
- 33. To what extent do you believe that Dave will do well in training?
- 34. To what extent do you believe that Dave is competent?
- 35. To what extent do you believe that Dave will get along well with coworkers?
- 36. To what extent do you believe that Dave is a liability?

Sam received his degree in computer science and has previous work experience in computer programming. During his interview, Sam discloses that he has obsessive-compulsive disorder. You learn that Sam has extensive knowledge about building and using computer-assisted software engineering tools to automate the writing of some tools. Regarding debugging code for existing programs based on immediate need, you find out he has acceptable knowledge. Please indicate the extent to which you agree with the following statements about Sam. Extremely unlikely (1), Somewhat unlikely (2), Neither likely or unlikely (3), Somewhat likely (4), Extremely likely (5)

- 37. To what extent do you believe that Sam will be successful in this position?
- 38. To what extent do you believe that Sam should be hired for this position?
- 39. To what extent do you believe that Sam is adaptable?
- 40. To what extent do you believe that Sam will do well in training?
- 41. To what extent do you believe that Sam is competent?
- 42. To what extent do you believe that Sam will get along well with coworkers?

43. To what extent do you believe that Sam is a liability?

Tim is a recent college graduate with a Bachelor in computer information systems, who has interned in various IT departments. When he comes in for the interview, you notice that he is severely obese. Throughout the interview, you pick up that Tim has suitable skills in implementing systems in the in-house production environment. Tim also has passable skills in debugging programs by testing for and fixing errors. Please indicate the extent to which you agree with the following statements about Tim. Extremely unlikely (1), Somewhat unlikely (2), Neither likely or unlikely (3), Somewhat likely (4), Extremely likely (5)

- 44. To what extent do you believe that Tim will be successful in this position?
- 45. To what extent do you believe that Tim should be hired for this position?
- 46. To what extent do you believe that Tim is adaptable?
- 47. To what extent do you believe that Tim will do well in training?
- 48. To what extent do you believe that Tim is competent?
- 49. To what extent do you believe that Tim will get along well with coworkers?
- 50. To what extent do you believe that Tim is a liability?

### **Manipulation Checks**

- 51. In the video you watched earlier, did you witness a scenario related to pregnancy discrimination?
  - Yes
  - o No

5		the video you watched earlier, did you see text providing information about sability myths and facts?
	0	Yes
	0	No
5	53. In	the video you watched earlier, did a speaker claim to have a disability?
	0	Yes
	0	No
Dem	ogra	phic Questions
5	54. W	hat is your gender?
	0	Male
	0	Female
	0	Other
5	55. Pl	ease specify your race/ethnicity. Select all that apply.
	0	White
	0	Black or African American
	0	American Indian or Alaska Native
	0	Asian
	0	Native Hawaiian or Pacific Islander
	0	Other
5	56. W	hat is the highest degree or level of school you have completed?
	0	Less than high school degree
	0	High school degree or equivalent (GED)
	0	Some college, no degree
	0	Associate's degree
	0	Bachelor's degree
	0	Graduate degree

57.	Wh	aat is your age?
58.	On o	average, how many hours per week do you work for pay outside of MTurk?
59.	Но	w much face-to-face interaction do you have with other people on your job?
	0	None at all
	0	A little
	0	A moderate amount
	0	A lot
	0	A great deal
60.	Do	you supervise other employees on your job?
	0	Yes
	0	No
61.	Do	you have a disability?
	0	Yes
	0	No
62.		splay this question if "Do you have a disability= Yes" Which of the following t describes your disability? Please select all that apply.
	0	Intellectual (Learning) disability
	0	Physical disability
	0	Sensory disability
	0	Mental disability
	0	Other
63.		splay this question if "Do you have a disability= Yes" At what age was the set of the disability that most affects your life? If onset was at birth, please type
	$\circ$	

64. Does a person in your close family or friends have a disability?

	0	Yes
	0	No
65.	dis	splay this question if "Does a person in your close family or friends have a sability? =Yes" What types of disabilities do your close family and/or friends we? Please select all the apply.
	0	Intellectual (Learning) disability
	0	Physical disability
	0	Sensory disability
	0	Mental disability
	0	Other
66.	dis	splay this question if "Does a person in your close family or friends have a sability? =Yes" How many people in your close family and/or friends have a sability?