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## Abstract

Literature regarding attitudes toward the disabled has been dominated with a few, explicit measures that typically emphasize salient, physical disabilities. However, passage of the Americans with Disabilities Act (ADA; "Americans with Disabilities Act of 1990," 1991) has broadened previously accepted criteria for disabilities, and more non-visible, psychological and developmental conditions fall under the category of disability. This reconceptualization has not been addressed in many measures of disability, despite the clear potential for differences in the views toward different disabilities. Additionally, disability attitudes are likely to be impacted by the framing of the disabling condition. This study was an experiment designed to investigate the impact of disability type as well as use of the term 'disabled' in self-descriptions. Participants were asked to report their perceptions of three individuals they believed to be study participants based upon essays written by them, in which one referred to a disabling condition of one of four types (physical, psychological, cognitive/developmental or undefined). After making judgments of the others' personality traits, participants ranked the three candidates based upon preference for a work partner on a future writing exercise. Participants then evaluated their assigned disabled teammate and anticipated team performance. Generally, participants' expectations for working with a disabled individual were surprisingly positive, and use of the term disability and disability type did not impact these expectations, though they did impact some forms of individual perceptions. Individual differences as well as demographic characteristics also impacted these relationships. Potential explanations for these findings are discussed.

## Modeling Perceptions of Disabled Workers

Disabled persons represent a sizable proportion of the American population, but despite efforts by the federal government through legislation like the Americans with Disabilities Act (ADA; "Americans with Disabilities Act of 1990," 1991), disabled workers are disproportionately unemployed, and face tremendous difficulties gaining and keeping employment. Disabled persons who are able to gain employment must then deal with complications related to requesting or modifying work accommodations, interpersonal problems with coworkers, and fair treatment from supervisors(Boyle, 1997). These problems are amplified in organizational climates that are not supportive of disabled workers and by employees who harbor negative perceptions of individuals with disabilities (Robert & Harlan, 2006; Wooten & James, 2005).

Research on disabled workers has explored a limited range of the factors that impact how they are perceived and treated in organizations. While the notion that attitudes impact behavior is highly intuitive, with respect to attitudes toward the disabled, the research is lacking in empirical evidence. Topics investigated frequently have focused on demographics (Harasymiw, Horne, & Lewis, 1978), personality characteristics (Kelly, Sedlacek, & Scales, 1994) and attributions of controllability and cause of disability (e.g. Miller & Werner, 2005). Most of these studies have been conducted using survey methods, with very little behavioral evidence for how these attitudes impact interactions with disabled individuals. This study will address this gap in the research by gathering both attitudinal and behavioral data in a simulated work environment.

### *Experiences of Disabled Workers*

Historically, disabled workers have faced difficulties with gaining and keeping employment. As recently as January of 2009, the unemployment rate for disabled Americans was nearly double that of the abled population (Bureau of Statistics, 2009). Of those disabled persons who are employed, only 21.2% are working full-time/full-year, and the median difference in earnings between disabled and nondisabled persons was \$6,500 per year, approximately 15% of the average annual salary (Bruyere, Burkhauser, & Stapleton, 2008).

The type of disability with which one is afflicted is apparently a significant predictor in the probability of unemployment in the disabled; individuals with physical disabilities were less likely to be looking for work than individuals with either sensory or mental (including both psychiatric and developmental/learning disabilities) disabilities. These differences also impact earnings, resulting in individuals with mental disabilities earning about 1/7 that of individuals with other types of disabilities (Bruyere, et al., 2008).

Beyond the economic impact of disability, those who are able to obtain and keep either part-time or full-time employment are faced with a number of other challenges. Stone and Colella (1998) developed a model of the factors that impact treatment of disabled individuals in the workplace, predicting generally negative attitudes of employees toward their disabled coworkers. These negative attitudes can lead to poor treatment of disabled workers, such as lower performance ratings or opportunities for development, exclusion from work groups, and less desirable work assignments.

Ultimately, this type of treatment leads to a variety of affective and behavioral responses from disabled employees, such as withdrawal, lower motivation and job dissatisfaction, which then elicit poor organizational outcomes such as performance decrements and discrimination claims.

#### *Treatment of Disabled Individuals by Coworkers*

Stone and Colella's (1996) model of treatment of disabled workers, includes both interpersonal behaviors as well as personnel decisions and outcomes. This model presents several antecedents of disability attitudes, which the authors propose are a direct cause of work-related behavior toward disabled coworkers. The first stage of the model is focused on macro-level antecedents, like federal and state legislation, followed by organizational characteristics. This can include organizational design as well as norms, values, policies and procedures, which have been investigated and associated with negative work outcomes such as segregation of disabled employees as well as lower rates of promotion and denial of even minor and reasonable accommodations (Robert & Harlan, 2006).

The second stage of the model includes attributes directly related to the disabled worker, the observer, and the nature of the job held by the disabled worker. Individual differences in the observer (personality, demographic characteristics, and level of contact with disabled persons) all appear to impact both job-related expectancies as well as psychological consequences (attitudes, stereotypes, affective reactions). Individual differences of observers have been investigated thoroughly to determine their impact on disability perceptions and treatment. Studies in this area have indicated a number of relevant predictors, such as social dominance orientation (Caldwell, 2007), ambiguity

tolerance (Feinberg, 1971), and the Big Five personality traits (e.g. Garcia, Paetzold, & Colella, 2005). There is some conjecture that these variables as well as demographic characteristics are unchangeable, produce limited prediction to disability attitudes, and should be eliminated partially or completely from research in the area (Yuker, 1994). Despite this challenge to personality characteristics as predictors, these variables continue to be examined in studies within this area.

Attributes of the disabled worker as well as the job characteristics are also included in the second stage of the Stone and Colella (1996) model. Attributes of the disabled worker include the nature of the disability (and its associated stigma) as well as status, race, gender and interpersonal style. Several studies have examined these variables, finding that women and minorities with disabilities reported significantly lower job satisfaction (Uppal, 2005), and that mental disabilities appeared to have particularly negative consequences (Sanders-Thompson, Noel, & Campbell, 2004). According to the Stone and Colella (1996) model, the effects of observer and disabled worker characteristics are moderated by characteristics of the job. Ability requirements, interdependence and reward system were initially proposed to compose the important aspects of the nature of the job, however, other variables included in this category have been investigated, such public contact and job complexity and job-disability type fit (Colella, DeNisi, & Varma, 1998; Colella & Varma, 1999; Gouvier, Sytsma-Jordan, & Mayville, 2003).

Stage three of the model consists of job-related expectancies and psychological consequences for observers. In this stage, job characteristics predict job-related expectancies, such as expected contact and outcomes. These expectancies are specific to

the job, based on job tasks and level of contact with the observer as well as members of the public, and have been found to impact performance evaluations and expectations of future performance (Colella & Varma, 1999).

Job characteristics, along with the moderated effects of observer and disabled individual characteristics, predict psychological consequences for observers. These consequences are the attitudes toward individuals with disabilities, including categorizations, stereotypes and expectancies, and affective responses. The bulk of literature on perceptions of the disabled has focused on this area, with strong emphasis on measurement of disability attitudes (Antonak & Livneh, 1995a, 1995b; Gething, 1994; Gething & Wheeler, 1992; Loo, 2001; MacLean & Gannon, 1995; Yuker, Block, & Campbell, 1960). The social psychology literature has also contributed to this line of research by investigating disabled persons within the framework of general prejudice and stereotypes (Cuddy, Fiske, & Glick, 2007; Deal, 2007; Eisenman, 1986; Fiske, Cuddy, Glick, & Xu, 2002; Wertlieb, 1985). The nature of these psychological consequences and research in the area will be addressed later in this paper.

Stage four of the model relates to treatment of disabled workers and the disabled workers' reactions to this treatment. Despite this extensive line of research into attitudes toward the disabled, few studies have extended the empirical support for the Stone and Colella (1996) model to include behavioral consequences of attitudes toward the disabled. The research currently available suggests that many personnel practices are impacted by disability attitudes, including selection (Gouvier, et al., 2003), performance appraisal from both peers and supervisors (Colella & Varma, 1999; Miller, 2002; Miller & Werner, 2005), as well as opportunities for teamwork, development and promotion

(Colella, et al., 1998; Colella & Varma, 2001). Specifically, this study will emphasize two types of job treatment: choice of work partners and evaluations of performance on a related exercise.

This study focused primarily on stages two, three and four of the Stone and Colella (1996) model, including antecedents of perceptions, attitudes toward disabled coworkers, as well as behaviors toward individuals with disabilities. I investigated multiple levels of the model proposed by Stone and Colella by including observer and disabled worker attributes, job-related expectancies, psychological consequences, and treatment of the disabled worker. This was one of few studies to encompass the core of the model within a single study. Figure 1 provides an overview of the elements investigated in each stage.

#### *Perceptions of the Disabled: Two Models*

The central element to the Stone and Colella(1996) model of interest in this study falls within Stage 3, which includes a group of variables that they refer to as psychological consequences of the observer. This category is somewhat broad, and includes attitudes and affective states experienced by observers with respect to disabled individuals. These psychological consequences can be framed around two primary models of disability attitudes, affective states and stereotypes. The first of these is the Stereotype Content Model (SCM), initially proposed by Fiske and colleagues (Fiske, et al., 2002). This model organizes stereotypes of various social groups along two dimensions, competence and warmth, suggesting that social groups fall in one of four quadrants created by these dimensions, based upon the level of status of the group and the



extent to which it is competitive with the majority. In this model, competence encompasses characteristics one might think of as conscientiousness, intellect, independence, confidence and efficiency, while warmth includes concepts such as friendliness, sincerity, trustworthiness, and well-intentioned. These two dimensions then combine to form four quadrants of stereotypes. Of these four quadrants, Fiske and her colleagues suggested that the off-diagonals (the high warmth-low competence and low warmth-high competence) are the most common because they serve a specific function of promoting the both competent and warm in-group. The *paternalistic* (high warmth/low competence) groups are likely to remain subordinate to the in-group and also unable to pose a significant threat even if they wished to, while the *envious* (low warmth/high competence) groups are successful, but not well intentioned toward the in-group, and the stereotype justifies taking action against envied groups, such as social exclusion and discrimination.

A number of studies have used this model as a framework for investigating a wide range of social groups, from racial groups (Pinel, Long, & Crimin, 2008) and nationalities (Kervyn, Yzerbyt, Demoulin, & Judd, 2008), to immigrants (Lee & Fiske, 2006) and small subgroups of females (DeWall, Altermatt, & Thompson, 2005). Despite the widespread support for this model, beyond the work by Fiske and colleagues (Cuddy, et al., 2007; Fiske, et al., 2002; Operario & Fiske, 2001), little mention has been made in this literature regarding individuals with disabilities.

An extension of the SCM model applies stereotype content to prejudice and discrimination (Cuddy, et al., 2007). This BIAS-Map (which stands for Behaviors from intergroup affect and stereotypes) is an attempt to connect the four stereotype categories

to behaviors and affective reactions related to prejudice and discrimination. The Competence-Warmth stereotype dimensions then correspond to quadrants, which then form four categories of prejudice. These categories of prejudice include the following: low competence-low warmth corresponds with *contempt prejudice*, associated with feelings of disgust and resentment; low competence-high warmth is the *paternalistic prejudice*, associated with pity and sympathy; high competence-low warmth results in *envious prejudice*, associated with jealousy; finally, high competence-high warmth judgments elicit *admiration*, associated with pride and generally positive reactions.

In their work, these affective reactions were associated with behavioral tendencies, which are an intersection of an active-passive dimension, and a facilitation-harm dimension. The model outlines a framework for understanding how affect mediates the relationship between competence and warmth perceptions and behavioral tendencies. Competence perceptions are specifically predictive of passive behaviors, which require less effort but still have repercussions for the out-group member, while warmth perceptions are predictive of active behaviors. However, for both competence and warmth, the relationships between stereotypes and behaviors are mediated by affective reactions—the categories of prejudice described above.

Fiske, et al. (2002) and Cuddy, et al. (2007) included disabled persons in their initial work with this model, and found, perhaps unsurprisingly, that people generally perceived individuals with disabilities to be of low competence and high warmth, attributing the paternalistic prejudice to them. This category of prejudice would be linked to two specific types of behaviors according to the BIAS-Map framework, active

facilitation and passive harm, however, Cuddy, et al. (2007) did not address this specifically in their paper.

While some research has hinted at relevance of these factors in workplace judgments (Louvet, 2007), the emphasis has been only upon judgments of competence, and not based on any theoretical models of stereotypes or prejudice. Further, the stereotype content model has not been extended to examine specific disability types, or the impact of disability labels on perceptions of individuals with disabilities. In this project I will be examining person perception with respect to disabled persons and directly compare perceptions of disabled persons with nondisabled persons to examine whether this model can be applied to specific disability types.

The SCM emphasizes the types of judgments made of out-groups in terms of attributions about their character and abilities. However, also important to person perception are the behavioral and affective reactions that arise from these judgments. While the BIAS Map has addressed this somewhat, the disability literature has devoted much time to this subject, modeling both behavioral and affective reactions to disabled persons. This line of research focuses most frequently on general, nondescript disabilities, and the majority of this work has been organized around several measures of attitudes. One of the most recent attempts to measure and model disability attitudes has arisen from the Interactions with Disabled Persons Scale.

The Interactions with Disabled Persons Scale (IDP; Gething, 1994; Gething & Wheeler, 1992) was developed as an alternative to earlier, unidimensional measures of disability such as the Attitudes Toward Disabled Persons Scale (ATDP; Yuker, et al., 1960; Yuker, Block, & Young, 1966). Gething and her colleagues proposed that attitudes

toward the disabled were multidimensional, and developed a scale to tap these attitudes. Factor analysis indicated a six-dimensional model of attitudes, with the greatest variance accounted for variables they refer to as 'discomfort in social interaction' and 'coping/succumbing framework', with other dimensions of vulnerability (two dimensions were labeled as this), coping, and perceived level of interaction (Gething, 1994; Gething & Wheeler, 1992). Despite this attempt at examining the multifaceted nature of these attitudes, the authors recommended scoring the measure by summing across all items, rather than focusing on individual subscales. Research using this measure emerged relatively quickly following initial publication of the scale, though the support for this model has been mixed, with some researchers supporting the model with limited refinements (e.g. Forlin, Fogarty, & Carroll, 1999), while others have suggested two- or three-factor models of attitudes toward the disabled (MacLean & Gannon, 1995; Thomas, Palmer, Coker-Juneau, & Williams, 2003).

One of the more frequently investigated alternatives to the six-factor model is the two-dimension model proposed by MacLean and Gannon (1995). The Sympathy and Discomfort categories are similar to the two largest subscales from the Gething framework, focusing on ten items from the original scale, but the remaining items did not load on any factors. This represented a significant departure from the work of Gething and colleagues (1994; Gething & Wheeler, 1992), but MacLean and Gannon argue that use of the entire scale masks distinctly different attitudes tapped by the sympathy and discomfort subscales. They found that the two subscales were virtually orthogonally related, and use of the subscales rather than summing across all the items predicted more variance in disability attitudes on a number of other measures. Finally, they argued that

the conceptual model presented by the two-dimensions detected in their research made accurate predictions regarding the level of interaction with disabled persons, with no sacrifice to reliability from the reduced number of items.

The parsimonious two-dimensional Sympathy-Discomfort model proposed by MacLean and Gannon represents the other side to the coin of reactions to individuals with disabilities as outlined by Fiske, et al. (Cuddy, et al., 2007; Fiske, et al., 2002). The MacLean and Gannon model describes the emotional reaction within the observer, and the SCM outlines the observer's perceptions of the disabled individual. These two models taken together offer a more comprehensive view of the underlying cognitions and affect in attitudes toward the disabled. In this project, I proposed that the SCM and Sympathy-Discomfort models would explain significant variance in the attitudes and behaviors exhibited toward disabled coworkers, over unidimensional approaches proposed by Yuker, et al.(1960), Gething and Wheeler, (1992) and Forlin, et al. (1999).

#### *Hypotheses 1a, 1b & 1c*

H1a: The Stereotype Content model will describe differences in participants' perceptions of their disabled peers, such that they will be stereotyped generally within the paternalistic group stereotype. H1b: Differences in the Sympathy-Discomfort Categories will describe emotional reactions to disabled persons H1c: The SCM and Sympathy-Discomfort models will predict job-related expectations (of team performance and team outcomes) and treatment (performance ratings and choice of work partner) of those disabled persons.

### *The Impact of Disability Type*

Within the Stage 2 of the Stone and Colella model are the attributes of the disabled individual, one of which is disability type. While many physical disabilities are visible (and often highly salient), many of the conditions which are recognized by the ADA as disabilities are not immediately visible to others (Cacciapaglia, Beauchamp, & Howells, 2004). In many cases, psychiatric disorders, learning disabilities, and some physical health issues can be concealed by employees. Individuals with these conditions are then in a position to choose whether to self-identify as disabled, whereas individuals with many physical disabilities (including a number of medical conditions) are unable to conceal their condition, and are readily identified as disabled.

Some research in this area has examined the differential impact of disability types on stigma and acceptance (McLaughlin, Bell, & Stringer, 2004; Sanders-Thompson, et al., 2004). The latter area of research has suggested that stigma serves as a mediator in the relationship between disability status (or type) and acceptance or discrimination outcomes. This work is limited however, and few studies have investigated a wide range of disability types within a single study, and clear comparisons of highly visible and invisible disabilities have shown mixed results with some showing no difference (e.g. Gething, 1991) and others showing differences based upon stigma or job fit (Gouvier, et al., 2003; McLaughlin, et al., 2004). Because of the difficulty with comparing all of the different specific disability conditions, this study will focus on general disability categories: psychiatric disorders, learning disorders, physical disabilities, and undefined, generic disabilities.

Comparisons of different disability types with respect to attitudes and behaviors of peers have produced mixed results. Some researchers have proposed at least some consistent trends in preference for physical disabled peers over mental retardation or mental illness (Royal & Roberts, 1987; Tringo, 1970). This has been supported in research regarding preference for physically disabled employees (Fuqua, Rathbun, & Gade, 1984; Hannah & Midlarsky, 1987; Koser, Matsuyama, & Kopelman, 1999).

These studies have each suggested that these preferences are guided by the perceptions of risk associated with individuals with mental illness, as well as concerns about their productivity and emotional stability (Fuqua, et al., 1984; Johnson, Greenwood, & Schriener, 1988; Koser, et al., 1999). Another possible explanation is that stigma mediates the effect of disability type on preference and attitudes, though research to this effect has been limited to disabilities other than mental health conditions (McLaughlin, et al., 2004). These relationships have even been found in workers who are regularly charged with working with individuals of different types of disabilities, and appears to be unrelated to preferences of physical disabilities over mental illness (Caldwell, 2007).

### *Hypotheses 2a & 2b*

H2a. Individuals with psychiatric disabilities will receive lower ratings on the “warmth” stereotype dimension than other disability types or controls. H2b. Individuals with psychiatric disabilities will be ranked lower as potential work partner, and performance expectations will be lower for psychiatric disability types than other disability types.

### *Hypotheses 3a & 3b*

H3a. Individuals with physical disabilities will receive higher ratings on the “warmth” stereotype dimension than other disability types or controls. H3b. Individuals with physical disabilities will be ranked higher as a potential work partner, and performance expectations will be higher than for other disability types.

### *Hypotheses 4a & 4b*

H4a. Psychiatric disabilities will be related to greater perceptions of neuroticism and lower levels of agreeableness. H4b. Cognitive/developmental disabilities will be related to perceptions of lower competence.

### *Disability Labels*

Another attribute of disabled individuals is their adoption of the label as “disabled”. Use of the term “disabled” appears to be somewhat controversial among many individuals with disabilities. Although recognized by the ADA as disabled, many individuals do not identify themselves as disabled and when capable of concealing their condition, choose to do so, particularly at work (Tierney, 2001). Others only refer to themselves as disabled when their condition impairs their performance at work, or requires accommodation (Dalgin & Gilbride, 2003). The use of other terms for disability, such as handicapped (or handi-capable) suggests that there is a desire to dissociate these types of conditions from the stigma associated with the word disability (Seiter, Larsen, & Skinner, 1998; Yuker, 1987). This has become of greater relevance in recent years, as



large numbers of Americans have been diagnosed with mental health problems, such as ADHD and depression (Kessler, Chiu, Demler, & Walters, 2005), and the stigma associated with mental health disabilities is particularly strong (Sanders-Thompson, et al., 2004).

One study (Seiter, et al., 1998) included comparisons of a variety of disability labels by manipulating fundraising statements for disabled students at an elementary school. While not specifically focusing on perceptions of the disabled, their initial analysis of their statements suggested significant differences in labels of disabled students as “normal”, “heroic”, “disabled” or “pathetic”, with respect to perceptions of character, ability and appearance, with the descriptions of disabled children as normal or heroic receiving more positive reactions than descriptions as disabled (the description of disabled children as pathetic received the lowest ratings).

Other researchers (Hannah & Midlarsky, 1987) have examined the impact of condition-specific labels provided either with or without descriptions of the condition. Their study extended the research into disability labeling by including a wider variety of conditions, such as mild and severe mental retardation, psychosis, amputation, ulcer, epilepsy, deafness and blindness. Participants reviewed labels of individuals either with or without descriptions of their conditions and completed social distance scales for each person. Participants responded differently with respect to a number of conditions based upon the presence of the description, with the description typically improving the responses of the participants toward the disabled person. Other research has found similarly that the specificity of the label (i.e. blindness versus “visual deficit”) impacts the perceptions of disabled persons, and that this effect differed by the type of disability

(Dooley & Gliner, 1989). This clearly indicates the importance of labeling and descriptions provided about disabilities in the resulting attitudes toward persons with disabilities.

Despite these findings, no research to date has examined the use of the word “disability” or “disabled” in person perception. In this study, I examined the impact of the term “disabled” directly, by examining the impact of perceptions from others when an individual refers to him or herself as “disabled”. This element of the study is an extension of the work by Dooley and Gliner (1989) and Hannah and Midlarsky (1987), by examining reactions to general descriptions of four different conditions, each described as a “disability” or not.

#### *Hypotheses 5, 5a & 5b*

H5. Individuals who self-identify as “disabled” will be viewed more negatively (lower competence and warmth) than individuals who do not. H5a. “Disabled” individuals will be ranked lower as potential work partners and expectations for performance will be lower. H5b. Individuals reporting a disabling condition without using the term ‘disability’ will be viewed differently in personality characteristics than controls.

#### *Observer Individual Differences*

The second category of variables within Stage 2 of the Stone and Colella model are the attributes of the observer. Current research in the area of disability attitudes has suggested a number of factors that impact how people view the disabled community. Sex,

age, nationality and other demographic variables have been investigated, with relatively consistent findings that demographic characteristics appear to predict differences both in attitudes toward the disabled and level of interaction with them (Forlin, et al., 1999; MacLean & Gannon, 1995; McLaughlin, et al., 2004).

Stone and Colella (1996) proposed that these negative attitudes are influenced by a number of factors, including attributes of both observer and the target, as well as attributes of the task. This may include attributes of the job that involve contact with others (Gouvier, et al., 2003; Louvet, 2007), but may also involve attributes related to the individual's specific disability type. The task-person fit has been investigated in other studies, with findings suggesting that the interaction between disability type and task characteristics may impact expectations of performance and choice of partners on team activities (Colella, et al., 1998; Colella & Varma, 1999), though some research has called this idea into question (Koser, et al., 1999).

In addition to fit, observer personality characteristics have been connected with perceptions of disabled individuals, including the Big Five Personality Traits (e.g. Garcia, et al., 2005), as well as more narrow traits such as authoritarianism (Noonan, Barry, & Davis, 1970), ambiguity tolerance (Feinberg, 1971; Galbreath & Feinberg, 1973) and social dominance orientation (Caldwell, 2007). Generally, this line of research has supported the notion of direct effects of personality traits on attitudes. However, a stream of research into general prejudice and discrimination offers an alternative model, with moderation and mediation effects of different personality and demographic characteristics on attitudes (Ekehammar, Akrami, Gylje, & Zakrisson, 2004; Sibley & Duckitt, 2008).

Contact with individuals with disabilities has been connected with disability attitudes in a number of studies (Beckwith & Matthews, 1994; Eberhardt & Mayberry, 1995). Generally, individuals who have had greater and more intimate contact with individuals with disabilities report more positive attitudes toward disabilities and individuals with disabilities. Despite this, some individuals with high levels of contact with disabled persons still report negative attitudes toward them, so it appears that additional factors may be operating with respect to contact (Caldwell, 2007; Eberhardt & Mayberry, 1995).

In the work environment, it has been suggested that the primary factor in predicting a disabled employee's acceptance by coworkers is the perceived impact of the disability on performance (McLaughlin, et al., 2004). The perceived impact of disability varied by the disability type, which differed by the level of stigma associated with it. Other researchers have also promoted this idea, though there has not been agreement yet on particulars of a model to predict attitudes or workplace behaviors toward the disabled (Colella, DeNisi, & Varma, 1997; Stone & Colella, 1996).

Though a variety of individual differences have been examined to determine the nature of their relationships with disability attitudes, the findings are mixed and frequently limited to individuals working within a single industry. This study will offer information regarding a somewhat broader sample of variables, including replication of studies regarding the Big Five, social dominance orientation and ambiguity tolerance, along with investigating new variables such as philosophies of human nature, self-efficacy, and self-esteem. It is expected that these variable will impact attitudes and

behaviors toward the disabled, though the exact nature of the relationships will not be specifically hypothesized, and were instead treated as exploratory research questions.

#### *Hypothesis 6*

H6. The relationship between disability type and psychological consequences for observers will be moderated by observer ethnicity, gender, and age.

#### *Hypotheses 7 & 7a*

H7. Individual differences (Big Five Personality, Social Dominance Orientation, Self-Esteem, Self-Efficacy, Philosophies of Human Nature and Intolerance for Ambiguity) and contact with individuals with disabilities will predict psychological consequences for observers and (H7a) will moderate the relationships between attributes of disabled workers and psychological consequences for observers (stereotypes and affective reactions).

#### *Hypothesis 8*

H8. The relationship between disabled individual attributes, observer characteristics and treatment of disabled individuals will be mediated by psychological consequences for observers and observers' job-related expectancies.

#### *Study Purpose*

This study served as an attempt to directly compare behaviors and attitudes toward individuals with disabilities within the context of a team writing activity. Using

the frameworks developed by Fiske, et al. (2002) and MacLean and Gannon (1995), participants offered their views regarding their perceptions of disabled individuals and affective reactions to them, as well as choosing and evaluating work partners. In addition, these behavioral criteria were compared with several explicit measures used to tap disability attitudes, such as the Interactions with Disabled Persons Scale (Gething, 1994; Gething & Wheeler, 1992), and the Attitudes Toward Disabled Persons Scale (Yuker, et al., 1960). In doing this, I hoped to add clarification to the debate regarding the utility of explicit measures in this domain. Finally, this study provided more data regarding the impact of both broad and narrow personality characteristics on disability attitudes.

## Method

### *Participants*

Participants were 190 undergraduates from the University of Oklahoma Psychology department. They were recruited from upper and lower division courses, as part of a research participation course requirement or for extra credit. While it was expected that a majority of participants would not be disabled, to control for personal experience with disabilities, the debriefing questionnaire asked participants about any disabilities that they have, as well as their relationships with individuals with different disability types.

### *Design*

The study was a 2 (“disabled” vs. not) x 4 (disability type) design. In sessions of 4-8 participants, each participant read two essays each from three fake participants, regarding each individual’s health while in college and a description of the university

student insurance program. The manipulation was integrated into one of the health statements. The two control health statements were developed to reflect healthy and unhealthy lifestyles, in order to control for general wellness.

The disabled condition was compared with two controls, one reporting generally healthy behaviors (regular exercise, efforts to eat healthy, sleeping well, etc.), the other reporting less healthy behaviors (no exercise, poor diet, inconsistent and low quality sleep, etc.). This was done as an attempt to remove perceptions of overall health from considerations of disabled persons. It was expected that generally, individuals reporting more positive health behaviors would be viewed generally more positively or the same as the poor health individuals but more positively than individuals with disabilities. This study was an attempt to associate behavioral criteria with disability attitudes. With that in mind, a large battery of measures was employed to capture a wide variety of individual differences and participants' attitudes toward disabilities.

### *Study Part 1*

*Part 1 Procedure.* The experiment was conducted in two sessions, the first consisting of an online-administered survey, which included all the individual difference measures except the explicit disability attitudes measures and the Philosophies of Human Nature Scale.

*Part 1 Materials.* These measures were administered through the online survey system, in a single session, and were prerequisites for participation in Part 2.

*Big Five Personality Traits.* The Five Factor Model Questionnaire, developed by Gill and Hodgkinson (Gill & Hodgkinson, 2007), consists of 80 words, with 16

representing each of the Big Five personality traits. For example, agreeableness was measured using words like “caring”, “generous” and “unemotional”, and openness was measured with words including “ordinary”, “innovative”, and “unique”. Six words were selected from each list in order to reduce the survey length. Participants rated each word based upon the extent to which the word described them on a six-point scale, ranging from 1 (not like me at all) to 6 (very much like me). Because there was some overlap in the measures of agreeableness, conscientiousness and warmth and competence (the stereotype dimensions in the SCM models), words were selected from the FFQM that were not listed in the much shorter scales provided to tap the SCM dimensions. Participants also completed this scale with respect to each of their three prospective work partners.

*Intolerance of Ambiguity.* Ambiguity tolerance was measured with Budner’s (1962) Intolerance of Ambiguity Scale. Commonly used in the literature, this 16-item scale consisted of statements such as “people who insist upon a yes or no answer just don’t know how complicated things really are” and “there is really no such thing as a problem that can’t be solved.” The response scale is 7 points, ranging from “Strongly disagree” to “Strongly agree”. High scores on this scale indicate a lack of tolerance for ambiguity.

*Self-esteem.* Self-esteem was measured using a classic measure of the construct, developed by Rosenberg (1965), consists of ten items regarding participant’s attitudes toward him- or herself. Items were rated on a four-point scale, ranging from 1 (strongly disagree) to 4 (strongly agree).



*Self-efficacy.* A measure of general self-efficacy was used to capture self-efficacy across multiple tasks. This measure, developed by Chen, Gully and Eden (Chen, Gully, & Eden, 2001) consists of eight items, each rated on a five-point scale, from 1 (strongly disagree) to 5 (strongly agree). Items refer to overcoming difficult and challenging tasks generally, and performing well in the face of adversity. An example item from this scale is “I am confident that I can perform effectively on many different tasks.”

*Motivation to Respond Without Prejudice.* The Internal and External Motivation to Respond Without Prejudice Scale was developed by Plant and Devine (1998), consists of ten items, five measuring both internal motivations (motivation based on personal values and beliefs), and external motivations (motivation based on desire to please others). The original scale was developed to tap motivations related to prejudice against Blacks, and the scale was adapted for use in this study, and in each item the word ‘Blacks’ or ‘Black people’ was replaced with ‘disabled people’. An external motivation item is “Because of today’s PC (politically correct) standards I try to appear nonprejudiced toward disabled people”, and an internal item is “I attempt to act in nonprejudiced ways toward disabled people because it is important to me.” Items were rated on a nine-point Likert-type scale, ranging from 1 (Strongly disagree) to 9 (Strongly agree).

*Social Desirability.* Social desirability was measure with a classic scale developed by Crowne and Marlow (1960). Consisting of 33 true-false statements, social desirability was measured by the number of statements to which participants respond in line with ideal behaviors.

*Social Dominance Orientation.* The Social Dominance Orientation inventory was developed by Pratto, Sidanius, Stallworth & Malle (1994). The scale includes 18 items regarding social equality and views of other social groups as inferior, such as “to get ahead in life, it is sometimes necessary to step on other groups.” Items were rated on a seven-point Likert-type scale, ranging from 1 (Strongly disagree) to 7 (Strongly agree).

*Stereotype Content Model Scale.* Using terms from the original study on the SCM, a 20-item scale was generated to capture the competence and warmth stereotype components. Words were selected by searching for synonyms of the words in the original competence measures (competent, confident, independent, competitive, intelligent, capable) and warmth measures (warm, friendly, tolerant, good natured, sincere) in the two primary investigations of the SCM (Cuddy, et al., 2007; Fiske, et al., 2002). This scale was administered to participants twice—once during the initial personality test battery, in which participants rate themselves on each item, and second regarding their assigned disabled work partner. The response scale is essentially the same, with the anchors either referencing themselves or their partner. Competence and warmth were each tapped with a total of ten words, rated on a six-point scale (1, very much like me/my partner, to 6 not at all like me/my partner).

### *Study Part 2*

*Part 2 Procedure Changes.* For this portion of the study, initially the procedure was designed to be conducted in an in-person session, as described below. However, following extended periods of data collection, it was determined that a fully online procedure would be most effective in gaining the number of participants necessary. The

in-person procedure is described first, with the amendments made for the online procedure described after.

*Part 2 In-Person Procedure.* Participants completed the writing task, and the experimenter left the room to “scan and copy” the essays from the session participants in order to distribute them for rating by the group. During this time, participants were instructed to read and take notes on the insurance brochure, as those notes would facilitate their work on a future exercise in the experiment. The experimenter was absent from the room for approximately ten minutes, but visibly moving and ‘working’ in the next room as seen through a two-way mirror. Additionally, an empty box for a large scanner was placed just outside of the experiment room, so that upon entering the lab, participants saw the equipment needed to scan and copy the packets.

When the experimenter returned to the room, participants were informed that two other participants in the session would evaluate each of them, and that they will read and rate three of their peers. The essays were actually generated for the experiment, with the manipulation embedded within a single health/wellness statement by one of the other “participants.” The essays were all copies of handwritten statements, with illegible student ID numbers blacked out with a marker. The health/wellness statements were each included in a packet with an insurance review statement, and the pairs were held constant. Pilot testing on the quality of the statements indicated that each of the three pairs of statements were generally consistent, with average pair scores of 3.93, 4.08, and 4.12, each on a five point scale across the five rating criteria (described below). Of the three pairs, the highest rated pair always consisted of the experimental condition statement.

In these essays, one ‘participant’ disclosed that he/she has a disability, by either stating that they have a specific mental, cognitive or physical problem, by stating that they have a ‘disability’, or both. Examples of these statements are included in Appendix 1.

Participants rated the writing quality of all essays and complete measures of the personality as well as their affective and behavioral reactions to each writer, and their work-related affective reactions. After rating all three writers, participants were instructed to complete rankings of the three in order of preference for a work partner on a second writing exercise. The second exercise was also fictional, a writing activity as part of research by the Health Sciences, Psychology and Communications programs to develop promotional materials to encourage incoming freshmen to purchase student health insurance. Participants were informed that the teams (actually dyads) would work together to write a persuasive and informative statement about the health insurance program, to be distributed to prospective students and incoming freshmen along with other information about the university. Participants were given a brief description of this exercise before being instructed to rank order their potential partners.

After rankings participants completed the rankings, they received Survey 1 (the Philosophies of Human Nature Scale) to complete while the experimenter matched participants using the fictional “Work Compatibility Algorithm, created by Miller and Jesten”, which they were informed computed ideal pairs based on both rankings as well as personality trait compatibility. Again, the experimenter was absent from the room for approximately 10 minutes, while ‘working’ in the next room to match teams.

The experimenter then returned with new copies of the essays written by each participant's assigned partner (all participants were matched with the disabled partner), to inform them of their partner on the next activity, along with the Team Expectations Scale. In this scale they were asked to report their expectations for performance with their partner, as well as their perceptions of their partner's competence and warmth. After completing these ratings, participants completed Survey 2, which included demographic information along with their opinions of the study to that point, as well as their level of experience with different disability types, followed immediately by Survey 3, which is a collection of the explicit disability attitudes scales. Before receiving Surveys 2 & 3, they were informed that the surveys were one last activity to be completed before being seated with their partner for the final activity. After completing Survey 3 however, they were informed that the final activity was fictional and debriefed regarding the purpose of the study.

Because of the level of deception in the study, participants were given their debriefing in written form, with a statement allowing them to remove their data from consideration in the study, by writing in their study ID (which will be their student ID in order to match their online survey data with their experiment data) and checking a box to remove their data from the study.

*Part 2 Online Procedure.* After approximately 80 participants had completed the study, it was determined that an entirely online procedure would facilitate faster data collection and reduce attrition between parts 1 & 2 of the study. At this point, the procedure was modified to allow participants to complete parts 1 & 2 entirely in one sitting, using the online survey engine, Survey Monkey. The changes required were

relatively minimal, mainly coming in the form of instructions which assisted participants in proceeding through the experiment website.

Participants signed up to participate in the study, and were then sent an email containing instructions to log into the study. Because of limitations of the survey engine, separate links were created for each condition, and participants were assigned to condition using a random number table prior to beginning the study, and received emails with links to the site for their assigned condition. The email also contained a 4-digit ID, which was unique to each participant, used to trace participation and award credits. The key file, which contained participant names and IDs, was kept separate from the study data file, and was discarded following the end of data collection.

When participants logged into the survey, they first completed the personality measures originally included in Part 1 of the study. Following completion of these measures, participants were informed that they had completed the first section of the study, and were instructed to enter their ID and proceed to part two.

The content of the experiment portion of the study was essentially the same as before, however, participants completed the essays by typing into a web form, and they viewed the insurance documents by clicking a link that opened a pdf document linked directly from the university health insurance program website. Participants were informed that the essays were to be randomly distributed for rating by a program within the survey engine, and that, the procedures for assigning work partners would be conducted by a computer rather than calculated by the experimenter. Additionally, when informed of the team writing activity, they were told that all communication with their partner would be completed using a specially designed internet chat program, to which

they would be directed following completion of the other measures. After completing Surveys 2 & 3, they were again given the written debriefing with a checkbox to remove their data from analysis, and signed it using their four-digit ID.

*Part 2 Materials.* These materials were used within the experiment portion of the study, and are described in the order they were administered.

*Writing Activity.* Participants were asked to write and rate two types of essays. The first essay was related to the participants' health while in college. The instructions for this essay were as follows:

Write 5-8 sentences about your health since coming to college. You do not have to disclose any specific behaviors, health issues, disorders, etc. that you do not wish to share. Think about your normal health/wellness behaviors, beliefs about health, and your overall physical and psychological health during your time in college. What/who has influenced you in your approach to health and wellness?

The second essay was related to the university's student health insurance program, and participants were asked to read a packet of materials distributed by the university's student health insurance office, and write a brief summary about the program, and their opinions of it. The instructions for this essay were as follows:

Using the information provided, write 5-8 sentences about the health insurance program for students at OU. Briefly describe the program (in 2-3 sentences) in terms of the general costs and benefits provided by the plans. Don't worry about getting too detailed or technical—we just want a general summary. Is the insurance sufficient? Do you utilize the student health insurance program (and why/why not)?

Participants were given two lined worksheets with these instructions and room to write each essay, as well as the health insurance program brochure, which is an illustrated, 15-page document with tables and charts outlining the program, and including information about the coverage and cost associated with the student health insurance program.

**Statement Ratings.** Participants viewed three pairs of written statements, each including a statement about another ‘participant’s’ health and wellness since coming to college, and a review of the student health insurance program at OU. Participants rated each of these six essays separately on five-point scales, ranging from 1(poor) to 5(excellent) on five criteria: completeness, organization, grammar and spelling, points well articulated/defended, and overall writing quality. As mentioned earlier, the rating packet also included questions asking participants to evaluate participants on the FFQM personality inventory, as well as the BIAS map scale, and work-related affect scale (both of which are described below).

*Disability-Related Feelings and Behaviors.* Contained within the rating packets for each of the three ‘participants’, items to tap affective reactions and reported behavioral reactions were developed based upon the BIAS map framework (Cuddy, et al., 2007). The BIAS map built off of the SCM research by determining affective reactions and behavioral tendencies associated with each of the four cells formed by the competence and warmth stereotype components. The emotions associated with the different cells are contempt, admiration, pity and envy, and behavioral tendencies included active facilitation (helping and protecting), active harm (fighting and attacking), passive facilitation (cooperation), and passive harm (exclusion). In order to include more



than a single item for each dimension, additional items were generated using the original study measure, based upon synonyms of the feelings and behaviors validated in the original paper. For each of the four components for both behaviors and emotions, three terms were included in a scale to be completed for each of participants' three potential work partners. The six-point response scale ranged from 1 (not at all how I would feel/act) to 6 (very much how I would feel/act).

*Work-Related Affect Scale.* The last section of the rating packets included the Work-Related Affect Scale (WRAS). This scale was developed as part of a dissertation regarding individuals' perception of their disabled coworkers (Wright, 1998). The ten-item scale will be completed by participants with respect to each of the three potential work partners (contained within the rating packet for each), and includes items related to feelings associated with general work activities such as "I would be comfortable providing performance feedback to this individual." The scale is rated on a seven-point scale, from 1 (strongly agree) to 7 (strongly disagree).

*Philosophies of Human Nature (Survey 1).* Philosophies of Human Nature was measured with four subscales from the full measure developed by Wrightsman (1964). Each subscale contains 5-7 items with response options on a 6-point Likert scale ranging from "Disagree strongly" to "Agree strongly". The four subscales measuring beliefs about one's first impressions, human variability, locus of control and complexity include items like "I find that my first impressions of people are frequently wrong," "Different people react to the same situation in different ways," "Most persons have a lot of control over what happens to them in life," and "You can't accurately describe a person in just a few words" respectively.

*Team Expectations Scale.* This nine-item scale was partially developed using items from the Cognitions subscale in the Multidimensional Attitudes Scale Toward Persons With Disabilities (MAS; Findler, Vilchinsky, & Werner, 2007). The items focus on the participant's expectations of the quality of the interaction between the participant and their assigned work partner as well as their team performance, rated on a five-point scale of 1 (strongly disagree) to 5 (strongly agree). An example item from this scale is "I think my partner and I will do really well on the task."

*Suspicion/Manipulation Check & Control Measures (Survey 2).* This scale, referred to as Survey 2 in the experiment, served several purposes. First, demographic items, including age, ethnicity, gender, and academic level allowed for comparison of various individual characteristics with respect to the perception and treatment variables. Second, items in this scale addressed participants' opinions of the study to this point, to detect suspicion of the true study purpose, as well as any elements of the study that may seem unique or noteworthy to them. Finally, the third section of Survey 2 will tap participants' level of experience with individuals of different disability types, including two scales of experience with disabilities, both of their own and those of acquaintances. The first scale consists of nine items rated on a six-point scale, (1, No knowledge/very infrequent, not at all intense, to 6, Extensive knowledge/very frequent/very intense) includes items regarding their general knowledge of developmental, physical and psychological conditions, as well as the frequency and intensity of contact of individuals with these types of conditions. The second scale has seven items rated on a six point scale (1, Never, to 6, Always), related to the individuals' personal experience of a variety of disabilities or disabling conditions, such as problems with seeing or hearing, mobility or

communication disorders. A final item asks the extent to which the participant has utilized the services of the disability resource center on campus. Survey 2 will be administered prior to administration of the explicit disability attitudes scales in order to ensure that the experimental manipulations are operating without indicating the true study purpose.

*Explicit disability attitudes measures (Survey 3)*

*Sympathy-Discomfort Scale.* Based upon the Interactions with Disabled Persons Scale (IDP), the two scales were formed based on factor analyses by MacLean and Gannon (1995). The sympathy and discomfort scales consist of six and five items, respectively, primarily the same from the Discomfort in Social Interactions subscale and Coping/Succumbing Framework subscale originally outlined by Gething (Gething, 1994; Gething & Wheeler, 1992). To address the debate regarding appropriate models to be used from the scale, all items from the scale will be included in the measure, allowing direct comparison of the different models proposed in the literature.

In addition to the IDP, participants will respond to a number of other scales intended to measure disability attitudes, the Attitudes Toward Disabled Persons Scale (ATDP; Yuker, et al., 1960), Attitudes Toward Employing Disabled Persons Scale (ATEDP; Loo, 2004), the Interaction (with Disabled Persons) Strain Scale (ISS; Wright, 1998), Knowledge Regarding Disabilities Scale (KRDS; Wright, 1998), and the Contact with Disabled Persons Scale (CWDP; Higgs, 1972). Multiple scales were deemed necessary for several reasons; first, the literature in this area has not provided clear support for any one scale, and each has been criticized for different reasons. Additionally,

it is possible that different elements of attitudes toward disabled persons are relevant, and each scale focuses on different aspects of interactions with disabled persons, such as affective reactions (IDP and ISS), beliefs about work-related capabilities and performance (KRDS and ATEDP), and general social perceptions (ATDP, CWDP, IDP). The scale characteristics and example items are presented in Table 1, and correlations, means, and reliabilities are presented in Table 2.

### Results

The data were collected across multiple semesters, and using two different media (online format and live, paper format), so the first stage of data analysis involved a review of the data to ensure that no differences based on medium or semester would emerge. This analysis included a brief review of means of the scale totals and comparisons of correlation matrices across the groups, and while some differences between the conditions existed, none of those differences were determined to be meaningful. Essentially, the variables that differed were either not directly related to any of the hypotheses or the differences, though significant, were not great enough in magnitude to warrant separate analysis, so the data were analyzed in a single dataset.

A number of methodological problems emerged during data collection. First, online data collection of the personality measures proved to be problematic, as some participants completed only partial measures and others skipped large portions of scales. Additionally, due to a server error in the online version of the experiment, one scale was replaced with another during the experiment portion of the study, making data from the Contact with Disabled Persons scale unusable. (However, the subject of experience and

familiarity with disabilities was captured in a number of scales, so that the concept could still be included in models in a slightly different form.)

*H1a. The Stereotype Content model will describe differences in participants' perceptions of their disabled peers, such that they will be stereotyped generally within the paternalistic group stereotype.*

Because the scale developed was intended to be a slightly-lengthened version of those used in previous studies (the original scale contained only 5 items each for competence and warmth), I conducted a maximum-likelihood exploratory factor analysis with a promax rotation rather than confirmatory, to investigate the utility of the new items added to the competence and warmth scales. Because it was expected that the factors would be negatively correlated, factors were allowed to correlate.

Rather than supporting the notion of the paternalistic group stereotype, the findings from the factor analysis of the SCM measure indicated a different perception of the disabled individuals. Participants viewed their disabled work partner in terms of the positive and negative valence of the traits in the scales, rather than along the competence & warmth dimensions. Factor analysis revealed two general factors, the first consisting of the 16 positive traits, and the second factor consisting of the remaining four negative traits. Additionally, participants generally viewed the disabled individual very positively, rating them high on both competence and warmth across all disability conditions. Of a possible high score of 60, participants rated the disabled individual (across all type and both term conditions) 43.57 (SD=5.48) on the competence scale, and 43.58 (SD=5.92) on the warmth scale, well above the midpoint of the scale (30) on both variables. This is instead consistent with perceptions of admiration and not paternalism, which is typically

associated with in-group members and close allies rather than disabled individuals (Fiske, et al., 2002).

To further investigate these results, I conducted additional factor analyses on the scales used in the original article by Fiske and colleagues (2002). In that paper, two different measures were used in separate studies, and items from each were incorporated into the scale used in this study. Factor analyses revealed two factors. These factors did not clearly represent competence and warmth, and many items crossloaded on both factors. Thus, it appears that both the original and revised measures may be psychometrically unsound and/or response biases with the study sample may have occurred (the latter possibility will be addressed later).

*H1b. Differences in the Sympathy-Discomfort Categories will describe emotional reactions to disabled persons.*

For both H1b & H1c, I conducted a stepwise regression, including both sympathy and discomfort in one step because there was no clear theoretical reason for including one variable first. As H1b pertained to emotional responses in the participants, I included each of the BIAS-Map affect scales (Pity, Contempt, Admiration and Envy) as well as the Work-Related Affect Scale, each of which was completed specific to each of the potential work partners, and analyses only included measures of the disabled individual. As Table 3 indicates, only admiration was significantly predicted by sympathy and discomfort. Interestingly, the direction for both sympathy and discomfort was positive. In other words, individuals high in sympathy and individuals high in discomfort reported higher levels of admiration.

*H1c. The SCM and Sympathy-Discomfort models will predict job-related expectations (of team performance and team outcomes) and treatment (performance ratings and choice of work partner) of those disabled persons.*

Presented in Table 4, analysis for H1c was conducted in a similar manner to the stepwise regression conducted for H1b. Performance Rating composite (which was marginally significant in the overall rating). For the SCM model, competence perceptions significantly impacted ratings of performance on Statement A and this relationship contributed to a marginally significant impact on the overall performance rating. The direction of the relationship is positive, as expected.

Additionally, the  $\Delta R^2$  was significant for Statement B ratings; however, neither of the beta weights was statistically significant. This may be due to the high correlation between competence and warmth ( $\alpha = .76, p < .001$ ). None of the ratings were significantly predicted by the sympathy and discomfort variables (See Table 4).

Finally, with respect to the Team Performance Expectations scale, the results indicated significant effects of competence and warmth, but no significant impact of either sympathy or discomfort (See Table 4).

*H2a/H3a. Individuals with psychiatric disabilities will receive lower ratings and individuals with physical disabilities will receive higher ratings on the “warmth” stereotype dimension than other disability types or controls.* A univariate analysis of variance indicated no significant differences in perceptions of warmth across disability types. However, with respect to psychiatric disabilities, the pattern of results was consistent with the hypothesis (H2a), in that generally the ratings for the individual with the psychiatric disability were lower than each of the other three disability types. The

physical disability individual was rated higher on the warmth dimension than the psychiatric disability individual, but lower than the generic disability or cognitive disability individuals.

The measures of competence and warmth were administered with respect to the assigned partner after participants were assigned the disabled individual as a partner. While this was originally intended to reduce the already large number of measures completed for each of the three potential work partners, this prevented direct comparison across the healthy and unhealthy controls on the competence and warmth measures.

Because the warmth ratings were not collected for the unhealthy and healthy control individuals, a second analysis was conducted to determine whether the control condition, which included no reference to disability symptoms or terms, differed from the generic disability condition or the specific disability types. No significant difference was found.

*H2b/H3b. Individuals with psychiatric disabilities will be ranked lower and individuals with physical disabilities will be ranked higher as potential work partner, and performance expectations will be lower for individuals with psychiatric disabilities and higher for individuals with physical disabilities than other disability types.*

A chi square test of significance was run to examine the assigned ranks across disability types (for the disabled individual only). Results indicated a significant difference across groups,  $\chi^2 = 19.95$ ,  $p < .05$ . Further examination of the differences indicated that the differences were actually contrary to what was predicted in the hypothesis. Participants selected the disabled individual as their first choice of work partner most frequently, and ranked the disabled individual as their last choice least often.



This pattern was consistent across all disability types, in other words, psychiatric disabilities were ranked no differently than physical disabilities. Table 5a presents the cell counts by rank for each disability type. Within condition, individuals with physical disabilities were least likely to be ranked first (by 37.5% of participants). Individuals with psychiatric disabilities were ranked first by 39.5% of participants, while individuals with cognitive and generic disabilities were rated first slightly more often (52.1% and 42.0% respectively).

Again, a univariate analysis of variance indicated no significant differences in expectations of team performance across disability types, and as with H2a/H3a, the pattern of results was consistent with the hypothesis that the psychiatric disability individual would be ranked lowest, but the physically disabled individual was not ranked highest.

*H4a. Psychiatric disabilities will be related to greater perceptions of neuroticism and lower levels of agreeableness.* A one-way MANOVA was conducted to investigate this hypothesis and H4b. While the trend of the data for both neuroticism and agreeableness was consistent with the hypothesis, again the results were nonsignificant.

*H4b. Cognitive/Developmental disabilities will be related to perceptions of lower competence.* This hypothesis was also not supported, and the nonsignificant results indicated a trend that was opposite of that which was predicted, such that the learning disabled individual was perceived as more competent (again, not significantly) than the other disability types.

*H5. Individuals who self-identify as “disabled” will be viewed more negatively (lower competence and warmth) than individuals who do not.* A significant difference did

emerge between individuals labeled 'disabled' versus those who did not use that term, however, it was in the opposite direction of the one predicted. Participants rated their disabled partner as significantly more warm when labeled as 'disabled' than when they were simply described in terms of a disabling condition  $F(1,179)=4.19, p<.05$ . This relationship was not significant for the competence dimension, though the differences were in the same direction. Refer to Table 6 for these results.

*H5a. "Disabled" individuals will be ranked lower as potential work partners and expectations for performance will be lower.* Using the same method as described above, I evaluated the overall differences with a chi square test of significance. The test did not yield any significant results, and no further analysis was conducted. Table 5b reflects the cell totals for by rank for the two conditions. Individuals labeled with a "disability" were chosen by 40.9% of participants in the condition, while those whose essays did not include the term were chosen by 45.2% of participants.

To investigate the differences in team expectations, a two-independent samples t-test was conducted. As seen in Table 6, no significant differences emerged between the groups based on the use of the disability term.

*H5b. Individuals reporting a disabling condition without using the term 'disability' will be viewed differently in personality characteristics than controls.* A multivariate analysis of variance (MANOVA) including participant perceptions of the disabled individual on four personality variables, agreeableness, neuroticism, conscientiousness and extraversion (openness was not included because the scale produced an unacceptably low reliability of .51) was conducted, comparing the Disability

and No Disability conditions. However, when including each of the four together in the model, no differences emerged across any of the traits (see Table 6).

Separate, repeated measures analyses of variance for each of the personality variables individually were conducted to directly compare the disabled individual with the healthy and unhealthy controls, and significant interactions were found for agreeableness ( $F(2,182)=3.40, p<.05$ ) and conscientiousness, ( $F(2,182)=5.69, p<.01$ ). In each case, the pattern of results was the same, in that the perceptions of the healthy control and disabled individual were high and positive, and did not differ based on disability term, but the unhealthy control condition was significantly lower for both disability term conditions, and those who had also read statements by a disabled individual without a disability term rated the unhealthy control more favorably (higher on agreeableness and conscientiousness) than in cases when the participant read a disabled statement including the word disability. This suggests that even at an unconscious level, some amount of comparison occurred between the candidates independent of the rankings and even performance ratings.

Though no differences based on disability term were found for extraversion, a main effect of individual (based on whether the individual was the healthy control, unhealthy control, or disabled) emerged for extraversion ( $F(1,182)=1.15, p<.05$ ). The pattern of data in this case differed from agreeableness and conscientiousness, however, in that the healthy control was rated as significantly higher in extraversion than either the disabled individual or the unhealthy control. The analysis of neuroticism yielded no significant results.

*H6. The relationship between disability type and psychological consequences for observers will be moderated by observer ethnicity, gender, and age.*

In line with the standards for moderation analysis set forth by Baron and Kenny (1986), the variables were first examined to determine which correlations were statistically significant, and only those would be included in analysis. Among the psychological consequences for observers, which included the BIAS-Map (affect and behavior intentions), Competence & Warmth scales, and Work-Related Affect, only pity was significantly related to disability type. The results of this analysis for ethnicity, gender and age are presented in Table 7. Specifically, males were less likely to report feelings of pity toward individuals with disabilities than females, and gender significantly moderated the relationship between disability type and pity. Females reported the highest levels of pity for the physically disabled individual, while males reported the highest levels for the generic/unknown disability. The converse was also true (females reported the lowest levels for generic/unknown condition and males reported the highest levels for the physically disabled condition). Both genders reported similar (high) ratings of pity for the psychiatric disability, and much lower levels for the cognitive disability.

Age was also a significant moderator, though ethnicity was not a significant moderator. Consistent with previous research, older individuals were slightly more sympathetic toward individuals with disabilities than younger individuals, and surprisingly, this pattern was significant even with small age differences in a college sample, with an age range of only 12 years (the participant sample ranged from 17-29, with only 9 individuals aged 22 and older). Generally, age moderated the relationship between pity and disability type such that pity toward physical disabilities was relatively

consistent across all ages, while, the other three types appeared to increase with age. However, given the range restriction of the sample, it would be advisable to interpret this data with caution.

As Table 7 indicates, interactive effects were observed for both age and gender, but not ethnicity. The  $\Delta R^2$  in both cases were statistically significant, and consistent with previous findings that suggested impacts of age and gender to a greater extent than ethnicity with respect to disability perceptions.

*H7. Individual differences (Big Five Personality, Social Dominance Orientation, Self-Esteem, Self-Efficacy, Philosophies of Human Nature and Intolerance for Ambiguity) and contact with individuals with disabilities will predict psychological consequences for observers.*

I examined this hypothesis first through plotting significant relationships between variables representing participant personality and psychological consequences for observers. These relationships are displayed in Table 8 (in bold). It is noteworthy that pity correlates negatively with agreeableness, but positively with extraversion and neuroticism (though the results for neuroticism should be interpreted with caution because of the slightly low reliability of the scale). Additionally, competence is related agreeableness and neuroticism, but warmth is not, while both are related to self-efficacy and self-esteem. Envy and contempt were negatively correlated with a majority of the personality variables, although contempt was positively correlated with social dominance orientation. Both were negatively correlated with both self-esteem and self-efficacy. Another surprising finding was the positive correlation between personal experience with disability and contempt. Admiration correlated only with social dominance orientation,

and this relationship was negative, as one would expect. Interaction strain was positively correlated with neuroticism, as well as self-esteem and social dominance orientation and familiarity with disabilities, however, it also positively correlated with social desirability, so these relationships should be interpreted with caution. Work related affect, scaled such that higher scores reflect more positive affective responses, correlated positively with both personal experience with disability and familiarity with disability scales and complexity beliefs.

*H7a. Individual differences (Big Five Personality, Social Dominance Orientation, Self-Esteem, Self-Efficacy, Philosophies of Human Nature and Intolerance for Ambiguity) and contact with individuals with disabilities will moderate the relationships between attributes of disabled workers and psychological consequences for observers (stereotypes and affective reactions).*

As with H6, only limited variables were significantly related to attributes of disabled individuals. Because of this, the moderation analysis was limited to dependent variables that differed based on the disability type or disability term conditions, which were Warmth and Pity. Again using the standards developed by Baron and Kenny (1986), moderators were excluded that were correlated with either the predictor or criterion variable, leaving five moderators for examination with warmth, and six for pity. For each moderator, separate moderation analyses were conducted to determine the impact of variable. Although main effects for some variables were observed, no moderation effects were statistically significant for either pity or warmth.

*H8. The relationship between disabled individual attributes, observer characteristics and treatment of disabled individuals will be mediated by psychological consequences for observers and observers' job-related expectancies.*

Because of the complexity of this hypothesis, I began with an examination of the relationships between the independent and dependent variables. The general standard with respect to mediation analysis requires that each variable included in the model is correlated with the others (Baron & Kenny, 1986). However, disability type and term were not significantly correlated with any of the outcome variables, nor were many of the observer characteristics. To address this, I focused on analysis of the factors that were related to treatment variables first. Table 9 reflects the results of these analyses. This hypothesis was intended to capture the model as a whole, though after eliminating the variables that could not be included in analysis because of the assumptions of the standards of mediation analysis, only a total of 14 mediation analyses were conducted (separate analyses were conducted based on the mediators that correlated with the independent and dependent variables, with the intention of conducting the smallest possible number of analyses).

With regard to passive facilitation, admiration significantly mediated in each case (for age, gender and social dominance orientation) and contempt mediated for gender and social dominance orientation, and the effects of admiration and contempt were negative, as would be expected. Interaction strain significantly mediated with both social dominance orientation and age, though interestingly, these relationships were positive.

For active facilitation, admiration and interaction strain significantly mediated the relationship between active facilitation with age, while work-related affect and team

expectations partially mediated age. As suggested above, the results related to age should be interpreted lightly, however, social dominance orientation, which was negatively correlated with interaction strain, was fully mediated by both admiration and interaction strain, but like passive facilitation, both beta weights were positive, suggesting that higher levels of strain and discomfort resulted in greater active facilitation.

In the largest mediation model, for active harm, only one mediator, contempt, was significant, however it fully mediated the effect of the only variable that was significant in step 1, self-esteem. Consistent with the research by Cuddy, et al. (2007), contempt was positively related with active harm.

The models for passive harm indicated that envy and pity partially mediated social dominance orientation, fully mediated agreeableness, and envy fully mediated complexity. Also consistent with the original BIAS-Map research, pity significantly mediated passive harm, however, unlike in their research, envy also significantly predicted passive harm, mediating agreeableness, social dominance orientation and complexity.

The choice of work partner mediation analyses demonstrated that admiration was a marginally significant mediator for gender, and work-related affect was a marginally significant mediator for gender and variability. Neither competence nor warmth perceptions were significant mediators for the complexity and variability variables.

Finally, with respect to the performance ratings, admiration significantly mediated the relationship between performance ratings (for both Statement B ratings and Overall Performance Rating Composite) and gender). Because females were coded as 0, and



males as 1, this analysis indicates that females actually tended to give lower ratings, and this relationship was mediated by admiration.

Generally, it is clear that many of the psychological consequences for observers as well as team expectations mediated the relationship between observer attributes and treatment. It is noteworthy that the BIAS-Map affect scales were generally significant mediators in many instances, as was interaction strain. Many of the other moderators were only significant for individual variables.

## Discussion

This research contributes to the growing body of literature related to the difficulties faced by individuals with disabilities. These individuals represent a substantial proportion of the population, and their unemployment rates are more than double of the nondisabled population (Bureau of Labor Statistics, 2009). Those who are able to obtain employment are often challenged with finding employment full-time (Hotchkiss, 2004), and even when they do, organizations are often slow to adopt disability-friendly workplaces (Wooten & James, 2005). This paper was an attempt to examine some of the mechanisms underlying the treatment that disabled workers experience from peers and supervisors. The results, summarized in Table 10, are mixed, but still offer insight into these mechanisms as well as some recommendations for future research in this area.

### *Models of Disability Perceptions*

A supplemental analysis of the Interactions with Disabled Persons scale was conducted to examine the question of which of the three models presented the greatest

utility. I began with a comparison of the three primary models using items from Interactions with Disabled Persons scale. Confirmatory factor analysis revealed that both the 2-factor model and the 3-factor model were superior (with respect to model fit) to the model proposed by Gething and colleagues. However, CFA indicated that none of the models fitted particularly well, suggesting that there remains a need for improved models and measures of attitudes toward the disabled.

Despite the poor fit of the two-factor model, the conceptual parsimony of the dimensions relative to the two alternative approaches and the high internal consistency of the scales (internal consistency reliabilities for the 2F sympathy and discomfort scales were .88 and .93, respectively) suggested that additional research on this model may be productive.

The sympathy-discomfort variables accounted for significant variance in one of the emotional reaction variables, admiration. However, the positive beta value for the discomfort dimension appears to be in conflict with what would be suggested in by previous research, though the relationships between the variables were not explicitly specified in the hypothesis. It is unclear why higher levels of discomfort would be related to higher levels of admiration. It is possible that a form of response bias was operating here, particularly given the problems associated with the IDP scale generally.

Interestingly, only one variable from the SCM and Sympathy-Discomfort models was significantly related to performance ratings (competence), and it was related only to Statement A ratings and the Overall Performance rating composite combining ratings for Statements A and B. Statement A was about the students' health while in college, and was intended to be more about the student personally, and less technical. This statement

should have been (slightly) less related to the future task, as the content was not related to the student health insurance, whereas both Statement B and the partner task were related to descriptions of the student health insurance program.

It is noteworthy that these variables impacted the statement in which the content was personal, but not in which the content was technical. Perhaps competence perceptions and sympathy reactions are more relevant in these cases when performance ratings are based on behaviors where characteristics of the ratee are more difficult to separate from the behavior. In other words, in the Statement B, participants may have been able to separate the individual from the technical aspects of writing quality because the content of the statement allowed them to do so. Even though the statements were paired as a unit, participants rated the statements independently, and the content along with SCM/Sympathy-Discomfort model variables interacted to impact ratings on Statement A.

With respect to the Team Expectations, the SCM variables competence and warmth each significantly predicted expectations, and neither of the sympathy or discomfort variables were significant predictors (though sympathy was marginally significant). Given that the expectations scale consisted primarily of items related to how well the participant anticipated working with the individual, it is not surprising that their perceptions of the disabled individual's competence and warmth predicted expectations of team performance. However it is surprising that sympathy and discomfort were not significantly related to expectations, though again measurement issues may be to blame here. It is possible that the general concepts would be related if measured with an improved technique.

Issues with the SCM measures may have been due to the timing of the administration of the measure. Participants may have experienced a certain amount of cognitive dissonance, accepting the fact that they were already being placed in a situation in which they would have to work with this individual, and perceptions of the individual as well as performance expectations reported after this point would be impacted by the (unconscious) desire to make the work experience as pleasant as possible.

### *Disability Type*

Generally, little significant difference occurred based on disability type manipulations. However, in several analyses the pattern of results followed the general prediction that individuals with psychiatric disabilities would be perceived most negatively, while those with physical disabilities would be perceived most positively. While the pattern of results was consistent with the study predictions, the difference in perceived partner warmth was not statistically significant across disability types. This may be due to the timing of the measurement of the competence and warmth perceptions. This supports the idea that the strength of the situation was enough that it overpowered any individual biases, at least with respect to initial perceptions of coworkers.

The pattern of results was consistent with the hypothesis, however the differences between disability types were not statistically significant. The lack of significant results may be explained by the strength of the manipulation, which was intentionally made to be more subtle, and relate to less severe psychiatric issues. The majority of research regarding attitudes toward psychiatric disabilities focuses primarily on severe conditions such as bipolar disorder and schizophrenia, which are considerably less prevalent in the

population than anxiety disorders, though they are more publicized in popular media. Additionally, it is possible that this result is reflective of a change in attitudes, particularly among young people, regarding psychological problems, as greater efforts to de-stigmatize these problems are emerging, and psychopharmacological breakthroughs are offering medical treatments that support the notion of psychiatric issues as medical diseases increase.

Physical disabilities were not perceived differently than other types. Surprisingly, it appeared that participants viewed their disabled work partner similarly with respect to warmth across all disability types. Individuals with psychiatric disabilities were perceived less positively than other disability types, however these differences were not statistically significant.

The pattern of results related to psychiatric and learning disabilities was somewhat supportive of the hypothesis. As found in previous research, psychiatric disabilities were perceived less positively than other types of disabilities, specifically, being lower in agreeableness—however both psychiatric and physical disabilities were perceived worse than cognitive or generic disabilities. Still, none of these differences were statistically significant.

Again, participants seemed to perceive individuals with psychiatric disabilities more negatively than others, and interestingly, cognitive disability type was not a significant predictor of lower perceptions of competence. While the difference was not significant, the cognitive disability type was viewed slightly more competent than the other disability types. It is possible that perceptions of cognitive disabilities among college students are changing, in line with increasing diagnoses of many learning

disabilities like ADD and ADHD (Pastor & Reuben, 2008). With increasing exposure to disabilities, research has suggested that perceptions of disabilities tend to improve (e.g. Cambra, 1996; Fichten, et al., 1997). Perhaps the increase in prevalence has provided college students with greater exposure to disabilities, and given the reduced stigma associated with learning disabilities (McLaughlin, et al., 2004), this could dampen their effect on how individuals with these conditions are perceived. Given the increasing prevalence (or at least rates of diagnosis) of many learning disabilities, increased exposure should be considered in future research of perceptions of individuals with disabilities.

Among the three analyses included in the demographics analysis, age and gender both significantly moderated the relationship between disability type and pity. Pity was the affective reaction that the BIAS-Map predicts will be associated with individuals with disabilities (Cuddy, et al., 2007), and is frequently cited generally as an affective reaction experienced by individuals interacting with disabled persons. However, these findings support other studies that have indicated that affective reactions are not consistent across groups, and that certain demographic groups are more susceptible to these reactions than others (Harasymiw, et al, 1978; Jones & Stone, 1995).

#### *Disability Labels*

Of the personality and SCM variables compared on the basis of the use of the disability term, only warmth was statistically significant, and the difference was in the opposite direction of what was predicted. Interestingly, participants perceived the individual who referred to him/herself as disabled as significantly more warm than the individual who did not. Perhaps this is related to a sense that the individual using the term

disability is putting the reader at ease by directly addressing the issue. Research has suggested that in some work contexts, such as interviews, disabled interviewees who directly acknowledge their condition are perceived more positively than those who do not (Hebl, & Skorinko, 2005). While the other variables were not significantly different based on the use of the term, it makes sense that warmth, which can be thought of as similar to approachability, would be the variable to differ across groups, given how important the reduction of discomfort (through higher levels of perceived warmth) is to enhancing communications.

With regard to the partner ranking, no significant differences were found, which is perhaps not unexpected given the lack of significant differences across perceptions of the competence variable and personality characteristics, as well as team performance expectations. However, given that the warmth variable was significantly different, it is apparent that participants may have been focusing on more than simply personality (or at least more than just the warmth variable) when considering a work partner, so task performance apparently was at least considered in addition to traits like warmth in ranking the three candidates.

### *Comparing Disability and Controls*

The pilot testing of the essays illustrated that they were approximately equal in terms of quality; however, the piloting did not examine any impacts of the content. Despite the similarities in performance found in piloting, the pattern of differences emerged between the disability and healthy and unhealthy controls across all variables seems to suggest that generally, the healthy control and disabled individual were

perceived similarly. This lends itself to several possible interpretations; first, that the manipulation of disability was not strong enough to differentiate it from the healthy individual, and since I had purposefully tried to separate general physical health from the condition of the specific condition, the unhealthy individual was simply perceived generally more negatively because it stood out in generally negative ways aside from disability. Second, the operationalization of healthy and unhealthy behaviors, which had been based on essays written by college students from the university, may have been too strongly associated with other positive and negative behaviors that outweighed the characteristics of disability, particularly in the case of the unhealthy behavior.

In other words, the unhealthy control individual may have just seemed like someone who just was irresponsible, lazy, and or an otherwise poor performer because of the content of the health behaviors essay. For example, the essay includes statements that blame others for influencing him/her to eat poorly or avoid the gym, only going to a doctor when forced by a parent, and repeated statements about poor eating habits. The repetition of negative information was apparently excessively negative, and the pattern of results for virtually every variable across the three candidates illustrated significantly more negative views of the unhealthy controls than the other two conditions. This effect was consistent across all conditions for all of the BIAS Map affect variables, behaviors, work-related affect, performance ratings, as well as personality.

### *Individual Differences*

The number of significant relationships lends further support to the model proposed by Stone & Colella (1996), with a number of caveats; first, the personality



measures were all self-report, primarily scaled with Likert-type scales, and method bias is a significant concern. With that in mind, however, the relationships that were significant were generally in line with what one would expect given the nature of the scales, so while correlations should not be used to make substantial inferences, in this case they do appear to reflect several interesting patterns. For instance, of the psychological consequences, the variables that were significantly predicted by most of the individual differences were Pity, Envy and Contempt, three of the four elements of the BIAS-Map affective reactions. Again, the BIAS Map is emerging as key figure in the model, and demonstrates the importance of affective reactions in the context of disability perceptions, and the potential for use of affective reactions in modeling workplace behaviors toward and regarding disabled workers.

However, it is also noteworthy that when including the individual differences as moderators between disability type and pity and between disability term and warmth, none of the individual differences were statistically significant. Many of the psychological consequences as well as team expectations did significantly mediate the relationship between observer characteristics and treatment of disabled individuals. The treatment variables included were both the choice of work partner as well as performance ratings as well as the self-reported expected behaviors toward the individuals. The category was intentionally developed to be a more rich form of treatment, encompassing judgments (that would be associated with future actions) as well as anticipated behaviors and actual behaviors, in the form of a choice. While a partner choice task has less fidelity than other behaviors one might complete in a laboratory setting, the activity was

developed to offer the participant the greatest opportunity at realism without the use of confederates or more elaborate study procedures.

In many work settings, employees are given some opportunities to choose individuals with whom they would like to work on team projects, whether formally or informally, and they often are required to provide performance assessments of coworkers, so these forms of treatment variables have relevance to many workplace settings. Additionally the behavior variables are likely related to how disabled workers experience teams as well as social environments. Numerous studies have indicated that coworkers are highly aware of individuals with disabilities with respect to accommodations that they may receive (e.g. Garcia, et al., 2005). This awareness also translates to ratings of task performance (Miller & Werner, 2005), which was supported by the positive relationship between the admiration variable and the performance rating for both Statement B as well as the Overall rating.

### *Limitations*

Because of the nature of the new and untested scales, measurement problems were a significant issue throughout this project. Additionally, completion of data collection within a reasonable time required changes in data collection methods from live sessions to online sessions, administered together in a large battery of scales and exercises, which likely resulted in fatigue along with a number of other sources of error. The problems associated with the measures themselves appear to be the dominant issue in the study, and using less common measures of the Big Five, new, short scales for the BIAS map and SCM measures, as well as smaller samples to test large, complex models,

make the probability of interpretable results more likely. This project was an ambitious attempt to tackle many issues within a single study, and would have best been approached in a two- or three-experiment series rather than all at once to avoid some of these problems.

Additionally, the development of the new measures for the BIAS-Map and SCM scales was based upon the research of Fiske and her colleagues; however, full validations were not conducted with the scales due to time and resource constraints. Because those scales represented such a significant portion of the study, it would have been advisable to complete a more thorough investigation of those scales prior to beginning this project, in order to ensure that the criteria were of acceptable quality. Generally, however, after correcting for a couple of individual problematic items, the scales were acceptable for use in the study, though future research in this area should include time dedicated to a more intense scale development and validation phase.

With respect to design, the creation of the essays appears to have been a critical element to the reason for some of the surprising results in this study. Perhaps if the control essays had been more subtly different from the experimental condition, the disability manipulations would have had a greater impact on some of the outcome variables. Additionally, the disabled individual was evaluated as higher in performance ratings than the other conditions—the essays should have been more thoroughly developed and piloted to ensure that they were equal in terms of both writing quality and health behaviors that the content captured those health behaviors independent of any other types of personality or other work behaviors (such as conscientiousness or similar

work-related concepts) that could bias ratings. In the future, research of this kind should also focus on thorough pilot studies of the stimuli to be used.

### *Contributions to Future Research*

This study represented an effort to take a new approach in the area of disability research, with respect to the methods, measurements, and theoretical approach. This research offers a unique insight into some of the mechanisms underlying the cognitions and affect related to the perceptions of disabled persons, and how those perceptions may impact workplace relationships and expectations. It also provided behavioral criteria related to a number of the most frequently used measures of disability attitudes, as well as two frameworks for understanding stereotypes associated with disabled persons and both affective and behavioral reactions to different disability types. Few studies thus far have captured behavioral data with respect to individuals of different disability types, and this information is critical to understanding the issues faced by disabled persons in a work environment. It is expected that this study also provided useful information about coworkers' expectations of disabled individuals' performance, as well as the perceived personality characteristics of disabled persons.

Finally, this study also provided greater evidence of the psychometric qualities of the numerous explicit attitude scales, and potentially supports the need for development of measures that have greater utility in the workplace as well as those that may take disability type into consideration. The majority of the hypotheses were not supported, however, the differences found between groups were either in line with the hypotheses, and those that were not, can be explained by experimenter errors (as was the case with

the measures that were not administered to the entire sample) or design issues (such as the timing of the administration of the competence and warmth scales). Because of this, the findings in this study still merit consideration for further research in the area, particularly with use of more high-fidelity simulation and other experimental methods.

Disabled workers face numerous challenges associated with interpersonal isolation or conflict, discrimination or reduced access to organizational resources, and current literature on the subject suggests that this varies by disability type. However, few studies have examined this with methods beyond self-report surveys or interviews, and this project presented participants with the opportunity to evaluate and choose among disabled and nondisabled potential work partners. Although the participants were unsure of exactly who in the experiment is the disabled person, the study was designed to create the illusion that the statement is written by another individual in the room. This was expected to have higher fidelity than previous research which has relied on ratings of completely hypothetical 'paper people', and elicit more realistic responses from participants.

Ultimately it is expected that this study will lead to further research into the experiences of disabled individuals in the workplace, and potentially provide insight into the mechanisms that serve to exclude many disabled persons from employment. Research in the area of contact with disabled persons has suggested that attitudes toward individuals with disabilities generally improve with greater levels of contact with them. It is likely that improving conditions for disabled workers, and increasing the numbers of individuals who are disabled in organizations, will further improve the quality of life for

disabled individuals, as well as adding greater diversity to the American workforce in general.

## Appendix 1

### *Health/Wellness Statements* (Manipulations are italicized)

#### **A-8 (Control- NO “DISABLED”) 205 Words, Reading Level, 7.1**

I consider myself a healthy person. I work out two times a week, and try to eat well. I am much more active than I was before coming to college, because I didn't have a gym to go to and I didn't do any sports. I don't have a car, which means I have to walk everywhere, and that's good exercise, even though I don't like having to go outside when it's cold out. *College can get really stressful and it's hard to keep up sometimes.* I miss out on sleep sometimes because of school, and that tends to make me sick, but it's usually only a cold. I try to take vitamins and drink lots of water when I get sick, which helps a little. Since my brother goes to OU too, when I got here he helped me get used to college and working out so I wouldn't gain weight my first semester. He helped me make a diet plan that I've been able to stick with so far. I still have about three or four more years here, so I'd like to maintain my weight, cut back on sugar and not eat any junk food for most of my time in school.

#### **A-9 (UNHEALTHY CONTROL) 213 Words, Reading Level, 7.3**

I 'm the kind of person who doesnt go to the doctor unless my mom makes me. I know that being healthy is important, but I dont always do things that I should. I try to exercise and eat healthy, but I a lot of time I don't have time with my busy schedule, and since last semester I gained a few pounds. For example, when I spend all day in the library, a lot of times I don't eat unless I grab something from a vending machine. I also drink way too much coffee to stay awake, and then I get stomachaches from the combination of too much caffeine and an empty stomach. Once I make it home from campus, I don't feel like exercising, so I just hang out in my dorm room to get a little rest. My mom has tried to encourage me to be healthy and take care of myself when I'm at school. But I feel like my friends just try to make me ignore that. Friends will try to get you to eat something unhealthy to make them feel better about eating it. They do the same with exercising. Everybody does it, but its tough to maintain a healthy lifestyle when friends are the main influence in college.

#### **A-10 (HEALTHY CONTROL) 215 Words, Reading Level, 7.2**

My first year I lived in the dorms and I caught everything that any person on my hall had met. I got to know the doctors at Goddard pretty well. Since I moved out of the dorms, I am a lot healthier. I try to watch what I eat, the amount of people I am around and the time I can exercise, though I still get sick sometimes because I don't have time to sleep as much as I need. When I was in high school, I started running to help me deal with stress, and since coming here I run or work out a few times a week at the gym. It gives me energy and I don't feel bad eating fast food after a long run. I used to stress out about eating any kind of junk food, or even having soda, but now that doesn't bother me as much anymore. I still try to make sure I eat healthy, but I still treat myself every now and then. My friends really helped me change the way I think about what to eat and how it will affect me. I want to keep running and being happier with myself for the rest of college, so I can be healthy even after I graduate.

**A-7 (Control- “DISABLED”) 211 Words, Reading Level, 7.1**

I consider myself a healthy person. I work out two times a week, and try to eat well. I am much more active than I was before coming to college, because I didn't have a gym to go to and I didn't do any sports. I don't have a car, which means I have to walk everywhere, and that's good exercise, even though I don't like having to go outside when it's cold out. *College can get really stressful, and with my disability, it's hard to keep up sometimes.* I miss out on sleep sometimes because of school, and that tends to make me sick, but it's usually only a cold. I try to take vitamins and drink lots of water when I get sick, which helps a little. Since my brother goes to OU too, when I got here he helped me get used to college and working out so I wouldn't gain weight my first semester. He helped me make a diet plan that I've been able to stick with so far. I still have about three or four more years here, so I'd like to maintain my weight, cut back on sugar and not eat any junk food for most of my time in school.

**A-6 (Cognitive- “DISABLED”) 213 Words, Reading Level, 7.3**

I consider myself a healthy person. I work out two times a week, and try to eat well. I am much more active than I was before coming to college, because I didn't have a gym to go to and I didn't do any sports. I don't have a car, which means I have to walk everywhere, and that's good exercise, even though I don't like having to go outside when it's cold out. *College can get really stressful, and it's hard to keep up sometimes, since I have problems concentrating and focusing because of my learning disability, but I've been getting treatment for it, which is helping a lot.* I miss out on sleep sometimes because of school, and that tends to make me sick, but it's usually only a cold. I try to take vitamins and drink lots of water when I get sick, which helps a little. Since my brother goes to OU too, when I got here he helped me get used to college and working out so I wouldn't gain weight my first semester. He helped me make a diet plan that I've been able to stick with so far. I still have about three or four more years here, so I'd like to maintain my weight, cut back on sugar and not eat any junk food for most of my time in school.

**A-5 (Cognitive- NO “DISABLED”) 215 Words, Reading Level, 7.2**

I consider myself a healthy person. I work out two times a week, and try to eat well. I am much more active than I was before coming to college, because I didn't have a gym to go to and I didn't do any sports. I don't have a car, which means I have to walk everywhere, and that's good exercise, even though I don't like having to go outside when it's cold out. *College can get really stressful, and it's hard to keep up sometimes, since I have problems concentrating and focusing, but I've been getting treatment for it, which is helping a lot.* I miss out on sleep sometimes because of school, and that tends to make me sick, but it's usually only a cold. I try to take vitamins and drink lots of water when I get sick, which helps a little. Since my brother goes to OU too, when I got here he helped me get used to college and working out so I wouldn't gain weight my first semester. He helped me make a diet plan that I've been able to stick with so far. I still have about three or four more years here, so I'd like to maintain my weight, cut back on sugar and not eat any junk food for most of my time in school.



**A-4 (Psychiatric -“DISABLED”) 211 Words, Reading Level, 7.1**

I consider myself a healthy person. I work out two times a week, and try to eat well. I am much more active than I was before coming to college, because I didn't have a gym to go to and I didn't do any sports. I don't have a car, which means I have to walk everywhere, and that's good exercise, even though I don't like having to go outside when it's cold out. *College can get really stressful, and it's hard to keep up sometimes, since I have problems with anxiety, but I've been getting treatment for my disability, which is helping a lot.* I miss out on sleep sometimes because of school, and that tends to make me sick, but it's usually only a cold. I try to take vitamins and drink lots of water when I get sick, which helps a little. Since my brother goes to OU too, when I got here he helped me get used to college and working out so I wouldn't gain weight my first semester. He helped me make a diet plan that I've been able to stick with so far. I still have about three or four more years here, so I'd like to maintain my weight, cut back on sugar and not eat any junk food for most of my time in school.

**A-3 (Psychiatric- NO “DISABLED”) 213 Words, Reading Level, 7.3**

I consider myself a healthy person. I work out two times a week, and try to eat well. I am much more active than I was before coming to college, because I didn't have a gym to go to and I didn't do any sports. I don't have a car, which means I have to walk everywhere, and that's good exercise, even though I don't like having to go outside when it's cold out. *College can get really stressful, and it's hard to keep up sometimes, since I have problems with anxiety, but I've been getting treatment for it, which is helping a lot.* I miss out on sleep sometimes because of school, and that tends to make me sick, but it's usually only a cold. I try to take vitamins and drink lots of water when I get sick, which helps a little. Since my brother goes to OU too, when I got here he helped me get used to college and working out so I wouldn't gain weight my first semester. He helped me make a diet plan that I've been able to stick with so far. I still have about three or four more years here, so I'd like to maintain my weight, cut back on sugar and not eat any junk food for most of my time in school.

**A-2 (Physical- “DISABLED”) 215 Words, Reading Level, 7.2**

I consider myself a healthy person. I work out two times a week, and try to eat well. I am much more active than I was before coming to college, because I didn't have a gym to go to and I didn't do any sports. I don't have a car, which means I have to walk everywhere, and that's good exercise, even though I don't like having to go outside when it's cold out. *College can get really stressful, and it's hard to keep up sometimes, since I have problems getting around, but I've been getting treatment for my disability, which is helping a lot.* I miss out on sleep sometimes because of school, and that tends to make me sick, but it's usually only a cold. I try to take vitamins and drink lots of water when I get sick, which helps a little. Since my brother goes to OU too, when I got here he helped me get used to college and working out so I wouldn't gain weight my first semester. He helped me make a diet plan that I've been able to stick with so far. I still have about three or four more years here, so I'd like to maintain my weight, cut back on sugar and not eat any junk food for most of my time in school.

**A-1 (Physical- NO “DISABLED”) 211 Words, Reading Level, 7.1**

I consider myself a healthy person. I work out two times a week, and try to eat well. I am much more active than I was before coming to college, because I didn't have a gym to go to and I didn't do any sports. I don't have a car, which means I have to walk everywhere, and that's good exercise, even though I don't like having to go outside when it's cold out. *College can get really stressful, and it's hard to keep up sometimes, since I have problems getting around, but I've been getting treatment for it, which is helping a lot.* I miss out on sleep sometimes because of school, and that tends to make me sick, but it's usually only a cold. I try to take vitamins and drink lots of water when I get sick, which helps a little. Since my brother goes to OU too, when I got here he helped me get used to college and working out so I wouldn't gain weight my first semester. He helped me make a diet plan that I've been able to stick with so far. I still have about three or four more years here, so I'd like to maintain my weight, cut back on sugar and not eat any junk food for most of my time in school.

## Statements about OU Health Insurance

### **B-1 (Words- 208, Reading Level, 10.9)**

To get health insurance at OU, you have to meet certain requirements depending on student status. If someone meets these requirements, then the person has the option to choose between Plan I and Plan II. Both plans are good coverage, but plan I has coverage that's broader. The insurance program is a program that lets current OU undergraduates and graduate students to obtain health services from the Goddard clinic. It lets students enrolled in the university have health care at low deductibles and provides reasonable prices on various medicine. I think the insurance at the university is probably okay since elsewhere the cost incurred for healthcare is far higher than it is with the health insurance program at OU. I don't have the health insurance plan right now at OU since I don't know whether or not I can have it with my current health insurance plan. But for people who don't have any insurance, or expensive insurance, this program is reasonable I guess. Based on the information packet, the guidelines seem to cover everything, but I would need to see the whole policy to decide if the coverage was good enough. The guidelines talk about additional or partial coverage but they don't explain what those might be.

### **B-2 (Words- 215, Reading Level, 11.9)**

The insurance covers 100% of most of the basic things like doctor visits at Goddard, vaccinations and physical therapy, and 80% of emergency care. Dependents are covered for that too, but at a lower amount than the student. You are automatically eligible for coverage if you are a full-time student enrolled in the University or if you are an International student regardless of credit hours you are eligible for coverage. You can get coverage year round as long as you are a student of the university. Students are required to go to Goddard Medical Center to receive full benefits, otherwise they may have to pay deductibles or show why they went somewhere else for treatment. As soon as you graduate or leave the University you are not eligible for the Health plan anymore. I don't have the student insurance but I have had appointments at Goddard and they are relatively cheap. I go to Goddard because I am away from home and never got set up with a regular doctor in Norman. It is pretty reliable care and doesn't cost much for a doctor's visit, counseling or other appointments. It seems like if a family can afford the thousands of dollars worth of tuition, the health service fees are most likely affordable for them too.

### **B-3 (Words – 211, Reading Level 12.0)**

The student health plan is available to undergraduate, graduate and international students who are enrolled full time at the University of Oklahoma. To be seen at Goddard, you have to be a student at the university. Students with a dependent (unmarried, under 19) or a spouse may choose to add insurance for them. No applications or changes are allowed after the deadlines, except in the cases of qualifying events, like births, deaths, adoption, marriage divorce, change of status, or gain/loss of other insurance. Changes must be made within 31 days of the event. Goddard Health Center is the primary care facility, but if Goddard is closed, the primary provider of emergency treatment is Norman Regional Hospital. In order to enroll online, students must have a working OU email address, agree to have the insurance billed to the bursar account, and complete all enrollment forms before the university deadline. International students can also be covered under certain

requirements. The insurance is generally fine, depending on what kind of health issues the student has. I don't use the student health insurance because I am covered through my parents' insurance. However, if I wasn't, I would only use the insurance if it offered full prescription coverage and specialty doctors not available at Goddard.

Figure 1: Modified Model of Treatment of Disabled Workers (Stone & Colella, 1996)

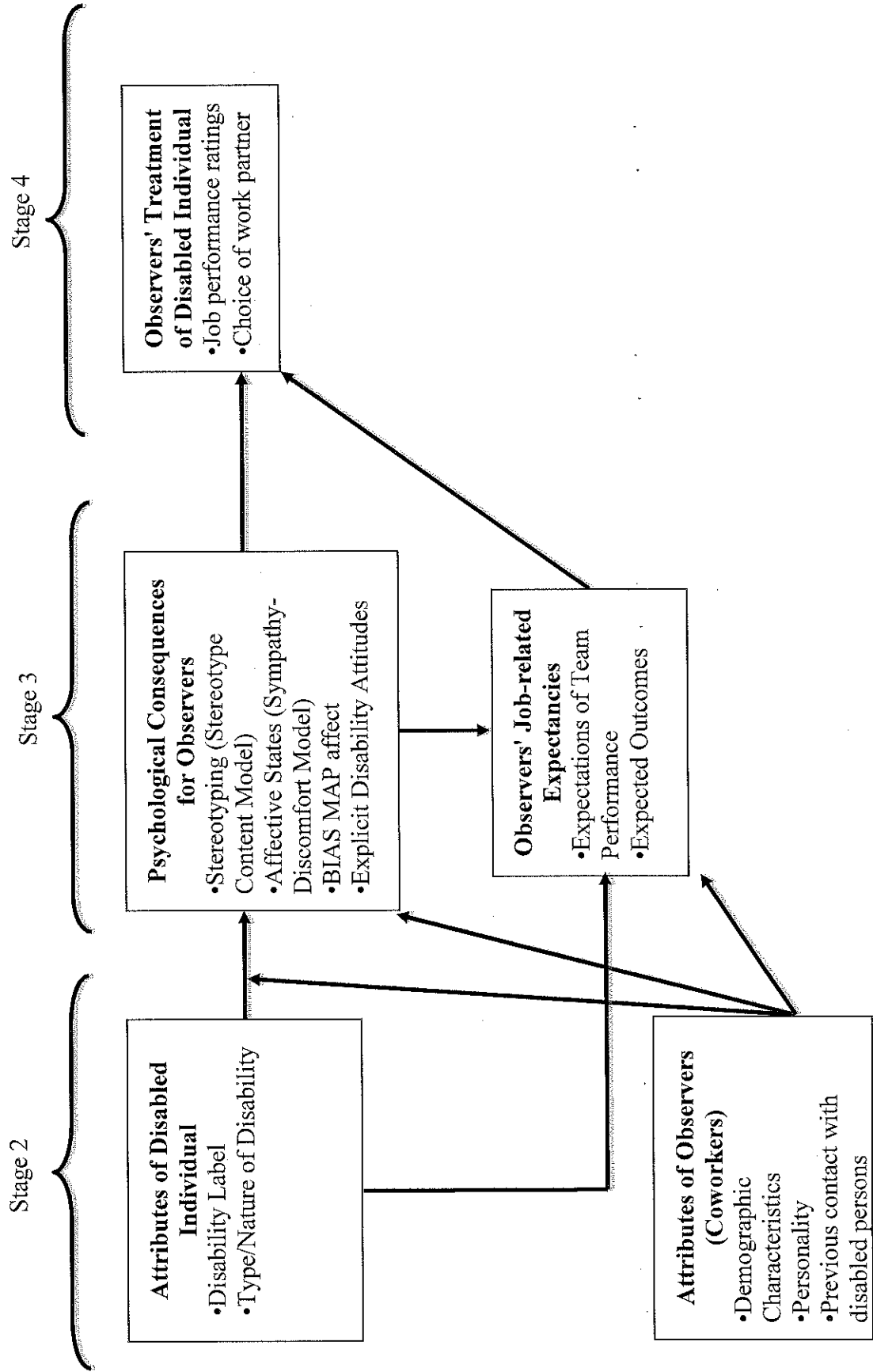


Table 1: Explicit Disability Attitudes Measures

| Scale Name  | No. of Items | Response Scale  | Example Item  |
|---|--------------|---|---|
| Interactions with Disabled Persons Scale            | 20           | 6-point Likert 1(Strongly Disagree) to 6 (Strongly Agree)       | "I can't help staring at them."   |
| <i>Discomfort in Social Interaction<sup>a</sup></i> | 6            |   | "I feel frustrated because I don't know how to help."   |
| <i>Coping/Succumbing Framework<sup>b</sup></i>      | 4            |   | "I feel ignorant about disabled people."  |
| <i>Perceived Level of Interaction</i>               | 5            |   | "I am grateful I do not have such a burden."  |
| <i>Vulnerability</i>                                | 2            |   | "After frequent contact, I notice the person, not the disability."                              |
| <i>Coping</i>                                       | 2            |   | "Contact with a disabled persons reminds me of my own vulnerability."                           |
| <i>Vulnerability (2)</i>                            | 2            |   | "It would be best for disabled persons to live and work in special communities."                |
| Attitudes Toward Disabled Persons Scale             | 20           | 6-point Likert 1(I disagree very much) to 6 (I agree very much) |   |
| Attitudes Toward Employing Disabled Persons Scale   | 13           | 6-point Likert 1(Strongly Disagree) to 6 (Strongly Agree)       |   |
| <i>Organizational Policies &amp; Procedures</i>     | 6            |   | "Disabled employees need extra training."   |
| <i>Organizational Climate</i>                       | 5            |   | "Organizations tend to discriminate against the disabled."                                      |
| <i>Working with Disabled Employees</i>              | 2            |   | "Whether a coworker is able or disabled makes no difference to me."                             |
| Interaction (with Disabled Persons) Strain Scale    | 17           | 7-point Likert 1(Strongly agree) to 7 (Strongly disagree)       | "Most people would be somewhat embarrassed being seen with a person who has a disability."      |
| Knowledge Regarding Disabilities Scale              | 20           | 7-point Likert 1(Strongly agree) to 7 (Strongly disagree)       |   |
| <i>General Knowledge</i>                            | 9            |   | "I am not aware of how persons with disabilities typically feel about their own condition."     |
| <i>Knowledge Regarding Disabled Workers</i>         | 11           |   | "I understand the consequences disabilities are likely to have on the quantity of work output." |
| Contact with Disabled Persons Scale                 | 22           | Dichotomous Yes-No ratings                                      | "I often see and sometimes talk to several people with a disability during a normal week."      |

<sup>a</sup>Items are also in the MacLean & Gannon Discomfort Scale

<sup>b</sup>Items are also in the MacLean & Gannon Sympathy Scale

Table 2: Correlations - Explicit Disability Scales Only

|  | M     | SD    | $\alpha$ | 1     | 2      | 3      | 4      | 5      | 6     | 7      | 8      | 9 | 10     |
|--|-------|-------|----------|-------|--------|--------|--------|--------|-------|--------|--------|---|--------|
| Familiarity with Disabilities- by Disability Category        |       |       |          |       |        |        |        |        |       |        |        |   |        |
| 1 Developmental Disabilities                                 | 9.91  | 4.14  | .83      |       |        |        |        |        |       |        |        |   |        |
| 2 Physical Disabilities                                      | 6.34  | 3.40  | .85      | .39** |        |        |        |        |       |        |        |   |        |
| 3 Psychological Disabilities                                 | 9.03  | 4.56  | .88      | .40** |        |        |        |        |       |        |        |   |        |
| Familiarity with Disabilities- by Familiarity Type           |       |       |          |       |        |        |        |        |       |        |        |   |        |
| 4 Knowledge  | 9.51  | 2.87  | .57      | .67** | .57**  | .58**  |        |        |       |        |        |   |        |
| 5 Intensity of Relationships                                 | 7.66  | 3.61  | .52      | .73** | .57**  | .66**  | .60**  |        |       |        |        |   |        |
| 6 Frequency of Contact                                       | 8.11  | 3.55  | .59      | .77** | .51**  | .71**  | .65**  | .75**  |       |        |        |   |        |
| 7 Attitudes Toward Employing Persons with Disabilities       | 43.86 | 6.94  | .30      |       |        | .22**  |        |        |       |        |        |   |        |
| 8 Attitudes Toward Persons with Disabilities                 | 70.04 | 19.68 | .90      |       |        |        |        |        | .29** |        |        |   |        |
| 9 Personal Experience with Disabilities Scale                | 10.63 | 4.44  | .75      | .27** | .30**  | .22**  | .29**  | .35**  | .29** |        |        |   |        |
| 10 Knowledge Regarding Disabilities - General                | 34.44 | 8.83  | .75      | .25** | -.21** |        | -.26** | -.014  | -.18* | .18*   |        |   |        |
| 11 Knowledge Regarding Disabilities - Work                   | 43.31 | 13.34 | .90      |       |        | .20*   | 0.15†  |        |       | .27**  | -.16*  |   | .26**  |
| Interactions with Disabled Persons (IDP) Subscales           |       |       |          |       |        |        |        |        |       |        |        |   |        |
| 12 IDP All Items   | 63.30 | 12.04 | .51      |       |        | -.013† |        |        |       | .30**  | .20**  |   |        |
| IDP Gething & Wheeler (1992, 1994) Subscales                 |       |       |          |       |        |        |        |        |       |        |        |   |        |
| 13 IDP (GW) Discomfort in Social Interactions                | 21.15 | 8.19  | .89      |       |        | -.17*  | -.014† |        |       | .55**  |        |   |        |
| 14 IDP (GW) Coping & Succumbing Framework                    | 11.84 | 6.58  | .93      |       |        |        |        |        | .19*  | -.47** |        |   |        |
| 15 IDP (GW) Vulnerability (a)                                | 6.77  | 3.02  | .36      |       |        | 0.13†  |        |        | .22** | -.015† |        |   |        |
| 16 IDP (GW) Coping   | 7.07  | 2.49  | .16      |       |        |        |        | -.015† |       | .44**  |        |   | -.26** |
| 17 IDP (GW) Vulnerability (b)                                | 6.42  | 2.35  | .33      |       |        | -.014† |        |        |       | .31**  |        |   |        |
| IDP MacLean & Gannon (1995) Subscales                        |       |       |          |       |        |        |        |        |       |        |        |   |        |
| 18 IDP (MG) Discomfort                                       | 17.71 | 7.07  | .88      |       |        | -.16*  |        |        |       | .52**  |        |   |        |
| 19 IDP (MG) Sympathy   | 14.99 | 7.79  | .93      |       |        |        |        |        |       | .21**  | -.45** |   |        |
| IDP Thomas, Palmer, Coker-Juneau & Williams (2003) Subscales |       |       |          |       |        |        |        |        |       |        |        |   |        |
| 20 IDP (TPC-JW) Anxiety-Discomfort                           | 17.46 | 6.78  | .85      |       |        | -.17*  | -.013† |        |       | .54**  |        |   |        |
| 21 IDP (TPC-JW) Empathy                                      | 15.09 | 8.23  | .94      |       |        |        |        |        | .184* | -.49** |        |   |        |
| 22 IDP (TPC-JW) Fear of Disability                           | 13.37 | 4.80  | .63      |       |        |        |        |        | .30** | -.16*  |        |   | -.015† |

\*\*p<.01, \*p<.05, †p<.10

Table 2: Correlations - Explicit Disability Scales Only (cont.)

|  | 11     | 12     | 13     | 14     | 15    | 16     | 17    | 18     | 19    | 20     | 21    | 22 |
|--|--------|--------|--------|--------|-------|--------|-------|--------|-------|--------|-------|----|
| Familiarity with Disabilities- by Disability Category        |        |        |        |        |       |        |       |        |       |        |       |    |
| 1 Developmental Disabilities                                 |        |        |        |        |       |        |       |        |       |        |       |    |
| 2 Physical Disabilities                                      |        |        |        |        |       |        |       |        |       |        |       |    |
| 3 Psychological Disabilities                                 |        |        |        |        |       |        |       |        |       |        |       |    |
| Familiarity with Disabilities- by Familiarity Type           |        |        |        |        |       |        |       |        |       |        |       |    |
| 4 Knowledge  |        |        |        |        |       |        |       |        |       |        |       |    |
| 5 Intensity of Relationships                                 |        |        |        |        |       |        |       |        |       |        |       |    |
| 6 Frequency of Contact                                       |        |        |        |        |       |        |       |        |       |        |       |    |
| 7 Attitudes Toward Employing Persons with Disabilities       |        |        |        |        |       |        |       |        |       |        |       |    |
| 8 Attitudes Toward Persons with Disabilities                 |        |        |        |        |       |        |       |        |       |        |       |    |
| 9 Personal Experience with Disabilities Scale                |        |        |        |        |       |        |       |        |       |        |       |    |
| 10 Knowledge Regarding Disabilities - General                |        |        |        |        |       |        |       |        |       |        |       |    |
| 11 Knowledge Regarding Disabilities - Work                   |        |        |        |        |       |        |       |        |       |        |       |    |
| Interactions with Disabled Persons (IDP) Subscales           |        |        |        |        |       |        |       |        |       |        |       |    |
| 12 IDP All Items   |        |        |        |        |       |        |       |        |       |        |       |    |
| IDP Getting & Wheeler (1992, 1994) Subscales                 |        |        |        |        |       |        |       |        |       |        |       |    |
| 13 IDP (GW) Discomfort in Social Interactions                | .40**  | -.39** | .52**  |        |       |        |       |        |       |        |       |    |
| 14 IDP (GW) Coping & Succumbing Framework                    | .30**  | .58**  | -.19*  | .63**  |       |        |       |        |       |        |       |    |
| 15 IDP (GW) Vulnerability (a)                                | -.32** | .29**  | .57**  | -.52** | -.17* |        |       |        |       |        |       |    |
| 16 IDP (GW) Coping   | .16*   | .58**  | .48**  | .43**  | .43** | -.19*  |       |        |       |        |       |    |
| 17 IDP (GW) Vulnerability (b)                                |        |        |        |        |       |        |       |        |       |        |       |    |
| IDP MacLean & Gannon (1995) Subscales                        |        |        |        |        |       |        |       |        |       |        |       |    |
| 18 IDP (MG) Discomfort                                       | .39**  | .39**  | -.52** | .99**  | .66** | -.50** | .56** | -.49** |       |        |       |    |
| 19 IDP (MG) Sympathy   |        |        |        |        |       |        |       |        |       |        |       |    |
| IDP Thomas, Palmer, Coker-Juneau & Williams (2003) Subscales |        |        |        |        |       |        |       |        |       |        |       |    |
| 20 IDP (TPC-JW) Anxiety-Discomfort                           | .40**  | .31**  | -.57** | .99**  | .64** | -.58** | .48** | -.54** | .98** | -.48** |       |    |
| 21 IDP (TPC-JW) Empathy                                      | .30**  | .64**  | -.19*  | .68**  | .93** | -.16*  | .55** | -.015t | .73** | -.16*  | .67** |    |
| 22 IDP (TPC-JW) Fear of Disability                           |        |        |        |        |       |        |       |        |       |        |       |    |

\*\*p<.01, \*p<.05, †p<.10



Table 3: Sympathy-Discomfort and emotional reactions (H1b)

|            | BIAS-Map<br>Pity |              | BIAS-Map<br>Contempt |              | BIAS-Map<br>Admiration |              |
|------------|------------------|--------------|----------------------|--------------|------------------------|--------------|
|            | B                | $\Delta R^2$ | $\beta$              | $\Delta R^2$ | $\beta$                | $\Delta R^2$ |
| Step 1:    |                  | .02          |                      | .00          |                        | .07**        |
| Sympathy   | .09              |              | .02                  |              | .25**                  |              |
| Discomfort | -.07             |              | .00                  |              | .25**                  |              |

|            | BIAS-Map<br>Envy |              | Work Related<br>Affect |              |
|------------|------------------|--------------|------------------------|--------------|
|            | B                | $\Delta R^2$ | $\beta$                | $\Delta R^2$ |
| Step 1:    |                  | .00          |                        | .02          |
| Sympathy   | .02              |              | .10                    |              |
| Discomfort | .08              |              | .17‡                   |              |

\*\*p<.01, \*p<.05, ‡p<.10

Table 4: SCM, Sympathy-Discomfort Models & Performance Outcomes (H1c)

| SCM Model  | Statement A         |              | Statement B         |              | Overall            |              |
|------------|---------------------|--------------|---------------------|--------------|--------------------|--------------|
|            | Performance Ratings |              | Performance Ratings |              | Performance Rating |              |
|            | $\beta$             | $\Delta R^2$ | $\beta$             | $\Delta R^2$ | $\beta$            | $\Delta R^2$ |
| Step 1:    |                     | .07**        |                     | .05**        |                    | .07**        |
| Competence | .24*                |              | .12                 |              | .20‡               |              |
| Warmth     | .02                 |              | .13                 |              | .07                |              |

| Sympathy-Discomfort Model | Statement A         |              | Statement B         |              | Overall            |              |
|---------------------------|---------------------|--------------|---------------------|--------------|--------------------|--------------|
|                           | Performance Ratings |              | Performance Ratings |              | Performance Rating |              |
|                           | $\beta$             | $\Delta R^2$ | $\beta$             | $\Delta R^2$ | $\beta$            | $\Delta R^2$ |
| Step 1:                   |                     | .01          |                     | .01          |                    | .01          |
| Sympathy                  | -.05                |              | .00                 |              | -.02               |              |
| Discomfort                | .04                 |              | .09                 |              | .09                |              |

| SCM Model  | Team Performance Expectations |              | Sympathy-Discomfort Model | Team Performance Expectations |              |
|------------|-------------------------------|--------------|---------------------------|-------------------------------|--------------|
|            | $\beta$                       | $\Delta R^2$ |                           | $\beta$                       | $\Delta R^2$ |
| Step 1:    |                               | .37**        | Step 1:                   |                               | .02          |
| Competence | .31**                         |              | Sympathy                  |                               | -.15‡        |
| Warmth     | .34**                         |              | Discomfort                |                               | -.07         |

Table 5a: Cell totals for Ranks by Disability Type- (H2b, H3b)

| Rank         | Physical  | Psychiatric | Cognitive/<br>Developmental | Control/<br>Generic | Total      |
|--------------|-----------|-------------|-----------------------------|---------------------|------------|
| <b>1</b>     | 15        | 17          | 25                          | 21                  | <b>78</b>  |
| <b>2</b>     | 16        | 16          | 17                          | 17                  | <b>66</b>  |
| <b>3</b>     | 9         | 10          | 6                           | 12                  | <b>37</b>  |
| <b>TOTAL</b> | <b>40</b> | <b>43</b>   | <b>48</b>                   | <b>50</b>           | <b>181</b> |

Table 5b: Cell totals for Ranks by Disability Term- (H5a)

| Rank         | Disabled  | Not Disabled | Total      |
|--------------|-----------|--------------|------------|
| <b>1</b>     | 36        | 42           | 78         |
| <b>2</b>     | 36        | 30           | 66         |
| <b>3</b>     | 16        | 21           | 37         |
| <b>Total</b> | <b>88</b> | <b>93</b>    | <b>181</b> |

Table 6: Disability Term ANOVA Results (H5, H5a, H5b)

| Dependent Variable     | Disability Term    |           |                        |           |          |           |          |          |           |  |
|------------------------|--------------------|-----------|------------------------|-----------|----------|-----------|----------|----------|-----------|--|
|                        | Disabled<br>(n=93) |           | Not Disabled<br>(n=89) |           | Total    |           | <i>F</i> | <i>p</i> | <i>df</i> |  |
|                        | <i>M</i>           | <i>SD</i> | <i>M</i>               | <i>SD</i> | <i>M</i> | <i>SD</i> |          |          |           |  |
| H5: Warmth             | 44.52              | 6.51      | 42.67                  | 5.61      | 43.56    | 6.12      | 4.19*    | ns       | 1,179     |  |
| H5: Competence         | 44.24              | 5.38      | 42.97                  | 5.27      | 43.57    | 5.48      | ns       | ns       |           |  |
| H5a: Team Expectations | 35.25              | 5.39      | 34.08                  | 4.44      | 34.64    | 4.94      | ns       | ns       |           |  |
| H5b: Agreeableness     | 27.30              | 6.06      | 27.05                  | 4.54      | 27.17    | 5.32      | ns       | ns       |           |  |
| H5b: Neuroticism       | 17.11              | 4.77      | 17.99                  | 4.10      | 17.57    | 4.44      | ns       | ns       |           |  |
| H5b: Conscientiousness | 27.43              | 5.75      | 26.67                  | 4.60      | 27.04    | 5.19      | ns       | ns       |           |  |
| H5b: Extraversion      | 21.62              | 5.74      | 22.69                  | 4.98      | 22.17    | 5.38      | ns       | ns       |           |  |

\**p* < .05

Table 7: Moderation effects of ethnicity, gender and age (H6)

| <b>Age</b> |                       | <b>Pity</b> |              |
|------------|-----------------------|-------------|--------------|
|            |                       | $\beta$     | $\Delta R^2$ |
| Step 1:    |                       |             | .06*         |
|            | Disability Type       | -.23        |              |
|            | Age                   | -.08        |              |
| Step 2:    |                       |             | .06**        |
|            | Disability Type       | -2.93**     |              |
|            | Age                   | -.53**      |              |
|            | Disability Type x Age | 2.75**      |              |

| <b>Ethnicity</b> |                             | <b>Pity</b> |              |
|------------------|-----------------------------|-------------|--------------|
|                  |                             | $\beta$     | $\Delta R^2$ |
| Step 1:          |                             |             | .06*         |
|                  | Disability Type             | -.24**      |              |
|                  | Ethnicity                   | .04         |              |
| Step 2:          |                             |             | .00          |
|                  | Disability Type             | -.08        |              |
|                  | Ethnicity                   | .15         |              |
|                  | Disability Type x Ethnicity | -.19        |              |

| <b>Gender</b> |                          | <b>Pity</b> |              |
|---------------|--------------------------|-------------|--------------|
|               |                          | $\beta$     | $\Delta R^2$ |
| Step 1:       |                          |             | .06*         |
|               | Disability Type          | -.23**      |              |
|               | Gender                   | -.08        |              |
| Step 2:       |                          |             | .05**        |
|               | Disability Type          | -.37**      |              |
|               | Gender                   | -.47*       |              |
|               | Disability Type x Gender | .60**       |              |

\*\*p<.01, \*p<.05, ‡p<.10

Table 8: Correlations (H7)

|                                      | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 |  |
|--------------------------------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|
| 1 Disability Term                    |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| 2 Disability Type                    |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| 3 Agreeableness                      |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| 4 Neuroticism                        |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| 5 Conscientiousness                  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| 6 Openness                           |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| 7 Extraversion                       |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| 8 Self Efficacy                      |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| 9 Social Dominance Orientation       |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| 10 Social Desirability               |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| 11 Self Esteem                       |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| 14 Intolerance for Ambiguity         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| 15 Familiarity w/Disabilities- Total |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| 16 Self Disability total             |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| 17 PHN- Variability                  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| 18 PHN- First Impressions            |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| 19 PHN- Complexity                   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| 20 PHN- Int. Locus of Control        |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| 21 Partner Competence                |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| 22 Partner Warmth                    |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| 23 Pity                              |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| 24 Envy                              |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| 25 Admiration                        |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| 26 Contempt                          |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| 27 Interaction Strain                |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| 28 Work-Related Affect               |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |

\*\*p<.01, \*p<.05, †p<.10  
Correlations related to the hypothesis are presented in bold.

Table 9: Mediation analysis(H8)

| Passive Facilitation   |         |              | Passive Facilitation   |         |              | Passive Facilitation   |         |              |
|------------------------|---------|--------------|------------------------|---------|--------------|------------------------|---------|--------------|
|                        | $\beta$ | $\Delta R^2$ |                        | $\beta$ | $\Delta R^2$ |                        | $\beta$ | $\Delta R^2$ |
| Step 1:                |         | .06**        | Step 1:                |         | .05**        | Step 1:                |         | .06**        |
| Gender                 | .25**   |              | Soc. Dominance Orient. | -.22    |              | Age                    | -.24**  |              |
| Step 2:                |         | .55**        | Step 2:                |         | .50**        | Step 2:                |         | .59**        |
| Gender                 | .03     |              | Soc. Dominance Orient. | .04     |              | Age                    | -.10‡   |              |
| BIAS Map Admiration    | .75**   |              | BIAS Map Admiration    | .66**   |              | BIAS Map Admiration    | .70**   |              |
| BIAS Map Contempt      | -.18**  |              | BIAS Map Contempt      | -.19**  |              | BIAS Map Contempt      | -.16    |              |
|                        |         |              | Interaction Strain     | .14*    |              | Interaction Strain     | .12*    |              |
| Active Facilitation    |         |              | Active Facilitation    |         |              | Active Harm            |         |              |
|                        | $\beta$ | $\Delta R^2$ |                        | $\beta$ | $\Delta R^2$ |                        | $\beta$ | $\Delta R^2$ |
| Step 1:                |         | .06*         | Step 1:                |         | .04*         | Step 1:                |         | .17*         |
| Age                    | -.19*   |              | Age                    | -.19*   |              | Soc. Dominance Orient. | .14     |              |
| Soc. Dominance Orient. | -.15‡   |              | Step 2:                |         | .29**        | Gender                 | -.19‡   |              |
| Step 2:                |         | .44**        | Age                    | -.17*   |              | Self Esteem            | -.27*   |              |
| Age                    | .06     |              | Work-Related Affect    | .47**   |              | Self Efficacy          | .16     |              |
| Soc. Dominance Orient. | -.04    |              | Team Expectations      | .25**   |              | Agreeableness          | -.17    |              |
| BIAS Map Admiration    | .65**   |              |                        |         |              | Conscientiousness      | -.04    |              |
| Interaction Strain     | .16*    |              |                        |         |              | PHN-Variability        | -.19‡   |              |
|                        |         |              |                        |         |              | Step 2:                |         | .18**        |
|                        |         |              |                        |         |              | Soc. Dominance Orient. | .06     |              |
|                        |         |              |                        |         |              | Gender                 | -.14    |              |
|                        |         |              |                        |         |              | Self Esteem            | -.17    |              |
|                        |         |              |                        |         |              | Self Efficacy          | -.14    |              |
|                        |         |              |                        |         |              | Agreeableness          | -.06    |              |
|                        |         |              |                        |         |              | Conscientiousness      | -.06    |              |
|                        |         |              |                        |         |              | PHN-Variability        | -.14    |              |
|                        |         |              |                        |         |              | BIAS Map Contempt      | .46**   |              |

\*\*p<.01, \*p<.05, ‡p<.10

Table 9: Mediation analysis (H8) (cont.)

| Passive Harm  | $\beta$                        | $\Delta R^2$ | Passive Harm  | $\beta$                | $\Delta R^2$ | Passive Harm  | $\beta$                       | $\Delta R^2$ |
|---|--------------------------------|--------------|---|------------------------|--------------|---|-------------------------------|--------------|
| Step 1:<br>PHN- Complexity  | .16*                           | .03*         | Step 1:<br>Soc. Dominance Orient.                                   | .28**                  | .08**        | Step 1:<br>Agreeableness  | -.13‡                         | .02‡         |
| Step 2:<br>PHN- Complexity<br>BIAS Map Envy                           | .03<br>.06**                   | .29**        | Step 2:<br>Soc. Dominance Orient.<br>BIAS Map Envy<br>BIAS Map Pity | .17*<br>.47**<br>.20** | .30**        | Step 2:<br>Agreeableness<br>BIAS Map Envy<br>BIAS Map Pity<br>Team Expectations | .09<br>.48**<br>.26**<br>-.07 | .35**        |
| Choice of Work Partner (Rank)   | $\beta$                        | $\Delta R^2$ | Choice of Work Partner (Rank)                                       | $\beta$                | $\Delta R^2$ | Choice of Work Partner (Rank)   | $\beta$                       | $\Delta R^2$ |
| Step 1:<br>PHN- Complexity<br>PHN-Variability                         | -.36**<br>-.14‡                | .16**        | Step 1:<br>Gender   | -.15‡                  | .02‡         | Step 1:<br>Gender<br>PHN-Variability  | -.15<br>-.21*                 | .07*         |
| Step 2:<br>PHN- Complexity<br>PHN-Variability<br>Competence<br>Warmth | -.36**<br>-.14‡<br>-.05<br>.04 | .00          | Step 2:<br>Gender<br>BIAS Map Admiration                            | -.10<br>-.15‡          | .02‡         | Step 2:<br>Gender<br>PHN-Variability<br>Work-Related Affect                     | -.12<br>-.20*<br>-.19‡        | .03‡         |
| Statement B Rating  | $\beta$                        | $\Delta R^2$ | Overall Rating  | $\beta$                | $\Delta R^2$ |   |                               |              |
| Step 1:<br>Gender   | .19*                           | .03*         | Step 1:<br>Gender   | .17‡                   | .03‡         |   |                               |              |
| Step 2:<br>Gender<br>BIAS Map Admiration                              | .09<br>.36**                   | .14**        | Step 2:<br>Gender<br>BIAS Map Admiration                            | .06<br>.38**           | .13**        |   |                               |              |

\*\*p<.01, \*p<.05, ‡p<.10



Table 10: Results Overview

|     | Hypothesis   | Supported?  |
|-----|--|---|
| H1a | The Stereotype Content model will describe differences in participants' perceptions of their disabled peers, such that they will be stereotyped generally within the paternalistic group stereotype.           | Not supported   |
| H1b | Differences in the Sympathy-Discomfort Categories will describe emotional reactions to disabled persons.   | Partially supported<br>(Admiration only)  |
| H1c | The SCM and Sympathy-Discomfort models will predict job-related expectations (of team performance and team outcomes) and treatment (performance ratings and choice of work partner) of those disabled persons. | Partially supported   |
| H2a | Individuals with psychiatric disabilities will receive lower ratings on the "warmth" stereotype dimension than other disability types or controls.   | Not significant, but pattern of results was consistent with hypothesis          |
| H2b | Individuals with psychiatric disabilities will be ranked lower as potential work partner, and performance expectations will be lower for psychiatric disability types than other disability types.             | Not significant, but pattern of results was consistent with hypothesis          |
| H3a | Individuals with physical disabilities will receive higher ratings on the "warmth" stereotype dimension than other disability types or controls.   | Not supported   |
| H3b | Individuals with physical disabilities will be ranked higher as a potential work partner, and performance expectations will be higher than for other disability types.   | Not supported   |
| H4a | Psychiatric disabilities will be related to greater perceptions of neuroticism and lower levels of agreeableness.  | Not significant, but pattern of results was consistent with hypothesis          |
| H4b | Cognitive/Developmental disabilities will be related to perceptions of lower competence.   | Not significant, but pattern of results was in opposite direction of hypothesis |

Table 10: Results Overview (cont.)

|            | Hypothesis  | Supported?   |
|------------|---|--|
| H5         | Individuals who self-identify as “disabled” will be viewed more negatively (lower competence and warmth) than individuals who do not.   | Warmth- Significant, opposite direction of prediction, Competence-Not significant, but difference is similar pattern to warmth |
| H5a        | “Disabled” individuals will be ranked lower as potential work partners and expectations for performance will be lower.  | Not significant, but difference is similar pattern to H5   |
| H5b        | Individuals reporting a disabling condition without using the term ‘disability’ will be viewed differently in personality characteristics than controls.  | Not supported  |
| H6         | The relationship between disability type and psychological consequences for observers will be moderated by observer ethnicity, gender, and age.   | Supported  |
| H7/<br>H7a | Individual differences (Big Five Personality, Social Dominance Orientation, Self-Esteem, Self-Efficacy, Philosophies of Human Nature and Intolerance for Ambiguity) and contact with individuals with disabilities will predict psychological consequences for observers and (H7a) will moderate the relationships between attributes of disabled workers and psychological consequences for observers (stereotypes and affective reactions). | H7- Partially supported,<br>H7a- Not supported   |
| H8         | The relationship between disabled individual attributes, observer characteristics and treatment of disabled individuals will be mediated by psychological consequences for observers and observers’ job-related expectancies.   | Partially supported  |

## References

- Americans with Disabilities Act of 1990, Pub. L. No. 101-336, §2, 104 Stat. 328 (1991).
- Antonak, R. F., & Livneh, H. (1995a). Direct and indirect methods to measure attitudes toward persons with disabilities, with an exegesis of the error-choice test method. *Rehabilitation Psychology, 40*(1), 3-24.
- Antonak, R. F., & Livneh, H. (1995b). Randomized response technique: A review and proposed extension to disability attitude research. *Genetic, Social, and General Psychology Monographs, 121*(1), 97-145.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173-1182.
- Beckwith, J. B., & Matthews, J. M. (1994). Measuring comfort in interacting with people with intellectual disabilities. *Australian Journal of Psychology, 46*(1), 53-57.
- Boyle, M. A. (1997). Social barriers to successful reentry into mainstream organizational culture: Perceptions of people with disabilities. *Human Resource Development Quarterly, 8*(3), 259-268.
- Bruyere, S., Burkhauser, R., & Stapleton, D. (2008). *2007 Disability Status Report: United States*. Ithaca, NY: Rehabilitation Research and Training Center on Disability Demographics and Statistics, Cornell University.
- Budner, S. (1962). Intolerance of ambiguity as a personality variable. *Journal of Personality, 30*(1), 29-50.
- Cacciapaglia, H. M., Beauchamp, K. L., & Howells, G. N. (2004). Visibility of Disability: Effect on Willingness to Interact. *Rehabilitation Psychology, 49*(2), 180-182.
- Caldwell, A. C. (2007). Attitudes of juvenile justice staff towards intellectual, psychiatric, and physical disabilities. *Intellectual and Developmental Disabilities, 45*(2), 77-89.
- Chen, G., Gully, S. M., & Eden, D. (2001). Validation of a new general self-efficacy scale. *Organizational Research Methods, 4*(1), 62-83.
- Colella, A., DeNisi, A. S., & Varma, A. (1997). Appraising the performance of employees with disabilities: A review and model. *Human Resource Management Review, 7*(1), 27-53.
- Colella, A., DeNisi, A. S., & Varma, A. (1998). The impact of ratee's disability on performance judgments and choice as partner: The role of disability-job fit stereotypes and interdependence of rewards. *Journal of Applied Psychology, 83*(1), 102-111.
- Colella, A., & Varma, A. (1999). Disability-job fit stereotypes and the evaluation of persons with disabilities at work. *Journal of Occupational Rehabilitation, 9*(2), 79-95.
- Colella, A., & Varma, A. (2001). The Impact of Subordinate Disability on Leader-Member Exchange Relationships. *Academy of Management Journal, 44*(2), 304-315.
- Crowne, D. P., & Marlowe, D. (1960). A new scale of social desirability independent of psychopathology. *Journal of Consulting Psychology, 24*(4), 349-354.

- 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.
- Dalgin, R. S., & Gilbride, D. (2003). Perspectives of people with psychiatric disabilities on employment disclosure. *Psychiatric Rehabilitation Journal*, 26(3), 306-310.
- Deal, M. (2007). Aversive disablism: Subtle prejudice toward disabled people. *Disability & Society*, 22(1), 93-107.
- DeWall, C. N., Altermatt, T. W., & Thompson, H. (2005). Understanding the structure of stereotypes of women: Virtue and agency as dimensions distinguishing female subgroups. *Psychology of Women Quarterly*, 29(4), 396-405.
- Dooley, D. M., & Gliner, J. A. (1989). Perception of disability labels: Effect of attitude and stimulus presentation. *Rehabilitation Psychology*, 34(4), 259-270.
- Eberhardt, K., & Mayberry, W. (1995). Factors influencing entry-level occupational therapists' attitudes toward persons with disabilities. *American Journal of Occupational Therapy*, 49(7), 629-636.
- Eisenman, R. (1986). Social distance ratings toward Blacks and the physically disabled. *College Student Journal*, 20(2), 189-190.
- Ekehammar, B., Akrami, N., Gylje, M., & Zakrisson, I. (2004). What Matters Most to Prejudice: Big Five Personality, Social Dominance Orientation, or Right-Wing Authoritarianism? *European Journal of Personality*, 18(6), 463-482.
- Feinberg, L. B. (1971). Intolerance of ambiguity as a variable in attitudes toward the disabled. *Psychological Aspects of Disability*, 18(3), 117-121.
- Findler, L., Vilchinsky, N., & Werner, S. (2007). The multidimensional Attitudes Scale toward persons with disabilities (MAS): Construction and validation. *Rehabilitation Counseling Bulletin*, 50(3), 166-176.
- 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.
- Forlin, C., Fogarty, G., & Carroll, A. (1999). Validation of the factor structure of the Interactions with Disabled Persons Scale. *Australian Journal of Psychology*, 51(1), 50-55.
- Fuqua, D. R., Rathbun, M., & Gade, E. M. (1984). A comparison of employer attitudes toward the worker problems of eight types of disabled workers. *Journal of Applied Rehabilitation Counseling*, 15(1), 40-43.
- Galbreath, J., & Feinberg, L. B. (1973). Ambiguity and attitudes toward employment of the disabled: A multidimensional study. *Rehabilitation Psychology*, 20(4), 165-174.
- Garcia, M. F., Paetzold, R. L., & Colella, A. (2005). The relationship between personality and peers' judgments of the appropriateness of accommodations for individuals with disabilities. *Journal of Applied Social Psychology*, 35(7), 1418-1439.
- Gething, L. (1991). Generality vs. specificity of attitudes towards people with disabilities. *British Journal of Medical Psychology*, 64(1), 55-64.
- Gething, L. (1994). The Interaction with Disabled Persons Scale. *Journal of Social Behavior & Personality*, 9(5), 23-42.

- Gething, L., & Wheeler, B. (1992). The Interaction with Disabled Persons Scale: A new Australian instrument to measure attitudes towards people with disabilities. *Australian Journal of Psychology, 44*(2), 75-82.
- Gill, C. M., & Hodgkinson, G. P. (2007). Development and validation of the Five-Factor Model Questionnaire (FFMQ): An adjectival-based personality inventory for use in occupational settings. *Personnel Psychology, 60*(3), 731-766.
- Gouvier, W. D., Sytsma-Jordan, S., & Mayville, S. (2003). Patterns of discrimination in hiring job applicants with disabilities: The role of disability type, job complexity, and public contact. *Rehabilitation Psychology, 48*(3), 175-181.
- Hannah, M. E., & Midlarsky, E. (1987). Differential impact of labels and behavioral descriptions on attitudes toward people with disabilities. *Rehabilitation Psychology, 32*(4), 227-238.
- Harasymiw, S. J., Horne, M. D., & Lewis, S. C. (1978). Age, sex, and education as factors in acceptance of disability groups. *Rehabilitation Psychology, 25*(4), 201-207.
- Higgs, R. W. (1972). *Attitudes toward persons with physical disabilities as a function of information level and degree of contact*. ProQuest Information & Learning, US.
- Johnson, V. A., Greenwood, R., & Schriener, K. F. (1988). Work performance and work personality: Employer concerns about workers with disabilities. *Rehabilitation Counseling Bulletin, 32*(1), 50-57.
- Kelly, A. E., Sedlacek, W. E., & Scales, W. R. (1994). How college students with and without disabilities perceive themselves and each other. *Journal of Counseling & Development, 73*(2), 178-182.
- Kervyn, N., Yzerbyt, V. Y., Demoulin, S., & Judd, C. M. (2008). Competence and warmth in context: The compensatory nature of stereotypic views of national groups. *European Journal of Social Psychology, 38*(7), 1175-1183.
- Kessler, R. C., Chiu, W. T., Demler, O., & Walters, E. E. (2005). Prevalence, Severity, and Comorbidity of 12-Month DSM-IV Disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry, 62*(6), 617-627.
- Koser, D. A., Matsuyama, M., & Kopelman, R. E. (1999). Comparison of a physical and a mental disability in employee selection: An experimental examination of direct and moderated effects. *North American Journal of Psychology, 1*(2), 213-222.
- Lee, T. L., & Fiske, S. T. (2006). Not an outgroup, not yet an ingroup: Immigrants in the Stereotype Content Model. *International Journal of Intercultural Relations, 30*(6), 751-768.
- Loo, R. (2001). A psychometric re-analysis of the Interaction with Disabled Persons Scale. *Canadian Journal of Behavioural Science/Revue canadienne des sciences du comportement, 33*(4), 245-250.
- Loo, R. (2004). Attitudes Toward Employing Persons With Disabilities: A Test of the Sympathy-Discomfort Categories. *Journal of Applied Social Psychology, 34*(10), 2200-2214.
- Louvet, E. (2007). Social judgment toward job applicants with disabilities: Perception of personal qualities and competences. *Rehabilitation Psychology, 52*(3), 297-303.
- MacLean, D., & Gannon, P. M. (1995). Measuring attitudes toward disability: The Interaction with Disabled Persons Scale revisited. *Journal of Social Behavior & Personality, 10*(4), 791-806.

- McLaughlin, M. E., Bell, M. P., & Stringer, D. Y. (2004). Stigma and Acceptance of Persons With Disabilities Understudied Aspects of Workforce Diversity. *Group & Organization Management, 29*(3), 302-333.
- Miller, B. K. (2002). *Helping disabled coworkers: An attribution based laboratory experiment*. ProQuest Information & Learning, US.
- Miller, B. K., & Werner, S. (2005). Factors Influencing the Inflation of Task Performance Ratings for Workers With Disabilities and Contextual Performance Ratings for Their Coworkers. *Human Performance, 18*(3), 309-329.
- Noonan, J. R., Barry, J. R., & Davis, H. C. (1970). Personality determinants in attitudes toward visible disability. *Journal of Personality, 38*(1), 1-15.
- Operario, D., & Fiske, S. (2001). Causes and consequences of stereotypes in organizations. In M. London (Ed.), *How People Evaluate Others in Organizations* (pp. 45-63). Mahwah, NJ: Lawrence-Erlbaum.
- Pinel, E. C., Long, A. E., & Crimin, L. A. (2008). We're warmer (they're more competent): I-sharing and African-American's perceptions of the ingroup and outgroup. *European Journal of Social Psychology, 38*(7), 1184-1192.
- Plant, E. A., & Devine, P. G. (1998). Internal and external motivation to respond without prejudice. *Journal of Personality and Social Psychology, 75*(3), 811-832.
- Pratto, F., Sidanius, J., Stallworth, L. M., & Malle, B. F. (1994). Social dominance orientation: A personality variable predicting social and political attitudes. *Journal of Personality and Social Psychology, 67*(4), 741-763.
- Robert, P. M., & Harlan, S. L. (2006). Mechanisms of disability discrimination in large bureaucratic organizations: Ascriptive Inequalities in the Workplace. *Sociological Quarterly, 47*(4), 599-630.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.
- Royal, G. P., & Roberts, M. C. (1987). Students' perceptions of and attitudes toward disabilities: A comparison of twenty conditions. *Journal of Clinical Child Psychology, 16*(2), 122-132.
- Sanders-Thompson, V. L., Noel, J. G., & Campbell, J. (2004). Stigmatization, discrimination, and mental health: The impact of multiple identity status. *American Journal of Orthopsychiatry, 74*(4), 529-544.
- Seiter, J. S., Larsen, J., & Skinner, J. (1998). 'Handicapped' or 'Handi-capable?': The effects of language about persons with disabilities on perceptions of source credibility and persuasiveness. *Communication Reports, 11*(1), 21-31.
- Sibley, C. G., & Duckitt, J. (2008). Personality and prejudice: A meta-analysis and theoretical review. *Personality and Social Psychology Review, 12*(3), 248-279.
- Statistics, B. o. L. (2009). *Current Population Survey: Employment status of the civilian noninstitutional population by sex, age, and disability status, not seasonally adjusted*. Retrieved from [www.bls.gov/cps/cpsdisability](http://www.bls.gov/cps/cpsdisability).
- 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.
- Thomas, A., Palmer, J. K., Coker-Juneau, C. J., & Williams, D. J. (2003). Factor structure and construct validity of the Interaction with Disabled Persons Scale. *Educational and Psychological Measurement, 63*(3), 465-483.

- Tierney, S. (2001). A reluctance to be defined 'disabled.' How can the social model of disability enhance understanding of anorexia? *Disability & Society*, 16(5), 749-764.
- Tringo, J. L. (1970). The hierarchy of preference toward disability groups. *The Journal of Special Education*, 4(3), 295-306.
- Uppal, S. (2005). Disability, workplace characteristics and job satisfaction. *International Journal of Manpower*, 26(4), 336-349.
- Wertlieb, E. C. (1985). Minority group status of the disabled. *Human Relations*, 38(11), 1047-1063.
- Wooten, L. P., & James, E. H. (2005). Challenges of Organizational Learning: Perpetuation of Discrimination Against Employees with Disabilities. *Behavioral Sciences & the Law*, 23(1), 123-141.
- Wright, K. P. (1998). *Uncertainty, attentiveness to performance-related information, and social affect in hiring decisions involving persons with disabilities*. ProQuest Information & Learning, US.
- Wrightsmann, L. S., Jr. (1964). Measurement of philosophies of human nature. *Psychological Reports*, 14(3), 743-751.
- Yuker, H. E. (1987). Labels can hurt people with disabilities. *Etc.*, 44(1), 16-22.
- Yuker, H. E. (1994). Variables that influence attitudes toward people with disabilities: Conclusions from the data. *Journal of Social Behavior & Personality*, 9(5), 3-22.
- Yuker, H. E., Block, J. R., & Campbell, W. J. (1960). A scale to measure attitudes toward disabled persons. *Human Resources Studies. Columbia University*(5), 14-14.
- Yuker, H. E., Block, J. R., & Young, J. H. (1966). The measurement of attitudes toward disabled persons. *Human Resources Study*, 7, x.