

## ABSTRACT

Title of Dissertation:        WHY DOES EMPLOYMENT DISCRIMINATION  
   PERSIST AGAINST PEOPLE WITH MENTAL  
   ILLNESS? EFFECTS OF NEGATIVE  
   STEREOTYPES, POWER, AND DIFFERENTIAL  
   HIRING DISCRIMINATION

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Mental illness affects a sizable minority of Americans at any given time, yet many people with mental illness (hereafter PWMI) remain unemployed or underemployed relative to the general population. Research has suggested that part of the reason for this is discrimination toward PWMI. This research investigated mechanisms that affect employment discrimination against PWMI. Drawing from theories on stigma and power, three studies assessed 1) the stereotyping of workers with mental illness as unfit for workplace success, 2) the impact of positive information on countering these negative stereotypes, and whether negatively-stereotyped conditions elicited discrimination; and 3) the effects of power on mental illness stigma components. I made a series of predictions related to theories on the Stereotype Content Model, illness attribution, the contact hypothesis, gender and mental health, and power. Studies tested

predictions using, 1) an online vignette survey measuring attitudes, 2) an online survey measuring responses to fictitious applications for a middle management position, and 3) a laboratory experiment in which some participants were primed to feel powerful and some were not. Results of Study 1 demonstrated that PWMI were routinely stigmatized as incompetent, dangerous, and lacking valued employment attributes, relative to a control condition. This was especially evident for workers presented as having PTSD from wartime service and workers with schizophrenia, and when the worker was a woman. Study 2 showed that, although both war-related PTSD and schizophrenia evoke negative stereotypes, only schizophrenia evoked hiring discrimination. Finally, Study 3 found no effect of being primed to feel powerful on stigmatizing attitudes toward a person with symptoms of schizophrenia. Taken together, findings suggest that employment discrimination towards PWMI is driven by negative stereotypes; but, stereotypes might not lead to actual hiring discrimination for some labeled individuals.

**WHY DOES EMPLOYMENT DISCRIMINATION PERSIST AGAINST PEOPLE WITH  
MENTAL ILLNESS? EFFECTS OF NEGATIVE STEREOTYPES, POWER, AND  
DIFFERENTIAL HIRING DISCRIMINATION**

by

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## Chapter 1: Introduction

Approximately one quarter of Americans suffer from a mental illness at any given time, with nearly half suffering from a diagnosable condition at some point in their lives (Kessler, Chiu, Demler, and Walters 2005). Research has demonstrated that the population of people with mental illness (hereafter PWMI) suffers from a wide range of structural inequalities, one of which is employment discrimination (Stuart 2006). People with mental illness face higher rates of unemployment and underemployment than the general population, and might be passed over for jobs, demoted or even fired as a result of their mental illness (Baldwin and Marcus 2007; Cook 2006; Corrigan 2003; Hipes, Lucas, Phelan, and White 2016; Stuart 2006). This is despite legal protections afforded PWMI under the 1990 Americans with Disabilities Act (ADA; National Alliance on Mental Illness 2007). These factors make PWMI a vulnerable population that might be subjected to discrimination in their daily lives as they interact with institutions.

The susceptibility of PWMI to employment discrimination is consequential to this population, as participation and success in the labor market - in the form of being hired for jobs for which one is qualified, kept on rather than fired, given a raise for job success, or promoted at the appropriate time - are vital to well being. Stuart noted that “to be excluded from the workforce not only creates material deprivation but also erodes self-confidence, creates a sense of isolation and marginalization, and is a key risk factor for mental disability” (2006, p. 522). Research has shown that there is a strong negative correlation between becoming unemployed and mental health, and conversely a positive correlation between gaining employment and mental health (Murphy and Athanasou 1999). There is also an obvious connection between employment and socioeconomic status (SES), which has been cited as a “fundamental cause” of

health outcomes (Link and Phelan 1995). This might be especially true for men, who are often expected to be the breadwinners in relationships. Employment, then, can play a significant role in affecting mental health.

Efforts to combat discrimination toward PWMI can benefit from attending to the sociological mechanisms that perpetuate unequal interactions and outcomes. Research has identified some of the mechanisms, such as negative stereotyping of PWMI, reflected by employers' negative attitudes toward PWMI and hesitancy to hire them (Stuart 2006; Cook 2006). One study illustrated how this stereotyping follows gendered patterns, such that the public expects women and men to be more likely to suffer from certain conditions and exhibit certain behaviors (Wirth and Bodenhausen 2009). Other potential mechanisms have been addressed from a small groups perspective, but not often connected to real-world situations. Power, and its connection to stereotyping, falls into this category.

This research consisted of three studies that addressed the roles of stereotyping and power imbalances in increasing stigma toward a worker with a mental illness label who is otherwise presented as having a successful work history. The first study examined the perceived characteristics of workers with five different mental illness labels, which are ("mental illness" [unspecified], post-traumatic stress disorder [PTSD/automobile accident victim and Iraq War veteran], schizophrenia, and depression), compared to a worker with no disclosed condition. Study 2 utilized results of Study 1 to frame a candidate with either war-related PTSD, schizophrenia, or a past physical injury for a job application in a stereotype-disconfirming way, compared to a candidate who is not framed in such a manner. Measures tested participants' willingness to recommend the candidate for hire, for a job for which they were well qualified. And Study 3 tested the impact of feeling powerful on participants' stigmatizing attitudes toward

a person exhibiting mental illness symptoms consistent with schizophrenia (labeling, stereotyping, and social exclusion). Results of these studies shed light on the ability for negative stereotyping to lead to hiring discrimination, and the role of power and other factors to influence the stigma process.

This document is organized into 16 chapters. Chapter 2 addresses the stigma of mental illness, specifically as it relates to stereotypes associate with mental illness labels, outcomes of the stigma process such as unequal access to social resources, and evidence of employment discrimination for this population. Chapter 3 focuses on the role of power in affecting stereotyping, social exclusion, dehumanization, and other aspects of the stigma process. From these theories, Chapter 4 develops guiding propositions about the interrelatedness of mental illness, negative stereotypes, and power imbalances. Then, Chapter 5 describes the experimental setting used in this research, including some limitations on using this methodological approach and potential ramifications of using two sampling procedures to complete these projects. Chapters 6-11 detail three interrelated studies focusing, in turn, on the stereotyping of different mental illness labels; whether people with war-related PTSD or schizophrenia face hiring discrimination in an employment setting; and whether an artificially manipulated sense of power can produce stigmatizing attitudes, relative to participants who were not primed with power. First, I present Study 1 predictions, methods, and study results. Then, I present studies 2 and 3 in the same organizational manner. Chapter 12 is the discussion, addressing implications of the main findings and limitations. And Chapter 13 concludes, highlighting key contributions of this research to broader theories of stigma, stereotyping, and power. Appendices with the complete study materials are found at the end of the document. Appendix A contains Study 1 materials, Appendix B contains Study 2 materials, and Appendix C contains Study 3 materials. Finally,

Appendix D lists all the studies' hypotheses and whether or not I ultimately found support for them.



## Chapter 2: The Stigmatization of Mental Illness

The competitive workplace is one setting that satisfies conditions for discrimination toward PWMI to occur, as it is a location in which power is experienced and acted upon, and workers are judged on their competence and ability to interact in groups to accomplish goals. Research has shown that mental illness labels can lead to adverse treatment in social interactions, including social exclusion and discrimination in institutional settings, for example searches for housing, employment, and health care (Brand and Claiborn 1976; Druss, Marcus, Rosenheck, Olfson, Tanielian, and Pincus 2000; Farina and Felner 1973; Link, Cullen, Frank, and Wozniak 1987; Link, Phelan, Bresnahan, Stueve, and Pescosolido 1999; Page and Day 1990; Phelan 2005; Sibicky and Dovidio 1986). Looking at employment specifically, a mental illness label can lead to a lower chance of a well-qualified applicant being called back for a job in a field requiring competitive credentials. In one recent study, researchers sent out fictitious applications to real software jobs that indicated either past hospitalization for a mental illness or a past physical injury, and the candidates with mental illness received significantly fewer callbacks (Hipes et al. 2016).

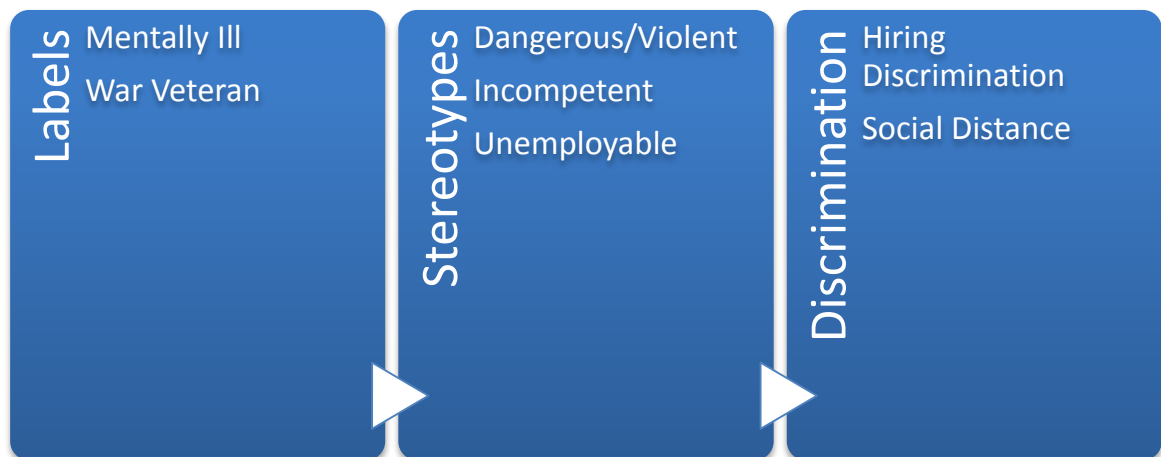
Past studies indicated that mental illness labels lead to labor market discrimination. Brand and Claiborn (1976) studied employment rates of tuberculosis patients, ex-convicts, and ex-mental health patients, finding that these types of people received similar numbers of job offers for retail positions. Farina and Felner (1973) tested discrimination toward PWMI, finding that an individual who had been a mental patient for the past nine months (compared to someone who had been traveling for that time) was less likely to be hired for a position, received less friendly treatment, and had a lower probability of finding a position. Stigma, then, can lead to unequal

treatment from individuals in meaningful settings. Looking at specific attitudes that lead to devaluation for PWMI in the labor market, Gouvier, Drew, Sytsma-Jordan, and Mayville (2003) compared individuals with chronic mental illness, compared to individuals with developmental disabilities, back injuries, or head injuries. They asked participants to evaluate job candidates on 10 items, which they then grouped into three factors using principal components analysis. The three factors were interpersonal skills, job performance, and negative evaluations. Ratings of the applicant with chronic mental illness were lower than individuals with the other characteristics (developmental disability, back injury, or head injury) for interpersonal skills and negative evaluations, and were next to lowest on the job performance rating. Furthermore, the applicant with a developmental disability received significantly higher job performance ratings than the individual with chronic mental illness, significantly fewer negative evaluations, and both the applicant with a developmental disability and back injury received a higher combined rating. There is evidence, then, that PWMI face discrimination in the labor market. What remains less clear, however, is the extent to which different mental illness labels evoke varying levels of stereotypes, and the extent to which feelings of power – such as those seen in workplace environments – might affect the tendency to stereotype and, ultimately, discriminate.

Theories on stigmatization and stereotyping help to explain how mental illness labels lead to unequal outcomes including employment discrimination. Stigma is a social phenomenon that results in discrimination via the following process: 1) people create distinctions based on characteristics and assign labels; 2) cultural norms dictate that certain characteristics are undesirable; 3) labeled individuals are set apart from non-labeled individuals, creating an us/them division; 4) people create justifications for stigmatizing labeled individuals based on their perceived differentness; and 5) a power differential exists such that a more powerful group

can stigmatize a labeled, devalued group (Link and Phelan 2001). This model, which I call the “traditional” stigma model, looks like the figure presented below:

**Figure 1: Traditional Stigma Model**



This research is an attempt to elucidate the roles of stereotyping and power - both as separate mechanisms and as forces that interact - and test whether two heavily-stereotyped labels lead to hiring discrimination. Furthermore, Study 2 tested one practical, applied intervention that uses knowledge on damaging stereotypes to counter harmful effects of the public viewing PWMI as possessing traits that render them undeserving or incapable of workplace success. Findings yield insight into specific stereotypes elicited by various mental illness labels, the effects of feeling powerful on stigmatizing behaviors, and factors that tend to alter the relationship between stereotyping and discrimination.

## Stereotypes of PWMI

The first step in the stigma process is “distinguishing and labeling human differences” (Link and Phelan 2001, p. 367). For PWMI, this process often occurs through the transmission of information about a mental illness diagnosis, as these seemingly-discrete categorizations are often how mental health status is conveyed by medical professionals to patients and from person to person. Once PWMI have been labeled as having a condition – and thus a label that separates them from “normal” individuals - their mental illness labels can become associated with negative attributes or stereotypes (Link and Phelan 2001). Stereotypes are cognitive shortcuts used to make quick judgments about individuals with whom someone has limited knowledge, and operate preconsciously (Link and Phelan 2001). Research has demonstrated that mental illness labels evoke damaging stereotypes such as incompetence, dangerousness, uncleanliness, worthlessness, and unpredictability (Olmsted and Durham 1976; Link et al. 1987; Link et al. 1999; Phelan and Link 2004; Ottati, Bodenhausen, and Newman 2005). The stereotype that people with mental illness are prone to violence and dangerousness is particularly damaging for labeled individuals, because it can lead to fear and social rejection (Link et al. 1999). And, one study conducted in the 21<sup>st</sup> century showed the persistence of negative stereotyping of PWMI as violent, with belief in this stereotype actually increasing since 1950 (Phelan, Link, Stueve, and Pescosolido 2000). This stereotype remains a powerful tool leading to social exclusion and negative treatment of PWMI. <sup>1</sup>

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<sup>1</sup> Some research has suggested a modest association between psychiatric diagnosis and violent behavior, especially when combined with substance abuse. However, PWMI are still more likely to be the victims of violence than the perpetrators. Also, some research linking violence with mental illness relies on samples of institutionalized individuals who may not be representative of all PWMI. And all of the materials in this study do not involve participants witnessing behaviors of the stigma targets, but rather only interacting with mental illness labels. The intent with this research is to show how negative stereotypes can affect PWMI who are otherwise presented as

Public reactions to people with mental illness can be more severe when the person has a label of “mental illness,” when the person is seen as not having a genetic/biological cause for their behavior, and when the person is seen as more dangerous by the public (Martin, Pescosolido, and Tuch 2000). In an overview of studies, Angermeyer and Dietrich (2006) found that the public saw people with mental illness as especially dependent on others, unpredictable, and violent/dangerous. Of the range of mental health conditions, the public is more likely to respond to people with schizophrenia with uneasiness, fear, or even aggressiveness. Altogether, this can lead some to desire social distance from PWMI (Angermeyer and Dietrich 2006). The effects of labels has been shown to be pervasive for PWMI, as efforts to avoid negative reactions through keeping a diagnosis a secret or avoiding situations likely to evoke public rejection actually have been shown to do more harm than good by actually increasing stigma (Link, Mirotznik, and Cullen 1991).

Contrary to any belief that the behavior or actions of PWMI leads to stereotyping, study methodologies have in large part demonstrated that this process is the result of the mental illness labels alone evoking damaging traits. For example, in a vignette survey embedded in the 1996 General Social Survey (GSS), Link et al. (1999) found that 61% of respondents indicated that schizophrenics were very or somewhat likely to be violent, and demonstrated social distance toward labeled individuals. This was without participants interaction with the person labeled as schizophrenic. The authors further showed the importance of this perception, finding a significant correlation between perceived violence and social distance. Thus, mental illness labels alone might lead to harmful stereotypes, and the violence stereotype can be instrumental in

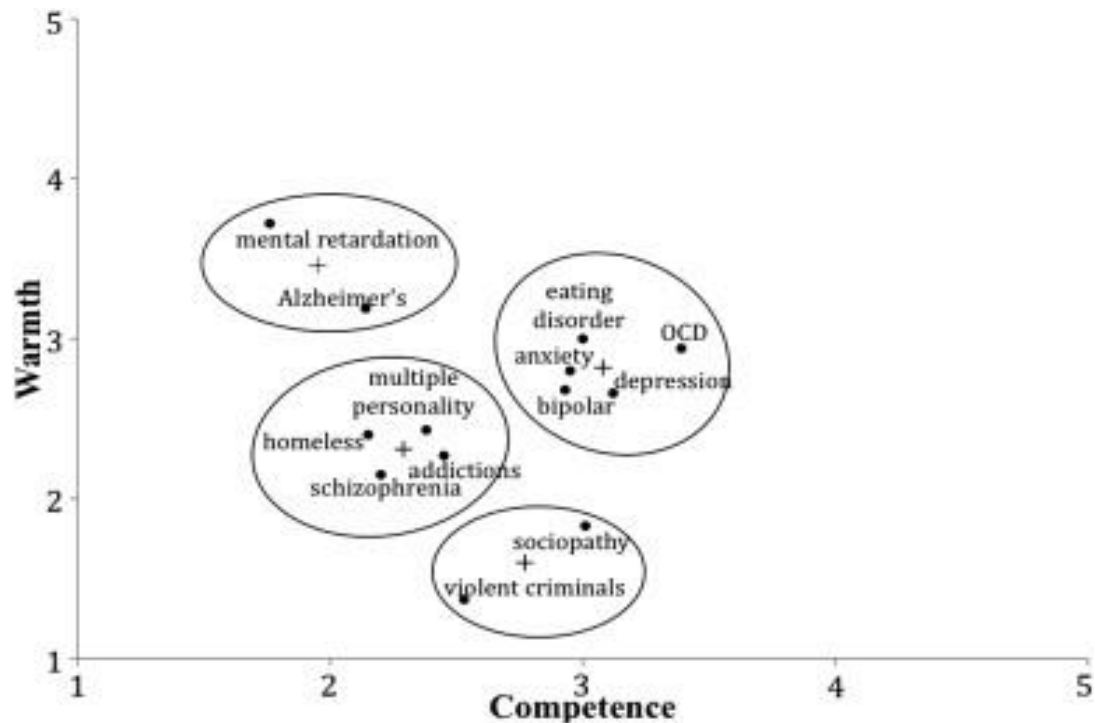
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successful workers.

affecting social inequality for PWMI as they interact with others in neighborhoods or work environments.

Public stereotypes of PWMI differ based on the specific label (Sadler, Meagor, and Kaye 2012). The Stereotype Content Model suggests that different labels, as indicative of different “types” of people, evoke varied amounts of competence and warmth (Sadler et al. 2012; Fiske, Cuddy, and Glick 2007). For example, the public sees homeless people and migrant workers as low in both competence and warmth, and sees whites and “The Middle Class” as high in both competence and warmth. Views of PWMI, however, vary by label, such that some categories of mental illness evoke more competence or warmth than others. Sadler et al. (2012) investigated the levels of competence and warmth elicited by the general label of “people with mental illness,” finding that participants saw the group as relatively warm but low in competence. In a follow-up study, looking at sub-groups of mental illness as identified by participants, the authors identified four clusters of mental illnesses. A cluster containing schizophrenia and addictions were perceived as incompetent and not warm, while the other three clusters showed ambivalent scores on the competence and warmth ratings. Specifically, participants perceived a mixture of disorders with symptoms such as anxiety or mood irregularities as moderate in both warmth and competence. The table from their study is shown below as Figure 2:

**Figure 2. Stereotypes of Various Mental Illness Labels (p. 919, Sadler et al. 2012)**



This research extended the analysis of stereotypes of PWMI to the workplace, to specifically compare individuals with certain conditions with non-labeled individuals in terms of dangerousness (the opposite of warmth), competence, and characteristics seen as essential for workplace success (assertiveness and capability).

#### Perceived Causes of Mental Illness and Public Sympathy

Based on stereotyping alone, the public perceives of different mental illnesses as entailing different degrees of negative traits. An important factor leading to differential treatment of PWMI is the level of sympathy elicited by the condition. Beliefs about the controllability of a disorder can influence social responses, such that disorders believed to be uncontrollable tend to elicit pity from the public, while disorders believed to be controllable elicit anger (Weiner et al. 1988). Two studies showed that the public believes posttraumatic stress disorder (PTSD) to not

be caused by the individual, and to elicit pity or sympathy, while another study found contrasting results. Weiner et al. (1988) showed that Vietnam War Syndrome is believed to be less controllable than other “mental-behavioral” disorders, and elicits helping behaviors. More recently, Wilson, Brodsky, Neal and Kramer (2011) showed a PTSD label to elicit sympathy from prosecutors when responding to veterans who were criminal offenders, compared with veterans with no PTSD label. Public attributions for the mental illness can also affect stereotypes, as they imply certain root causes of the condition. For example, stereotypes of individuals with PTSD can differ based on how the disorder is acquired. Combat veterans with PTSD believe that the public sees them as dangerous, violent, and “crazy” (Mittal, Drummond, Blevins, Curran, Corrigan, and Sullivan 2013). And, even though research (Weiner, Perry, and Magnusson 1988) has found that individuals with Vietnam War Syndrome were seen as less at fault for their conditions, more recent veterans perceived that the public believes they are responsible for acquiring PTSD (Mittal et al. 2013).

Corrigan (2000) provided an overview of research on attributions for mental disorders. He noted that social responses to the mentally ill are based on the perceived stability of the causes of the disorder, the perceived controllability of the causes of the disorder, and the affective responses to the individual. First, the degree to which the public views a cause of a disorder as stable can affect the strength of responses to the individual, such that stable attributions result in decreased helping behaviors. Second, if the public sees individuals as personally accountable for their mental disorders, they are more likely to ascribe responsibility and blame, which leads to a response of anger. On the contrary, if the individual is seen as not accountable for her or his condition, the public is more likely to respond with pity.



### *PTSD and Symbolic Capital*

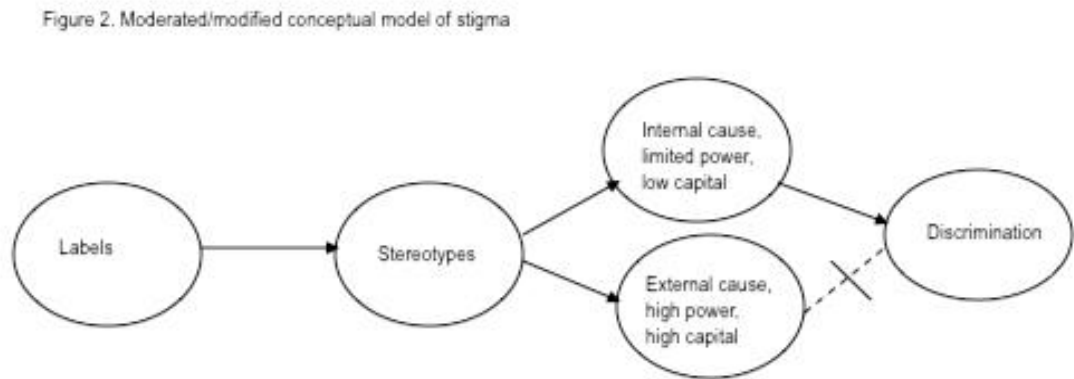
The public generally views mental-behavioral conditions (e.g. drug abuse and AIDS) as more controllable at their onset than physical conditions (e.g. obesity), and these conditions elicited less pity than physical conditions (Weiner et al. 1988). These judgments were partially based on the stated cause of the condition. However, Vietnam War Syndrome, an earlier term similar to what is now called PTSD, elicited more pity than other mental-behavioral conditions, and was also seen as less controllable than other mental conditions. In the meaningful setting of courtroom sentencing, prosecutors were significantly more lenient toward veterans both with and without PTSD diagnoses compared to non-veterans. Furthermore, they viewed veterans as less at fault for their crimes and empathized more with them compared to non-veterans (Wilson et al. 2011). Nevertheless, Hipes, Lucas, and Kleykamp (2014) found that veterans with PTSD had lower status in a group interaction than members of the military with no such diagnosis, suggesting that pity might be accompanied by negative standing in group situations.

For veterans with PTSD diagnoses, a label could actually lead to increased public sympathy and less stereotyping of the person as dangerous than other mental illnesses such as schizophrenia. One study found an inverse relationship between pity and social distance, such that the more pity respondents felt toward the labeled individual (in this case the label was schizophrenia), the less social distance they desired from her or him (Angermeyer and Matschinger 2003). Furthermore, there was an inverse relationship between perceived dangerousness and pity.

MacLean and Kleykamp (2014) investigated public responses to military veterans presented as having seen combat, noncombat veterans, and military contractors. They developed

an extension of the stigma model (Link and Phelan 2001) by including “symbolic capital” as a moderator/modifier that can alter the effects of negative stereotypes on discrimination. Symbolic capital constitutes the prestige given to a social group that is derived from their cultural value, which for modern U.S. veterans comes largely from the cultural desire to “support the troops” (Calhoun 2002; MacLean and Kleykamp 2014). Results of their study demonstrated support for their hypothesis, such that the public saw combat veterans as more likely to have mental/behavioral issues than the other groups studied, but did not seek social distance from the group. Thus, labels (combat veteran) that evoked negative stereotypes (mental/behavioral issues), did not lead to discrimination (social exclusion). Their conceptual model is presented in Figure 3:

**Figure 3. Modified Stigma Model (p. 134, MacLean and Kleykamp 2014)**



In contrast to a social group who is privileged by social capital, research has not indicated that people with schizophrenia evoke cultural sympathy relative to other stigmatized groups. Part of this might be due to the public's belief that schizophrenia symptoms do not lie on a continuum of health to illness (Schomerus, Angermeyer, and Matschinger 2013). Schomerus, Angermeyer and Matschinger (2013) studied public responses to depression, alcohol dependence and schizophrenia, and found that the public perceived schizophrenia as the condition with symptoms least likely to exist on a continuum. Beliefs in the continuity of an illness were associated with emotional reactions and desire for social distance. Therefore, people with schizophrenia can face detachment from society due to their perceived differentness, while war veterans with mental illness might be less likely to face rejection due to their symbolic capital.

PTSD can evoke sympathy from the public, but this sympathy might not be associated with how much status these individuals receive in social interactions. One study of the status given to war veterans with PTSD – a group shown to receive sympathy (Hipes et al. 2014) – found that the group had lower status than military personnel with no label. In this study, participants worked with a partner they believed was real in a group task, and could choose to change their answers to match the partner's answers or ignore them. Participants were significantly more likely to change their answers for the control condition compared to the war veteran with PTSD. However, participants were most likely to say they would donate a portion of their payment to a veterans' charity for the PTSD partners, suggesting they sympathized with them. Conversely, the experimental conditions that were given the highest status by participants evoked the lowest amounts of sympathy. It might be, then, that sympathy can be positive for leading to social support for PWMI, but negative for promoting the belief that PWMI are

competent or even employable. But sympathy might also alter the effects of negative stereotyping on the stigma process, thus helping to alleviate employment discrimination.

### *Gender and Stigma*

Research has demonstrated that mental illness stereotypes are gendered, such that the public sees men as more capable of violence or dangerousness, and women as more likely to be dependent (Wirth and Bodenhausen 2009). Certain mental illness prevalences do in fact vary by gender, which accounts for the association of certain characteristics with women or men. For example, men are more likely to be diagnosed with externalizing disorders and alcohol dependency (Wirth and Bodenhausen 2009; Grant 1997), and women are more likely to be diagnosed with major depression (Kessler 2003). These disorders link onto the mental illness stereotypes of dangerousness/violence for men and helplessness/dependence for women. Wirth and Bodenhausen (2009) examined the effect of gender on public stigma towards a person who is said to suffer from alcohol abuse or major depression. The authors selected these disorders because alcohol abuse is typically associated with men, and major depression with women. Participants responded to either a woman or man with these conditions, with results demonstrating greater stigma when the PWMI's gender matched up with her or his disorder. When cases were gender typical, participants expressed more negative emotions, lower sympathy, and less desire to help. This might be because participants were less likely to see gender-typical cases as genuine mental disturbances.

In addition to playing a role in how stigma targets are treated, gender can also have some effects on how stigma perpetrators treat others. Research has shown that former mental patients who are women were treated more favorably than men as targets of stigma, and women also treated former mental patients more favorably than did men (Farina 1981; Robillard 2010). Yet,

women were more likely than men to perceive of people with schizophrenia as dangerous (Corrigan, Markowitz, and Watson 2004). In a more recent overview, Holzinger, Floris, Schomerus, Carta, and Angermeyer (2012) also found that women who were former mental patients received less stigma. However, they did not find support that women showed more favorable attitudes toward PWMI than men.

Gender can also influence who seeks treatment for mental health symptoms. One study showed that women have 41% higher odds of having positive attitudes toward mental health treatment than men (Mojtabai 2007), and another showed that they used outpatient mental health services more frequently (Rhodes, Goering, To, and Williams 2002) Part of the higher usage rate was based on women's higher diagnosis of mood and anxiety disorders, which Wirth and Bodenhausen's (2009) research might suggest is due to lower stigma for women with those conditions. The present research examined the gendered conditions of depression as well as schizophrenia and war-related PTSD (stereotyped as masculine). Hypotheses tested whether the gender-typicality of conditions affected stereotyping.

### *Social Characteristics and Stigma Perpetrators*

Past experience interacting with people with mental illness can be a strong predictor of treatment of labeled individuals (Corrigan, Green, Lundin, Kubiak and Penn 2001). Corrigan and Watson (2007) tested whether stigma toward people with schizophrenia, drug dependency, or emphysema differed by sex, education and ethnicity of stigma perpetrators<sup>2</sup>. They found that

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<sup>2</sup>. Stigma perpetrators refers to social actors who enact stigma through their behaviors, whether consciously, subconsciously, or some combination of the two.

women, people with more education, and nonwhite participants were less likely to endorse stigma.

Alexander and Link (2003) examined the effect of contact with PWMI across several domains on perceived dangerousness and desired social distance of a person with mental illness. They summed the types of contact and found that as total contact increased, perceived dangerousness and desired social distance both decreased significantly. Using a military sample, Hipes (2011) found that past contact with PWMI was a significant predictor of stigmatizing attitudes toward a soldier with PTSD symptoms, such that contact was associated with less endorsed stigma. This paper will assess the role of contact on stereotypes and hiring discrimination of PWMI.

#### *Stereotype Disconfirmation and Stigma Reduction*

In addition to research on the theoretical processes undergirding the stigma of mental illness, some have focused on applied intervention strategies that can alleviate stigma. Rooted in stigma theory, this research highlights the fact that challenging the misunderstandings and misinformation surrounding people with mental illness can have a positive impact on reducing stigma. One of the most effective factors in reducing the stigma of mental illness has been contact with people with mental illness (Corrigan et al. 2012). People who reported more contact with PWMI perceived of labeled individuals as less dangerous – one of the most damaging stereotypes - than individuals who did not report contact (Trute et al. 1989; Penn et al. 1999; Corrigan et al. 2001). Interpersonal contact can also be associated with less stigma toward people who choose to seek treatment for mental health symptoms (Hipes 2012). Employing a scale I mirror in these studies, Anderson and Link (2003) found that a wide range of contact types were associated with decreased social distance from a PWMI and lower perceived dangerousness of

the person. The present research incorporated a contact scale that allowed for assessing its impact on stereotyping and hiring discrimination of PWMI.

. Strategies for tackling stigma have included contact with PWMI (in various forms), education targeted toward better understanding mental illness, and social activism geared toward changing the discourse and treatment of PWMI (Corrigan, Morris, Michaels, Rafacz, and Rusch 2012). Of the stigma reduction strategies, contact with PWMI has shown the most effectiveness at reducing public stigma. A meta-analysis of 72 articles that examined effectiveness of reducing public stigma, or the level of stigmatizing attitudes and discrimination endorsed by a population, found that contact with PWMI is the best strategy for reducing public stigma (Corrigan et al. 2012). This included contact that disconfirms harmful stereotypes, such as a presentation by a person with schizophrenia about how she manages to succeed at work while managing symptoms.

Research has demonstrated that moderate disconfirmation of a stereotype can be effective at reducing negative stereotypes, compared to no disconfirmation (Weber and Crocker 1983). Similarly, Reinke, Corrigan, Leonhard, Lundin, and Kubiak (2004) found that both moderate and high disconfirmation methods were successful in decreasing stigmatizing attitudes of the participants, and there was no significant difference between the moderate and high conditions. They tested the effect of stereotype disconfirmation on stigmatizing attitudes of study participants. A person with mental illness either gave an in-person or videotaped presentation to a group of participants, with some presentations only featuring the debilitating symptoms of the mental health condition (no disconfirmation), some presenting a balance between symptoms and success (moderate disconfirmation), and others highlighting the person's successes (high

disconfirmation). These studies suggested that interpersonal contact intended to reduce stereotypes should be tempered, perhaps to seem more believable to the stigma target.



## Chapter 3: Power and the Stigma Process

The stigma process, according to Link and Phelan's (2001) conceptualization, occurs under a power imbalance, whereby the PWMI is less powerful than the stigma perpetrator. Yet this proposition has not been linked to the large group processes or psychological research on power. Therefore, the role of power as a mechanism in producing stigma is uncertain. I define power as the ability to get what one wants despite resistance from others (Lovaglia 1999). For the purposes of this study, the most important aspect of having power is the perception that one feels that they have control over others, or that they have power (Anderson, John, and Keltner 2012). In sociological research, power is largely discussed as a function of one's position in a group structure. That is, power comes from one's position relative to others. High power individuals are able to have control over others, whereas low power individuals are controlled and constrained. Power is linked to the mechanisms of stereotyping and discrimination, two processes that occur under stigmatization, yet noticeably absent is research linking power and mental illness stigma directly.

Some sociologists have theorized power as rooted in social networks. In this way, a person is powerful if she controls access to valued resources such as monetary rewards or decision-making ability (Willer, Lovaglia, and Markovsky 1997; Anderson et al. 2012). In addition to stemming from a structural position, power is accompanied by a sense of feeling powerful. Thus, a consideration of power as a personal sense is important for considering how it affects stigma, as stigmatizing individuals might often possess a sense of power that cannot necessarily be measured by their social standing. For this reason, I measure power as a sense of control over others in general, rather than a position in a social network.

Power has been linked to action with studies showing that powerful individuals are more likely to make the first move in a number of situations, and also engage in risky behaviors (Keltner, Gruenfeld, and Anderson 2003). Galinsky, Gruenfeld, and Magee (2003) conducted three experiments, two of which involved priming subjects with power and measuring their responses to situations. They demonstrated that powerful individuals were more likely to move an annoying fan next to their work station, and were more likely to act in a social dilemma regardless of whether the action led to positive consequences for the other individuals in the setting. Power is also associated with action, whereas powerlessness is associated with inhibition (Keltner et al. 2003).

Some direct linkages have been established between power and certain stigma components. For example, power can increase social distance – one form of discrimination - desired toward a target (Lammers, Galinsky, Gordjin, and Otten 2012). In one study, participants were given a choice of a video game that was shown to be associated with either high or low social distance, and participants in the powerful conditions were less likely to play the high social distance game. As another instance of power increasing the stigmatization of others, Gruenfeld et al. (2008) showed that power increases the objectification of others, in that more powerful people were more likely to use others for instrumental purposes. And, Lammers and Stapel (2011) showed that power increased dehumanization towards an outgroup, which they suggested could actually function to help powerful individuals make decisions in a less emotional manner. Thus, research has established a connection between power and the stigma component of social distance.

Power has been linked by researchers with various processes that occur under stigmatization, including the stereotyping of outgroup members (as detailed in the next section),

social distancing of others, and mistreatment of an outgroup. Yet the effects of power on stigmatization have not been directly tested using a controlled setting. Study 3 tested the association between power and stigma components directed towards an individual experiencing symptoms of schizophrenia, including labeling, social distance, and stereotyping. And studies 1 and 2 connected power to the stigma of mental illness to determine whether a sense of power – such as that experienced by a superior over a subordinate – was associated with increased stereotyping and hiring discrimination toward a PWMI.

### *Stereotyping and Power*

Little research to my knowledge exists linking power and stigma directly, yet there is a body of research on power and stereotyping. This research has shown in some studies that powerful positions increase can one's willingness to stereotype. In one study, powerful individuals were less likely to attend to stereotype-disconfirming information, and were also more attentive to stereotypical information about other individuals (Goodwin, Gubin, Fiske, and Yzerbyt 2000). Furthermore, Georgesen and Harris (1998) found that the more power someone had, the more negative were evaluations of others. Fiske (1993) argued that power leads to stereotyping because powerful people have less need to pay attention to details of others. On the contrary, powerless individuals must form more complex impressions of others, so are less likely to stereotype. Guinote and Phillips (2010) also demonstrated that high-power individuals attended less to information and relied more on stereotyping in decision-making processes. Related to stereotyping, others have shown that dominant group members are more discriminatory towards an outgroup member than subordinate group members (Sachdev and Bourhis 1985, 1991).

Despite research showing a link between a sense of power and stereotyping others, Lammers, Stoker, and Stapel. (2009) demonstrated that power can actually be associated with *less* stereotyping of others. This is because the association between stereotyping and power can depend on the type of power measured; either power based on control or power based on independence from intrusion by others, or interdependence. The present research is focused on power based on control over others, which Lammers et al. (2009) called “social power.” The authors found that social power was actually associated with less stereotyping behavior because it was associated with interdependence and responsibility to others. Furthermore, others have asserted that power can lead individuals to look for more information from a target person when information is unclear, leading them to be less quick to jump to stereotypes (Chen, Ybarra, and Kiefer 2004).

Taking stigma theory and power research together, I would expect for a higher sense of power to be associated with more stigmatization of people with mental illness, in the form of stereotyping, social distancing, and other forms of discrimination. The majority of research on the relationship between power and mistreatment of others or stigmatization of out-groups has demonstrated that powerful people are more likely to rush to judgment of others and thus might rely more on stereotypical information, especially in the absence of any real behaviors exhibited by the stigma target. But, a sense of control over others can also be associated with less stereotyping of others, perhaps due to a sense of responsibility for the person in an interactional setting. And, there may be a difference in measuring a participants’ sense of power through survey questionnaires and priming her or him to feel powerful prior to answering attitudinal questions. In the next section, I outline the guiding propositions of this study, based on the

theories just described, including some hesitance to propose that power might only be associated with more stigmatizing attitudes and behaviors.

## Chapter 4: Theoretical Propositions

This research is based on stigma-and-power-related research that culminates in some theoretical expectations. To fully illustrate the expectations of this research, this chapter lays out the theoretical propositions that follow from previous findings as well as the more specific predictions that link the propositions to the study methodologies.

The first piece of this research is to establish that discrimination toward PWMI in the labor market is rooted in the negative stereotypes of incompetence, dangerousness, and low perceived employability. The stigma model asserts that mental illness labels become associated with negative stereotypes, which represents the beginning of the stigma process (Link and Phelan 2001). From the consistent research demonstrating the unequal treatment of PWMI by the public in and outside of the labor market, I develop the first key proposition of this research:

**Proposition 1 (Stigma of Mental Illness): The public will negatively stereotype workers with discernable mental illness labels, and will desire social distance from them.**

The next propositions specify that the negative stereotyping of PWMI will include perceptions of dangerousness and incompetence. Researchers have consistently found that people with mental illness evoke perceptions of dangerousness, violence, and the public tends to fear and exclude them. This has been especially true for people with psychotic disorders such as schizophrenia (Link et al. 1999; Sadler et al. 2012). Perceptions of dangerousness and violence are linked with fear and a prevalence to desire social distance toward PWMI (Link et al. 1999; Sadler et al. 2012).

**Proposition 2: The public will perceive of PWMI as more dangerous than non-labeled individuals. This will be especially true for conditions commonly linked with perceived violence and dangerousness.**

Perceptions of competence differ based on the specific condition, but the public stereotypes PWMI as less competent than non-labeled individuals (Sadler et al. 2012). Hipes et al. (2014) showed that war veterans with PTSD received lower status when working on a group task in a partner, which is one measure of perceived competence. Other research has shown that people with certain mental illness labels evoked perceptions of lowered competence compared to non-stigmatized individuals (e.g. Sadler et al. 2012).

**Proposition 3: The public will perceive of PWMI as less competent than non-labeled individuals.**

There is limited research to my knowledge of gender differences in public responses to stigma targets. One study (Wirth and Bodenhausen 2009) examined responses to PWMI who were presented as either a woman or man and a gender-typical or atypical condition (depression for women and alcohol dependence for men). Their results showed that stigma was greater when the stigma targets were linked to gender-typical conditions. The present research included some conditions that are typically seen as masculine (schizophrenia, war-related PTSD) and one that is typically seen as more feminine (depression). From this, I expect to find greater stereotyping for the female vignette when the condition is depression, while for men I might expect more stereotyping for PTSD and schizophrenia.

**Proposition 4: Gender-typical mental illness labels will evoke more negative stereotyping of a PWMI.**

One study incorporating focus groups of combat veterans found that they believe that the public thinks they are at fault for their condition (Mittal et al. 2013). Since post-9/11 military personnel mostly enlisted in a time in which service was voluntary, the public might be more likely to hold them responsible for mental health issues following service.

**Proposition 5: The public will view a worker with PTSD from wartime service as especially at fault for their condition, relative to people with other mental illness conditions.**

Little research to my knowledge has examined the effects of PTSD labels on social interactions in controlled settings. Yet I expect stereotypes of PTSD to be similar to stereotypes of other mental illnesses. One study examined the levels of influence of war veterans with PTSD relative to military personnel with no such label, finding that the veterans with PTSD had less influence in a group task. This might indicate that participants viewed these individuals as less competent than someone without a mental illness label. One goal of this paper is to determine the level of stereotyping war-related PTSD evokes, alongside other mental health conditions that have received more scrutiny in academic research.

**Proposition 6: Individuals with war-related PTSD will be seen as incompetent and less employable compared to non-labeled individuals.**

#### *Differential Discrimination*

Earlier propositions predict stigma for PWMI in terms of negative stereotyping. However, I do not expect this negative stereotyping to lead to equal levels of hiring discrimination. Instead, due to the symbolic capital afforded military personnel and veterans (MacLean and Kleykamp 2014), I expect low-sympathy condition of schizophrenia to evoke more discrimination relative to a high-sympathy condition such as war-related PTSD.



**Proposition 7 (Symbolic Capital): The public will desire less social distance from war veterans with PTSD than individuals with schizophrenia.**

Social exclusion is one form of discrimination by which stigma perpetrators exercise “stigma power” (Link and Phelan 2014). However, more specific hiring discrimination can serve to keep PWMI out of the labor market altogether or underemployed. The labor market might be one scenario in which differential discrimination takes place for war veterans with PTSD, because veterans’ employment is an issue that has been prominent in the U.S. media. Even President Obama mentioned the issue in his State of the Union address in 2012, saying: “We need all leaders, and all sectors – public and private – to play their part to get this economy moving for everyone, and especially our unemployed veterans who have so many great skills to offer and have done so much for our country” (Obama 2012). I expect that the high level of cultural support for veterans will lead to the following:

**Proposition 8: (Symbolic Capital) The public will be less likely to express hiring discrimination towards war veterans with PTSD relative to a person with schizophrenia due to the symbolic capital afforded military personnel.**

*Stigma Targets*

Corrigan and Watson (2007) demonstrated that women, people with higher education, and white participants were less likely to endorse stigma than men, people with lower levels of education, and non-white participants. From this, I expect that:

**Proposition 9: Women, people with higher levels of education, and people who identify as white will be less likely to express stigmatizing attitudes toward PWMI than men, people with lower levels of education, and people who do not identify as white.**

Contact with mental illness, in various settings and scenarios, has been associated with less stigma toward PWMI in a number of studies. People who have experienced previous contact with PWMI tend to see them as less dangerous (e.g. Trute et al. 1989; Corrigan et al. 2001), and desire less social distance from them (Corrigan et al. 2001).

**Proposition 10: People who have more past contact with people with mental illness will perceive of PWMI in less stereotypical ways than people with less contact.**

### *Power and Stereotyping*

Several studies have linked a higher sense of power with more stereotyping behaviors (Fiske 1993; Georgesen and Harris 1998; Goodwin et al. 2000; Guinote and Phillips 2010; Sachdev and Bourhis 1985, 1991). I thus make the following proposition:

**Proposition 11: A high sense of power will be associated with more stigma toward individuals with mental illness labels.**

**Proposition 12: A high sense of power will be associated with more stereotyping of PWMI.**

At least one study (Lammers et al. 2009) has suggested that a higher sense of power can actually be associated with lower levels of stereotyping when the power is conceptualized as control over others. Therefore I might also find results that contradict proposition 12 should this be the case for this research. There is contrasting research on the effects of power on stereotyping, however this research does not speak to the effects of a high sense of power on labeling or socially excluding (discriminating against) a PWMI. For this reason, I draw from the consensus of psychological research on power that has shown power to increase social

distancing. Labeling is the first step in the stigma process, as it signals stereotypes and a division of us vs. them in the mind of the stigma target. I therefore propose that:

**Proposition 13: A high sense of power will be associated with labeling someone as mentally ill.**

In the psychology literature, power is associated with social distance towards a target. Power has been shown to increase the objectification of others, leading to using others for instrumental purposes (Gruenfeld et al. 2008), and also leads individuals to dehumanize others (Lammers et Stapel 2011). From these collected findings, I expect that:

**Proposition 14: A high sense of power will be associated with desiring social distance from a PWMI.**

#### *Hiring Discrimination toward PWMI*

The stigma process unfolds such that labeling leads to stereotyping, which then leads to discrimination. This has been amended such that, for military personnel, veterans, or others benefiting from symbolic capital, the level of cultural prestige for a group can alleviate discrimination. For some other groups, such as people with serious and persistent mental illness, there is no such mitigation of the negative effects of stereotyping on discrimination. I therefore propose that:

**Proposition 16: (Differential Discrimination): Relative to a person with schizophrenia, the public will be more likely to recommend a war veteran with PTSD for hire for a job for which she/he is qualified.**

Stigma Reduction via Stereotype Disconfirmation

As discussed earlier, contact with a person with mental illness can be instrumental in reducing stigmatizing attitudes (e.g. Corrigan et al. 2012). This is especially true if the contact includes disconfirmation of prevalent, negative stereotypes related to the stigmatized group (Weber and Crocker 1983; Reinke et al. 2004). I thus propose that:

**Proposition 17: A person with a visible mental illness label who presents her/himself in a manner that disconfirms negative stereotypes will evoke less stigma compared to a PWMI who does not disconfirm negative stereotypes.**

## Chapter 5: The Experimental Setting

The present research attempts to connect theory and research on stereotyping, power and stigma to more applied considerations of employment discrimination toward PWMI in modern society. This research will link knowledge about unequal treatment of PWMI to specific mechanisms that perpetuate these inequalities in a context in which power imbalances are commonplace and individuals often make crucial decisions about hiring or promotions with little information other than what can be read in a few documents. Thus, it is a context suitable to examine the impact of labels and limited information - apart from appearances, behavior, or other interpersonal factors – in leading to systematic discrimination for people with disclosed mental illness labels. This chapter explains the justification for using experimental methods to examine the research questions, including using a more modern online survey tool.

### *The Value of the Experimental Approach*

To test the theoretically-based hypotheses, the studies employed experimental methods, as I was interested in examining the effect of labels and specific theoretical mechanisms in affecting stigma variables in a controlled setting. Examining workplace discrimination at the interactional level requires a view of how variation in key pieces of information can lead to unequal responses. In the case of this research, I am interested in how mental illness labels and limited information – in and of themselves – evoke negative stereotypes, and whether this differs by how powerful someone feels. Experiments allow for the isolation of specific variables, and the exposure of specific information to certain groups of participants, who otherwise I expect to experience equal conditions in the study. The goal of these studies therefore is to explain the

*process* of stigmatization in a competitive, workplace-like setting. The intent is not to generalize to other settings, but to demonstrate how theoretical mechanisms operate under given conditions.

### *The Experimental Setting*

These studies were carried out using two different sampling procedures and settings, although both are conventional for use in modern social psychological research. Studies 1 and 2 utilize Mechanical Turk, which is a tool to connect researchers with participants to carry out various types of studies that can be completed online. Participants agree to work on Human Intelligence Tasks (called HITs) in exchange for money, and researchers post their HITs to be completed. Many HITs can be completed within a few hours or even minutes, provided that pay is sufficient to attract participants. Thus, mTurk allows for extremely fast data collection relative to laboratory studies by streamlining participant recruitment and utilizing a massive subject pool. And, research has demonstrated that mTurk's subject pool is more diverse than traditional university samples and just as reliable as traditional methods (Buhrmester, Kwang, and Gosling 2011).

One potential difficulty with using an online experiment tool is the lack of control over the participant's attention. Traditional laboratory experiments allow for more thorough debriefing to ensure that participants paid attention to manipulations and study materials. To address this, I built in "attention checks" to Study 1 and 2 that asked simple questions to ensure participants had paid attention to key pieces of information. Then, I dropped any participants who did not correctly answer these questions. Another measure of participant attention is the amount of time spent on a study. Thankfully, mTurk tracks the start and end time for each

respondent, allowing the researcher to screen out participants who spent an unreasonably short (or long) amount of time on the study.

Study 3 was completed using a traditional laboratory setting in which undergraduate students came to a lab and completed a study with guidance from research assistants. Thus, the demographics of the sample differed significantly (as detailed in the sample demographics tables in later chapters). Nevertheless, research involving university samples has been the norm for much of the seminal works in social psychology.

### Measuring Power

Power is associated with control over resources and the ability to give out rewards and punishments (Anderson and Galinsky 2006), which is similar to how it is presently defined in the dissertation. Following from this, many sociological considerations of power focus on structural positions in which someone has the ability to control exchanges or interactions. For example, exchange theories see power as rooted in network exchange structures, such that more powerful individuals are able to have more control over interactions (see Cook and Whitmeyer 1992 for an overview). However, power is also a *perception* that a person has control, whether or not it is actually true in her or his interactions (Anderson et al. 2012). So, for the purposes of this research I see power as occurring alongside a psychological state that can be induced through priming procedures and also measured through survey questions.

Psychological research has demonstrated that a sense of feeling powerful can lead individuals to objectify others (Gruenfeld, Inesi, Magee, and Galinsky 2008), seek social distance from others (Lammers et al. 2012), and be more attentive of stereotypical information (Goodwin et al. 2000). This dissertation draws from this literature, while connecting the

psychological treatment of power to structural situation of a person with mental illness applying for a job. The goal is to see whether participants' level of personal power affects the degree to which they stigmatize someone.

Theories on power suggest that high power would be associated with more stereotyping, labeling and social distance of workers with mental illness (Study 1 and 3) and more discriminatory treatment of a person with mental illness (Study 2). For Study 1 and 2, I will test participants' level of general power at the end of the study using a scale created by Anderson et al. (2012), which measures the personal sense of power an individual feels in various relationships or in general. Its items capture the definition of power used in these studies, and should tap into the participants' general level of power in a range of roles and relationships. The items are as follows (scaled from Strongly Disagree to Strongly Agree):

“In my relationships with others...”

1. I can get them to listen to what I say. \_\_\_\_\_
2. My wishes do not carry much weight. (r) \_\_\_\_\_
3. I can get them to do what I want. \_\_\_\_\_
4. Even if I voice them, my views have little sway. (r) \_\_\_\_\_
5. I think I have a great deal of power. \_\_\_\_\_
6. My ideas and opinions are often ignored. (r) \_\_\_\_\_
7. Even when I try, I am not able to get my way. (r) \_\_\_\_\_
8. If I want to, I get to make the decisions.

This scale is related to both social factors and more psychologically-based personality variables that are associated with power (Anderson, John, and Keltner, 2012).

This research assumes that a personal sense of power is indicative of behaving in powerful ways, as research has shown. While the limited sociological research on power and



stigma focuses on one's social position, the goal of this research is to assess whether a personal sense of power (Studies 1 and 2) or the feelings associated with being in a powerful position (Study 3) lead an individual to be more stigmatizing of a person with mental illness than the feelings associated with being less powerful.

### Attending to Contact

I theorize that contact with mental illness, whether through interpersonal relationships or through the media, can affect responses to study materials. As a result, I ensured that there were no major news stories related to mental illness on the days I ran Studies 1 and 2. Both of these studies were conducted within 24-48 hours each, which made this possible. For Study 3, however, because this was done in a laboratory setting over a longer period of time, I could not ensure that there were no major news stories during the entire time.

## Chapter 6: Study 1 Predictions and Methods

The guiding propositions for this research trace the roots of employment discrimination toward PWMI to negative stereotyping of PWMI and differential discrimination based on a specific mental health condition. Furthermore, I proposed that a sense of power would play a key factor in all components of the stigma process, as well as past contact with mental illness and the gender of the stigma target. To test these propositions, I conducted three separate but interrelated experiments that isolated and controlled for specific mental illness labels in relation to perceptions of the PWMI's attributes (Study 1), her or his worthiness of being hired for a competitive position for which they were qualified (Study 2), and whether a manipulated sense of power affected stigmatizing attitudes toward someone exhibiting symptoms of schizophrenia (Study 3).

Study 1 was an online vignette survey in which participants provided demographic information, read a scenario in which a worker with a successful history was said to have missed work time to attend to a condition (or missed no work time for the control condition), then indicated whether they believed a series of attributes were characteristic of the type of person they had read about in the vignette. The conditions were "mental illness," PTSD from an automobile accident, PTSD from wartime service in Iraq, schizophrenia, and depression. The attributes covered the mental illness stereotypes of dangerousness and incompetence, as well as key traits necessary for successful employment, such as assertiveness and capability. Following this, participants responded to questions assessing their sense of power and past contact with mental illness. A detailed list of all study hypotheses and decisions to reject or support them is located in Appendix D. A list of the hypotheses for Study 1 is located at the end of Chapter 7.

### Predictions

Beliefs about the dangerousness and competence of individuals with certain labels can dictate how others perceive and treat them (Sadler et al. 2012), and are thus critical as factors impacting employment discrimination. Research on views of PWMI with no specified condition have found that the public views these individuals as potentially dangerous and thus low in warmth, compared to other social groups (Sadler et al. 2012). Proposition 2 predicts that PWMI will be stereotyped as dangerous relative to non-labeled individuals. It follows that:

**Hypothesis 1:** Participants will perceive of a worker with an unspecified “mental illness” as more dangerous than the control condition.

Within the range of mental health conditions, I also expect to see variation in stereotyping, as research has shown that specific mental illness labels can differ on the level of dangerousness they evoke from others. For example, in one study the public viewed people with psychotic disorders, such as people with schizophrenia, as potentially dangerous or violent compared to other conditions, such as depression (Link et al. 1999; Sadler et al. 2012). I predict that:

**Hypothesis 2:** Participants will perceive of the worker with schizophrenia as more dangerous than the control condition.

Sadler and others (2012) also measured ratings of competence for different mental illnesses, showing that PWMI are viewed as less competent than people with no label. Proposition 3 states that PWMI will be perceived of as less competent than non-labeled individuals. I thus predict that:

**Hypothesis 3:** Participants will perceive of workers with mental illness labels as less competent than the control condition.

### Gender Predictions

The gender of both stigma targets and perpetrators can impact the stigma process (Holzinger et al. 2012; Wirth and Bodenhausen 2009). To assess this, Study 1 had parallel conditions with different mental illness conditions that varied by gender of the stigma target.

The public stigmatizes PWMI more if their gender does not link onto the stereotypes of their condition (Wirth and Bodenhausen 2009). In one study, participants treated a stigma target more harshly if their mental health condition was gender-typical (depression for women and alcohol dependence for men). Proposition 4 links gender-typical conditions to levels of stereotyping. I thus predict that:

**Hypothesis 4:** For scenarios with a female worker, participants will be most stigmatizing of the depression condition (stereotyped as feminine).

And conversely, I predict that:

**Hypothesis 5:** For scenarios with a male worker, participants will be most stigmatizing of the war-related PTSD and schizophrenia conditions (stereotyped as masculine).

The public is less stigmatizing of women with mental illnesses than men, showing less likelihood of rejecting them (Holzinger et al. 2012). I thus expect that:

**Hypothesis 6:** For the female vignette conditions compared to the male vignette, participants will be less stigmatizing of the mental illness conditions relative to the control condition.

As stigma perpetrators, Corrigan and Watson (2007) showed that women, people with higher education, and people who identify as white are less stigmatizing of PWMI. I thus expect that:

**Hypothesis 7:** Women participants will be less stigmatizing of the mental illness conditions than male participants.

**Hypothesis 8:** Participants with higher levels of education will be less stigmatizing of the mental illness conditions than participants with lower levels of education.

**Hypothesis 9:** White participants will be less stigmatizing of the mental illness conditions than non-white participants.

Proposition 10 stated that contact with mental illness would be associated with stigmatizing attitudes, such that more contact will lead to less stereotyping of PWMI. Research has demonstrated the effects of contact on reducing perceived dangerousness and desire for social exclusion (Trute et al. 1989; Corrigan et al. 2001). I thus predict that:

**Hypothesis 10:** Participants who have experienced more contact with mental illness will be less stigmatizing of the mental illness conditions than participants with lower levels of contact.

### *PTSD Predictions*

Stereotypes of workers with mental illness differ significantly based on the perceived cause and perceived symptoms associated with it. For example, one past study showed that the cause of PTSD – labeled in the study as “Vietnam War Syndrome” - was seen as out of the control of the individual sufferer compared to other “mental-behavioral” conditions, thus leading to more pity for individuals with PTSD (Weiner et al. 1988). And, a PTSD label might elicit pity

from the public when considering sentencing for criminals (Wilson et al. 2011). Pity has important implications for stigmatizing behaviors, as pity has been associated with less social exclusion and perceived dangerousness of a PWMI (Angermeyer and Matschinger 2003). Other conditions, such as schizophrenia, might be more likely to evoke perceptions of intractability from the public relative to PTSD.

PTSD resulting from an accident might also be expected to elicit more pity than a condition perceived to be the fault of the individual. I include it as an experimental condition for this reason, and also as a comparison for war-related PTSD. While the cause of both conditions might be seen as outside the individual's control, the stereotypes evoked by the different labels might lead to different attitudes and behaviors of participants directed at these stigma targets.

The elite media frame military veterans as facing a multitude of problems, including high rates of PTSD diagnoses within returning Iraq and Afghanistan veterans. Simultaneously, public discourse has portrayed these veterans as extremely deserving of public respect and sympathy (Kleykamp and Hipes 2015). I expect the negative stereotyping of people with PTSD to be slightly blunted if they are a veteran of 21<sup>st</sup> century war in Iraq, as they will be seen as being especially deserving of sympathy, and thus might be seen as more warm. Thus I predict that:

**Hypothesis 11a:** The worker with a war-related PTSD label will be stereotyped as no more dangerous than the worker with no label.

However, alongside portrayals of OIF veterans as deserving of sympathy has also been fears of veterans being depicted as insane or volatile (Kleykamp and Hipes 2015). While these portrayals are more infrequent than other types of stories about veterans, they could be more attention-grabbing to casual viewers of media. I thus also predict that:

**Hypothesis 11b:** Participants will perceive of the worker with war-related PTSD as more dangerous than the worker with no label.

### Power Predictions

Power is also theorized to affect public stigma toward PWMI. This study asked participants how powerful they feel in general using eight scaled items. Based on Propositions 10-12 – which connect theory on power and stereotyping – and research suggesting a link between feeling powerful and stereotyping, I predict that:

**Hypothesis 12a:** Participants who feel more powerful will more strongly stereotype PWMI as dangerous, incompetent, and unemployable.

However, other research (Lammers et al. 2009) has suggested that power can be associated with *lower* levels of stereotyping when it is measured as control over others rather than as independence from others. This is the type of power I measure in these studies, so I tentatively predict that:

**Hypothesis 12b:** Participants who feel more powerful will less strongly stereotype PWMI as dangerous, incompetent, and unemployable.

### Employability Predictions

This research attempts to explain how stereotypes of PWMI disadvantage them in the workplace relative to workers with no labels. In addition to stereotypes of PWMI as dangerous and incompetent, research has also demonstrated that employment outcomes are suggestive of possible discrimination toward PWMI. In attempting to connect stereotyping of PWMI to direct

discrimination outcomes, Study 1 tested for requisite employment traits and whether participants saw these traits as characteristic of the type of person they read about in a vignette. I predict that:

**Hypothesis 13:** Participants will perceive of workers with mental illness labels as less employable (assertive and capable) than workers with no label.

### *Social Distance Predictions*

Following from the cultural support that military personnel and veterans have, I expect that war veterans with PTSD will be subjected to less social exclusion than other types of mental illness. Thus I predict that:

**Hypothesis 14:** Participants will desire less social distance from a war veteran with PTSD than a control condition; this will not be the case for a worker with schizophrenia

### *Methods*

Study 1 assessed negative stereotypes toward a worker with mental illness (with a successful work history) that differ from participants' perceptions of a successful worker with no mental illness label. Following from Schein's (1973) study titled "The Relationship between Sex Role Stereotypes and Requisite Management Characteristics," which demonstrated the stereotyping of managerial characteristics as masculine, I utilized a list of characteristics which participants rated according to the extent to which they are characteristic of someone like the worker described in a paragraph (see below and in Appendix A). Participants were randomly assigned to one of twelve conditions, and believed they were participating in a study about perceptions of workers. Due to the different concepts of the labor market around the world, only U.S. participants were sampled. After completing demographic information (age, sex, education,



and race), they read the following instructions and a short paragraph describing a successful middle manager applying for a new job:

“On the following pages you will find a series of descriptive terms commonly used to characterize people in general. Some of these terms are positive in connotation, others are negative, and some are neither very positive nor very negative.

I would like you to use this list to indicate what you think the following type of person is like. In making your judgments, it may be helpful to imagine that you are about to meet this person for the first time and the only thing you know in advance is the information in the following paragraph. Please read this paragraph carefully, then respond to the descriptive items:

Lisa/Robert is applying for a middle manager position at a large company in the United States. S/he has a competitive resume, and has been successful in her/his last position. S/he won a “Manager of the Year” award in 2012 in a position for which s/he served six years. Before that, s/he received B.S. and M.B.A. degrees, and successfully completed an internship. But recently s/he had to take a leave of absence from her/his company to receive treatment for [*control condition does not contain these last two sentences*/a mental illness/post-traumatic stress disorder (PTSD) resulting from an automobile accident/post-traumatic stress disorder (PTSD) resulting from service during Operation Iraqi Freedom/schizophrenia/depression]. S/he later returned to work and continued to perform well at her/his job.”

The conditions for the study were as follows:

Condition 1: Control (Has not missed work time for a medical condition), Woman

Condition 2: Mental Illness (unspecified), Woman

Condition 3: PTSD resulting from auto accident, Woman

Condition 4: PTSD resulting from service during Operation Iraqi Freedom, Woman

Condition 5: Schizophrenia, Woman

Condition 6: Depression, Woman

Condition 7: Control (Has not missed work time for a medical condition), Man

Condition 8: Mental Illness (unspecified), Man

Condition 9: PTSD resulting from auto accident, Man

Condition 10: PTSD resulting from service during Operation Iraqi Freedom, Man

Condition 11: Schizophrenia, Man

Condition 12: Depression, Man

Next, the participant was asked to indicate the degree to which a series of traits are characteristic of the type of person described in the paragraph. These traits either represented competence, dangerousness, or characteristics believed to be necessary for success as a manager (Schein 1973). I used factor analyses to create indices from the traits. The requisite managerial characteristics overlapped with mental illness stereotypes in some cases and were used in part in the stereotype indices that were the dependent variables for some analyses. Some, however, were used to create indices of traits commonly associated with workplace success (considered to be a proxy for perceived employability). Next, participants answered whether they thought the person was at fault for her/his condition, the degree of social distance they desired from her or him, their past contact with mental illness in various scenarios, and their personal sense of power in their interactions with others (Anderson et al. 2012). Finally, participants read a brief paragraph explaining to them the true purposes of the study and providing them with contact information should they have questions or concerns.

### Sample

One thousand and seventy participants from Amazon's Mechanical Turk system responded to a Qualtrics survey intended to take between 10-15 minutes of time, in exchange for \$0.75. On average, participants spent eight minutes and thirty seconds on the survey, however completion time included participants who did not complete the survey, so is actually somewhat higher. The initial sample was 1,070, but 96 people did not complete the study, and were excluded from the sample. An additional 45 participants failed to enter the correct information in the first attention check that required respondents to select a certain answer to indicate they were paying attention to the question items. Thirty-five participants entered an incorrect response on the second attention check. Respondents who answered incorrectly to either or both of these checks were excluded from the sample (62 people total). As an example of these checks, one item stated "Please select somewhat uncharacteristic here." Also, of participants who completed the survey and correctly responded to attention checks, 7% of participants (69 people) had missing data on at least one variable included in the final models, and are excluded from analyses. There are slightly more participants for conditions 7-10 because an initial batch was run with these four conditions a few minutes before the main batch. This initial batch was conducted in an identical manner to the full batch, so I did not exclude these participants. The final sample included in analyses was 843 participants.

Table 1 presents the descriptive statistics for the sample demographics.

<b>Table 1. Study 1 Sample Demographics</b>		
<b>Sex</b>	<b>N</b>	<b>%</b>
Male	468	55.52
Female	374	44.36
Other	1	0.12
<b><i>Education Level</i></b>		
High School or Less	85	10.08
Some College	319	37.84
4-Year College+	439	52.08
<b><i>Race</i></b>		
White/Caucasian	616	73.07
Black/African-American	51	6.05
Asian	74	8.78
Other/Multi-racial/Unspecified	102	12.1
<b><i>Age (Mean)</i></b>	33.99	Range (18-71)
<b>Total</b>	843	100

Fifty-six percent of the sample identified as male, 44% as female, and one respondent as “other.” The mean respondent age was 34, with a range of ages from 18 to 71 years old. I truncated the 10-category education variable into “High School or Less” (10%), “Some College, Trade School or Two-Year College” (38%), and “Four-Year College or More” (52%). Seventy-three percent of the sample identified as white or Caucasian, with 6% identifying as Black or African-American, 9% identifying as Asian, and 12% coded as other (including multi-racial or unspecified/unclear information). Demographic distributions indicate that this sample is significantly older and more educated than many samples for past academic studies, which are often conducted using university students as participants. I will discuss the possible implications of this in the Discussion section.

## Procedures

Hypotheses for Study 1 were that participants would stereotype the worker with an unspecified mental illness (Hypothesis 1), and the worker with schizophrenia (Hypothesis 2), as more dangerous than the control condition. Hypothesis 11a and 11b made contrasting predictions that participants might see the worker with war-related PTSD as lower or higher in dangerousness. Hypothesis 5 predicts that mental illness labels will lead to lower perceived competence for the workers with mental illness. Hypothesis 12a and 12b again predict contrasting findings on how a sense of power will affect stereotyping, either increasing it or decreasing it.

The last four predictions for study 1 relate to gender. Hypothesis 4 and 5 predict, respectively, that participants will be most stigmatizing of depression in the female vignette, and PTSD/schizophrenia in the male vignette conditions. I also predicted that participants will be less stigmatizing of PWMI in the female vignette conditions compared to the male vignette conditions (Hypothesis 6). Finally, hypotheses predicted that women, participants with higher levels of education, and participants who identify as white will be less stigmatizing than a reference group.

## Independent Variables

To measure power, I created a scale comprising the eight power items, reverse-coded as necessary to indicate a higher sense of power for higher scores. The scale reliability coefficient for these items was 0.95, indicating high reliability. Anderson et al. (2012) first demonstrated the reliability of these items and appropriateness of combining them into a scale. The mean of this

scale was 4.93, with a standard deviation of 1.19. Means and standard deviations of scale components are in Table 2 below.

<b>Table 2. Descriptive Statistics on Sense of Power Items (N=843)</b>		
<b>Question Item</b>	<b>Mean</b>	<b>St. Dev</b>
<i>"In my interactions with others..."</i>		
I can get them to listen to what I say.	5.11	1.31
My wishes do not carry much weight (rev).	5.07	1.39
I can get them to do what I want.	4.72	1.26
Even if I voice them, my views have little sway (rev).	5.1	1.44
I think I have a great deal of power.	4.28	1.48
My ideas and opinions are often ignored (rev).	5.13	1.46
Even when I try, I am not able to get my way (rev).	5.09	1.42
If I want to, I get to make the decisions.	4.92	1.32
<i>Note: scale is 7-point, with 1=Disagree Strongly and 7=Agree Strongly</i>		

To measure contact with mental illness, I used a scale developed by Alexander and Link (2003), adding two items for exposure to news about mental illness. The contact scale measured whether the participant had contact with mental illness in scenarios ranging from friends, the workplace, being in public, and via news exposure. This scale ranged from zero to six, with zero indicating no contact, and six indicating contact with mental illness in every domain. Mean for this scale was 1.76, with a standard deviation of 1.09. Table 3 gives the means for the scale components.

<b>Contact Type</b>	<b>N</b>	<b>%</b>	
<b>Self or Family Hospitalized</b>	180	21.4	
Self	51	6	
Close family member	145	17	
<b>Spouse or Close Friend Hospitalized</b>	115	13.6	
Spouse	24	2.9	
Close Friend	97	11.5	
<b>Worked/volunteered in Mental Health</b>	58	6.9	
<b>Exposed to News about Mental Illness in Past Week</b>	198	23.5	
<b>Exposed to News about Mental Illness (General)</b>			
Never	51	12.5	
Almost Never	218	55.3	
Sometimes	466	25.9	
Often	105	6.4	
<b>Seen Someone in Public Place who Seems Mentally Ill</b>			
Never	68	8.1	
Almost Never	427	50.7	
Sometimes	260	30.8	
Often	88	10.4	
<i>Note: all responses were coded 0=no, 1=yes, except the general news exposure item and "seen someone in public place," which were coded 0=never, 0.33=Almost Never, 0.67=Sometimes, 1=Often. Adapted from</i>			

### Dependent Variables

For Study 1, I predicted several outcomes for the different mental illness labels derived from theory. To assess these, I first conducted a confirmatory factor analysis of some of the items in the survey to ensure they clustered around the main stereotypes of competence and dangerousness. Using 49 variables that I expected to capture the stereotypes, I ran a factor analysis using orthogonal varimax rotation. This analysis yielded six factors with eigenvalues greater than 1. However, upon inspection only the first two factors had loadings that appeared to tap into the distinct traits of competence (factor 1), and dangerousness (2). One factor only

displayed a significant loading for one trait (erratic), and several of the variables with high loadings were redundant with dangerousness and therefore unnecessary. Using the three factors identified in the analysis, I created indices from the variables with loadings of .5 or greater. This formed the indices shown in Table 4 below.

<b>Table 4. Study 1 Dependent Variable Index Components</b>	
<i>Trait Variable</i>	<i>Loading</i>
	<b>"Competence"</b>
Consistent	0.51
Capable	0.74
Leadership	0.73
Intelligent	0.69
Skilled	0.79
Analytical	0.54
Competent	0.78
Well-informed	0.52
Qualified	0.73
	<b>"Dangerousness"</b>
Violent	0.78
Threatening	0.8
Devious	0.53
Dangerous	0.75
Vulgar	0.54
Quarrelsome	0.5
Harmful	0.66
*(rev) – variable was reverse-coded	

In addition to assessing perceptions of PWMI relative to common stereotypes, this study also addresses perceived employability of a PWMI relative to a non-labeled individual. To measure employability, I conducted a factor analysis using orthogonal varimax rotation of 34 variables that were drawn from Schein's (1973) requisite managerial characteristics and intended to avoid overlap with the constructs measured by the stereotyping analysis above. This analysis



generated two factors that, together, accounted for 70.9% of the variance among the items. These factors tapped into the distinct constructs of “capability” and “assertiveness.” Using the traits whose factor loadings were .5 or greater, I created indices for the constructs. See Table 5 below for these indices.

<b>Table 5. Employability Index Components</b>	
<i>Trait Variable</i>	<i>Loading</i>
	<b>"Capability"</b>
Capable	0.74
Leadership	0.7
Qualified	0.73
Desires Responsibility	0.55
Ambitious	0.68
Competent	0.78
Skilled	0.78
Persistent	0.51
Intelligent	0.67
	<b>"Assertiveness"</b>
Assertive	0.71
Self-Confident	0.6
Authoritative	0.68
Direct	0.61
Decisive	0.52
Firm	0.64

To test for differences in desired social distance from PWMI, I combined four social distance items into a scale ranging from 1 to 4, following from Link et al. (1999), with higher scores indicating higher desired closeness (less social distance) to the type of person in the vignette. The scale reliability coefficient for these items was .86, indicating high reliability. The mean of this scale was 2.73, and standard deviation was 0.73.

For the item assessing the degree to which participants saw the vignette subject as at fault for her/his condition, the materials asked participants to rate the degree to which they thought the

person was at fault for her or his condition. The descriptive statistics for the conditions are presented below. Scores generally indicate an unwillingness to attribute responsibility for the condition to the person her or himself.

<b>Table 6. Descriptive Statistics for Whether Participants Believed Person was "At Fault" for Condition (1=Strongly Agree; 5=Strongly Disagree)</b>			
Condition	N	Mean	St. Deviation
Mental Illness, Woman	61	4.52	0.937
PTSD + Auto, Woman	67	4.43	0.63
PTSD + Iraq Vet, Woman	69	4.3	0.99
Schizophrenia, Woman	61	4.44	0.85
Depression, Woman	62	4.4	0.88
Mental Illness, Man	79	4.46	0.73
PTSD + Auto, Man	85	4.51	0.85
PTSD + Iraq Vet, Man	80	4.6	0.61
Schizophrenia, Man	60	4.48	0.83
Depression, Man	59	4.37	0.76

## Chapter 7: Study 1 Results – Mental Illness Stereotypes and Employment

I theorized that employment discrimination based on mental illness is rooted in negative perceptions of people with mental illness that place these individuals at odds with employers' expectations of an ideal worker. To ensure that this negative stereotyping can occur even for a worker presented as having a successful work history, I made all the candidates have equal job histories except for the reason they had missed time off work. Theory has suggested that the stereotypes of dangerousness and incompetence might lead to inequality, and the characteristics of assertiveness and capability represent requisite managerial traits necessary to be a successful employee (Schein 1973). To address the research questions of this dissertation that explore the mechanisms associated with employment discrimination for PWMI, I first conducted a study to assess whether people with different mental illness labels are negatively stereotyped relative to someone with no label, what form these stereotypes take, and whether stereotyping differs based on contact with mental illness and personal sense of power. A detailed list of all study hypotheses and decisions to reject or support them is located at the end of this chapter, with the complete list for all the studies in Appendix D.

### *Stereotyping of PWMI as Dangerous*

Public perceptions that PWMI are more dangerous than non-labeled individuals is perhaps one of the most damaging stereotypes, and is expected to have repercussions for employment chances, as PWMI must be expected to interact with, supervise, and coordinate with fellow co-workers. Analyses measured public perceptions of dangerousness for the conditions

examined in this study, with all the people said to be workers with successful employment histories.

I measured dangerousness using the index described in the last chapter, created from traits that loaded highly on a single factor. This dangerousness scale, which ranged from 1 to 5, was heavily skewed. This might be due to the sensitivity of the items and unwillingness for participants to stigmatize the vignette subject. Although this scale was not normally distributed, analysis of the kernel density plot indicated that the residuals were normally distributed. Therefore I was able to conduct an OLS regression instead of a logistic regression, which would have eliminated some of the variation in the dependent variable by dichotomizing it.

To assess whether participants' perceptions of the vignette subject's dangerousness differed by condition, I estimated two OLS regressions (one for each gender of the vignette subject) of perceived dangerousness on the experimental conditions, sense of power, contact with mental illness, and control variables. Results are in Table 7 below.<sup>3</sup>

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<sup>3</sup> I also ran an OLS regression with vignette gender and illness label as variables, plus an interaction. This was to test for differences across the vignette gender. These results revealed no significant interaction effects between vignette gender and illness label. However, for the dangerousness model vignette gender was significant in predicting less dangerousness, such that participants saw the female vignette as significantly less dangerous than the male vignette, controlling for other variables.

**Table 7. OLS Regression Models Predicting Perceptions of Safety (Opposite of Dangerousness) of Person like Vignette Subject (Conditions, Power, Contact, and Control Variables)**

	Female Vignette		Male Vignette	
	Coefficients (Standard Error)		Coefficients (Standard Error)	
Conditions ( <i>Reference = No Illness Label</i> )				
"Mental Illness"	-0.275 *		-0.166	
	(0.115)		(0.118)	
PTSD (Auto Accident)	-0.231 *		0.064	
	(0.111)		(0.117)	
PTSD (Iraq War)	-0.662 ***		-0.442 ***	
	(0.110)		(0.118)	
Schizophrenia	-0.595 ***		-0.454 ***	
	(0.114)		(0.125)	
Depression	-0.041		-0.06	
	(0.114)		(0.127)	
Sense of Power	0.116 ***		0.102 **	
	(0.028)		(0.030)	
Contact with Mental Illness	0.021		0.042	
	(0.031)		(0.033)	
Sex ( <i>Reference=Male</i> )	0.191 **		0.162 *	
	(0.069)		(0.074)	
Age	0.003		0.005	
	(0.003)		(0.003)	
Race ( <i>Reference=White</i> )				
Black/African-American	-0.304 *		0.321 *	
	(0.133)		(0.154)	
Asian	-.2		-0.119	
	(0.103)		(0.161)	
Other Race	-.05		-0.103	
	(.109)		(0.107)	
Education ( <i>Reference=4-year degree +</i> )				
High-school or Less	.141		0.287 *	
	(0.113)		(0.122)	
Some College/Trade School	.029		0.069	
	(0.071)		(0.077)	
Constant	3.56		3.23	
	(0.214)		(0.227)	
R-Squared	0.221		0.137	
F	7.65 ***		4.94 ***	
N	393		450	

\* p<.05 (two-tailed test); \*\* p<.01 (two-tailed test); \*\*\*p<.001 (two-tailed test)

Hypothesis 2 predicted that participants would perceive of the worker with schizophrenia as more dangerous than the control condition, and Hypothesis 11b predicted that participants would perceive of the worker with PTSD from service in the Iraq War as more dangerous than the control condition. Conversely, Hypothesis 11a predicted the opposite effect for the worker with PTSD from wartime service, such that participants would see this person as *less* dangerous than the control. For the model with the female vignette, results indicate that respondents perceived of all conditions except for the depression condition as significantly more dangerous than the control condition at the 0.05 alpha level, with the schizophrenia and PTSD + Iraq War conditions significant at the 0.01 alpha level. Thus, results support Hypotheses 2 and 11b, and do not support Hypothesis 11a. Furthermore, results support Hypothesis 1, that a person with an unspecified “mental illness” would evoke perceptions of dangerousness relative to a control.

I also made predictions related to personal sense of power and past contact with mental illness. With regard to the effect of power, I made contrasting predictions that power might either be associated with more or less stereotyping (Hypothesis 12a or 12b, respectively). For the female vignette, participants’ sense of power had a significant, independent effect on perceptions of dangerousness, such that a higher sense of power is associated with a lower sense of dangerousness, across conditions. Results therefore support Hypothesis 12b. An interaction effect of power multiplied by the conditions did not yield significant results, suggesting that power does not significantly interact with the mental illness labels to affect stereotyping. Hypothesis 10 predicted that higher levels of contact with mental illness, as measured by the scale detailed in the last chapter, would be associated with less negative stereotyping of a PWMI. The coefficient for contact with mental illness was not statistically significant, indicating that results do not support Hypothesis 10 in this model.

For the model with the male vignette, respondents perceived of the PTSD + Iraq War condition and schizophrenia conditions as significantly more dangerous than the control condition at the 0.01 alpha level. This supports Hypotheses 2 and 11b. The mental illness, PTSD + auto accident, and depression conditions were not significantly different from the control condition. Similar to the female vignette model, a higher sense of power was associated with a lower sense of dangerousness across conditions, supporting Hypothesis 12b. Also similar to the female vignette model, contact with mental illness was not statistically significant in the model, indicating no support for Hypothesis 10.

Hypothesis 1 predicted that participants will perceive of a worker with an unspecified “mental illness” as more dangerous than the control. This was true for the female vignette ( $p < .01$ ) but not for the male vignette. In the discussion section, I consider the fact that violence and dangerousness are stereotypically gendered as masculine in U.S. society, so the baseline for the female vignette of perceived dangerousness would be considerably lower. Indeed, 13% of participants saw the control condition as dangerous for women compared to 29% for the men. This might have led to less difference between the mental illness conditions and control condition for men, but not as much for women. Hypothesis 2 predicted that participants would perceive the schizophrenia condition as significantly more dangerous than the control condition. . Schizophrenia is often considered as one of the most stigmatized mental illnesses, and these results indeed show that the public views people with schizophrenia as significantly more dangerous than a non-labeled individual.

For the PTSD conditions, Hypothesis 11a predicted that the worker with a war-related PTSD label would be stereotyped as less dangerous than the worker with no mental illness label. This prediction is not supported by the data, as the war-related PTSD condition was not

stereotyped as less dangerous, but rather both the war-related PTSD and schizophrenia conditions were perceived as significantly more dangerous than the control condition. I also predicted that war veterans with PTSD might be stereotyped as dangerous, or not dangerous, relative to a control condition. Surprisingly, war veterans with PTSD were negatively stereotyped as severely as people with schizophrenia. This was true for both the female and male vignettes.

Hypotheses 4 and 5 predicted that the gender-typicality of a condition would lead to more stigma, such that women with depression would be stereotyped more strongly than a man with depression, and a man with schizophrenia and war-related PTSD would be stigmatized more strongly than a woman with those conditions. To test these predictions, I ran logistic regression models containing both the female and male conditions, using the female vignette condition of interest as the reference group (depression, schizophrenia, and war-related PTSD). This allowed for a full examination of the differences while controlling for key variables. The odds ratios for these separate analyses are presented here as a comparison of the conditions, as well as the percentage of respondents who perceived of the person as dangerous by condition.

<b>Table 8. Odds Ratios for Logistic Regression Models Predicting Perceived Dangerousness for Male Vignette Relative to the Female Vignette Conditions Based on Gender-typicality of Condition</b>				
<b>Gender</b>	<b>Condition</b>	<b>Odds Ratio</b>		<b>% Dangerous</b>
Man	Depression	2.56	*	30.4
Woman	Depression	Reference		17.1
Man	Iraq War + PTSD	0.72		43.2
Woman	Iraq War + PTSD	Reference		54.7
Man	Schizophrenia	1.19		48.5
Woman	Schizophrenia	Reference		42.9
* p<.05 difference in odds ratio from reference group				



These results do not support Hypotheses 4 and 5, which predicted that stigma targets who are labeled with gender-typical conditions would be more stigmatized. In fact, for depression the results were the opposite, with a male worker labeled with depression significantly more likely to be labeled as dangerous relative to a woman with depression. For the PTSD + Iraq War conditions and the schizophrenia conditions, the gender of the stigma target did not have a significant effect on perceptions of dangerousness. Thus, results of Study 1 do not support Hypotheses 4 and 5.

### *Stereotyping of PWMI as Incompetent*

Another pervasive stereotype of PWMI that might disadvantage them in the labor market is incompetence (Sadler et al. 2012). The workers in the Study 1 scenarios are said to have a successful employment history, and thus should evoke perceptions of competence unless mental illness labels counteract this. In this study, Hypothesis 3 predicted that mental illness labels would lead to lowered perceptions of competence. To assess this, I estimated OLS regression models for the female vignette and male vignette of competence on experimental conditions, sense of power, contact with mental illness, and control variables. The competence index is skewed such that participants were more likely to say that the vignette subject was competent, however a kernel density plot indicated that the residuals were normally distributed. Therefore, I ran OLS regression models. Results are in Table 9.<sup>4</sup>

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<sup>4</sup> I also ran an OLS regression with vignette gender and illness label as variables, plus an interaction. This was to test for differences across the vignette gender. These results revealed no significant interaction effects between vignette gender and illness label, and no differences in statistical significance for any of the variables.

<b>Table 9. OLS Regression Models of Perceived Incompetence on Experimental Conditions, Power, Contact, and Control Variables</b>				
	<b>Female Vignette</b>		<b>Male Vignette</b>	
	<b>Coefficients (Standard Error)</b>		<b>Coefficients (Standard Error)</b>	
<i>Conditions (Reference = No Label)</i>				
"Mental Illness"	0.355 ***		0.29 **	
	(0.087)		(0.097)	
PTSD (Auto Accident)	0.270 **		0.078	
	(0.084)		(0.097)	
PTSD (Iraq War)	0.437 ***		0.196 *	
	(0.083)		(0.098)	
Schizophrenia	0.461 ***		0.509 ***	
	(0.087)		(0.103)	
Depression	0.269 **		0.23 *	
	(0.086)		(0.105)	
Sense of Power	-0.131 ***		-0.108 ***	
	(0.021)		(0.024)	
Contact with Mental Illness	-0.046		-0.078 **	
	(0.024)		(0.027)	
Sex ( <i>Reference=Male</i> )	-0.185 **		-0.12	
	(0.053)		(0.061)	
Age	-0.005 *		-0.001	
	(0.002)		(0.003)	
<i>Race (Reference=White)</i>				
Black/African-American	0.275 **		-0.263 *	
	(0.101)		(0.127)	
Asian	.043		0.051	
	(0.078)		(0.134)	
Other Race	-.016		0.081	
	(.083)		(0.088)	
<i>Education (Reference=4-year degree +)</i>				
High-school or Less	-.051		-0.138	
	(0.085)		(0.101)	
Some College/Trade School	.021		-0.023	
	(0.054)		(0.064)	
Constant	2.41		2.37	
	(0.163)		(0.188)	
F-statistic	8.38 ***		5.16 ***	
R-squared	0.237		0.142	
N	393		450	

\* p<.05 (two-tailed test); \*\* p<.01 (two-tailed test); \*\*\*p<.001 (two-tailed test)

For the female vignette model, all conditions showed statistically significant coefficients. The PTSD + auto accident condition and the depression condition were significant at the 0.01 level, while the other conditions were significant at the 0.001 level. These results support Hypothesis 3 and suggest that participants perceived of the control condition as significantly more competent than the conditions in which the vignette subject had a mental illness label, controlling for other key factors. Similar to the dangerousness stereotype, I predicted that sense of power would affect stereotyping, with contrasting predictions of a positive or a negative effect of sense of power on stereotyping. Sense of power was significant ( $p < 0.001$ ) and positive, indicating that a higher sense of power is associated with higher perceptions of competence in general. This supports Hypothesis 12b. Hypothesis 10 predicted that contact with mental illness would be associated with lower levels of stereotyping. The coefficient for contact with mental illness was positive, suggesting that contact was associated with less stereotyping of the worker as incompetent, but narrowly missed significance ( $p = .051$ ). Results did not support Hypothesis 10.

For the male vignette model, all mental illness conditions other than the PTSD + auto accident condition yielded positive, statistically-significant coefficients. This suggests that perceptions of competence for these conditions were significantly lower than the control condition, controlling for other key variables. These results support Hypothesis 3. Similar to the female vignette model, sense of power was significant ( $p < .001$ ) and positive, indicating that a higher sense of power is associated with higher perceptions of competence in general. This supports Hypothesis 12b. The coefficient for contact with mental illness was positive and statistically significant ( $p < .01$ ), indicating that more contact with mental illness across social

spheres was associated with higher perceptions of competence, across condition. This provides the first support for Hypothesis 10.

### *PWMI as Unemployable*

This research attempts to connect previous knowledge on mental illness stereotypes with the labor market, by illustrating how PWMI are seen not only as dangerous and incompetent, but also less employable than non-labeled individuals. I measured employability as assertiveness and capability, which are seen as requisite managerial characteristics (Schein 1973) that help someone be a decisive, responsible, skilled leader. To assess participants' perceptions of the vignette subjects as employable, I estimated an OLS regression of perceived assertiveness (using the scale detailed in the last chapter) on control variables, the experimental conditions, sense of power and contact with mental illness. Despite the skewness of the variable, a kernel density plot of the residuals indicated normality, therefore I use an OLS model rather than a logit model. Results of this analysis are presented in Table 10.<sup>5</sup>

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<sup>5</sup> I also ran OLS regressions for the employability factors that separated out vignette gender as a variable and illness label, then interacted them. These results indicated (for the assertiveness model) that PTSD + war was not significantly different from the control in the full model, and female participants saw the PWMI as more assertive than male participants, controlling for other factors. For the capability model, the PTSD conditions were not perceived to be more or less capable than the control condition, and female participants saw the vignette subject as significantly more capable than did male participants, controlling for other factors.

**Table 10. OLS Regression Models Predicting Perceived Unassertiveness of a Person like Vignette Subject (Conditions, Power, Contact, and Control Variables)**

	Female Vignette		Male Vignette	
	Coefficients (Standard Error)		Coefficients (Standard Error)	
<i>Conditions (Reference = No Label)</i>				
"Mental Illness"	0.43	***	0.41	***
	(0.110)		(0.110)	
PTSD (Auto Accident)	0.350	**	0.23	*
	(0.110)		(0.110)	
PTSD (Iraq War)	0.300	**	0.03	
	(0.110)		(0.110)	
Schizophrenia	0.61	***	0.4	**
	(0.110)		(0.120)	
Depression	0.48	***	0.4	**
	(0.110)		(0.120)	
<i>Contact with Mental Illness</i>				
	-0.06		-0.03	
	(0.030)		(0.030)	
<i>Sense of Power</i>				
	-0.13	***	-0.1	**
	(0.030)		(0.030)	
<i>Sex (Reference=Male)</i>				
	-0.1		-0.1	
	(0.070)		(0.070)	
<i>Age</i>				
	-0.01		-0.005	
	(0.003)		(0.003)	
<i>Race (Reference=White)</i>				
Black/African-American	0.18		-0.11	
	(0.130)		(0.140)	
Asian	.03		-0.01	
	(0.100)		(0.150)	
Other Race	-.19		-0.1	
	(.11)		(0.100)	
<i>Education (Reference=4-year degree +)</i>				
High-school or Less	-.18		0.03	
	(0.110)		(0.120)	
Some College/Trade School	-.04		-0.03	
	(0.070)		(0.070)	
<i>Constant</i>				
	2.75		2.66	
	(0.210)		(0.210)	
F-statistic	5.89	***	3.6	***
R-squared	0.18		0.1	
N	388		446	

\* p<.05 (two-tailed test); \*\* p<.01 (two-tailed test); \*\*\*p<.001 (two-tailed test)

Hypothesis 13 predicted that participants would stereotype a worker with mental illness as less employable than a worker with no label. These models suggest that, for the female vignette, participants viewed PWMI as significantly less assertive than a person with no stated condition. Participants viewed all mental illness conditions as less assertive, including a woman with an unspecified “mental illness” ( $p=.000$ ), a woman who had PTSD resulting from an auto accident ( $p=.001$ ) or service during Operation Iraqi Freedom ( $p=.005$ ), a woman with schizophrenia ( $p=.000$ ), and a woman with depression ( $p=.000$ ). Results therefore support Hypothesis 13. Furthermore, this finding demonstrates the perceived incompatibility of managing a mental illness while being a successful leader. Not only are PWMI stereotyped negatively as incompetent and dangerous, but also as less decisive, firm, and possessing less of qualities deemed important to be a successful leader and manager. Higher levels of contact with mental illness, measured using the contact scale, and a higher sense of power were associated with greater perceived assertiveness across conditions ( $p=.049$  and  $p=.000$ , respectively). These findings support Hypothesis 10 and Hypothesis 12b.

For the male vignette model, participants also stereotyped PWMI as lacking assertiveness, with the exception of the person with war-related PTSD ( $p=.773$ ). Respondents rated the man with a “mental illness” ( $p=.000$ ), PTSD from an auto accident ( $p=.035$ ), schizophrenia ( $p=.001$ ), and depression ( $p=.001$ ) as significantly less assertive than someone with no stated health condition. Results provide some support for Hypothesis 13, although the person with war-related PTSD was not stigmatized as unassertive relative to the control condition. Similar to the female vignette model, a higher sense of power was associated with less negative stereotyping across all conditions, indicating support for Hypothesis 12b.

The next measure of employability was capability, made up of some characteristics that overlap with competence, but also leadership, desire for responsibility, and other traits that tap into putting competence into action to complete goals. The complete list of items in the scale is in the previous chapter, along with an explanation of how I created the scale. Using the scale created from the items detailed above, I ran an OLS regression identical to the one for assertiveness, assessing perceptions of capability by experimental condition, control variables, sense of power and contact with mental illness. Results are presented in Table 11.

<b>Table 11. OLS Regression Models Predicting Perceived Incapability of a Person like Vignette Subject (Conditions, Power, Contact, and Control Variables)</b>				
	<b>Female Vignette</b>		<b>Male Vignette</b>	
	<b>Coefficients (Standard Error)</b>		<b>Coefficients (Standard Error)</b>	
<i>Conditions (Reference = No Label)</i>				
"Mental Illness"	0.28 **		0.32 **	
	(0.090)		(0.100)	
PTSD (Auto Accident)	0.250 **		0.09	
	(0.080)		(0.100)	
PTSD (Iraq War)	0.400 ***		0.13	
	(0.080)		(0.100)	
Schizophrenia	0.36		0.46 ***	
	(0.090)		(0.110)	
Depression	0.25		0.24 *	
	(0.090)		(0.110)	
<i>Contact with Mental Illness</i>				
	-0.06		-0.08 **	
	(0.020)		(0.030)	
<i>Sense of Power</i>				
	-0.12		-0.12 ***	
	(0.020)		(0.030)	
<i>Sex (Reference=Male)</i>				
	-0.17		-0.14 *	
	(0.050)		(0.060)	
<i>Age</i>				
	-0.01		0	
	(0.002)		(0.003)	
<i>Race (Reference=White)</i>				
Black/African-American	0.25		-0.24	
	(0.100)		(0.130)	
Asian	.03		0.06	
	(0.080)		(0.140)	
Other Race	-.06		0.09	
	.08		(0.090)	
<i>Education (Reference=4-year degree +)</i>				
High-school or Less	-.06		-0.08	
	(0.090)		(0.100)	
Some College/Trade School	-.02		0.03	
	(0.050)		(0.070)	
<i>Constant</i>				
	2.43		2.34	
	(0.160)		(0.190)	
<i>F-statistic</i>				
	7.64 ***		5.11 ***	
<i>R-squared</i>				
	0.22		0.14	
<i>N</i>				
	391		448	

\* p<.05 (two-tailed test); \*\* p<.01 (two-tailed test); \*\*\*p<.001 (two-tailed test)



For these models, I again predicted that participants would stereotype the worker with mental illness as less employable than the worker with no label. Here, participants stereotyped some conditions as less capable than the control condition, but this differed for the female and male vignette. In the female vignette, participants perceived of the “mental illness” condition and both PTSD conditions (automobile accident and war-related) as significantly less capable than the control condition, with participants not significantly stigmatizing the schizophrenia and depression conditions. Results thus only indicate moderate support for Hypothesis 13, because some conditions did not differ from the control. None of the control variables were statistically significant in the model, indicating no support for Hypothesis 12b and Hypothesis 10, which again predicted that higher sense of power and more contact with mental illness would be associated with less stigmatizing responses. The R-squared was 0.22 and the model as a whole was significant at the .001 level ( $F=7.64$ ).

In the male vignette, schizophrenia, “mental illness” and depression were all statistically significant as evoking lower perceptions of capability relative to the control, while both PTSD conditions did not evoke lower perceptions of capability. Thus, similar to the female vignette for capability, results indicate some support for Hypothesis 13. And, the control variables of contact with mental illness and sense of power were both significant, indicating that higher levels of interpersonal contact with people with mental illness was associated with lower negative stereotyping, and a higher sense of power was also associated with lower stereotyping. These findings support Hypothesis 10 and Hypothesis 12b. Women participants were less likely to stigmatize the worker as less capable ( $p<.05$ ).

This research demonstrates that mental illness labels can evoke negative stereotypes that have the power to affect interactions in the workplace. Labels alone suffice to elicit these harmful stereotypes, thus placing PWMI in a difficult position relative to their non-labeled peers.

### *Gender and Stigma*

Hypothesis 6 predicted that participants would be less stigmatizing of a worker with mental illness who was a woman than a male worker with mental illness, relative to the control condition. Results of the models on dangerousness, incompetence, and employability do not yield support for Hypothesis 6. In fact, for the dangerousness model the women workers appear to evoke more stigma than the male vignette.

As a further test of Hypotheses 4 and 5, which predicted that the gender-typicality of a condition would lead to more stigma, I examined the findings from the three models discussed above. Schizophrenia and war-related PTSD, which are stereotyped as masculine conditions, appear to be most stigmatizing across models, regardless of the gender of the worker in the vignette. And, depression, stereotyped as feminine, is less significant than the more masculine-stereotyped traits. Thus, I again do not find support for Hypotheses 4 and 5. Perhaps the different setting in this study compared to Wirth and Bodenhausen's (2009) study might have made a difference in stigmatizing responses, and also the different stereotypes measured could have had an impact.

Hypothesis 7 predicted that women participants would be less stigmatizing of the mental illness conditions than male participants. This hypothesis is supported in the dangerousness model, such that women participants were less likely to stereotype all types of worker as dangerous, relative to the control condition ( $p < .01$  and  $p < .05$  in the female and male vignettes,

respectively). In the competence models, women participants were significantly more likely to perceive of the woman worker as competent across conditions, relative to male participants. In the assertiveness models, participant sex was not a significant factor in stigmatizing attitudes, while for capability women participants were significantly more likely ( $p < .05$ ) to perceive of the male worker as capable across conditions.

#### *Race and Education of Stigma Perpetrator as Factors*

Hypotheses 8 and 9 predicted that participants with higher levels of education and white participants would be less likely to stereotype the mental illness conditions, relative to participants with lower levels of education and participants who did not identify as white. For the dangerousness models, participants who identified as Black or African-American, relative to white participants, were significantly more likely to stereotype the woman worker as dangerous across conditions ( $p < .05$ ), but significantly less likely to stereotype the male worker as dangerous across conditions ( $p < .05$ ). Also in the male dangerousness model, participants with a high-school degree or less, relative to participants with a four-year degree or more, were less likely to stereotype all the workers as dangerous, relative to the control condition. With the exception of the female vignette then (where Black or African-American participants were more stigmatizing than white participants) these results do not support Hypotheses 8 or 9. For education, the effect was the opposite of expected, since lower education was associated with less stereotyping as dangerous, relative to a control condition.

The results of the competence regression models mirror the race findings, such that Black or African-American participants stereotyped the woman worker as more incompetent relative to the control ( $p < .01$ ), but showed opposite attitudes in the male vignette ( $p < .05$ ). This suggests an

interaction between the racial identification of the stigma perpetrator and the gender of the stigma target. Results did not indicate any education effects for the competence models, as higher education was not associated with less stigma as predicted. In the employability models (assertiveness and capability) there were no significant effects of either race or education. Overall, results do not support Hypothesis 8, that higher levels of education would be associated with less stigma; and findings only find moderate support for effects of self-identified race on stigma, with some results in the opposite direction of expectations. As these variables were mainly used as controls in the analyses, I do not speculate further on why they did not play a bigger role in the models.

### *Social Distance*

Social distance is a key stigma outcome reflecting how mental illness labels can lead to social exclusion for PWMI. In the workplace, an increased desire for social distance might mean less willingness to hire someone due to possible fears of dangerousness, awkwardness, and a desire to avoid interactions with the person. In Study 1, I measured the level of social distance participants desired from the different types of worker. To analyze this variable, I regressed the social distance scale (detailed in the previous chapter) on the experimental conditions, contact with mental illness, sense of power, and the control variables. Results are presented in Table 12 below.<sup>6</sup>

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<sup>6</sup> I also ran this as an interactive model with illness label and vignette gender as separate and interacted variables. These results revealed that both PTSD conditions evoked less social distance than the other conditions, and contact with mental illness was associated with less social distance across conditions. Finally, African-American participants desired more social distance from PWMI relative to white participants.

**Table 12. OLS Regression Models Predicting Social Closeness Desired towards a Person like Vignette Subject (Conditions, Power, Contact, and Control Variables)**

	Female Vignette		Male Vignette	
	Coefficients (Standard Error)		Coefficients (Standard Error)	
Conditions ( <i>Reference = No Label</i> )				
"Mental Illness"	0.4 **		0.12	
	(0.130)		(0.110)	
PTSD (Auto Accident)	0.160		0.28 *	
	(0.120)		(0.110)	
PTSD (Iraq War)	0.250 *		0.32 **	
	(0.120)		(0.110)	
Schizophrenia	0.16		0.04	
	(0.130)		(0.120)	
Depression	0.4 **		0.1	
	(0.130)		(0.120)	
Sense of Power	0.03		-0.05	
	(0.030)		(0.030)	
Contact with Mental Illness	0.09 *		0.14 ***	
	(0.030)		(0.030)	
Sex ( <i>Reference=Male</i> )	0.04		0.01	
	(0.080)		(0.070)	
Age	-0.004		-0.004	
	(0.004)		(0.003)	
Race ( <i>Reference=White</i> )				
Black/African-American	-0.08		-0.35 *	
	(0.150)		(0.150)	
Asian	-.11		0.08	
	(0.120)		(0.150)	
Other Race	-.07		-0.25 *	
	.12		(0.100)	
Education ( <i>Reference=4-year degree +</i> )				
High-school or Less	-.09		-0.11	
	(0.130)		(0.120)	
Some College/Trade School	-.09		0.01	
	(0.080)		(0.070)	
Constant	2.31		2.76	
	(0.240)		(0.220)	
F-statistic	2.23 **		3.58 ***	
R-squared	0.08		0.1	
N	393		449	

\* p<.05 (two-tailed test); \*\* p<.01 (two-tailed test); \*\*\*p<.001 (two-tailed test)

Hypothesis 14 predicted that participants would desire less social distance from a person with war-related PTSD relative to the control, but that this would not be true for a person with schizophrenia. In the female vignette model, participants desired significantly less social distance from the conditions in which the worker had a “mental illness,” ( $p < .01$ ) was an Iraq veteran with PTSD ( $p < .05$ ), and had depression ( $p < .01$ ). The coefficient for the worker with schizophrenia was not significantly different from the control. This supports Hypothesis 14, that war-related PTSD but not schizophrenia would evoke less social distance. Hypothesis 10 predicted that contact with mental illness would be associated with less stigma. Findings showed that contact with mental illness was associated with less desired social distance across conditions, thus supporting this hypothesis. Hypothesis 12b predicted that a higher sense of power would be associated with less stigma. The power variable was not significant in the model, indicating no support for this hypothesis..

Hypotheses were identical for the male vignette. In the male vignette model, participants desired significantly less social distance from the two PTSD conditions, with the PTSD + Iraq Vet condition significant at the .01 level, and PTSD + auto accident significant at the .05 level. This supports Hypothesis 14, that war-related PTSD but not schizophrenia would be associated with less social distance. Greater contact with mental illness was associated with less social distance across conditions, providing support for Hypothesis 10 ( $p < .001$ ). A model containing the interaction of contact with the conditions did not indicate any significant interactions, perhaps suggesting a main effect of contact on social distance attitudes . The sense of power variable approached significance as a main effect ( $p = .09$ ), indicating that a higher sense of power was associated with more social distance across conditions. This yields no support for

Hypothesis 12a/b. Table 13 lists all the Study 1 hypotheses and whether or not results provided support for them.

<b>Table 13. Study 1 - Hypotheses and Decisions</b>	
<b>Hypotheses</b>	<b>Support?</b>
# 1: Participants will perceive of a worker with an unspecified “mental illness” as more dangerous than the control condition.	Yes
# 2: Participants will perceive of the worker with schizophrenia as more dangerous than the control condition.	Yes
# 3: Participants will perceive of workers with mental illness labels as less competent than the control condition.	Yes, except PTSD +auto condition in male vignette
#4: For scenarios with a female worker, participants will be most stigmatizing of the depression condition (stereotyped as feminine).	No
#5: For scenarios with a male worker, participants will be most stigmatizing of the war-related PTSD and schizophrenia conditions (stereotyped as masculine).	Yes
#6: For the female vignette conditions compared to the male vignette, participants will be less stigmatizing of the mental illness conditions relative to the control condition.	No
#7: Women participants will be less stigmatizing of the mental illness conditions than male participants.	Yes, for dangerousness; and for the female vignette for competence; and for the male vignette for capability
#8: Participants with higher levels of education will be less stigmatizing of the mental illness conditions than participants with lower levels of education.	No

#9: White participants will be less stigmatizing of the mental illness conditions than non-white participants.	No, for the male dangerousness and competence models; Yes for the female dangerousness and competence models
#10: Participants who have experienced more contact with mental illness will be less stigmatizing of the mental illness conditions than participants with lower levels of contact.	Yes for social distance; No for dangerousness; Yes for male vignette capability and male vignette competence
#11a: The worker with a PTSD label (resulting from either an auto accident or OIF service) will be stereotyped as no more dangerous than the worker with no label.	No
#11b: Participants will perceive of the worker with PTSD (resulting from either an auto accident or OIF service) as more dangerous than the worker with no label.	Yes
#12a: Participants who feel more powerful will more strongly stereotype PWMI as dangerous, incompetent, and unemployable.	No
#12b: Participants who feel more powerful will less strongly stereotype PWMI as dangerous, incompetent, and unemployable.	Yes
#13: Participants will perceive of workers with mental illness labels as less employable (assertive and capable) than workers with no label.	Yes
#14: Participants will desire less social distance from a war veteran with PTSD than a control condition; this will not be the case for a worker with schizophrenia	Yes

### Discussion

Study 1 results demonstrated that mental illness labels can lead to negative stereotyping of an otherwise successful worker as dangerous, incompetent, and unemployable. These findings are the first of my knowledge to demonstrate that war-related PTSD evokes negative



stereotyping on a similar level to other conditions that have been shown to be heavily stigmatized, such as schizophrenia. And these findings also demonstrate how negative stereotyping can apply to both women and men. Nevertheless, the social distance measure, which is the measure of discriminatory attitudes for this study, provided support for the possibility that people with war-related PTSD do not evoke social exclusion despite the negative stereotypes held by participants.

The idea that two conditions can evoke negative stereotypes, but lead to different levels of actual discrimination is something I refer to as *differential discrimination*. This is a process whereby social support for certain groups, such as war veterans with PTSD, can prevent discrimination that might otherwise have resulted due to damaging stereotypes directed toward the group. Both of the fictitious workers were presented as having successful work histories, but the worker with schizophrenia still elicited discrimination in the form of social distancing due to the negative mental illness label. It is important to note that not all of the stereotypes evoked by the war-related PTSD and schizophrenia conditions were identical. Rather there were some differences, such as the war-related PTSD condition evoking lower perceptions of unassertiveness and incompetence relative to the person with schizophrenia, which may have led to less discrimination. But, in the female vignette participants perceived of the worker with war-related PTSD as less capable, but not the worker with schizophrenia.

Study 2 delves further into factors that affect discrimination toward PWMI by examining workers with schizophrenia and workers with war-related PTSD to determine if differential discrimination occurs again in the scenario of a hiring recommendation, and whether attempts to disconfirm harmful stereotypes through application materials can prove successful in reducing stigmatizing behaviors.

This study was also the first of my knowledge to examine gender differences in mental illness stigma in the workplace. I expected to find that workers with mental illness who had labels of gender-typical conditions would experience more stereotyping than workers with gender-atypical conditions. So, for the vignette with a woman I expected that depression would be most stigmatizing, as it is viewed as feminine; and for men, I expected that schizophrenia and war-related PTSD would be most stigmatizing, as they are viewed as masculine. Models comparing the coefficients for these labels by gender did not indicate that participants were more stigmatizing towards gender-typical labels in this scenario involving a worker. Instead, participants stereotyped women with mental illness more severely than men in some situations, such as for perceptions of dangerousness. I speculate that this may be due to the workplace setting, in which women already face discrimination in the form of more negative evaluations, pay disparities and sexual harassment, among other types of discrimination. So, participants might use a mental illness label as an excuse for seeing a woman as unfit for workplace success, whereas for a man a mental illness might lead to a less substantial negative downgrade.

Perhaps the most striking finding from Study 1 is that a high sense of power was associated with lower levels of stereotyping. This contradicts much of the psychological research demonstrating that power is associated with more stigma in the form of social distance, dehumanization, and stereotyping. And, it support Lammers et al. (2009) who found that when power is measured as control over others it can be associated with lower levels of stereotyping, possibly due to a heightened sense of responsibility for powerful individuals. Studies 2 and 3 also include power as a manipulation. In Study 2, the method of measuring power is the same scale used in Study 1, while in Study 3 I primed participants to feel powerful and then had them

complete an attitudinal questionnaire intended to gauge stigmatizing responses in the form of labeling, stereotyping, and social distance.

Study 1 helped to elucidate some of the specific stereotypes that frame PWMI as unfit for workplace success. Generally, participants viewed people with mental illness as more dangerous, more incompetent, less assertive, and less capable than a worker with no illness label, with some important distinctions mentioned in the findings above. This is despite the PWMI being presented as a worker with a successful history in a competitive position. Any stereotyping I identified should have been a conservative estimate relative to a study showing a PWMI who was not presented as having a successful history, because presumably having a successful career should alleviate some of the damaging stereotypes that come with having a mental illness label. This contributes to the Stereotype Content Model by adding employability stereotypes, PTSD as a condition, and using a workplace scenario in which discrimination often plays out against PWMI.

## Chapter 8: Study 2 Predictions and Methods

Study 1 provided evidence of what I term differential discrimination, which occurs when mental illness labels evoke damaging stereotypes, but these stereotypes lead to different levels of discrimination toward stigma targets. Evidence of this was that workers with schizophrenia and war-related PTSD were both negatively stereotyped as dangerous, incompetent, and unemployable relative to a control condition. But for the discrimination measure of participants' desire for social distance, respondents expressed a desire for less social distance toward the worker with war-related PTSD relative to a control; with no difference for the worker with schizophrenia. Study 2 attempted to answer the question of whether this differential discrimination toward people with PTSD can be seen in how the public privileges them (or perhaps discriminates against them) in employment. Methods also addressed whether an attempt to disconfirm negative stereotypes could increase the hiring outcomes for the candidate. I again employed an online vignette survey in which participants acted as evaluators for one job applicant said to be in an applicant pool for a large company. They provided demographic information, then viewed fictitious application materials (a resume, cover letter excerpt, and letter of reference excerpt). All study materials are in Appendix B. Application materials differed in whether the applicant had missed time off work to attend to a physical injury (the control for this study), PTSD resulting from Iraq War service, or schizophrenia. For the mental illness conditions, I also varied whether the applicant attempted to moderately disconfirm mental illness stereotypes or did not attempt to disconfirm them. This chapter details the predictions for this study, with a detailed list of Study 2 hypotheses and decisions located at the end of the results for this study, and all study hypotheses and decisions to reject or support them located in Appendix D.

## Predictions

Predictions for Study 1 assumed that stereotyping plays a crucial role in affecting discrimination in the workplace. However, research on military personnel and veterans has demonstrated that this group might benefit from their cultural worth such that negative stereotyping of veterans with mental illnesses will not lead to discrimination as directly as it does for other conditions. Study 2 used two of the experimental conditions – schizophrenia and war-related PTSD – to assess the effectiveness of one stigma reduction strategy and to test the symbolic capital theory that negative stereotyping would lead to differential discrimination. First, countering stereotypes by highlighting stereotype-disconfirming information might be able to reduce discrimination for PWMI (Weber and Crocker 1983; Reinke et al. 2004). I thus predict that:

**Hypothesis 1:** Participants will be more likely to recommend PWMI who are framed in a way that counters harmful stereotypes than PWMI with no stereotype disconfirmation.

In addition to recommending someone for hire, discrimination can also occur in the level of salary offered to a job applicant. I predict that:

**Hypothesis 2:** Participants will recommend a higher starting salary for PWMI who are framed in a way that counters harmful stereotypes than PWMI with no stereotype confirmation.

Similar to study 1, I predicted that power may or may not lead to increased stigma. Thus:

**Hypothesis 3a:** A higher sense of power will be associated with more discrimination against the mental illness conditions, relative to the control condition.

**Hypothesis 3b:** A higher sense of power will be associated with less discrimination against the mental illness conditions, relative to the control condition.

Similar to Study 1, I expect that previous contact with mental illness will lead to less stigma in the form of hiring discrimination. I predict that:

**Hypothesis 4:** Higher levels of previous contact with mental illness will be associated with less discrimination toward the mental illness conditions, relative to the control condition.

Study 1 demonstrated that the public sees veterans with PTSD more negatively than people with no mental illness label, to an extent comparable to people with schizophrenia. However, Study 1 and other research has shown that people tend to not express social exclusion of Iraq veterans relative to civilian contractors, (MacLean and Kleykamp 2014) and other research suggests they may sympathize with them in meaningful scenarios such as courtroom decisions (Wilson et al. 2011). Thus, it might be that even though veterans with PTSD evoke negative stereotypes, the public does not discriminate against them in a hiring decision.

**Hypothesis 5 (Differential Discrimination):** Participants will not discriminate against veterans with PTSD in hiring evaluations, compared to people with a past physical injury.

People with schizophrenia, on the other hand, might not benefit from cultural support, and could be less likely to evoke sympathy from the public. This is evidenced by research showing that schizophrenia is believed to have symptoms that exist less on a continuum relative to alcohol dependence or depression, and is thus viewed as more distinct from other conditions (Schomerus, Matschinger, and Angermeyer 2013). I therefore predict that:

**Hypothesis 6:** Participants will discriminate against people with schizophrenia in hiring evaluations, compared to people with a past physical injury.

### Methods

Results of Study 1 demonstrated significant negative stereotyping of PWMI as dangerous, incompetent, and unemployable. Study 1's results demonstrated that workers with schizophrenia and war-related PTSD are the most likely to be negatively stereotyped as incompetent, dangerous, cold, and unemployable. Building from this, Study 2 systematically tested the role of stereotypes in producing inequality, and the potential for stereotype disconfirmation – one proven stigma reduction strategy - to apply to the labor market by improving hiring chances for individuals who indicate a history of mental illness. Materials also assessed whether power and contact were key factors in explaining the effectiveness of stereotype disconfirmation on reducing hiring discrimination, or on the discrimination process more broadly.

### Design

Five hundred sixty-six participants from Amazon's Mechanical Turk acted as “evaluators” in a decision on whether to hire a PWMI, how much starting salary to offer them should they hire the person, and how many sick/personal days to allow the person. Similar to Study 1, the sample consisted only of participants from the United States to reduce variations in labor market knowledge and expectations. The study invited participants to evaluate the worthiness of a middle manager who was applying for a Senior Project Manager position, including assigning the appropriate starting salary. Each of the different candidates had missed a significant time off work to attend to a medical condition, with the control condition indicating a past physical injury and the treatment conditions indicating either schizophrenia or PTSD from

wartime service. There was no true baseline condition for this study (with the fictitious candidate indicating no past medical condition), in order to ensure that both the treatment and control had missed a significant period of time off work.

Participants only evaluated one candidate, as including a control condition might have aroused suspicion of the study's purposes, and the experimental procedures were identical to allow for comparison across conditions. The key manipulation was whether the applicant with a mental illness was framed by themselves and a supervisor as managing their condition successfully despite debilitating symptoms. In the control condition, only the condition and symptoms are mentioned without discussion of "getting by" despite the mental illness. The conditions for the study were as follows:

Condition 1: Physical Injury, Woman

Condition 2: Schizophrenia, No Stereotype Disconfirmation, Woman

Condition 3: Schizophrenia, Moderate Stereotype Disconfirmation, Woman

Condition 4: PTSD, No Stereotype Disconfirmation, Woman

Condition 5: PTSD, Moderate Stereotype Disconfirmation, Woman

Condition 6: Physical Injury, Man

Condition 7: Schizophrenia, No Stereotype Disconfirmation, Man

Condition 8: Schizophrenia, Moderate Stereotype Disconfirmation, Man

Condition 9: PTSD, No Stereotype Disconfirmation, Man

Condition 10: PTSD, Moderate Stereotype Disconfirmation, Man

Appendix B provides the Study 2 materials. The fictitious candidate's health information appeared in the candidate's cover letter, stating that s/he had taken a recent leave of absence from a previous job to attend to schizophrenia (conditions 2/7 and 3/8) or PTSD resulting from serving in Operation Iraqi Freedom (conditions 4/9 and 5/10). In all the mental illness conditions,



the cover letter excerpt reads that the candidate experiences symptoms resulting from their condition, “but I am currently in treatment. “For the moderate disconfirmation conditions (3, 5, 8, and 10), the text of the cover letter also says that “I am able to manage my symptoms while still being an intelligent, warm, and effective leader.” This statement directly contrasts with the negative stereotypes of incompetence, dangerousness/coldness, and employability. For the physical injury conditions, there is no statement that the candidate is managing their condition. In addition to the cover letter, participants read an excerpt of a letter of reference from the candidate’s previous employer (see Appendix B). This letter also mentioned the person’s mental illness, and mirrors the cover letter by either only mentioning the condition and missed work (no disconfirmation conditions), or mentioning symptoms plus successful work and stereotype-disconfirming job qualities.

Outcome measures for Study 2 include the item “How likely would you be to recommend Lisa/Robert for a position with our company?” which was on a 1-5 scale from “Very Unlikely” to “Very Likely.” Participants also recommended a starting salary on a sliding scale from \$75,000 to \$125,000.

### Sample

Five hundred and sixty-six participants completed the study. Thirty-eight participants missed a question designed as an attention check to ensure they viewed the resume included in the study, so I do not include their data. Six participants completed the study in less than two minutes, which I use as the minimum possible time needed to complete the study while reading all the materials. So, I do not include their data. An additional eleven participants did not answer

key questions used in the analyses, so I do not include their data. As a result, the final sample consists of 511 participants.

Participants provided demographic information identical to Study 1, including sex, age, race, and education level. Sample demographics are presented in Table 14. Approximately 43% of the sample were women, 57% had at least a four-year college degree, 75% identified as white, and the mean age was 35 years old. This demographic makeup is very similar to the makeup of the Study 1 sample, which I expected because the studies drew from the same participant pool.

<i>Sex</i>	<b>N</b>	<b>%</b>
Male	293	57.34
Female	218	42.66
<b><i>Education Level</i></b>		
High School or Less	51	9.98
Some College	169	33.07
4-Year College+	291	56.95
<b><i>Race</i></b>		
White/Caucasian	384	75.15
Black/African-American	33	6.46
Asian	39	7.63
Other/Multi-racial/Unspecified	55	10.76
<b><i>Age (Mean)</i></b>	34.86	Range (19-74)
<b>Total</b>	511	100

*Independent Variables*

Key predictor variables in this study included personal sense of power and contact with mental illness. These variables were constructed in the same manner as Study 1. That is, for power the materials asked participants to rate their personal sense of power using eight

questions. These items were then reverse-coded as needed, such that higher scores indicated a higher sense of power. Then, I combined the items to form an index.

I also measured contact with mental illness identically to the methods used in Study 1. That is, I asked participants whether they had contact with mental illness via various persons in their life or scenarios, then combined them into a scale (Alexander and Link 2003). Table 15 gives the percentage of respondents who had experienced contact with mental illness in various scenarios.

<b>Table 15. Descriptive Statistics on Mental Illness Contact Items (N=511)</b>		
<b>Contact Type</b>	<b>N</b>	<b>%</b>
<b>Self or Family Hospitalized</b>	118	23.1
Self	29	5.7
Close family member	102	20
<b>Spouse or Close Friend Hospitalized</b>	58	11.4
Spouse	14	2.7
Close Friend	48	9.4
<b>Worked/volunteered in Mental Health</b>	38	7.4
<b>Exposed to News about Mental Illness in Past Week</b>	161	31.5
<b>Exposed to News about Mental Illness (General)</b>		
Never	24	4.7
Almost Never	113	22.1
Sometimes	312	61.6
Often	62	12.1
<b>Seen Someone in Public Place who Seems Mentally Ill</b>		
Never	40	7.8
Almost Never	153	30
Sometimes	284	55.6
Often	34	6.7
<i>Note: all responses were coded 0=no, 1=yes, except the general news exposure item and "seen someone in public place," which were coded 0=never, 0.33=Almost Never, 0.67=Sometimes, 1=Often. Adapted from Alexander and Link (2003)</i>		

Participants' levels of contact for this study were similar to the levels in Study 1, most likely due to the samples being drawn from the same participant pool

I also asked respondents how skilled they thought the candidate was, immediately after viewing the resume but before exposure to the experimental manipulations. This variable ranged from 1-10, with 10 indicating the participant thought the candidate was extremely skilled. The

mean for this variable was 8.05 with a standard deviation of 1.35, indicating that participants thought the candidate was very skilled. I used this variable as a control in the analyses.

### Dependent Variables

The key outcome variable to assess discrimination toward the fictitious job candidates was the participants' likelihood of recommending the person for hire. This variable ranged from Very Unlikely (1) to Very Likely (5). The mean for the variable was 3.74 with a standard deviation of 0.91. This variable was skewed such that participants were more likely to recommend hiring the candidate than not hiring her or him. To account for this, analyses treat the variable as dichotomous, with participants either indicating they were likely or very likely to recommend the candidate for the job, or not (thus Very Unlikely, Unlikely, or Undecided). The other outcome variable directly related to hiring discrimination was recommended starting salary. Materials told participants that the company using the applicant pool typically pays between \$75,000 and \$125,000 for this job, depending on skill and experience level. Participants gave their recommended starting salary on a sliding scale between those two numbers. The mean for this variable was \$93,558, with a standard deviation of \$12,583.

## Chapter 9: Study 2 Results – Stereotype Disconfirmation and Differential Discrimination

To assess the hypotheses related to hiring discrimination, I estimated a logistic regression model predicting the odds of recommending the candidate for hire based on the experimental conditions, control variables (sex, age, race, education, and how skilled they thought the candidate was from the resume), and the power and contact scales. Results are presented in Table 16.<sup>7</sup>

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<sup>7</sup> I also ran the models for this study as interactive models with vignette gender, illness label, and level of stereotype disconfirmation as variables, and did not find any substantive differences.



**Table 16. Logistic Regression Models Predicting Odds of Recommending Job Candidate for Hire by Conditions, Power, Contact, and Control Variables (ND - No Stereotype Disconfirmation; MD - Moderate Stereotype Disconfirmation)**

	Female Vignette		Male Vignette	
	Odds Ratio (Standard Error)		Odds Ratio (Standard Error)	
<i>Conditions (Reference = Physical Injury)</i>				
Schizophrenia, ND	0.09 (0.049)	***	0.308 (0.160)	*
Schizophrenia, MD	0.262 (0.138)	*	0.166 (0.085)	***
PTSD, ND	1.156 (0.686)		0.754 (0.428)	
PTSD, MD	0.459 (0.263)		1.011 (0.613)	
Sense of Power Scale	1.095 (0.160)		1.19 (0.171)	
Contact with Mental Illness Scale	1.478 (.224)	*	0.805 (.121)	
Candidate Skill	1.627 (0.203)	***	1.63 (0.208)	***
Sex ( <i>Reference= Male</i> )	1.672 (0.571)		1.86 (0.652)	
Age	0.953 (0.014)	**	0.973 (0.014)	
<i>Race (Reference= White)</i>				
Black/African-American	0.406 (0.251)		1.736 (1.313)	
Asian	.906 (0.520)		1.947 (1.399)	
Other Race	.657 (.355)		1.372 (0.763)	
<i>Education (Reference= High School or Less)</i>				
Some College/Trade School	.621 (0.374)		1.16 (0.717)	
Four-Year College +	.836 (0.486)		0.836 (0.494)	
Constant	0.252 (0.285)		0.169 (0.237)	
LR Chi-2	72.39	***	48.06	***
N	252		258	

\* p<.05 (two-tailed test); \*\* p<.01 (two-tailed test); \*\*\*p<.001 (two-tailed test)



Hypothesis 1 and Hypothesis 2 predicted that the conditions with moderate stereotype disconfirmation would evoke less discrimination relative to the conditions with no stereotype disconfirmation. Results indicated that all schizophrenia conditions were significantly less likely to elicit a recommendation for hire relative to the control condition. For the male vignette, moderate disconfirmation actually made the candidate less likely to receive a recommendation relative to the no disconfirmation condition ( $p < .001$  and  $p < .05$ , respectively), while these results were flipped for the female vignette. Results, then, do not support Hypotheses 1 and 2.

Hypothesis 5 predicted that a worker with war-related PTSD would not be discriminated against in hiring relative to the control condition. Hypothesis 6 predicted that a worker with schizophrenia would be discriminated against relative to the control condition. Results demonstrate that participants discriminated against people with schizophrenia but not against people with war-related PTSD. For both the female and male vignettes, and both the moderate and no disconfirmation conditions, the worker with schizophrenia was less likely to receive a hiring recommendation relative to the control. However, veterans with PTSD saw no such level of discrimination relative to the control. This was true for both the female and male vignettes. Results support Hypotheses 5 and 6.

For the female vignettes, older age was a significant predictor of likelihood to recommend for hire, as was higher levels of past contact with mental illness. Findings thus support Hypothesis 4, that past contact with mental illness would be associated with less discrimination for the mental illness conditions. Predictably, participants' rating of how skilled they thought the candidate was based on their resume was a significant predictor of their recommendation for them to be hired. The schizophrenia-no disconfirmation condition, relative to the control condition, was only 9% as likely to be recommended for hire. The schizophrenia-

moderate disconfirmation condition was only 26% as likely to be recommended for hire. Neither of the PTSD conditions showed significantly different odds of being recommended versus the control condition.

For the male candidate conditions, results were similar. That is, participants were less likely to recommend a person with schizophrenia for hire compared to a person with a physical injury, but did not indicate similar discrimination towards a veteran with PTSD.

As another test of hiring discrimination, I estimated a logistic regression predicting the odds of recommending a high starting salary (greater than or equal to \$100,000) on the experimental conditions, control variables, and power and contact scales. These results are presented in Table 17.

**Table 16. Logistic Regression Models Predicting Odds of Recommending a Salary Greater than or Equal to \$100,000 (Conditions, Power, Contact, and Control Variable; ND - No Stereotype Disconfirmation; MD - Moderate Stereotype**

	Female Vignette		Male Vignette	
	Odds Ratio (Standard Error)		Odds Ratio (Standard Error)	
<i>Conditions (Reference = Physical Injury)</i>				
Schizophrenia, ND	0.51 (0.250)		1.8 (0.760)	
Schizophrenia, MD	1.070 (0.460)		0.85 (0.370)	
PTSD, ND	1.310 (0.580)		0.7 (0.310)	
PTSD, MD	1.2 (0.550)		1.73 (0.750)	
Sense of Power Scale	0.994 (0.130)		1.02 (0.120)	
<i>Contact with Mental Illness Scale</i>				
	1.35 * (.17)		0.98 (.13)	
Candidate Skill	1.14 (0.120)		1.56 *** (0.200)	
<i>Sex (Reference=Male)</i>				
	1.2 (0.350)		1.03 (0.290)	
<i>Age</i>				
	1 (0.010)		1 (0.130)	
<i>Race (Reference=White)</i>				
Black/African-American	0.37 (0.250)		0.35 (0.220)	
Asian	.59 (0.330)		0.1 * (0.110)	
Other Race	1.64 (.75)		0.75 (0.330)	
<i>Education (Reference=4-year degree +)</i>				
High-school or Less	.99 (0.500)		1.26 (0.620)	
Some College/Trade School	.75 (0.230)		1.35 (0.420)	
Constant	0.13 (0.140)		0.02 (0.020)	
LR Chi-2	24.35 *		38.76 ***	
N	252		258	

\* p<.05 (two-tailed test); \*\* p<.01 (two-tailed test); \*\*\*p<.001 (two-tailed test)

Hypotheses 1 and 2 predicted that moderate stereotype disconfirmation would reduce discrimination toward the worker with schizophrenia and the worker with war-related PTSD. Results do not support these hypotheses, as none of the experimental conditions differed significantly from the control condition. That is, participants were no more likely to recommend – or not recommend – these types of workers for a high starting salary. The worker with war-related PTSD did not face more discrimination than the control, supporting Hypothesis 5, but the worker with schizophrenia also did not face discrimination, yielding no support for Hypothesis 6. Hypothesis 4 predicted that contact with mental illness would be associated with less discrimination, and this was the case for the female vignette ( $p < .05$ ) across experimental conditions. But, results do not support Hypothesis 4 for the male vignette in this model. A higher sense of power did not significantly affect participants’ salary recommendations, providing no support for Hypothesis 3b, which predicted that a higher sense of power would be associated with less discrimination.

Table 18 lists hypotheses for Study 2 and the decisions of whether to support or reject them.

<b>Table 18. Study 2 Hypotheses and Decisions</b>	
<b>Hypothesis</b>	<b>Support?</b>
#1: Participants will be more likely to recommend PWMI who are framed in a way that counters harmful stereotypes than PWMI with no stereotype disconfirmation.	No
#2: Participants will recommend a higher starting salary for PWMI who are framed in a way that counters harmful stereotypes than PWMI with no stereotype confirmation.	No

#3a: A higher sense of power will be associated with more discrimination against the mental illness conditions, relative to the control condition.	No
#3b: A higher sense of power will be associated with less discrimination against the mental illness conditions, relative to the control condition.	No
#4: Higher levels of previous contact with mental illness will be associated with less discrimination toward the mental illness conditions, relative to the control condition.	Yes
#5: Participants will not discriminate against veterans with PTSD in hiring evaluations, compared to people with a past physical injury.	Yes
#6: Participants will discriminate against people with schizophrenia in hiring evaluations, compared to people with a past physical injury.	Yes

### Discussion

Study 2 demonstrated how differential discrimination can lead to unequal outcomes for people with mental illness. Study 1 showed that people with schizophrenia and war-related PTSD evoke negative stereotypes, yet the public did not discriminate by desiring social distance from people with PTSD. Perhaps indicating some important differences between these illness labels, participants stereotyped war veterans with PTSD as slightly more assertive and capable than people with schizophrenia, although this differed somewhat by the gender of the stigma. Study 2 showed differential discrimination for these two conditions, such that participants were less likely to recommend a person with schizophrenia for a job for which they were qualified than a person who had a past physical injury. Participants did not discriminate against war veterans with PTSD in hiring. I speculate that this differential discrimination is due to the level

of cultural support for military personnel and veterans, and the calls to “support the troops” in their adjustments back into society following wartime service. Indeed, many media stories have covered veterans’ unemployment as a social problem, whereas the unemployment of other PWMI has perhaps not received as much attention over that timespan.

The attempt to reduce discrimination toward PWMI by stereotype disconfirmation did not yield significant results. As I discuss later, this might be due to the lack of interpersonal contact between participants and the PWMI. Reinke et al. (2004) used more meaningful interactions to demonstrate that stereotype disconfirmation can reduce negative stereotyping. Furthermore, I found no effects of power on either reducing or increasing hiring discrimination. Comparing this finding to Study 1, it seems that a high sense of power is associated with lower levels of stereotyping, but this might not translate to actual discrimination directed toward PWMI.

Study 2 findings indicated a lower likelihood of participants recommending a person with schizophrenia for hire for a job for which they are qualified, relative to a control condition. But findings did not indicate any significant effects of the mental illness labels on evoking different salary recommendations for the fictitious candidates. I do not have an explanation for why the salary model did not produce significant results. For the contact with mental illness variable, results showed that higher levels of contact were associated with less discrimination toward workers with mental illness, as predicted. This supports previous findings of the contact hypothesis line of research in suggesting the importance of increasing exposure for the general population to PWMI to demonstrate the relative normality of PWMI compared to their depiction in the media.

Thus far, this research has established that mental illness labels can lead to harmful stereotypes that disadvantage workers who otherwise have successful employment histories. These stereotypes do not lead to discrimination for all conditions, however, as evidenced by different levels of social distancing and hiring discrimination directed towards people with schizophrenia relative to people with war-related PTSD. And, the role of power in this process is unclear, with Study 1 results suggesting an effect of power on reducing stereotyping, but Study 2 finding no such effects. Study 3 examines the effect of feeling powerful on the stigma process directly to determine whether priming participants to feel powerful has an effect on their likelihood of labeling someone as mentally ill, stereotyping them, and desiring social distance from them.

## Chapter 10: Study 3 Predictions and Methods

The effects of power on the stigma process have not been clearly delineated, with some studies suggesting that power can lead to increased social distance, objectification, and dehumanization toward a target (Lammers et al. 2012; Gruenfeld et al. 2008; Lammers and Stapel 2011); and at least one contrasting study that suggested that the type of power considered in this paper was associated with less stereotyping (Lammers et al. 2009). Studies lends further support to Lammers and co-authors (2009) by suggesting that power - when measured as a sense of control over others - is associated with less stereotyping of a worker with mental illness, relative to a control condition with either no label or a physical injury label.

Study 3 attempted to isolate the effect of feeling powerful and measure its impact on the stigma components of labeling, stereotyping, and socially excluding a person exhibiting symptoms of schizophrenia. This study was conducted in an on-campus laboratory, with undergraduate students as participants. Participants were told they were completing an “attitudinal assessment,” and first completed demographic information (sex, race, and age). Next, they were asked to either write about their day yesterday, or write about a time when they had control over others. These represented the control condition and the high-power condition, respectively. Then, all participants answered read a paragraph describing a person with symptoms of schizophrenia, and answered questions that measured whether they would label the person as having a mental illness, the extent to which they would negatively stereotype him, and the extent to which they would desire social distance from him.



## Predictions

The first step in the stigma process is the labeling of individuals, which associates the person with devalued characteristics. Because power is typically associated with increased stigmatization, I predict that:

**Hypothesis 1:** High-power participants will be more likely to label PWMI as having a mental illness than control participants.

As mentioned in previous chapters, several studies have demonstrated that power can be associated with higher levels of stereotyping (Fiske 1993; Georgesen and Harris 1998; Goodwin et al. 2000; Guinote and Phillips 2010; Sachdev and Bourhis 1985, 1991). I thus make the following prediction:

**Hypothesis 2a:** High power participants will be more likely to stereotype a PWMI than control participants.

Yet when power is measured as control over others, rather than independence from them, it is actually associated with less stereotyping (Lammers et al. 2009). This study and studies 1 and 2 measure power as control over others, thus I also predict that:

**Hypothesis 2b:** High power participants will be less likely to stereotype a PWMI than control participants.

The final step in the stigma process is discrimination toward the stigma target, such as social exclusion. Power influences social distance, such that more powerful individuals desire more social distance toward a target (Lammers et al. 2012). However, this has not been applied to PWMI. Following from this research, I predict that:

**Hypothesis 3:** High-power participants will desire more social distance from a PWMI than control participants.

Research has demonstrated that power leads individuals to be more stereotyping of others (Fiske 1993; Goodwin et al. 2000), to dehumanize others (Lammers and Stapel 2011), and to be more likely to stigmatize others (Link and Phelan 2001). Yet one study also suggests that power, when measured as control over others, is actually associated with less stereotyping (Lammers et al. 2009). This research has not, to my knowledge, been directly applied to the stigma process. Study 3 attempted to artificially prime participants to feel powerful via a writing task, then assessed their level of stigmatizing attitudes. Results provide evidence of whether the findings from Study 1 – that a higher sense of power is associated with less stereotyping – can be replicated in a laboratory setting in which participants not only indicate their sense of power but also feel powerful during the study.

### Design

Study 3 assessed the effect of feeling powerful on the propensity to stigmatize someone displaying mental illness symptoms. After arriving, participants completed a short demographic questionnaire, then some participants were primed to feel powerful and others were not. They then read a vignette describing a person experiencing symptoms of schizophrenia, then responded to items assessing the stigma components of labeling, stereotyping, and social distance.

The two experimental conditions were as follows:

Condition 1: High Power

Condition 2: Control

To achieve the necessary level of power, participants were primed via a writing task. They were asked to write about a situation where they had power over others (the high power condition) or about their day yesterday (the control condition) for ten minutes. In the high power condition, instructions said to: "...please recall a particular incident in which you had power over another individual or individuals. By power, we mean a situation in which you controlled the ability of another person or persons to get something they wanted, or were in a position to evaluate those individuals. Please describe this situation in which you had power – what happened, how you felt, etc." For the control condition, the instructions simply said to "write about your day yesterday, including how you felt and what you did." Galinsky and others (2003) have used this method successfully to induce a sense of power in participants (2003). Participants then read a vignette describing a person with symptoms of schizophrenia (see Appendix C for the Study 3 materials). This vignette described a man named John who began experiencing paranoia and auditory hallucinations, two symptoms of schizophrenia. The vignette also describes the man as beginning to isolate himself from others. I chose symptoms of schizophrenia here because it is a condition that the public views as very severe, and might be most likely to view as a definite mental health condition.

Following the vignette, each participant responded to questions assessing their attitudes toward John, the vignette subject (See Appendix C). Average study completion time was approximately 20 minutes. These questions were framed around the key stigma components identified by Link and Phelan (2001) and covered labeling, stereotyping, and social distance (see Appendix C for the full list). The labeling question asked participants to describe what the vignette subject was experiencing, and was thus open-ended and coded to determine whether the

participant labeled the situation as a mental illness or not. Together, these measures allowed for a test of whether different levels of felt power lead to an increased likelihood of labeling a person as mentally ill; stereotyping him negatively as dangerous, awkward, or untreatable; or seeking social distance from him. All have been shown to lead to negative life outcomes for the labeled individual, yet an effect of power has not been established in an interactional setting between stigma perpetrator and target. Following participation in the study, research assistants paid participants and debriefed them on the true purposes of the research.

### Sample

Undergraduate students from a large mid-Atlantic university volunteered to participate in the study in exchange for payment of \$20. Eighty-four participants were randomly selected into one of two conditions, primed, and asked to read a vignette and complete a survey intended to measure the stigma components of labeling, stereotyping, and social distance. Sample demographics are located in Table 16. Approximately 74% of the sample were women, 43% were white, with 32% identifying as Asian; and the mean age was 20 years old. As this sample were all college students, their demographic characteristics differ significantly from those of the mTurk participants from Study 1 and Study 2. The sample is made up of more women, more racial diversity, and lower age than the mTurk participants. I discuss the potential ramifications of these different samples in the discussion section.

<b>Sex</b>	<b>N</b>	<b>%</b>
Male	22	26.19
Female	62	73.81
<b>Race</b>		
White/Caucasian	36	42.86
Black/African-American	9	10.71
Asian	27	32.14
Other/Multi-racial/Unspecified	12	14.29
<b>Age (Mean)</b>	20.04	Range (18-26)
<b>Total</b>	84	100

*Dependent Variables*

Outcome variables for this study were whether or not participants labeled the vignette subject as having a mental illness or being mentally ill (coded to be a dichotomous measure); whether they stereotyped the person as dangerous, unpredictable, awkward, untreatable, at fault for his condition, or permanently affected by the condition (as separate measures); and the amount of social distance they desired toward the vignette subject, measured as willingness to living close to someone like the vignette subject, working with him, having him marry into the family, or having him care for your child (combined as a scale). Means and standard deviations of these dependent variables are in Table 20.

<b>Table 20. Study 3 - Dependent Variable Descriptives</b>		
<b>Labeling as Having Mental Illness</b>	<b>N</b>	<b>%</b>
Yes	67	80
No	17	20
<b>Stereotyping Items*</b>	<b>Mean</b>	<b>St. Dev</b>
"A danger to others"	3.33	1.06
"Unpredictable"	3.92	0.97
"Hard to talk to"	3.84	0.89
"Has himself to blame"	1.8	1
"Will not improve if treated"	1.88	1.09
"Will never recover"	1.74	0.79
<b>Social Distance Items**</b>	<b>Mean</b>	<b>St. Dev</b>
"Renting a room in your home"	4.23	0.83
"Being a worker on the same job"	3.1	0.95
"Having as a neighbor"	2.99	0.94
"Having take care of your child"	4.82	0.49
"Having your child marry him"	4.3	0.88
"Introducing to a young woman you're friendly with"	3.62	1.03
"Recommend to work a job for a friend..."	3.58	0.97
<i>*On a 1-5 Scale; Higher scores indicate more stereotyping</i>		
<i>**On a 1-5 Scale; Higher scores indicate more social distance desired</i>		

## Chapter 11: Study 3 Results – Primed Power and Stigmatizing Attitudes

Study 3 predictions were that feeling powerful would cause participants to be more stigmatizing of a person exhibiting mental illness symptoms, in terms of the degree to which they label (Hypothesis 1), stereotype (Hypothesis 2a), and seek social distance from the person (Hypothesis 3). To test the hypothesis that high-power participants would be more likely to label the scenario as a mental illness, I estimated a logistic regression of the likelihood of labeling the person in the vignette scenario as mentally ill based on the participant’s condition and control variables. Results are presented in Table 21.

<b>Table 21. Logistic Regression Predicting the Odds of Labeling the Person as Mentally Ill by Experimental Condition and Control Variables (N=84)</b>	
<b>Variable</b>	<b>Odds Ratio (Standard Error)</b>
High Power ( <i>Reference = No Power Prime</i> )	0.654 (0.369)
Sex ( <i>Reference = Male</i> )	0.639 (0.448)
Age	0.772 (0.135)
Race ( <i>Reference = White</i> )	
African-American	0.927 (0.877)
Asian	0.940 (0.607)
Other	0.981 (0.884)
Constant	1,344.892 (5,087.605)
LR chi2	3.060
N	84

Hypothesis 1 predicted that high power participants would be more likely than control participants to label the situation in the vignette as a mental illness. Results of this model do not suggest a significant effect of the high-power prime on likelihood of labeling the scenario as a mental illness ( $p=.452$ ). In fact, high-power participants were less likely to label the scenario as a mental illness, although this was not statistically significant. The control variables also did not significantly affect the likelihood of labeling. Finally, the  $\text{prob} > \chi^2$  of the model was .80, indicating that the model as a whole did not significantly explain the variance in the likelihood of labeling. Results therefore do not support Hypothesis 1.

To test the stereotyping hypotheses, I analyzed the items separately because they represented different theoretical constructs and were not expected to correlate strongly. First I analyzed the mean differences between the high-power and control conditions for the items, which indicated very small differences between the conditions (see Table 22 below).

<b>Table 22. Means of Stereotyping Variables by Experimental Condition (St. Dev in parentheses)</b>		
<b>"John is....." *</b>	<b>High Power</b>	<b>Control</b>
"A danger to others"	3.317 (1.035)	3.333 (1.097)
"Unpredictable"	3.881 (1.017)	3.952 (.936)
"Hard to talk to"	3.829 (.863)	3.857 (.926)
"Has himself to blame"	1.952 (1.168)	1.643 (.791)
"Will not improve if treated"	1.929 (1.091)	1.833 (1.102)
"Will never recover"	1.619 (.731)	1.857 (.843)
* <i>Higher scores indicate more stereotyping</i>		

Hypothesis 2 predicted that high power participants, relative to control participants, would be more likely to negatively stereotype the PWMI in the vignette. None of the mean differences were significant at the .05 alpha level in two-tailed tests. Moreover, none of the mean differences would have been significant with an increase in sample size to 80 participants per condition. Beginning with the “a danger to others” item and moving down in Table 18 the p-



values for two-tailed t-tests of mean differences were .946, .740, .887, .160, .689, and .171. Thus, I reject Hypothesis 2, which predicted that that high-power participants would stereotype a person with mental illness more than control participants.

To test the Hypothesis 3, the social distance hypothesis that high-power participants would desire more social distance from the person in the scenario, I first tested for internal reliability of the social distance items under each sub-heading, in order to group them into a scale. The items had a scale reliability coefficient of 0.835, indicating high reliability. This is consistent with Link et al. (1987), who found a reliability coefficient of 0.92 for the items. The scale was skewed such that participants were more likely to express social distance, and therefore was not normally distributed. Because seeking social distance was not the norm, I conducted a logistic regression predicting the odds of choosing “Probably Not” or “Definitely Not” as the average response to the social distance items. Table 19 presents the results of a model comparing control and high power conditions to one another in a logistic regression containing the conditions and control variables.

<b>Table 23. Logistic Regression Predicting the Odds of Desiring Social Distane by Experimental Condition and Control Variables (N=84)</b>	
<b>Variable</b>	<b>Odds Ratio (Standard Error)</b>
High Power ( <i>Reference = No Power Prime</i> )	1.223 (0.571)
Sex ( <i>Reference = Male</i> )	2.653 (1.541)
Age	1.061 (0.162)
Race ( <i>Reference = White</i> )	
African-American	4.892 (4.057)
Asian	2.746 (1.476)
Other	1.516 (1.075)
Constant	0.065 (0.211)
LR chi2	9.200
N	84

The coefficient for the high-power condition is not significant ( $p=.667$ ), indicating no support for Hypothesis 3. Furthermore, none of the control variables were statistically significant. The F-statistic also was not significant ( $p=.166$ ), indicating that the model as a whole is not significant in explaining the variance in social distance.

Table 24 lists study hypotheses and decisions for this study.

<b>Table 24. Study 3 Hypotheses and Decisions</b>	
<b>Hypotheses</b>	<b>Support?</b>
#1: High-power participants will be more likely to label PWMI as having a mental illness than control participants.	No
#2a: High power participants will be more likely to stereotype a PWMI than control participants.	No
#2b: High power participants will be less likely to stereotype a PWMI than control participants.	No
#3: High-power participants will desire more social distance from a PWMI than control participants.	No

Discussion

Study 3, which utilized a different sample and methods than studies 1 and 2, did not yield support for any of the study hypotheses. It is unclear whether results are indicative of a failure of the prime to induce a high sense of power in the treatment group participants; whether the effect of power on stigma is relatively stable and cannot be artificially created; or some combination of the two. That is, perhaps those participants in the traditional laboratory setting for Study 3 who were primed to feel powerful would have measured as very low in personal sense of power on the Study 1 and 2 power instrument, or vice versa. The power survey questions used for Studies 1 and 2 were intended to capture a general, personal sense of power that applies to a number of social settings that the participant encounters in their lives. Therefore, the sense of power scale might be a better measure of how powerful a person feels as a more permanent state of their

personality, while primed power might not have as big of an effect on inducing behaviors that would be different from the participants' regular behavior. Perhaps future research might survey potential participants before the study as well as priming them with power, to assess whether sense of power as shown in survey responses is more important in predicting stigmatizing attitudes than artificially-created power through priming. It is also possible that the different samples used in this research could have produced different types of participants. In the main discussion chapter I discuss some of the possible implications of using different sampling procedures for this study compared to the other two, as this could have influenced the propensity for participants to stigmatize.

Looking at the three studies' power findings together suggests some mixed results regarding power and the stigma process. The bullet points below lay out the findings and what they suggest about the relationship between power and the various stigma components.

- **Labeling** – Study 3 found no effect of being primed to feel powerful on labeling a person as having a mental illness
- **Stereotyping** – Study 1 found an independent, negative effect of sense of power on stereotypical attitudes towards women and men with mental illness presented as being successful workers
  - Sense of power was associated with less stereotyping of women and men workers with mental illness as dangerous, relative to a control condition
  - Sense of power was associated with less stereotyping of women and men workers with mental illness as incompetent, relative to a control condition
  - Sense of power was associated with less stereotyping of women and men workers with mental illness as unassertive, relative to a control condition

- Sense of power was associated with less stereotyping of only men workers with mental illness as incapable, relative to a control condition
- **Discrimination**
  - **Social Distancing** –
    - Study 1 found no effect of sense of power on desiring social distance toward workers with various mental illness conditions, relative to a control condition
    - Study 3 found no effect of being primed to feel powerful on desiring social distance towards a person with mental illness symptoms
  - **Hiring Discrimination** –
    - Study 2 found no effect of sense of power on recommending a job candidate with mental illness for hire, for a job for which they were well qualified
    - Study 2 found no effect of sense of power on recommended salary for a job candidate with mental illness, for a job for which they were well qualified

Despite the strong findings of power's effect on stereotyping, I did not find evidence of a direct link between sense of power and social distancing or hiring discrimination. I further discuss the theoretical implications, contributions, and future research related to this dissertation in the next section.

## Chapter 12: Discussion

Three interrelated studies assessed the extent to which stereotypes of competence, dangerousness, and employability differ for people with mental illness labels or no stated condition; the ability for stereotype-disconfirmation to reduce hiring discrimination and for stigma outcomes to differ by mental health condition; and the extent to which a manipulated sense of power impacts stigmatizing attitudes. Findings show that, even for people presented as successful workers, mental illness labels are deeply harmful for perceived dangerousness, competence, and employability (assertiveness and capability). In some instances, such as for perceived dangerousness, women suffer more from these mental illness labels than men. Despite the harmful stereotypes evoked by mental illness labels, cultural value and symbolic capital attached to war veterans leads to no significant hiring discrimination for this group compared to a person with a physical injury. Participants did not discriminate against veterans with PTSD in terms of recommending them for hire or recommending a starting salary. This is in comparison to people with schizophrenia, who did suffer hiring discrimination. These results suggest the importance of positive information, such as calls to “support the troops,” on countering the otherwise negative stereotypes of PWMI.

### Sample Differences

These studies utilized different pools of participants. Studies 1 and 2 used mTurk samples, while Study 3 was conducted on a university campus and used undergraduate university students. As a result, Study 3 participants were much younger, lower educated, more female, and more racially diverse than the mTurk participants used in the other studies. From the research on social characteristics and stigmatization, I might expect contrasting effects of having these

different samples. Because people with more education tend to be less stigmatizing, I should have expected the sample for Study 3 to be more stigmatizing; however this sample also had a higher proportion of women participants, who tend to be less stigmatizing. And it was also more racially diverse, which might lead to more stigma. Regardless, I had no reason to expect that the effect of feeling powerful (via a writing prime) would be different for this sample than for a sample drawn from an mTurk pool. Research on both power and stigma has drawn from university samples as well as more diverse samples from the general population.

### *Gender and Stigma*

Despite research showing that gender-typicality of a condition leads to more stigma, the gender-typicality of the mental illness in this study did not lead to increased stereotyping. Rather, for men with depression (typically seen as a more feminine mental health condition), stereotypes were more severe than for women with depression. And, women received harsh stereotyping on the components of dangerousness, incompetence, and employability. However, gender was a factor for stigmatizing attitudes, as women participants were less stigmatizing than male participants. One reason for the increased stereotyping of women with mental illness as dangerous compared to men might be that the baseline condition for men is perceived as significantly more dangerous than for women. Thus, mental illness plays more of a role in affecting negative stereotyping of women as dangerous since a non-labeled woman is seen as relatively safe compared to a man.

### *PTSD Stigma*

Results of Study 1 are the first to my knowledge to show that stereotyping of people with PTSD is as severe as people with schizophrenia, typically one of the most-stigmatized conditions. Both of the workers with these labels were viewed as more dangerous and

incompetent than a control condition. And the stigma appears to be directed at the cause of the PTSD, as war-related PTSD evoked harsher stereotypes than accident-related PTSD. Apart from the perceptions of people with war-related PTSD, however, results showed that social distance desired toward these individuals was lower than social distance desired toward people with some other types of mental illness labels. And, Study 2 demonstrated that participants do not discriminate in hiring toward people with PTSD relative to someone with a physical injury. Thus, this dissertation demonstrates that, although PTSD can be detrimental in evoking damaging stereotypes, the cultural support for military personnel and veterans can help to shield the group from discrimination. Future research should confirm that cultural support is the driver of the unwillingness of the public to discriminate against veterans with PTSD by directly assessing public knowledge and attitudes toward the group.

### Power

Study 1 measured participants' personal sense of power after they had responded to the trait items measuring stereotypes. Results indicated a significant main effect of power, such that participants who felt more powerful were less stigmatizing of the vignette subjects, across conditions for some of the stereotype clusters. Further analysis did not yield insight into the specific placement of power in the stigma process in this setting, however, as no interaction effects were significant. This might suggest that, as Proposition 12 suggested, a higher sense of power can in some cases be associated with less stereotyping. Research has shown this to be especially true when power is operationalized as a sense of control (Lammers et al. 2009).

Another explanation for why power was associated with lower levels of stereotyping for Study 1 might be that participants with lower levels of power felt threatened by the vignette subjects. Group threat theories (e.g. Tajfel and Turner 2004) suggests that people are likely to



discriminate against people seen to belong to different social groups (such as people with stigmatized identities). It might be the case that participants with low senses of power felt hostility toward the workers with mental illness, who have successful work histories and might be viewed as competitors for scarce resources.

Study 3 assessed the role of power in impacting labeling, social distance, and stereotyping of a person exhibiting symptoms of schizophrenia. Results of this study did not indicate a significant effect of feeling powerful on the dependent variables of interest. However, it is unclear if this is due to a failure of the prime to induce a sense of power, or perhaps social desirability evoked by the sensitive question items.

#### *Social Distance and Social Desirability*

Findings of study 1 demonstrated that, although participants found several of the mental illness conditions to be more dangerous and more incompetent than the control condition, they nevertheless desired less social distance from some of those conditions. Another study of social responses to Iraq veterans (MacLean and Kleykamp 2014) also found that, despite beliefs about more dangerousness for Iraq combat veterans, participants did not socially distance them relative to other types of veterans or non-veterans. A follow-up study (Kleykamp, Hipes, and MacLean 2013) employing an unobtrusive measure to test social desirability, showed that true support for recent veterans is very high, accounting for any inflation of support that might exist from social desirability. Thus it is difficult to discard the social distance results of Study 1, because at least one previous study accounting for social desirability has demonstrated that social distance toward veterans is low.

## Chapter 13: Conclusion

These studies tested the impact of two theoretical mechanisms on the stigma of mental illness in a labor market setting. Study 1 assessed the degree to which different mental illness labels attached to an otherwise positive description of a middle manager evoked negative stereotypes that would disadvantage the individual in a workplace setting. I compared mental illness conditions to a baseline condition with no illness label, finding that mental illness labels evoked a range of negative stereotypes. Labels of PTSD and schizophrenia were especially stigmatizing, evoking similar negative perceptions relative to a control condition. Mental illness had a greater negative effect for women relative to men in some situations, especially with regard to dangerousness. Participants' sense of power was associated with stereotyping, such that a higher sense of power was associated with less negative stereotyping toward PWMI. Study 2 assessed hiring discrimination specifically toward people with schizophrenia and PTSD, the two most heavily stereotyped conditions from Study 1. Results showed that, relative to a worker with a history of physical injury, workers with schizophrenia were less likely to be recommended for hire. However, workers with war-related PTSD did not suffer such discrimination, which I believe reflects the cultural level of support for military personnel and veterans. Disconfirmation of stereotypes via application materials had mixed results. Finally, Study 3 assessed the effect of feeling powerful on labeling, stereotyping and social exclusion of an individual with mental illness symptoms, as workplace interactions frequently involve power imbalances. Results of Study 3 indicated no effects of feeling powerful on the dependent variables of interest.

### *Explaining Employment Discrimination toward PWMI*

Employment discrimination persists against PWMI despite efforts to combat it. This research shows that, even for a worker with a successful work history and successful resume, an absence from work to attend to a mental health condition leads to negative stereotyping and, in some cases, a lower likelihood of being recommended for a job for which they are qualified. Results thus support stigma theory, which states that labels will lead to negative stereotyping and subsequent discrimination. Research has established that mental illness labels are stigmatizing, but has not to my knowledge used an employment setting to explore the stigma process for PWMI.

This research first documented that the mental illness labels of schizophrenia, depression, and an unspecified “mental illness” lead to negative stereotyping for a worker with a successful history. And, these results represent some of the first findings to my knowledge to compare social responses to PTSD with responses to other mental illnesses, situating the label alongside labels known to be associated with negative stereotypes. Relative to a worker with no label, both workers with war-related PTSD were stereotyped in more damaging ways. From research on the Stereotype Content Model (Sadler et al. 2012), this research then places PTSD alongside schizophrenia as a condition that evokes damaging perceptions of dangerousness and incompetence relative to other conditions. And yet, this research also demonstrated that, perhaps due to the cultural support and symbolic capital of military veterans, participants did not discriminate against the group relative to a worker with schizophrenia.

Taken together, study results suggest that a sense of power can be associated with less stereotypical attitudes toward PWMI in some situations, but perhaps not others. In Study 1, participants who felt more powerful tended to be less stereotyping, across conditions, while in

Study 2 power was not associated with hiring discrimination and in Study 3 an attempt to prime participants with power did not lead to effects on their stigmatizing attitudes. These results suggest no support for the hypotheses connecting power to higher levels of stigma, which research had demonstrated to be a link across a number of measures. Instead, results might indicate that, as Lammers et al. (2009) demonstrated, a sense of control over others can be associated with less stereotyping. Thus, findings from this research yield mixed support for stigma theory and theories on the relationship between power and stigma components. As detailed below, I believe that future research might help to clarify the effects of sense of power on stigma components in different methodological approaches than those undertaken by this research.

An attempt to reduce hiring discrimination toward people with two heavily-stereotyped conditions (war-related PTSD and schizophrenia) by moderately disconfirming stereotypes did not work in Study 2. As mentioned in the Limitations section, this might have been due to the lack of interpersonal contact during the stereotype disconfirming process. Research using the contact hypothesis has demonstrated that interpersonal contact can reduce stigma towards an out-group, but much of this research involves face-to-face interaction, which Study 2 did not involve. Thus Study 2 does not contradict the contact hypothesis since I do not employ identical methods.

Research has shown how the public tends to stigmatize people with mental illness labels, and this research showed how this process persists in an employment setting, in which the labeled individual has a successful work history and, in the case of Study 2, is viewed as highly skilled and thus qualified for a position. Nevertheless, negative stereotyping persisted for the characteristics of dangerousness, incompetence, and low employability. One effort to address this using stereotype disconfirmation yielded no positive results. Current anti-stigma initiatives

are underway to combat negative public attitudes toward PWMI, such as the Bring Change 2 Mind initiative (Bring Change 2 Mind 2016), which asks people to share their stories about mental illness to educate the public and de-mystify these conditions. BuzzFeed, a popular pop culture and news website among younger demographics, has also posted various stories and videos showing the stories of PWMI, such as a video with people providing justification for why they take medication for a mental illness. Increasing public understanding of and empathy with PWMI might help to decrease stereotyping and discrimination. The studies presented here further suggest that cultural change in attitudes toward PWMI is needed to help alleviate the process whereby negative stereotyping leads to real discrimination.

### Future Research

Future research should ensure that the differential discrimination process, whereby people with schizophrenia face hiring discrimination relative to a control condition but people with war-related PTSD do not, exists because of public support for preferential treatment for military personnel and veterans. Because veterans may be a group that evokes socially desirable responses (Kleykamp et al. 2013), this could be done using a list experiment. List experiments can reveal true public responses to survey items by separating participants into a control group, in which respondents are asked about their support for several different types of social group, and a treatment group that also has several different types of social group but includes military veterans with PTSD. Participants are then asked to indicate *how many* of the groups they support, but not which ones. By comparing responses in the two experimental conditions (or more conditions for various forms of the experiment) the researcher can get an idea of the true public level of support for the treatment item. For now, this research is assuming that the lower

level of discrimination for war veterans with PTSD is due to cultural support, but I do not have data to support it.

To better reveal possible effective stigma reduction strategies in the workplace, future research might benefit from staging face-to-face interactions between potential job candidates and people with power to make hiring decisions. This interaction could replicate the research in this dissertation by having a no disconfirmation and moderate disconfirmation conditions for a candidate with a mental illness, but instead have the interpersonal contact take place in person rather than through text. The present research manipulated stereotype disconfirmation through a cover letter and letter of reference, but this might not have had a strong enough impact on participants' attitudes. A staged job interview scenario might better test the contact hypothesis for PWMI.

Finally, this research demonstrated a negative relationship between personal sense of power and stereotyping of PWMI as unfit for workplace success, but no effect of power on hiring discrimination. This finding merits further exploration, because it might suggest that employers, who would tend to be in more powerful positions in their workplace environment, could actually be less likely to stereotype PWMI than lower-level workers. However, this research also suggests that more powerful people are neither more nor less likely to actually discriminate in recommending a worker with mental illness for hire. Future research here could have participants complete the power survey items used in this research, then sample participants based on their power scores. Then, measures could try to assess true attitudes toward PWMI using unobtrusive measures. This could lend further support to the findings presented in this dissertation and might dispel the idea from stigma theory that a power imbalance perpetuates the stigma process.

### Limitations

These studies are experimental, and therefore isolate and test specific mechanisms in controlled settings. I expect the various symptoms associated with different mental health conditions to affect how PWMI behave and interact with others, however for the present studies mental illness *labels* are key, as mechanisms that can elicit negative stereotyping and negative treatment in interactions. These studies are not intended to shed light on the day-to-day interactions that take place between PWMI and their co-workers, which can have an impact on their treatment in key interactions such as promotion decisions. Further research might utilize ethnographic methods to assess the in-depth nature of interactions between labeled individuals and co-workers.

Another limitation of these studies is the use of middle managers as the fictitious candidates' position. This career was selected to sync with past work by Schein (1973) on gender stereotypes and the workplace, and also serves as a generic mid-status job that does not convey either an extreme status distinction or a high or low level of interaction required by the worker. The intent is to present the worker to study participants as successful, and to ensure the only reason participants give negative evaluations of the worker is because of the stereotypes elicited by her or his mental health condition.

The attempt to reduce hiring discrimination through stereotype disconfirmation did not succeed as anticipated. Reinke et al. (2004) had found positive results of moderate stereotype disconfirmation on reducing discrimination, but this was done with a more intensive manipulation involving (in some cases) direct personal interaction with a PWMI. It might be the case that the manipulation in Study 2 of including stereotype disconfirmation in a cover letter and letter of reference did not have the same effect on participants as more direct interaction with

a PWMI. Therefore, I do not interpret the non-finding with those experimental conditions as indicative of a failure of that stigma intervention, but rather as a weakness in the way information was conveyed to participants (the stigma perpetrators).

Similarly, for the power manipulation in Study 3 the manipulation of priming participants with power may not have been strong enough to actually induce a psychological state. Instead, future research might sample participants based on their personal sense of power (using the scale from Studies 1 and 2) and then have high-power participants and low-power participants complete studies with measures of labeling, stereotyping, and social distance. This type of measure might better ensure that participants truly have either a high or low sense of power before completing the study. It might have been the case that some of the control participants in Study 3 actually had a high personal sense of power despite being in the control condition, and vice versa for participants in the high power condition. Furthermore, because the stigma process suggests that a power imbalance is key to inducing stigma, future research might vary the power of the stigma target as well as the power of the stigma perpetrator. It may be that having the vignette subjects be workers with successful careers affected the presence of a power imbalance. Future research could vary the occupations or work histories of the stigma targets to alter the power dynamic.

Another limitation of these studies is that the worker only varies by mental health condition and sex. Other social characteristics such as race, class, or age, can also influence the stigma process. Because the worker in the study scenarios is said to have a successful work history and is applying (for study 2) for an upper-class job, I expected to find a conservative estimate of discrimination. Should I have varied race and class, stereotyping and subsequent



discrimination might have been more severe. Future research should investigate the roles of race and class in affecting employment discrimination for PWMI.

## Appendix A: Study 1 Instrument

*Pre-study measures: sex, age, education ethnicity, and occupation*

### Instructions

On the following pages you will find a series of descriptive terms commonly used to characterize people in general. Some of these terms are positive in connotation, others are negative, and some are neither very positive nor very negative.

We would like you to use this list to indicate what you think the following type of person is like. In making your judgments, it may be helpful to imagine that you are about to meet this person for the first time and the only thing you know in advance is the information in the following paragraph. Please read the paragraph carefully, then respond to the descriptive items:

[Lisa/Robert] is applying for a middle manager position at a large company in the United States. He has a competitive resume, and has been successful in his last position. He won a “Manager of the Year” award in 2012 in a position for which he served six years. Before that, he received B.S. and M.B.A. degrees, and successfully completed an internship. [Control condition ends here] But recently he had to take a leave of absence from his company to receive treatment for [a mental illness/post-traumatic stress disorder (PTSD) resulting from an automobile accident/post-traumatic stress disorder (PTSD) resulting from service during Operation Iraqi Freedom/schizophrenia/depression]. He later returned to work and continued to perform well at his job.

Please evaluate the following descriptive items according to the following scale:

- 5 - Characteristic of a person like this person
- 4 - Somewhat characteristic of a person like this person
- 3 - Neither characteristic nor uncharacteristic of a person like this person
- 2 - Somewhat uncharacteristic of a person like this person
- 1 - Not characteristic of a person like this person

*Note: Items appeared to participants in blocks repeating the instructions every 16 items.*

1. Consistent\_\_\_\_\_
2. Fearful\_\_\_\_\_
3. Capable\_\_\_\_\_
4. Adventurous\_\_\_\_\_
5. Leadership ability\_\_\_\_\_
6. Neat\_\_\_\_\_
7. Excessive\_\_\_\_\_
8. Uncertain\_\_\_\_\_
9. Violent\_\_\_\_\_
10. Creative\_\_\_\_\_
11. Threatening\_\_\_\_\_
12. Desire to avoid controversy\_\_\_\_\_
13. Oblivious\_\_\_\_\_
14. Courteous\_\_\_\_\_
15. Emotionally stable\_\_\_\_\_
16. Distant\_\_\_\_\_
17. Devious\_\_\_\_\_
18. Independent\_\_\_\_\_
19. Intelligent\_\_\_\_\_
20. Dangerous\_\_\_\_\_
21. Persistent\_\_\_\_\_
22. Skilled\_\_\_\_\_
23. Vigorous\_\_\_\_\_
24. Sophisticated\_\_\_\_\_
25. Weak\_\_\_\_\_
26. Forceful\_\_\_\_\_
27. Stiff in Interactions
28. Analytical ability\_\_\_\_\_

29. Clean\_\_\_\_\_
30. Wavering in decision\_\_\_\_\_
31. Cheerful\_\_\_\_\_
32. Competent\_\_\_\_\_
33. Understanding\_\_\_\_\_
34. Ignorant\_\_\_\_\_
35. Vulgar\_\_\_\_\_
36. Sociable\_\_\_\_\_
37. Aloof\_\_\_\_\_
38. Aggressive\_\_\_\_\_
39. Passive\_\_\_\_\_
40. Speedy recovery from emotional trauma\_\_\_\_\_
41. Shy\_\_\_\_\_
42. Firm\_\_\_\_\_
43. Prompt\_\_\_\_\_
44. Fickle\_\_\_\_\_
45. Intuitive\_\_\_\_\_
46. Awkward\_\_\_\_\_
47. Quarrelsome\_\_\_\_\_
48. Industrious\_\_\_\_\_
49. Feeble\_\_\_\_\_
50. Well informed\_\_\_\_\_
51. Harmful\_\_\_\_\_
52. Reserved\_\_\_\_\_
53. Ambitious\_\_\_\_\_
54. Obedient\_\_\_\_\_
55. Has Good Hygiene\_\_\_\_\_
56. Desires responsibility\_\_\_\_\_
57. Self-controlled\_\_\_\_\_
58. Modest\_\_\_\_\_

59. Decisive\_\_\_\_\_
60. Qualified\_\_\_\_\_
61. Nervous\_\_\_\_\_
62. Direct\_\_\_\_\_
63. Powerless\_\_\_\_\_
64. Hides Emotion\_\_\_\_\_
65. Authoritative\_\_\_\_\_
66. Self-confident\_\_\_\_\_
67. Inhospitable\_\_\_\_\_
68. Steady\_\_\_\_\_
69. Clumsy\_\_\_\_\_
70. Assertive\_\_\_\_\_
71. Feelings not easily hurt\_\_\_\_\_
72. Dominant\_\_\_\_\_
73. Tactful\_\_\_\_\_
74. Alarming\_\_\_\_\_
75. Helpful\_\_\_\_\_
76. Deceitful\_\_\_\_\_
77. Erratic\_\_\_\_\_
78. Generous\_\_\_\_\_
79. Bitter\_\_\_\_\_
80. Logical \_\_\_\_\_
81. Impaired Judgment\_\_\_\_\_
82. Selfish\_\_\_\_\_
83. Rude\_\_\_\_\_
84. Kind\_\_\_\_\_
85. Unpredictable\_\_\_\_\_
86. Strong need for monetary rewards\_\_\_\_\_
87. Self Reliant\_\_\_\_\_

### **Post-Study Measures**

- 5 - Strongly Agree
- 4 - Agree
- 3 - Neither Agree nor Disagree
- 2 - Disagree
- 1 - Strongly Disagree

### **Please indicate the extent to which you agree with the following statements**

*“In my relationships with others...”*

1. I can get them to listen to what I say. \_\_\_\_\_
2. My wishes do not carry much weight. (r) \_\_\_\_\_
3. I can get them to do what I want. \_\_\_\_\_
4. Even if I voice them, my views have little sway. (r) \_\_\_\_\_

*“In my relationships with others...”*

5. I think I have a great deal of power. \_\_\_\_\_
6. My ideas and opinions are often ignored. (r) \_\_\_\_\_
7. Even when I try, I am not able to get my way. (r) \_\_\_\_\_
8. If I want to, I get to make the decisions. \_\_\_\_\_

### **Please respond with how frequently you have experienced the following events**

- Has your spouse or close friend been hospitalized for mental health reasons? \_\_\_Yes  
\_\_\_No
- Has a close family member, or yourself been hospitalized for mental health reasons? Check all that apply: Self \_\_\_ Family member \_\_\_ Neither \_\_\_\_\_
- Have you ever worked or volunteered in the mental health field? \_\_\_Yes \_\_\_No
- How often have you seen someone in a public place who seems mentally ill? \_\_\_Often  
\_\_\_Sometimes \_\_\_Almost Never \_\_\_Never

- How often are you exposed to news about mental illness? \_\_\_\_ Often \_\_\_\_ Sometimes  
\_\_\_\_ Almost Never \_\_\_\_ Never
- Have you been exposed to news about mental illness in the past week? \_\_\_\_ Yes \_\_\_\_ No

- 5 - Strongly Agree
- 4 - Agree
- 3 - Neither Agree nor Disagree
- 2 - Disagree
- 1 - Strongly Disagree

**Please indicate the extent to which you agree with the following statements**

1. I believe this person is at fault for their medical condition/[no question for control condition] \_\_\_\_\_
2. How would you feel about renting a room in your home to someone like John?
3. How would you feel having someone like John as a neighbor?
4. How about as the caretaker of your children for a couple of hours?
5. How about having your children marry someone like John?

## Appendix B: Study 2 Instrument

*Pre-study measures: sex, age, education, and ethnicity*

### **Introduction**

Hello, we are a large U.S. company who would like you to help us evaluate a randomly-selected candidate from our applicant pool. Below you will see a candidate's resume and an excerpt of his or her cover letter and letter of reference. We then ask you to evaluate the candidate. Your opinions, combined with opinions of other evaluators, will help streamline our hiring process. Following your evaluation, we have some questions that help us know a little more about you. Please read all materials carefully and respond truthfully.

### **Resume**

#### **BUSINESS PROFILE**

A self-managed and result-oriented manager with seven years of experience in *Project Management, Administration, Budgeting, Product Development/Launch, Training/Development, Crew Supervision, Technical Support, and Client Relations*. Experienced in managing large scale and commercial projects with value of up to \$5 million. Proven ability to identify business opportunities and provide the management and technical expertise to sales representatives to achieve revenue targets.

Strategic manager with strong interpersonal, communication, problem solving and decision making skills. Ability to establish and maintain strong alliances; lead and motivate teams; drive projects to successful completion; convey complex technical requirements/data; exceed customer expectations and achieve fiscal bottom-line results.

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#### **PROFESSIONAL EXPERIENCE**

HATHAWAY GROUP, Chicago, IL

2009 - 2014

##### **Project Manager**

*The Hathaway Group designs and implements construction projects across the Midwestern United States, focusing on outdoor sports facilities, in coordination with public land projects.*

##### **SELECTED ACCOMPLISHMENTS**

- Earned Manager of the Year award in 2012
- Successfully managed 22 projects in excess of \$9,000,000
- Increased market share by 18%



- Played a key role in team sales presentations which led to acquiring new contracts with state and local governments

FLEMING AND ASSOCIATES, Chicago, IL  
**2008**

**Management Intern**

*Fleming and Associates implements large-scale software installation and training projects with businesses across the United States and Canada.*

**SELECTED ACCOMPLISHMENTS**

- Served on team charged with implementing new software training for a large Midwestern company
- Gained valuable skills at managing and coordinating a large-scale project

**EDUCATION**

University of Illinois, Champaign-Urbana, IL

**2008-2009**

**M.B.A.**

- Interned with management firm during summer of '08
- Completed projects using new software and organizational tools

University of Missouri, Columbia, MO  
**2005-2008**

**B.S. Business Administration/Management**

- 3.8 Grade Point Average
- Phi Beta Kappa inductee
- Vice President of Business club

**Resume Questions**

Based on the candidate's resume, how skilled do you feel this candidate is (on a scale 1-10)?

Who was the candidate's last employer? [used as attention check to ensure participants viewed the resume]

**Candidate Cover Letter Excerpt: Lisa/Robert [Last Name Removed]**

"I am applying for the position of Senior Project Manager at [company name removed]. I have a competitive resume, and have been a successful manager at a large company in the United States for the past six years, winning a "Manager of the Year" award in 2012. Before that, I received B.S. and M.B.A. degrees, and successfully completed an internship.

[As you may see from my resume, I have not worked since late 2014. I took a leave of absence from my previous employer to seek treatment for [a serious physical injury/schizophrenia/post-traumatic stress disorder (PTSD) resulting from service in Operation Iraqi Freedom].[No sentence here for physical injury]. [I sometimes experience symptoms as part of my condition, such as paranoia and hallucinations/flashbacks and anxiety], but I am currently in treatment." [I am able to manage my symptoms while still being an intelligent, warm, and effective leader.”

Letter of Reference Excerpt: Lisa [Last Name Removed]

"I strongly recommend Lisa for the position of middle manager with [company name removed]. She is a hardworking and effective leader, winning a Manager of the Year award for us in 2012. [She took some time off work to attend to an injury last year, but is still able to complete her duties.”]

She has been open about her struggles with [post-traumatic stress disorder/schizophrenia], taking some time off work to attend to her condition last year. Despite her struggles with mental illness, she still manages to perform her duties./[this sentence added for moderate disconfirmation conditions]She has excellent analytical skills, people skills, and leadership abilities.”

**Applicant Evaluation**

How likely would you be to recommend this candidate for our position of Senior Project Manager? (from Very Unlikely to Very Likely)

We typically pay our starting Senior Project Managers between \$75,000 and \$125,000. If we were to hire this candidate, how much should we pay him or her? Please indicate their recommended starting salary using the sliding scale.

How many days could this applicant arrive late or leave early per month before you would no longer recommend him or her for hire?

**Please indicate the extent to which you agree with the following statements**

*“In my relationships with others...”*

1. I can get them to listen to what I say. \_\_\_\_\_
- 2 My wishes do not carry much weight. (r) \_\_\_\_\_
3. I can get them to do what I want. \_\_\_\_\_
4. Even if I voice them, my views have little sway. (r) \_\_\_\_\_

*“In my relationships with others...”*

5. I think I have a great deal of power. \_\_\_\_\_
6. My ideas and opinions are often ignored. (r) \_\_\_\_\_
7. Even when I try, I am not able to get my way. (r) \_\_\_\_\_
8. If I want to, I get to make the decisions. \_\_\_\_\_

**Please respond with how frequently you have experienced the following events**

- Has your spouse or close friend been hospitalized for mental health reasons? \_\_\_Yes \_\_\_No
- Has a close family member, or yourself been hospitalized for mental health reasons? Check all that apply: Self \_\_\_ Family member \_\_\_ Neither \_\_\_\_\_
- Have you ever worker or volunteered in the mental health field? \_\_\_Yes \_\_\_No
- How often have you seen someone in a public place who seems mentally ill? \_\_\_Often \_\_\_Sometimes \_\_\_Almost Never \_\_\_Never
- How often are you exposed to news about mental illness? \_\_\_Often \_\_\_Sometimes \_\_\_Almost Never \_\_\_Never
- Have you been exposed to news about mental illness in the past week? \_\_\_Yes \_\_\_No

**Debriefing Text**

Thank you for participating. We told you this task was to evaluate potential candidates for a company. To give you a little more information, this study actually looks at attitudes toward different types of people. For example, some participants respond to a candidate with no stated

health condition, while others might respond to a worker with a mental illness. Furthermore, some participants respond to a scenario about a woman, while for some it is a man. All the candidates were fictitious. We want to see how different types of social characteristics affect people's attitudes. All of your responses will be kept confidential, and your participation will remain anonymous. Should you have any questions or concerns about this study, please contact the research team at [chipes@umd.edu](mailto:chipes@umd.edu). Feel free to keep a copy of this debriefing text for your records. Thank you.

## Appendix C: Study 3 Instrument

### *Demographic Measures*

Age, Sex, Race

### *Writing Prompt*

#### *Control Condition*

“For the next 10 minutes, write about your day yesterday, including how you felt and what you did. Please use the front and back of this sheet of paper to complete the exercise.”

#### *High-power Condition*

“For the next ten minutes please recall a particular incident in which you had power over another individual or individuals. By power, we mean a situation in which you controlled the ability of another person or persons to get something they wanted, or were in a position to evaluate those individuals. Please describe this situation in which you had power – what happened, how you felt, etc. Please use the front and back of this sheet of paper to complete the exercise.”

### *Vignette Paragraph*

(adapted from Link et al. 1999):

John is a college student. Up until a year ago, life was pretty okay for John. But then, things started to change. He thought that people around him were making disapproving comments and talking behind his back. John was convinced that people were spying on him and that they could hear what he was thinking. John lost his drive to participate in his usual work and family activities and retreated to his home, eventually spending most of his day in his room. John was hearing voices even though no one else was around.

These voices told him what to do and what to think. He has been living this way for six months.

### **Labeling Item**

How would you label John's situation? What is he experiencing?

### **Stereotyping Items**

John is:

A Danger to Others --- Not a Danger to Others

Unpredictable --- Not Unpredictable

Hard to Talk To --- Easy to Talk To

Has Himself to Blame --- Is Not at Fault for his Condition

Will not Improve if Treated --- May Improve if Treated

Will Never Recover --- May Recover

### **Social Distance Items**

From Link et al. (1987)

1 – Definitely Not; 2 - Probably Not; 3 – Maybe; 4 – Definitely

1. How would you feel about renting a room in your home to someone like John?
2. How would you feel about being a worker on the same job as someone like John?
3. How would you feel having someone like John as a neighbor?
4. How about as the caretaker of your children for a couple of hours?
5. How about having your children marry someone like John?
6. How would you feel about introducing John to a young woman you are friendly with?

7. How would you feel about recommending someone like John for a job working for a friend of yours?

<b>Appendix D. Study Hypotheses and Decisions</b>	
<b>Study 1</b>	<b>Support?</b>
# 1: Participants will perceive of a worker with an unspecified “mental illness” as more dangerous than the control condition.	Yes
# 2: Participants will perceive of the worker with schizophrenia as more dangerous than the control condition.	Yes
# 3: Participants will perceive of workers with mental illness labels as less competent than the control condition.	Yes, except PTSD +auto condition in male vignette
#4: For scenarios with a female worker, participants will be most stigmatizing of the depression condition (stereotyped as feminine).	No
#5: For scenarios with a male worker, participants will be most stigmatizing of the war-related PTSD and schizophrenia conditions (stereotyped as masculine).	Yes
#6: For the female vignette conditions compared to the male vignette, participants will be less stigmatizing of the mental illness conditions relative to the control condition.	No
#7: Women participants will be less stigmatizing of the mental illness conditions than male participants.	Yes, for dangerousness; and for the female vignette for competence; and for the male vignette for capability
#8: Participants with higher levels of education will be less stigmatizing of the mental illness conditions than participants with lower levels of education.	No
#9: White participants will be less stigmatizing of the mental illness conditions than non-white participants.	No, for the male dangerousness and competence models; Yes for the female dangerousness and competence models



<p>#10: Participants who have experienced more contact with mental illness will be less stigmatizing of the mental illness conditions than participants with lower levels of contact.</p>	<p>Yes for social distance; No for dangerousness;</p>
	<p>Yes for male vignette capability and male vignette competence</p>
<p>#11a: The worker with a PTSD label (resulting from either an auto accident or OIF service) will be stereotyped as no more dangerous than the worker with no label.</p>	<p>No</p>
<p>#11b: Participants will perceive of the worker with PTSD (resulting from either an auto accident or OIF service) as more dangerous than the worker with no label.</p>	<p>Yes</p>
<p>#12a: Participants who feel more powerful will more strongly stereotype PWMI as dangerous, incompetent, and unemployable.</p>	<p>No</p>
<p>#12b: Participants who feel more powerful will less strongly stereotype PWMI as dangerous, incompetent, and unemployable.</p>	<p>Yes</p>
<p>#13: Participants will perceive of workers with mental illness labels as less employable (assertive and capable) than workers with no label.</p>	<p>Yes</p>
<p>#14: Participants will desire less social distance from a war veteran with PTSD than a control condition; this will not be the case for a worker with schizophrenia</p>	<p>Yes</p>
<p><b>Study 2</b></p>	
<p>#1: Participants will be more likely to recommend PWMI who are framed in a way that counters harmful stereotypes than PWMI with no stereotype disconfirmation.</p>	<p>No</p>
<p>#2: Participants will recommend a higher starting salary for PWMI who are framed in a way that counters harmful stereotypes than PWMI with no stereotype confirmation.</p>	<p>No</p>
<p>#3a: A higher sense of power will be associated with more discrimination against the mental illness conditions, relative to the control condition.</p>	<p>No</p>
<p>#3b: A higher sense of power will be associated with less discrimination against the mental illness conditions, relative to the control condition.</p>	<p>No</p>

#4: Higher levels of previous contact with mental illness will be associated with less discrimination toward the mental illness conditions, relative to the control condition.	Yes
#5: Participants will not discriminate against veterans with PTSD in hiring evaluations, compared to people with a past physical injury.	Yes
#6: Participants will discriminate against people with schizophrenia in hiring evaluations, compared to people with a past physical injury.	Yes
<b>Study 3</b>	
#1: High-power participants will be more likely to label PWMI as having a mental illness than control participants.	No
#2a: High power participants will be more likely to stereotype a PWMI than control participants.	No
#2b: High power participants will be less likely to stereotype a PWMI than control participants.	No
#3: High-power participants will desire more social distance from a PWMI than control participants.	No

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