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WORKPLACE DYNAMICS: EXPLORING VIEWS, IMPRESSIONS, AND PREFERENCES
OF COLLEAGUES WITH DIVERSE BACKGROUNDS AND ATTRIBUTES

By

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WORKPLACE DYNAMICS: EXPLORING VIEWS, IMPRESSIONS, AND PREFERENCES
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DEDICATION

This dissertation is dedicated to all who have struggled with a mental health condition.

You are not alone.

ACKNOWLEDGMENTS

I would like to thank my parents for making my academic aspirations possible, my dissertation committee for their guidance, time, and patience, and my husband for always supporting me.

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Abstract

By Emily Broadhurst

University of the Pacific
2020

The general purpose of this study is to better understand stigmatized views of mental health conditions in the current social climate. In order to assess changes in current stigma levels, valid measurement tools are needed to make more accurate assessments. Many existing tools used to assess stigma levels present validity issues due to reporting bias, specifically social desirability bias. Researchers suggest that purposefully omitting diagnostic labeling helps to eliminate biased answers. In order to measure stigmatizing beliefs while minimizing the threat of social desirability, this study utilized an experimental design that compared mental health conditions with medical conditions. The Adjusted Attribution Questionnaire and Social Distance Scale were used to measure stigmatized beliefs toward each health conditions. Levels of familiarity and demographic characteristics were controlled for in analysis to determine potential mediating and moderating effects. Results indicate that familiarity had a significant effect on perceived attribution and preferred social distance for the mental health group. Gender also significantly affected outcomes on both stigma measures when considering mental health conditions. Ethnicity significantly affected both stigma measure outcomes for both the medical and mental health groups. Results may help contribute to current stigma reduction efforts by identifying research-based approaches to addressing stigma.

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LIST OF ABBREVIATIONS

A-AQ   Adjusted Attribution Questionnaire

ADA   Americans with Disabilities Act

ADF   asymptotically distribution-free

AMOS   analysis of a moment structures

ANOVA   analysis of variance

AQ-27   Attribution Questionnaire

CFI   comparative fit index

DSM-5   Diagnostic and Statistical Manual of Mental Disorders

EAP   Employee Assistance Programs

KR-20   Kuder-Richardson Formula 20

LOF   Level of Familiarity

MANOVA   multivariate analysis of variance

NFI   normed fit index

RMSEA   root mean square error of approximation

SDS   Social Distance Scale

SEM   structural equation modeling

SPSS   Statistical Package for the Social Sciences

TLI   Tucker-Lewis Index

LIST OF SYMBOLS

α	Cronbach's Alpha
b	unstandardized regression weights
β	standardized regression weights
F	F-statistic ratio of between group variance
p	probability
r	Pearson product moment correlation coefficient
W	Shapiro-Wilk Test of Normality
χ^2	Kruskal-Wallis H test
χ^2	Model Chi-Square

CHAPTER 1: INTRODUCTION

Workplace Dynamics: Exploring Views, Impressions, and Preferences of Colleagues with Diverse Backgrounds and Attributes.

In the United States, 18.1% of adults meet the criteria for having a mental health condition (Center for Behavioral Health Statistics and Quality, 2015). With a significant fraction of the population affected by mental health conditions, one would think seeking treatment to address mental health symptoms would be typical and normalized. However, more than half of people with an identified mental health concern do not seek any treatment (Handley et al., 2014). When untreated, mental health conditions have the potential to lead to severe symptoms, including increased risk of suicidal ideation, attempts, and completion (Hom, Stanley, & Joiner, 2015). Increased suicide rate of youth is currently becoming a global health epidemic as the third leading cause of death for youth ages 10 to 24 (Centers for Disease Control and Prevention, 2017). Considering the growing problem of high youth suicide rate (Hampson, Watt, Hicks, Bode, & Hampson, 2018), preventability of suicide completion, and potential for such devastation, it is of upmost importance to remove any barriers to seeking mental health treatment that may exist.

Researchers have explored the multitude of reasons identified for not seeking professional help despite the presence of a mental health condition (Fortney et al., 2016; Gearing, Schwalbe, & Short, 2012; Han, Compton, Gfroerer, & McKeon, 2014; Handley et al., 2014; Hom, Stanley, & Joiner, 2015; Larson et al., 2013; Ross et al., 2015; Sacks, Greene, Burke, & Owen, 2015; Sakai et al., 2014). Emerging themes include barriers related to logistic and personal concerns. Many logistical barriers identified in reviews of the research literature

involve problems related to circumstance. Some patients say they do not have time or money to pursue treatment (Han, Compton, Gfroerer, & McKeon, 2014; Handley et al., 2014; Larson, et al., 2013). Others report they do not know where to go to receive treatment (Han, Compton, Gfroerer, & McKeon, 2014) or experience major difficulties securing appointments (Sacks, Greene, Burke, & Owen, 2015) due to lack of convenient times or availability of appointments. Distance from treatment facilities (Handley et al., 2014) and lack of transportation (Sacks, Greene, Burke, & Owen, 2015) also present logistical barriers to patients pursuing treatment.

Although logistic problems do create barriers to engaging in mental health treatment, the more influential barrier identified in these studies involves personal concerns (Han, Compton, Gfoerer, & McKeon, 2014; Handley et al., 2014; Larson et al., 2013; Sacks, Greene, Burke, & Owen, 2015; Sakai et al., 2014). Several studies note a concern over confidentiality as a reason for not pursuing treatment (Han, Compton, Gfoerer, & McKeon, 2014; Handley et al., 2014). With legal considerations, such as mandated reporting by treatment providers of life-threatening symptoms of patients, this presents a valid concern for many mental health patients that want to avoid involuntary hospitalization as a result of pursuing treatment. Patients with prior inpatient psychiatric treatment report wanting to avoid negative experiences previously encountered during treatment (Sacks, Greene, Burke, & Owen, 2015; Sakai et al., 2014), thus leading to treatment avoidance. In addition to confidentiality concerns, many patients report barriers related to personal belief systems and fears surrounding treatment. Many do not want other people, such as neighbors or friends, to find out that they are receiving mental health services (Han, Compton, Gfroerer, & McKeon, 2014; Handley et al., 2014). Patients also report being concerned that disclosing a mental illness could affect their jobs (Elraz, 2018; Han, Compton, Gfroerer, & McKeon, 2014). Of all the noted concerns impacting treatment-seeking behaviors,

one major personal barrier was prevalent in every reviewed study—stigma surrounding mental health treatment.

Stigma can be defined as a mark of disgrace for a person or situation. Language used to describe personal beliefs individuals hold regarding mental health stigma across treatment-barrier studies brings light to the multitude of negative stereotypes associated with mental health conditions. Words like, "weak," "incompetent," and "cowardly," are among the descriptions of core beliefs held by mental health patients (Hom, Stanley, & Joiner, 2015). Shame, disgrace, and failure are also common themes used to describe having a mental health condition (Fortney et al., 2016). These beliefs are described in research as being internal, personal stigmas, meaning they stem from the patient's own values. If these feeling of disgrace originate from internal sources, rather than from being imposed by others, how did that same message emerge consistently from the vast majority of surveyed patients? Historically, individuals with mental health conditions were excluded from society and kept in asylums. This segregation not only inhibited most of society from having the opportunity to see and possibly understand people with mental health conditions, but also contributed to the view that these conditions were a mark of shame, meant to be hidden from the world (Hampson, Watt, Hicks, Bode, & Hampson, 2018). Considering the history of separation, it is hardly surprising then that having a mental health condition has led to internalized feelings of those afflicted as being deviant and undesirable.

Similar to the personal stigma reported by individuals with mental health concerns, research indicates that individuals with other serious and chronic health conditions also experience stigma related to their health conditions and engage in strategies to avoid potential rejection (Brown, 2015; Zhu, Smith, & Parrott, 2017). This often involves not disclosing a health condition to others for fear of negative consequences. Research indicates that this fear

appears to be valid, as individuals with serious health conditions report feeling excluded from social circles because of their health condition. They also report experiences of discrimination in employment (Brown, 2015) and insurance coverage as a result of their health conditions (Zhu, Smith, & Parrott, 2017). In addition to the social exclusion, stress, and discrimination experienced by individuals with rare health conditions, stigma also promotes a problematic motivation to remain silent about an experienced condition and situation. Secrecy may be preferred by many individuals in the interest of avoiding rejection or maintaining privacy. However, stigma prevents people from disclosing their condition, which may inhibit willingness to engage in treatment. Considering the importance of early intervention, prevention, and treatment for addressing any health concern, research is needed to eliminate stigma as a treatment barrier.

Reliability and Validity Concerns in Stigma Research

Inconsistency. Over the last decade, research on stigma has increased in various disciplines, including psychology and sociology. However, increased research has not resulted in clear results that would help to inform intervention efforts aimed at reducing stigma levels (Fox, Earnshaw, Taverna, & Vogt, 2018; Link, Yang, Phelan, & Collins, 2004). In their review of stigma measures, Fox, Earnshaw, Taverna, and Vogt (2018) conclude that the lack of consistency in the measurement and conceptualization of stigma surrounding mental health conditions has hindered the advancement of knowledge about stigma and its consequences. The authors note that researchers often use a variety of different terms to describe stigma concepts, rather than using consistent terminology, leading to difficulties in identifying constructs and confusion over definitions of utilized terms. For example, some studies may only focus on one type of mental health condition, such as Schizophrenia, while others measure stigma of a broader

range of disorders. Other studies use terminology interchangeably – such as using the terms "internalized stigma" and "self-stigma" to represent the same construct – possibly leading to ambiguous interpretations of results. Further, many studies analyze beliefs as singular variables (Andersson & Harkness, 2018), such as only examining beliefs of biological roots of mental health conditions, which provides a narrow view of a complex construct.

In addition to inconsistent terminology, stigma models and frameworks utilized in research also vary in conceptualization. Fox and colleagues (2018) examined models of stigma in research and found that most focus on either the stigmatizer or the stigmatized. Few incorporate both perspectives. As stigma theories emphasize a separation of groups as "us" and "them," (Link, Yang, Phelan, & Collins, 2004), the authors propose that theoretical framework incorporating both views could help provide a foundation of consistent constructs and common terminology for use in future stigma research.

Social desirability. Hom, Stanley, and Joiner (2015) point out that many measurement tools to assess stigma levels may present validity issues due to reporting bias. Individuals participating in social psychology research often provide what they believe is the desirable response, reflecting good intentions, even if their actual behaviors would indicate otherwise. Subscales used to measure stigma beliefs in several studies (Fortney et al., 2014; Pederson & Paves, 2014) also present measurement errors of reporting bias, suggesting this is a common theme in stigma research. Examining items from one personal stigma inventory (Pederson & Paves, 2014), most items are worded with negative personal perceptions regarding peers, such as, "They should feel embarrassed," "I would view them as weak," or, "I would blame them for the problem" (p. 146). These connotations force participants to view themselves in a negative light when responding, which may lead to less-than-truthful responses. Inclusion of positively

worded phrases such as, "I would view them as strong," or neutral phrases such as "I would

think no differently of them," may help to eliminate this source of bias.

      Selection of participants. Populations sampled also present a source of bias. In their

study of stigmatized beliefs held by individuals more familiar with mental health patients,

Dockery and fellow collaborators (2015) measured stigma by rating beliefs of caregivers and

patients. Caregivers are likely invested in the health and wellbeing of the person they are caring

for, which would influence their responses to survey items. Considering this, it is not surprising

that caregivers do not report high levels of stigma when surveyed about the people in their care.

If someone is closely related to someone with a mental disorder, they are likely more familiar

with the symptoms of the disorder and less likely to have stereotyped beliefs.

The Problem with Stigma

      Regardless of the inconsistency and inconclusiveness of stigma research studies, the fact

remains that stigma in all forms prevents people from reaching out for support when it may be

most needed and obtaining treatment to address urgent symptoms. As treatment is important for

recovery efforts, continued research to identify approaches to stigma reduction remains essential

for promoting mental health treatment. Although current research indicates that people are

becoming more willing to disclose personal mental health problems as compared to prior

generations, stigma levels have, for the most part, remained constant over the last several

decades (Pescosolido et al., 2010; McGinty, Goldman, Pescosolido, & Barry, 2015).

      In response to findings of prior stigma research, recent stigma-reduction campaigns have

promoted education as a possible method for reducing public stigma. As a result, public

knowledge about the biological roots of mental health conditions has increased. Results of the

2006 General Social Survey, a national survey monitoring social change within the United

States, showed that Americans were increasingly able to identify the medical and neurologic roots of mental health conditions. However, the same study found that increased public knowledge about neurobiological roots of mental health conditions have not been linked to lowering stigma levels (Pescosolido et al., 2010). In fact, increased knowledge of the medical roots may paradoxically lead to increased levels of stigma (Andersson & Harkness, 2018; Henderson & Gronholm, 2018).

In addition to providing information on the increased knowledge about mental health conditions, the General Social Survey also captured information on specific beliefs held by Americans. Survey results indicated that one-third of Americans thought that people with untreated major depression were likely to be violent toward others. This belief of violent tendencies was found to be even higher when considering individuals with untreated schizophrenia, with 60% of respondents endorsing a likelihood of individuals with this condition to be violent (McGinty, Goldman, Pescosolido, & Barry, 2015). Unfortunately, research indicates the reverse: Individuals with severe mental health conditions are typically the ones at risk of being a target for violence. Despite perceptions of the reverse, people with severe mental health conditions have been identified as having increased vulnerability to verbal, physical, and sexual abuse and are at higher risk for financial exploitation due to the nature of their symptoms (Henderson & Cronholm, 2018).

Ineffectiveness of anti-stigma campaigns and persistent negative stereotyping highlight the importance of continued stigma research. Numerous studies (McGinty, Goldman, Pescosolido, & Barry, 2015; Hampson, Watt, Hicks, Bode, & Hampson, 2018; Han, Compton, Gfoerer, & McKeon, 2014; Handley et al., 2014; Larson et al., 2013; Sacks, Greene, Burke, & Owen, 2015; Sakai et al., 2014) have identified stigma as a major barrier in pursuing mental

health treatment and document resistance to positive change. However, few studies have identified effective solutions. This may be, in part, due to reduction efforts focused on education. Andersson and Harkness (2018) suggest that stigmatizing beliefs of "bad" character or personal weakness associated with mental health conditions may need to be completely eliminated in order for biological education efforts to be effective. Changes to other methodological errors and validity threats in existing stigma research also need to be addressed to result in conclusive findings.

The Current Study

The purpose of this study is to expand the current research on mental health stigma to better understand changing views of mental health conditions in the current social climate. In order to assess changes in current stigma levels, valid measurement tools are needed to assess existing levels of stigma. Many existing tools used to assess stigma levels present validity issues due to reporting bias, specifically social desirability bias (Hom, Stanley, and Joiner, 2015). Pescosolido and colleagues (2010) suggest that using a vignette strategy that purposefully omits diagnostic labeling helps to eliminate the social desirability bias that has confounded the results of stigma research.

Consistent terminology and constructs are also needed to further current stigma research. Measures of "social distance" and "attribution" – constructs identified in prior research as relating to stigma – were utilized in this study to promote consistency. Social distance, a construct originally developed by Emory Bogardus to measure racial attitudes, has been adapted in research to measure a variety of social phenomena, including stigma toward mental health conditions. Bogardus described social distance as the level of acceptance people feel toward disparaged groups (Parrillo & Donoghue, 2005). Attribution, defined as the degree to which an

individual has responsibility and/or control over a situation, has also been widely used to measure stigmatized beliefs in mental health research (Corrigan, Powell, & Michaels, 2014; Parcesepe & Cabassa, 2012; Pescosolido et al., 2010).

Characteristics of participants sampled in stigma research also present a potential for bias. Stigma research has identified familiarity with mental health conditions as a mediating factor to levels of stigma (Anagnostopoulos & Hantzi, 2011). Considering this, it seems important to control for this familiarity in future stigma research to accurately gauge stigmatizing beliefs of the general population. Although prior research by Anagnostopoulos and Hantzi (2001) has examined the mediating effects of familiarity with mental health conditions on stigma, the research study explicitly asked university students to share their opinions on individuals with mental health conditions. Despite the attention to omitting specific diagnostic labels in the study, the threat of social desirability bias was not completely eliminated.

In order to measure stigmatizing beliefs without the threat of social desirability, this research study will utilize an experimental design that compares mental health conditions with medical conditions. By eliminating the term "mental health" completely from presented vignettes, this study will help gain better understanding of specific differences in stigmatized beliefs between medical and mental health conditions while controlling for levels of familiarity. Measures of "social distance" and "attribution" will be utilized to assess stigma levels of participants. Using constructs of social distance and attribution, this experimental study proposes the following research questions:

Q1: Do people prefer greater degrees of social distance from individuals with mental health conditions than individuals with medical conditions?

Q2: Do people have higher levels of perceived attribution for individuals with mental health conditions as compared to individuals with medical conditions?

Q3: When eliminating the influence of social desirability bias, do people who are less familiar with individuals with mental health conditions prefer greater amounts of social distance than people who are more familiar?

Q4: When eliminating the influence of social desirability bias, do people who are less familiar with individuals with mental health conditions have higher levels of perceived attribution than people who are more familiar?

CHAPTER 2: REVIEW OF THE LITERATURE

Review of the Literature

This review of literature examines numerous studies regarding stigma related to mental health conditions. Many terms to describe mental health have been used interchangeably in stigma research, including mental illness, mental disorder, and mental health condition. Following definitions set by the National Institute of Mental Health (2017), this review will consider any mental health condition as being a mental, behavioral, or emotional disorder meeting the diagnostic criteria outlined by the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM-5;* American Psychiatric Association, 2013). For the purposes of this review, this definition will exclude developmental, personality, and substance use disorders. Diagnoses included in the reviewed studies include Major Depressive Disorder, Generalized Anxiety Disorder, Bipolar Disorder, Schizophrenia, Post-Traumatic Stress Disorder, and Attention Deficit Hyperactivity Disorder.

Stigma

In his book, *Stigma*, Erving Goffman (1963) describes stigma as "the situation of the individual who is disqualified from full social acceptance" (preface). Although he presents many definitions of stigma, one definition often cited by stigma researchers is having an "attribute that is deeply discrediting" (p. 3). As an American social psychologist, Goffman analyzes stigma from both the perspective of stigmatizing society and the stigmatized. He poses the idea that anyone in society is potentially discreditable and therefore subject to facing stigma. In social encounters, people attempt to avoid discretization by adhering to societal identity norms and values. When one strays from these norms due to perceived abnormalities, such as physical

disfigurement, differing sexual orientation, or mental illness, the individual must then manage the resulting stigma. As a condition that is not automatically disclosed, as may be the case with a visible physical disfigurement, individuals with mental health conditions may encounter many situations where they have to decide whether they should disclose or not disclose, "to let on or not to let on; to lie or not to lie; and in each case, to whom, how, when, and where" (Goffman, 1963, p. 57).

Link, Yang, Phelan, and Collins (2004) have furthered stigma research with a focus on measuring stigma levels. The authors note that social psychology approaches to stigma focus on the cognitive processes of individuals experiencing stigma as both the stigmatized and the stigmatizer. However, the conceptualization of this process does not always lend to an understanding of the discrimination and exclusion experienced by a stigmatized person. As Goffman (1963) states, "These problems cannot always be handled by past experience, since new contingencies always arise, making former concealing devices inadequate" (p. 110). This variability in stigma experiences suggests that stigma occurs with varying degrees of severity. In order to measure this variation, Link and colleagues conceptualize stigma as a broad umbrella concept that involves interrelated components.

Labeling. When considering all possible variations of human differences, some are considered to be socially relevant, while others are not. For example, preference of animals – being labeled as either a "dog person" or a "cat person" – may be a major consideration when determining compatibility between two people, yet it does not lead to discrimination and exclusion on a social level. A landlord may reject a dog or cat person from renting their property due to a "no pet" policy, but typically will not go on to treat the person in a hostile or prejudiced way due to the applied label. Some differences, however, do lead to different perception and

treatment, such as skin color or sexual orientation. In these instances, the high social salience of the characteristic that accompanies the label leads to higher levels of stigma.

Stereotypes. When a labeled difference is associated with undesirable characteristics, assumptions are often applied. For example, many individuals with mental health conditions are assumed to pose a risk for violence (Pescosolido et al., 2010; McGinty, Goldman, Pescosolido, & Barry, 2015; Parcesepe & Cabassa, 2012). This assumption is applied despite the reality that mental health patients are more likely to be targets of violent crimes. The stereotype of individuals with mental health conditions having violent tendencies is typically perpetuated by media portrayals of untreated and symptomatic mental illness in the news (Hampson, Watt, Hicks, Bode, & Hampson, 2018; McGinty, Goldman, Pescosolido, & Barry, 2015). Coverage repeatedly depicts a deranged and dangerous mental patient as the culprit of mass shootings or senseless crimes. Repeated portrayals of individuals exhibiting deviant and abnormal behavior as a result of mental illness lend to the development of that image as a prototype for mental health problems. This characterization directly contributes to negative public attitudes about mental health conditions and undermines any positive representations that already struggle to be recognized. Further, media sources scarcely portray individuals with successful treatment outcomes for mental health conditions. With mass media outlets providing inaccurate models of the typical mental health patient, it is not surprising that the stereotype persists and individuals with mental health problems are approached with fear and stigmatization.

Separating. Link and colleagues (2004) also connect labeling with the process of separating "us" from "them." Many stigmatized groups – labeled as "them" – are considered to be both separate and fundamentally different from the non-stigmatized group – labeled as "us." In addition to tangible barriers of separation, as was the case with segregation of individuals

based on race or separation of the mentally ill in institutions, separation can also manifest as a

belief system. The stigmatizer that separates a person into a separate "them" group may do so

because of emotional reactions of anger, pity, or fear. The stigmatized individual also may

experience emotional reactions, such as shame, that causes them to withdraw and separate

themselves from others. For both groups, emotional responses shape behaviors that separate the

stigmatized person or group from the stigmatizer.

   Status loss and discrimination. During the process of labeling, separating, and

stereotyping individuals, evidence is gathered that becomes the basis for discrimination. As

evidence builds on the observed fundamental differences in stigmatized groups, public stigma

develops. This results in segregation and restricted opportunities, which in turn develops into

reduced autonomy and self-efficacy of the stigmatized group (Parcesepe & Cabassa, 2012). As

limitations are applied to stigmatized groups, status and power is lost. Attitudes and beliefs

resulting from the imbalance of power are often internalized by the stigmatized, resulting in poor

life outcomes. For individuals with mental health conditions, this often leads to negative

attitudes toward treatment.

   Attribution. Stigmatizing beliefs can be highly influenced by perceptions of attribution.

Attribution is defined as the degree to which an individual has responsibility and/or control over

a situation. Attribution theory proposes that people have negative, stigmatized responses to

individuals with certain health conditions if it is believed that the individual has some sort of

control over the condition (Pinto, Hickman, Logsdon, & Burant, 2012). Therefore, higher levels

of perceived attribution would indicate higher levels of stigma. For example, a person may

perceive an individual diagnosed with depression to be lazy or lacking will-power, associating

symptoms of low energy and motivation to character deficits that could perhaps be shifted with

some effort or willpower, deeming them responsible for the condition. This belief of "bad" character is largely associated with stigmatized beliefs (Andersson & Harkness, 2018; Pescosolido et al., 2010), as it can be considered as a moral judgement. On the other hand, recognizing depression as having biological roots with corresponding symptoms being outside of a person's control would lead to lower levels of stigma.

Attribution beliefs are not exclusive to mental health stigma. In their research on public stigma of individuals with rare health conditions, Zhu, Smith, and Parrott (2017) found that patients with rare genetic disorders often reported that doctors dismissed their health concerns as "an excuse to be lazy," and doubted the condition even existed (p. 189). Physicians and employers alike blamed patients for their own suffering, citing assumptions of the core root of their medical issues as self-inflicted, rather than genetic abnormalities. Beliefs of attribution and blame appear to be prevalent with "invisible" conditions, where an individual could "pass as normal." As is the case with mental health conditions, hidden conditions such as HIV/AIDS or diabetes are often associated with a degree of controllability, contributing to higher levels of stigma and attribution (Elraz, 2018; Engebretson, 2013).

Medical versus mental health stigma. Individuals with chronic health conditions, both medical and mental-health related, consistently report they experience discrimination in employment settings, such as being excluded from consideration for promotions, due to the effects of stigma (Elraz, 2018; Zhu, Smith, & Parrott, 2017; Henderson & Cronholm, 2018). As a result, many do not disclose having any serious health condition to avoid rejection and minimize the potential impact to their ability to obtain and retain jobs. Non-disclosure, of course, may not be possible for individuals with more visibly recognizable medical conditions, such as physical disabilities. Although individuals with medical issues – both seen and unseen –

do experience stigma directly related to their health conditions, reported experiences of stigma for people with mental health conditions suggest that negative attitudes may greatly differ when considering mental health and medical health conditions (Henderson & Cronholm, 2018).

Themes of lower levels of support and higher instances of stigma are noted when comparing medical and mental disabilities. Research indicates that employers demonstrate a tendency to rate people with mental health problems as less employable as compared to individuals that may have physical disabilities or no disabilities (Henderson & Cronholm, 2018). Further, many individuals with mental health conditions are constrained by negative stereotypes that they are unable to cope with work or perform competently due to their condition, contributing to chronic unemployment or a belief they are only capable of low-status jobs (Elraz, 2018). The internalization of stigmatized beliefs regarding employability highlights the negative impact stigma has on people with mental health conditions impacting their ability to obtain jobs and maintain employment (Henderson & Cronholm, 2018). Additionally, some research indicates that applicants who disclosed a history of mental health conditions received fewer overall call-backs for job interviews despite having strong credentials (Hipes, Lucas, Phelan, & White, 2016). In addition to potential discrimination from employers, co-workers also present a source of stigma in the workplace. People with mental health conditions report adverse reactions from co-workers as a result of disclosing mental health conditions, including being treated as less intelligent (Henderson & Cronholm, 2018).

Social distance. One aspect of stigma involves degrees of comfort people have in proximity to a person with a mental health condition, also referred to as "social distance." Social distance is described as "the majority's tendencies to distance from and limit the rights of those in disparaged groups" (Hinshaw & Stier, 2008, p. 368). In order to measure social distance,

measurement tools pose questions to gauge the level of comfort a person has in proximity to a person with a mental health condition. Social distance levels can range in levels of intimacy from being a stranger to the person to being so close as to potentially marry the person.

Research indicates that people with higher levels of stigmatizing beliefs prefer a greater amount of social distance from individuals with mental health problems (General Social Survey, 2016). Additionally, people who understand biological explanations for mental health conditions may have an increased desire for social distance (Andersson & Harkness, 2018; Henderson & Cronholm, 2018). As many stigma-reduction campaigns have focused on promoting biological explanations, this unintended outcome is surprising. Researchers suggest that this understanding of biological underpinnings may contribute to a belief that the condition is "incurable," and therefore more threatening, than if the condition were to be a result of will or character (Andersson & Harkness, 2018).

Moderators of Stigma

Aside from societal influences, which may shape beliefs of attribution and preferences for distance, demographic characteristics may also contribute to the development of stigmatized beliefs. Some stigma research has identified gender, ethnicity, and age as variables influencing stigma and treatment-seeking behaviors (Parcesepe & Cabassa, 2013). Individuals that are male gender, non-Caucasian ethnicity, and older age have been associated with higher levels of stigmatized beliefs when compared to other gender identities, ethnic backgrounds, or younger ages. However, further research is still needed to describe the moderating influence of these variables, as replications of stigma research has not always supported these findings (Brown, 2008; Hack, Muralidharan, Brown, Drapalski, & Lucksted, 2019).

Familiarity with mental health patients. Researchers have identified familiarity with mental health conditions as a mediating factor to levels of stigma. Research indicates that increased familiarity is associated with decreased desire for social distance from individuals with mental health conditions and reduced levels of prejudiced attitudes (Anagnostopoulos & Hantzi, 2011). Direct contact with a person with a mental health condition can provide an opportunity to promote empathy and reduce potential anxieties about having contact, leading to reduced stigma (Henderson & Gronholm, 2018). Familiarity with people with mental health conditions is more than just a helpful mediator for mental health related stigma. In addition to promoting positive attitudes and reducing desire for social distance, increased interpersonal contact also benefits mental health patients by reducing isolation for individuals who may withdraw from others as a result of anticipated discrimination (Zhu, Smith, & Parrot, 2017).

Stigma-reduction programs have focused on contact-based education to increase the public's familiarity with symptoms of mental health conditions. This intervention involves normalizing mental health conditions and promoting empathy by providing an opportunity to interact with a person with a mental health condition. Although these interventions have had effective and powerful short-term impacts (Hampson, Watt, Hicks, Bode, & Hampson, 2018), the effects appear to quickly dissipate, perhaps due to engrained stigmatized beliefs that persist after the encounter has passed.

Lack of familiarity with individuals with mental health conditions can be attributed to their prolonged segregation from society. When deinstitutionalization began in mid- to late-20th century, the community become more able to interact with individuals with mental health conditions as they integrated into society. Prior to this, only family members or those in the medical profession had experience responding to people with these conditions. (Hampson, Watt,

Hicks, Bode, & Hampson, 2018). In many cases those family members were also left in the dark

about any details of a loved one's mental health condition. In his book, *Another Kind of*

Madness: A Journey Through the Stigma and Hope of Mental Illness, researcher Stephen

Hinshaw (2017) shared his experiences growing up with a father misdiagnosed with

Schizophrenia and the code of silence adopted by his family members to never speak of it.

Hinshaw describes the unexplained absences of his father, sometimes for months at a time, due

to hospitalization and the secrecy maintained by his entire family for years. The cost of silence

impacted each family member – physically, socially, and emotionally – in a vicious cycle as a

result of stigma. Hinshaw writes that it is his hopes that in telling his story and encouraging an

open dialogue among family members and the community about mental health treatment,

reduction of stigma is possible.

Social Roles for Individuals with Mental Health Conditions

One area of stigma research that receives little attention involves stigma of mental health

conditions in the workplace. Existing research confirms that stigma, specifically prejudice

toward and discrimination against individuals who have mental health problems, is prevalent and

presents unique consequences in the workplace (Hanisch et al., 2016), including difficulty

finding and maintaining employment (Hampson, Watt, Hicks, Bode, & Hampson, 2018;

McGinty, Goldman, Pescosolido, & Barry, 2015).   However, many studies on workplace stigma

have a broad conceptualization of mental health concerns (Elraz, 2018), perhaps contributing to

inconclusive findings or failed attempts to reduce stigma. Some research addressing mental

health concerns in the workplace miss the mark, appearing to focus on promoting counseling

options and Employee Assistance Programs (EAP) for workers experiencing life stressors

(Hanisch et al. 2016). Although situational stressors impact mental health, making them

relatable conditions to neurotypical populations, these stressors do not constitute having a mental health condition. In fact, conceptualization of normal responses to stress or adverse life events as "mental illnesses" may have unintended consequences to campaigns wishing to promote a message of anti-stigma for those with chronic health conditions, as it does little to provide a better understanding of the functional limitations that may accompany such conditions. Gaps in the research exist in identifying supports for individuals with chronic or severe mental health conditions that may result in a need for ongoing support and accommodations in the workplace, rather than situational support that may be provided through EAP programs.

Although some individuals with severe mental health conditions receive disability and experience difficulties working, many achieve recovery and are eager to enter or re-enter the workforce. A major aspect of recovery efforts involves "reablement," a term used in occupational therapy to describe the rehabilitation process "where every-day life and mastery is seen as the basic point of departure" (Seberg & Eriksson, 2018, p. 1). Focus in reablement emphasizes common, everyday activities that individuals practice in order to develop competency and eventually mastery. Some activities may take place in the patient's home, including mastering tasks of daily living, such as cooking and cleaning. Other activities take place in the community, which could involve taking on a social role in the workplace as an employee.

Social roles individuals may take on in the workplace, whether it is as a rank-and-file worker or a supervisor, provide an opportunity to engage in activities that promote good health and well-being. Employment is often essential to meeting basic needs, including having a place to live and food to eat. Additionally, jobs give life meaning and contribute the development of identity, personality, and personal values (Elraz, 2018; Seberg & Eriksson, 2018). Having a job

not only empowers individuals with mental health conditions to develop self-efficacy and take charge of their lives, but also fills a need to give something back to society. Being a consumer of services in the helping industry is often a regular part of life for mental health patients. Hence, having the opportunity to be of service to others can provide a source of meaningful interactions with others.

Social circles are often smaller for stigmatized individuals, both due to a perceived need to avoid rejection and withdraw from the public (Zhu, Smith, & Parrott, 2017). The work environment provides a unique social network that can provide much-needed support to an individual who may be lacking social opportunities. Despite notable importance of employment opportunities to recovery, research indicates that reablement in occupational therapy often excludes individuals with mental health conditions (Seberg & Eriksson, 2018). Contrary to the assumption that individuals with mental health conditions are unable to work, Elraz (2018) proposes that people with mental health conditions are perhaps more equipped to manage employment compared to other individuals in the workforce. In his research on identity development of employees with mental health conditions, Elraz notes that living with a mental health condition may foster the development of unique insights and resiliency, which has an overall benefit in the work environment.

Although individuals with mental health conditions may have the potential to thrive in the workplace, there is also potential to struggle without proper supports in place. The Americans with Disabilities Act (ADA), a federal law enacted in 1990 requiring employers to provide "reasonable accommodations" for employees with disabilities, provides the framework for establishing proper accommodations for people with mental health conditions in the workplace. However, many individuals find that it can be difficult to identify what support is

needed to address mental health concerns at work. In their research on employment barriers for mental health patients, Hampson and colleagues (2018) note that many individuals find it difficult to describe serious mental health symptoms and explain reasons they may struggle to colleagues or managers. It would seem that this would be an appropriate occasion for an occupational therapist or human resources to step in to assist.

Occupational therapists often focus treatment on finding ways to adapt the environment of patients to increase functioning and independence. Research suggests that jobs that allow flexibility with time, such as part-time schedules, are needed to support individuals with mental health issues (Seberg & Eriksson, 2018). Although this accommodation would seem minimally demanding of employers—as compared to structural accommodations, such as ramps or specialized equipment, that may need to be put in place for individuals with physical disabilities—many employees fail to succeed in establishing such accommodations (Henderson & Cronholm, 2018). Further, what may be considered as a reasonable accommodation, such as time off to attend appointments, are frequently not offered or enforced (Hinshaw, 2007). Specific problems encountered by individuals failing to secure accommodations involve failures in establishing medical evidence establishing the effects of the disability (Henderson & Cronholm, 2018). Although discrimination appears to play a role in this failure, the nature of mental health conditions as "invisible illnesses" appears to also perpetuate difficulties in establishing the need for accommodation. If mental health patients struggle to identify appropriate accommodations on their own and occupational therapists are unable to consistently assist patients in securing much needed supports at work, it is not surprising that many individuals fail to establish accommodations that could support their employment.

Research indicates that employment offers an important source of empowerment, independence, social roles, and social opportunities for individuals living with mental health conditions (Elraz, 2018; Seberg & Eriksson, 2018; Zhu, Smith, & Parrott, 2017). Despite the benefits, people with mental health conditions continue to face discrimination in opportunities for employment, often merely for having a history of a mental disorder. Disclosure of a mental health condition runs the risk of disqualification from eligibility to join the military (Military.com, 2019). In around half of the states in the United States, individuals with mental health conditions are also limited in their fundamental rights, including the right to vote, run for office, maintain child custody, get married, and serve on a jury (Hinshaw, 2007). Even though education efforts were intended to reduce stigma, this spreading of information appears to have contributed to the labeling, stereotyping, and further development of discrimination. In order to reduce stigma, further research is needed to clarify specific aspects of stigma related to mental health. This research study will contribute to this effort by examining specific differences in stigmatized beliefs between medical and mental health conditions while controlling for levels of familiarity.

CHAPTER 3: METHODOLOGY

Methodology

Research Design

This study utilized a between-subjects experimental research design to examine stigmatizing beliefs people have regarding individuals with mental health conditions. For the purpose of this study, stigma toward mental health conditions was compared with stigma of medical conditions to determine differences in stigmatizing beliefs people may hold in relation to the types of health conditions. Two measures related to stigma - the Adjusted Attribution Questionnaire (A-AQ) and the Social Distance Scale (SDS) – were utilized to determine levels of stigmatizing beliefs. The influence of familiarity with mental health conditions, rated by the Level of Familiarity Scale, was measured to control for the potential influence of this variable.

A power analysis for a Multivariate Analysis of Variance (MANOVA) with two levels and two dependent variables was conducted in G*POWER to determine a sufficient sample size using an alpha of 0.05, a power of 0.95, and an estimated small effect size of 0.10. Based on these assumptions, the recommended sample size is 158. An additional analysis for a linear multiple regression model with four predictors and the same alpha, power, and effect size parameters yielded a suggested sample size of 129. An additional recommendation specific to structural equation modeling (SEM) by Kenny (2015) of having a goal sample size of at least 200 for any SEM analysis was also considered.

Participants

This study's sample was drawn from a general population of adults aged 18 and older from diverse backgrounds and geographic locations. For the purposes of the study, selection

criteria required participants to be able to read and understand the English language and have

access to a computer with a connection to the internet. The online platform,

FindParticipants.com (FindParticipants, 2018), was utilized to recruit participants. The paid

company connects researchers to registered participants in 129 countries with a wide range of

ages, ethnicities, educational backgrounds, and fields of employment (See Appendix A). The

recruited sample consisted of 211 participants ranging in age from 18 to 74. Although the

sample included a variety of ages and ethnic backgrounds, the majority of participants were

between the ages of 18-24 and of Caucasian descent. Research participants and their

demographics are summarized in Table 1.

Table 1
Demographic Characteristics of Participants

	n	Percent	Cumulative Percent
Age			
18-24	151	71.6	71.6
25-34	27	12.8	84.4
35-44	18	8.5	92.9
45-54	9	4.3	97.2
55-64	3	1.4	98.6
65-74	3	1.4	100
Gender Identity			
Female	123	58.3	58.3
Male	82	38.9	97.2
Non-binary	5	2.4	99.5
No response	1	.5	100
Ethnic Background			
African American	11	5.2	5.2
American Indian	2	.9	6.2
Asian	17	8.1	14.2
Caucasian	160	75.8	90
Hispanic/Latino	12	5.7	95.7
Multi-racial	5	2.4	98.1
Middle Eastern	2	.9	99.1
No Response	2	.9	100

Note. N = 211

Instrumentation

      Adjusted Attribution Questionnaire (A-AQ). The dependent variable of "Attribution" was measured using an adaptation of the Attribution Questionnaire (AQ-27). The AQ-27 introduces a brief vignette about Harry, "a man with schizophrenia," and asks participants to respond to items about Harry based on a nine-point Likert-Scale. Questions include items such as, "How dangerous would you feel Harry is?" Nine factors are measured with the scale, including blame, pity, anger, help, dangerousness, fear, avoidance, segregation, and coercion. Total scores range from 27 to 243 with higher scores reflecting higher levels of perceived attribution for individuals with mental health conditions. Language of the AQ-27 was adapted to meet the needs of this study, including omitting diagnoses from the vignette (See Appendix B). Following format of the original vignette, the Adjusted Attribution Questionnaire (A-AQ) will include statements about the nature of the health condition, related symptoms, relative impact to work, and resulting medical needs. Adequate reliability of the original AQ-27 is noted with internal consistencies ranging from .70 to .96 and test-retest reliabilities ranging from .75 to .90. Some convergent validity is noted between AQ-27 factor scales and three other stigma measures, including the Social Distance Scale, Dangerousness Scale, and Affect Scale, with moderate correlations ranging from .47 to .62 (Brown, 2008). Adapted versions of the AQ-27 have also demonstrated good reliability with Cronbach's alpha coefficients of 0.70 (Pinto, Hickman, Logsdon, & Burant, 2012).

      Level of Familiarity (LOF). The covariate of "Familiarity" will be assessed using a revised version of the Level of Familiarity Scale (LOF). The LOF presents 11 items gauging how familiar a person is with mental health conditions.   Items include statements such as, "A friend of the family has a severe mental illness," and "I live with a person with a severe mental

illness." Items are coded by level of intimacy with "11" reflecting the most intimate contact and "1" reflecting the lowest amount of intimacy with a person with a mental health condition. Resulting scores are determined by rank order according to the highest level of intimacy endorsed. Higher scores reflect higher level of familiarity. Limited information on reliability and validity is available, with inter-rater reliability noted at .83 in one study (Holmes, Corrigan, Williams, Canar, & Kubiak, 1999). However, other stigma studies have utilized this measure to assess levels of familiarity with mental health conditions (Holmes, Corrigan, Williams, Canar, & Kubiak, 1999; Anagnostopoulos & Hantzi, 2011). Language will be revised for the purposes of this study to match group assignment, with those in the "medical" group answering questions about familiarity with individuals with a severe medical condition and those in the "mental health" group answering questions about individuals with mental health conditions (See Appendix C).

      Social Distance Scale (SDS). The Bogardus Social Distance Scale (SDS) will be utilized to measure the dependent variable of "Social distance" in this study. Although the scale was originally designed to gauge attitudes toward various ethnic and religious groups, the instrument has been widely used to study a variety of groups, including differing occupations, social class, sex, age, and mental illness (Parrillo & Donoghue, 2005). The scale consists of 7 items gauging willingness to engage in activities or relationships with an individual with a severe health condition. Participants indicate a "yes" or "no" answer to questions such as, "Would you be willing to have a person with this type of condition as your colleague at work?" A score of "1" is assigned to each item endorsed with a "yes" answer. Higher scores reflect lower levels of preferred social distance (See Appendix D). The SDS has demonstrated good internal consistency with Cronbach's alpha coefficients of .85 to .86 (Anagnostopoulos & Hantzi, 2011;

Brown, 2008; Link, Yank, Phelan, & Collins, 2004) and test-retest reliability of .84 (Brown, 2008).

Procedures

Participants were recruited after receiving approval from the University's Institutional Review Board. Once potential participants were identified from the FindParticipants network that met selection criteria, e-mail requests which included a link to the online study were sent to eligible participants to enter into the study. All participants were provided with informed consent of the risks and benefits of participating in the study prior to entering (See Appendix E) and were offered the incentive of entering into a raffle for one of three $20 Amazon gift cards for participation. To reduce subject demand characteristics, participants were led to believe they were participating in a study about workplace dynamics and corresponding views, impressions, and preferences about colleagues.

Participants that agreed to participate were randomly assigned one of two experimental groups, one examining stigmatizing beliefs of mental health conditions and one examining stigmatizing beliefs of medical health conditions. Randomization occurred using the randomizer tool available through the Qualtrics (Qualtrics, 2020) survey platform. This tool uses an algorithm to randomly assign participants to one of the two experimental groups while maintaining even distribution of elements, dependent on the number of participants each week. All participants were presented with a vignette about a new employee at work. In the "mental health" group, the vignette explained that the employee has a mental health condition. In the "medical" group, the vignette described an employee with a medical condition. Both conditions had identical descriptions of symptoms and limitations in the work environment. For the full vignette, see Appendix B. The vignette was followed by questions from the A-AQ, LOF, and

SDS. Participants were instructed to answer questions related to their assigned group, with the "mental health" group answering questions regarding their level of familiarity, perceived attribution, and preferred social distance with individuals with mental health conditions. The "medical" group did the same considering individuals with medical conditions. The complete questionnaire took, on average, 5-10 minutes to complete. After completing the study, participants were forwarded to a webpage offering a debriefing (See Appendix F) on the true nature of the study and information on contacting the researcher with questions or concerns.

Analysis Approach

Data was analyzed using two statistical analysis methods: (1) a mean comparison approach and (2) a structural equation model path analysis approach. A multivariate analysis of variance (MANOVA) was utilized to answer research questions one and two for comparing sample means of each experimental group – mental health versus medical group. Structural equation modeling was utilized to answer research questions three and four to analyze relationships among all observed variables, including level of familiarity, attribution, and social distance. Paths between variables were analyzed within the model to determine correlations between each observed variable.

CHAPTER 4: RESULTS

Results

Data Analysis

Imputing missing data. Prior to analysis, several cases were inspected for outliers, non-normality, and missing responses. Cases were deleted for the following reasons: (1) The case had more than three missing values, (2) the case showed signs of a response set, such as choosing the same response for all items, and (3) the participant responded to the survey request multiple times. Seven cases that had three or fewer missing values were kept in the analysis. Rubin, Witkiewitz, St. Andre, and Reilly (2007) suggests that missing values should be analyzed to determine why they are missing before proceeding with any strategies for addressing them. After examining the dataset, it appears these cases had missing values due to participants skipping a row on matrix tables, possibly due to not clicking in the correct space on their screen to record a response. Due to this, the missing values were determined to be missing at random and therefore handled with a mean imputation approach (Rubin, Witkiewitz, St. Andre, & Reilly, 2007). Thus, the mean value was calculated for each item with missing data and then replaced.

Instrumentation analysis. The Kuder-Richardson Formula 20 (KR-20) was used to measure reliability of the SDS using SPSS Statistics Software version 26.0. Initial reliability results were poor (α = .576), leading to investigation of item statistics. Examination of scale inter-item correlations indicated that item 7 ("Would you be willing to have a person with this type of condition be excluded from associating with your country in any way?") had low correlations with other test items (r = -.046 to -.211). Evaluation of item statistics if item 7 was deleted from analysis indicated that excluding this item would result in higher alpha levels.

Further assessment of item content determined that this item contains confusing wording and contrasting valence to all other test items. Considering this information, item 7 was removed from the analysis. The resulting 6-item SDS resulted in acceptable internal consistency (α = .713). Cronbach's alpha was used to assess internal consistency of the LOF and A-AQ. The LOF yielded fair internal consistency (α = .641) and the A-AQ indicated very good overall internal consistency (α = .845).

As changes were made to the original AQ-27, exploratory factor analyses were conducted to assess changes to psychometric properties. Separate analyses were conducted for each experimental group – mental health and medical – to determine if any changes occurred from applying questions to a different target population: individuals with medical conditions. An additional analysis using the entire dataset was also run to determine stability of constructs. Exploratory principal factor analyses were used using a Varimax rotation with Kaiser Normalization. Based on recommendations by Bryant and Yarnold (1995), factors with Eigenvalues of 1.0 and above were retained and factor loading cut off was set at .30. In each analysis, all items significantly loaded onto factors. Internal consistencies were also computed for each factor to further validate unidimensionality of each factor construct.

Exploratory factor analysis of the A-AQ selecting only the responses from the mental health group yielded a five-factor solution that accounted for 73.6% of the variance (See Table 2). Internal consistency of the derived factors was good for almost all factors (α = .744 to .958) with the exception of factor four (α = .597). The five-factor structure does not support the nine-factor structure identified by the measure's authors (Corrigan, Powell, & Michaels, 2014) or the six-factor structure identified in later examinations of the measure (Brown, 2008). This shift in factor structure was expected given the changes that were made to the questionnaire for this

study. Despite differences in structure, consistencies were observed in factor themes across all exploratory analyses. The "Willingness to Help/Interact" factor yielded consistent item loadings across all analyses, suggesting stability of this construct despite changes. Other factors with more negative valence, such as the "Negative Thoughts" and "Negative Emotions" factors, varied in terms of specific item loadings across analyses.   However, many commonalities were observed, including themes of anger, fear, and dangerousness.

Table 2

Factor Internal Consistency, Content, and Loadings of Items for the Mental Health Group of the A-AQ

Factor, Item, and Content	Factor Alpha/Item Loading Value
Factor 1 – Negative thoughts (Fear, Danger, Blame, and Segregation)	**.958**
15. I think it would be best…if they were put away in a hospital.	.847
18. I would feel threatened by this employee.	.805
17. How much do you think a locked facility…is the best place for them?	.768
25. If I were in charge…I would force them to live in a group home.	.767
23. How responsible, do you think, is this employee for their present condition?	.701
10. I would think that it was (their) own fault that they are in (this) condition.	.690
13. How dangerous would you feel this employee is?	.686
19. How scared of this employee would you feel?	.658
6. I think this employee poses a risk…unless they are hospitalized.	.654
24. How frightened of this employee would you feel?	.644
Factor 2 – Negative Emotions (Anger, Irritation)	**.923**
2. I would feel unsafe around this employee.	.793
4. How angry would you feel at this employee?	.787
3. This employee would terrify me.	.757
1. I would feel aggravated by this employee.	.730
12. How irritated would you feel by this employee?	.660
11. How controllable…is the cause of this employee's present condition?	.604
Factor 3 – Willingness to help and interact	**.867**
7. If I were an employer, I would interview this employee for a job.	.776
26. If I were a landlord, I would probably rent an apartment to this employee.	.761
16. I would share a carpool with this employee every day.	.708
20. How likely is it that you would help this employee?	-.620
21. How certain would you feel that you would help this employee?	-.602
8. I would be willing to talk to this employee about their problems.	-.581
Factor 4 - Empathy	**.597**
27. How much concern would you feel for this employee?	.750
22. How much sympathy would you feel for this employee?	.693
Factor 5 – Freedom in treatment	**.744**
5. If I were in charge…I would require them to take their medication	.840
14. This employee should be forced into treatment…	.666
9. I would feel pity for this employee	.649

Note. Full item content can be found in Appendix B.

Exploratory factor analysis of the A-AQ for the medical group yielded a four-factor

solution that accounted for 66.5% of the variance (See Table 3). Internal consistency of the

derived factors was very good for factors 1 and 2 (α = .958 and .815, respectively). Factor 4 had

fair consistency (α = .605), while Factor 3 had poor consistency (α = .544).

Table 3

Factor Internal Consistency, Content, and Loadings of Items for the Medical Group of the A-AQ

Factor, Item, and Content	Factor Alpha/Item Loading Value
Factor 1 – Negative thoughts and emotions	**.958**
2. I would feel unsafe around this employee	.839
4. How angry would you feel at this employee?	.833
3. This employee would terrify me.	.815
6. I think this employee poses a risk…unless they are hospitalized.	.797
18. I would feel threatened by this employee.	.786
13. How dangerous would you feel this employee is?	.768
24. How frightened of this employee would you feel?	.766
19. How scared of this employee would you feel?	.754
1. I would feel aggravated by this employee.	.751
17. How much do you think a locked facility…is the best place for them?	.731
12. How irritated would you feel by this employee?	.709
15. I think it would be best...if they were put away in a hospital	.699
25. If I were in charge…I would force them to live in a group home.	.651
10. I would think that it was (their) own fault that they are in (this) condition.	.620
14. This employee should be forced into treatment…even if they do not want to	.495
Factor 2 – Willingness to help and interact	**.815**
16. I would share a carpool with this employee every day.	.761
21. How certain would you feel that you would help this employee?	-.753
20. How likely is it that you would help this employee?	-.722
7. If I were an employer, I would interview this employee for a job	.637
8. I would be willing to talk to this employee about their problems	-.581
26. If I were a landlord, I would probably rent an apartment to this employee	.538
Factor 3 - Blame	**.544**
11. How controllable…is the cause of this employee's present condition?	.740
23. How responsible, do you think, is this employee for their present condition?	.735
Factor 4 - Concern	**.605**
27. How much concern would you feel for this employee?	.741
9. I would feel pity for this employee	.708
5. If I were in charge…I would require them to take their medication	.642
22. How much sympathy would you feel for this employee?	.468

Note. Full item content can be found in Appendix B.

Exploratory factor analysis of the A-AQ for all data also yielded a four-factor solution that accounted for 67% of the variance (See Table 4). Internal consistency of the derived factors was very good for factors 1 and 2 (α = .963 and .856, respectively). Factor 4 had fair consistency (α = .652), while Factor 3 only yielded a single factor loading. Results of exploratory analyses indicate adequate internal reliability and consistency of the A-AQ despite changes to vignette wording and target population, as all items significantly loaded onto factors in each analysis.

Table 4

Factor Internal Consistency, Content, and Loadings of Items for the Mental Health and Medical Group of the A-AQ

Factor, Item, and Content	Factor Alpha/Item Loading Value
Factor 1 – Negative Thoughts and Emotions	**.963**
3. This employee would terrify me.	.865
2. I would feel unsafe around this employee.	.853
4. How angry would you feel at this employee?	.851
24. How frightened of this employee would you feel?	.803
6. I think this employee poses a risk…unless they are hospitalized.	.794
18. I would feel threatened by this employee	.773
19. How scared of this employee would you feel?	.773
13. How dangerous would you feel this employee is?	.771
1. I would feel aggravated by this employee.	.764
17. How much do you think a locked facility… is the best place for them?	.729
12. How irritated would you feel by this employee?	.715
15. I think it would be best…if they were put away in a hospital.	.712
25. If I were in charge…I would force them to live in a group home.	.695
10. I would think that it was (their) own fault that they are in (this) condition.	.617
11. How controllable…the cause of this employee's present condition?	.449
Factor 2 – Willingness to help and interact	**.856**
21. How certain would you feel that you would help this employee?	-.780
20. How likely is it that you would help this employee?	-.774
16. I would share a carpool with this employee every day.	.752
26. If I were a landlord, I would probably rent an apartment to this employee	.690
22. How much sympathy would you feel for this employee?	-.638
7. If I were an employer, I would interview this employee for a job.	.617
8. I would be willing to talk to this employee about their problems.	-.610
Factor 3 - Blame	-
23. How responsible, do you think, is this employee for their present condition?	.698
Factor 4 – Concern and Freedom in treatment	**.652**
9. I would feel pity for this employee.	.765
5. If I were in charge…I would require them to take their medication.	.659
27. How much concern would you feel for this employee?	.553
14. This employee should be forced into treatment…even if they do not want to.	.547

Note. Full item content can be found in Appendix B.

Assumption testing. A Shapiro-Wilk Test of Normality was run to test for normal distribution of group data. Distribution of levels of the independent variable – mental health or medical group assignment – were examined to test for normality. The Shapiro-Wilk test showed

a significant departure from the normality assumption for both the medical and mental health group in each outcome variable (A-AQ mental health group, $W(109) = .922$, $p = .000$; A-AQ medical group, $W(102) = .931$, $p = .000$; SDS mental health group $W(109) = .690$, $p = .000$; SDS medical group $W(102) = .703$, $p = .000$), indicating that the sample in this study does not meet normal population distributions and runs the risk of increasing Type I error rates. However, according to Lund and Lund (2018b) the one-way Analysis of Variance (ANOVA), which is in the same family of tests as the MANOVA, can tolerate non-normal distributions well with little impact to the Type I error rate. Additionally, Ghasemi and Zahediasl (2012) indicate that with large enough sample sizes – which the authors cite as any exceeding 30-40 – violations of the normality assumption do not present problems in statistical research.

As analytical approaches other than MANOVA were used in this study that also rely on the assumption of multivariate normality, additional steps were taken to further investigate reasons for non-normality of data and determine appropriate methods for addressing the issue. Lund and Lund (2018b) recommend using both graphical and numerical tests to examine normality of data distributions. Visual inspection of boxplot distributions of SPSS output data for the SDS indicated that 16 cases of SDS scores, nine for the mental health group and seven for the medical group, were considered to be outliers. Of these cases, three were observed to be extreme outliers. In contrast, the visual inspections of boxplots for the LOF and A-AQ showed that the LOF had a single outlier from the medical group and the A-AQ had a single outlier for each the medical and mental health groups.

In addition to inspection of outliers, kurtosis and skewness for each variable was analyzed to assess asymmetry in distribution. Assessment of normality tests were run using the structural equation modeling (SEM) statistical software, SPSS Amos 25.0, which revealed high

levels of skewness and kurtosis for the SDS for both experimental groups (see Table 5). Using

the recommended guidelines for normal distribution, which is cited as values within the range of

1.00 to -1.00 (Hair, Hult, Ringle, & Sarstedt, 2017), the LOF and A-AQ were both determined to

be within the acceptable levels of skewness and kurtosis for both experimental groups (see Table

5). These findings are congruent with boxplot inspection outcomes which also indicate that the

SDS shows deviations from normal distributions.

Table 5
Assessment of Normality Skewness and Kurtosis for Experimental Groups

Group and Variable	min	max	skew	c.r.	kurtosis	c.r.
Mental Health						
Level of Familiarity	2.000	11.000	-.444	-1.893	-.773	-1.648
Social Distance Scale	0.000	6.000	-1.908	-8.131	3.900	8.311
Adj. Attribution Questionnaire	51.000	172.000	.885	3.773	.063	.133
Multivariate*					8.666	5.407
Medical						
Level of Familiarity	1.000	11.000	-.851	-3.507	-.620	-1.278
Social Distance Scale	0.000	6.000	-1.863	-7.679	3.398	7.004
Adj. Attribution Questionnaire	57.000	168.000	.826	3.406	-.034	-.071
Multivariate*					16.781	10.128

Note. *Mardia's coefficient of multivariate kurtosis

Although non-normal data can be problematic to statistical analysis, it is important to

consider that real-world data often fails to meet normality assumptions (Bian, 2012; Gao,

Mokhtarian, & Johnston, 2008; Miceeri, T, 1989) Because of the frequency of this issue,

researchers have developed options to address non-normality, although not without setbacks.

Popular options utilized in psychosocial research are to either transform data to fit normality

assumptions or use alternate tests that do not require the assumption of normality (Gao,

Mokhtarian, & Johnston, 2008; Lund & Lund, 2018b). When data transformation techniques are

used, values of observed data are adjusted through techniques such as log transformation. Although common practice (Lund & Lund, 2018c), this method may not help to make data more normal and may even introduce interpretation error, as log-transformed data may differ greatly from the original dataset (Feng et al., 2014).

Other transformation approaches that aim to address skewed samples involve the deletion of outliers to bring samples closer to a normal distribution. When this approach is employed, extreme cases are trimmed in the attempt to align with what would be considered a typical distribution. However, this approach runs the risk of ignoring potentially unique characteristics of a sample that may differ from typical distributions for reasons other than error in measurement (Gao, Mokhtarian, & Johnston, 2008; Miceeri, 1989). Considering the risks involved in transformation, this analysis will address the issue of non-normality by using alternate statistical analyses that do not assume normal distribution (Gao, Mokhtarian, & Johnston, 2008).

Research questions: Group differences. To answer research questions 1 and 2, a one-way multivariate analysis of variance (MANOVA) was conducted to determine if there were group differences between experimental conditions – mental health and medical. Considering non-normality of data, the Kruskal-Wallis H-test, a rank-based nonparametric test recommended by Lund and Lund (2018a) as an alternate test for the one-way ANOVA with non-normally distributed data, was also run to test for group differences.

Research question 1: Do people prefer greater degrees of social distance from individuals with mental health conditions than individuals with medical conditions? There were no observed differences in social distance preferences for those with mental health versus medical conditions (F [1, 209] = .297, p = .586). The Kruskal-Wallis H test also showed that

there were no statistically significant differences in preferred social distance for mental health versus medical conditions ($\chi^2(1) = .284$, $p = .594$.)

Research question 2: Do people have higher levels of perceived attribution for individuals with mental health conditions as compared to individuals with medical conditions? There were no differences in levels of perceived attribution for individuals with mental health versus medical conditions ($F\,[1, 209] = .261$, $p = .610$). The Kruskal-Wallis H-test also showed that there were no statistically significant differences in perceived attribution levels for mental health versus medical conditions ($\chi^2(1) = .391$, $p = .532$).

Research questions: Modeling. To answer research questions 3 and 4, path analysis was used to determine whether level of familiarity with mental health or medical conditions affect observed levels of social distance and perceived attribution levels. Using AMOS, paths were estimated from the LOF variable to the A-AQ and SDS variables. Next, errors from the A-AQ and SDS variables were allowed to covary. Model fit was assessed with the Model χ^2, Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), Normed-Fit Index (NFI), and Root Mean Square Error of Approximation (RMSEA). The recommended criteria for Model χ^2 was any value with non-significance ($p > .05$). Values of .95 and above indicated good model fit for the CFI, TLI, and NFI, and values of 0.08 or less indicated adequate fit for RMSEA (Keith, 2015).

As data was previously determined to be non-normal, the asymptotically distribution-free (ADF) method of analysis was tried in place of the default maximum likelihood approach, as the ADF can estimate parameters and test models without the assumption of normal distribution (Bian, 2012; Huang & Bentler, 2015). Using an ADF approach to analysis, CFI and NFI indicated good model fit (CFI = 1.000 and NFI = 1.000). However, the Model χ^2 was significant

(Model χ^2 (6) = 38.056, p = .000), TLI was not calculated, and RMSEA was poor (RMSEA = .160, 90% CI = .114, .210). As both Model χ^2 and RMSEA suggested poor fit, model characteristics were explored for possible explanations. Kenny (2015) proposes that RMSEA can improve if more variables are added to the model and more parameters are free to vary. Considering prior research on the possibly moderating effects of age, ethnicity, and gender on stigmatized beliefs (Brown, 2008; Hack, Muralidharan, Brown, Drapalski, & Lucksted, 2019; Parcesepe & Cabassa, 2013), these variables were added to the model to determine improvements to model fit.

In the new model, paths were estimated from the each of the demographic variables – age, ethnicity, and gender identity – to all variables already included in the analysis – LOF, A-AQ, and SDS. An error term was added to LOF for this model and errors from the A-AQ and SDS variables were still allowed to covary. This model resulted in poor model fit for all fit indices (Model χ^2(6) = 25.309, p = .000, NFI = .773, TLI = -.162, CFI = .768, RMSEA = .124, 90% CI = .077, .176), indicating further adjustments could be made. As some studies have demonstrated inconsistencies in the significance levels of demographic moderators (Brown, 2008; Hack, Muralidharan, Brown, Drapalski, & Lucksted, 2019), variables were systematically removed from the analysis to determine possible improvements to model fit. The variable of age was deleted from the analysis first with all other model specifications remaining (see Figure 1). Age was chosen as the first variable to remove due to having no observed significant values with other variables. This new model resulted in good model fit by all indices (Model χ^2(2) = .754, p = .686, NFI = .990, TLI = 1.235, CFI = 1.00, RMSEA = .000, 90% RMSEA Confidence Interval = .000 to .103) and was thus accepted for use in analysis of research questions. To answer

research questions, groups were compared within the model (mental health $n = 109$, medical $n = 102$) to determine significance of group differences.
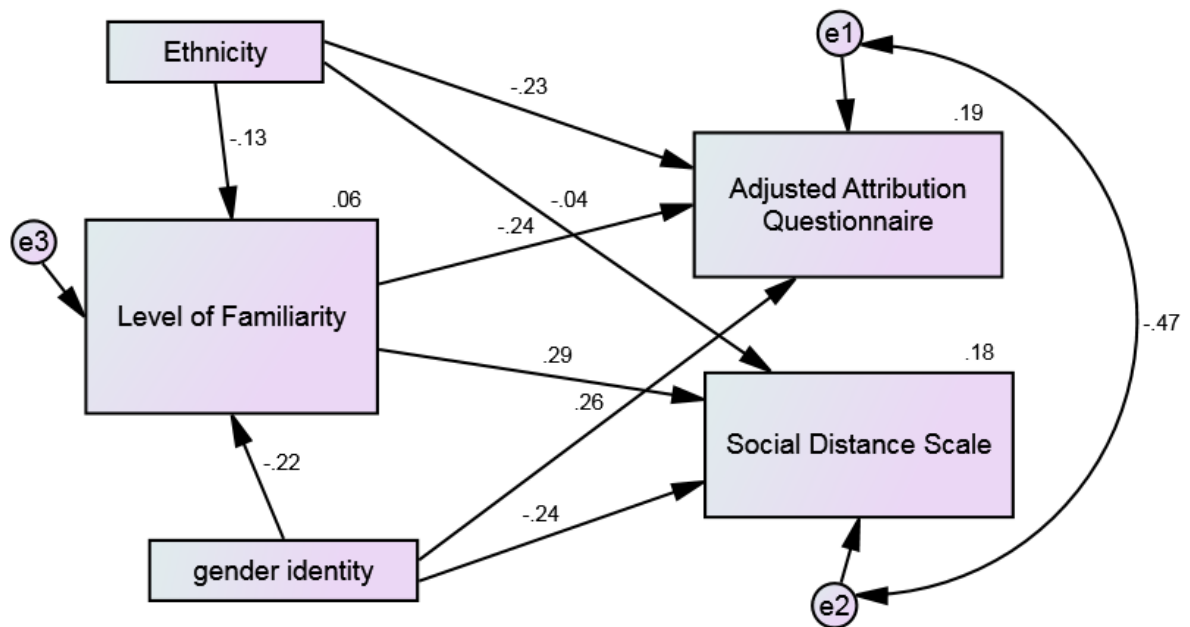
Figure 1. Standardized model of familiarity and stigma for the mental health group.

Research question 3: Do people who are less familiar with individuals with mental health conditions prefer greater amounts of social distance than people who are more familiar? Results indicate that people who are less familiar with individuals with mental health conditions prefer significantly greater amounts of social distance than those who are more familiar ($b = .136$, $\beta = .289$, $p < .01$). For every standard deviation increase in LOF scores, SDS scores increased by 0.289 standard deviations. In contrast, level of familiarity with medical conditions did not have a significant impact on preferred amounts of social distance ($b = .027$, $\beta = .057$, $p = .598$).

Research question 4*: **Do people who are less familiar with individuals with mental health conditions have higher levels of perceived attribution than people who are more familiar?*** Results indicate that people who are less familiar with individuals with mental health conditions have significantly higher levels of perceived attribution than those who are more familiar (b = -2.544, β = -.239, p = .01). For every standard deviation increase in LOF scores, A-AQ scores decreased by 0.239 standard deviations. In contrast, level of familiarity with medical conditions did not have a significant impact on levels of perceived attribution (b = -1.195, β = -.122, p = .177).

Additional findings.

Gender. Although demographic variables of gender identify and ethnicity were not the focus of this research, results identified significant findings worth reporting. Gender identity had a significant effect on all analyzed variables for the mental health group. Gender was found to significantly influence levels of familiarity with mental health conditions (b = -.935, β = -.216, p < .05) with those identifying as female having higher levels of familiarity than those identifying as male or non-binary. Gender also significantly influenced levels of preferred social distance from individuals with mental health conditions (b = -.490, β = -.242, p = .01) with those identifying as female reporting higher degrees of comfort and lower levels of preferred social distance than those identifying as male or non-binary. Gender had an additional influence on perceived levels of attribution for mental health conditions (b = 12.173, β = .265, p <.01) with those identifying as female reporting significantly lower perceptions of attribution than those identifying as male or non-binary. In contrast, gender had no effect on any outcome variable for the medical group (LOF b = -583, β = -.125, p = .184; SDS b = -.308, β = -.140, p = .218; A-AQ b = 5.116, β = .112, p = .267).

Ethnicity. Ethnicity was also observed to have a significant effect in the analysis, but this was only observed for levels of attribution. Additionally, this effect was found to be global for both the mental health and medical group. The reported ethnicity of participants had a significant impact on perception of attribution when considering mental health conditions ($b = -6.209$, $\beta = -.227$, $p < .001$). This was also observed when considering medical conditions ($b = -8.531$, $\beta = -.326$, $p < .001$). Specific differences in perceptions of ethnicity groups were unable to be determined from this analysis, as group membership was not evenly distributed, and the sample was predominantly Caucasian.

CHAPTER 5: DISCUSSION

Discussion

Results of this analysis indicate that familiarity is a potential mediator to levels of stigma toward mental health conditions. Specifically, individuals that are less familiar with mental health conditions prefer greater amounts of social distance and assign greater degrees of attribution towards individuals with mental health conditions. In contrast, familiarity with medical conditions had no effect on corresponding stigma levels. These findings suggest that stigma towards mental health conditions appear to be different from stigma related to having a medical condition. When familiarity was not controlled for in analysis, group differences between stigma levels and type of health condition were not observed. The absence of significance when examining these group differences indicate that other variables, such as level of familiarity, must be considered when determining differences in stigma levels. Significant correlations were only observed with the inclusion of familiarity as an observed variable in the analysis, highlighting the importance of considering potential mediators and moderators when measuring stigma levels. The findings of this study are consistent with prior research showing that increased familiarity is associated with decreased desire for social distance from individuals with mental health conditions and reduced levels of prejudiced attitudes (Anagnostopoulos & Hantzi, 2011). Findings also support prior research suggesting that stigma experiences between those with medical conditions and mental health conditions greatly differ (Henderson & Cronholm, 2018).

Familiarity appears to be a highly influential factor in shaping the public perceptions of people with mental health conditions. As inaccurate portrayals of individuals with mental health

conditions in the media perpetuate stereotypes of violent tendencies (Hampson, Watt, Hicks, Bode, & Hampson, 2018; McGinty, Goldman, Pescosolido, & Barry, 2015), it is important for stigma reduction campaigns to promote positive images of successful treatment outcomes. Elraz (2018) suggests that having high profile role models within organizations publicly disclose their experiences with having mental health conditions may be an effective approach to addressing stigma while promoting positive messages. When those with higher social status advocate for themselves and others by disclosing their mental health condition, it encourages those with potentially lower status to be open and confident about their own mental health experiences while establishing that individuals can still be successful in their careers while living with a mental health condition.

Though public disclosure could be an effective strategy for legitimizing the identity of those with mental health conditions, there are risks involved for these potential pioneers with this attempt to increase familiarity. Link, Yang, Phelan, and Collins (2004) propose that stigma levels are dependent on power. Groups that are more powerful, such as those with higher social status, socio-economic status, and political status, are more likely to have immunity from the discriminatory consequences of stigma. This is due to the inherent power differentials that result from stigmatization. As stigma develops from the separation of "us" and "them," it can only occur when higher status individuals reject those of a lower status. Considering this, only those with the highest level and most persistent status of power would be completely immune from the potential effects of stigma. Since the social status of any public figure can dramatically change in an instant, risks of public disclosure could be very high in relation to the potential rewards.

Recently, celebrities have been among the groups of high-status individuals willing to take on the risk of status loss by disclosing mental health histories. Using their fame as a public

platform, many famous musicians and actors have begun to share their experiences with mental health problems in the hopes of reducing stigma surrounding the topic. While research indicates that public disclosure encourages others to be open about their own experiences (Elraz, 2018), the risks of disclosure remain high for those without the protective factor of power from celebrity status. Hence, many that are inspired by the disclosures of celebrities with mental health conditions may not follow suit in disclosing their own status. This could be explained through Bandura's (1997) social learning theory, which proposes that people imitate those that they perceive to be similar to themselves. If a person is unable to identify with someone modeling a behavior, they may not adopt the observed behaviors. It is possible that people with mental health conditions do not feel represented by celebrities that disclose their own mental health conditions, lending to reduced motivation to follow the example of sharing their own mental health status. Additionally, if the behavior of disclosure is not reinforced with a positive response – a possibility for an individual without the protective factor of power – the behavior is not likely to be replicated. Furthermore, as the current study confirms, knowing a celebrity with a mental health condition does not have the same impact to stigma levels as knowing someone from one's own daily life, such a co-worker or a friend with a mental health condition. Higher levels of familiarity as rated by the Level of Familiarity Scale (LOF) imply having face-to-face contact, such as contact at work or other social settings. More intimate contact helps to promote empathy and reduce fears that fuel stigmatized beliefs (Henderson & Gronholm, 2018). While celebrities are starting a needed conversation, reduction in stigma is dependent on increasing familiarity in more intimate levels of contact.

Considering that status and power may offer protection from stigma, higher levels of familiarity may have the most powerful mediating effects on stigma in the context of the

workplace, a setting where those with seniority have regular contact with lower status workers. If people in superordinate positions or individuals with other high-profile jobs, such as lawyers or doctors, used their status to advocate and champion disclosure of mental health conditions, positive examples could be set that promote higher status social roles for individuals with mental health conditions in the context of an everyday setting, such as the workplace. Additionally, the process of setting this example could be easily implemented in the workplace through the scope of personnel development and possible trainings (Hanisch et al., 2016). Establishing role models in positions of power not only breaks the stereotype that individuals with mental health conditions are only capable of low-status jobs (Elraz, 2018), but also provides an opportunity for lower status individuals to disclose their own mental health conditions with possible legal protections.

As the current study has demonstrated, health conditions are viewed differently when considering medical conditions and mental health conditions. Research has found that individuals with mental health conditions experience unique discrimination in employment settings, such as being excluded from consideration for promotions (Elraz, 2018; Zhu, Smith, & Parrott, 2017; Henderson & Cronholm, 2018), receiving fewer call-backs for potential work (Hipes, Lucas, Phelan, & White, 2016), and being viewed as less intelligent and employable (Henderson & Cronholm, 2018). From the perspective of the employer, it is understandable that hiring individuals with specific limitations may be undesirable. Accommodations may require the use of unavailable resources, such as appointing a colleague as a mentor, or possibly impose strain on the department, as may occur if granting additional time off to the individual. As accommodations have the potential to present hardship to employers, it appears to be important to also draw attention to the strengths and unique skills that individuals with mental health

conditions bring to the workplace. For instance, individuals with disabilities may demonstrate increased resilience or have novel insights that are beneficial to the work environment as a result of a lifetime of managing their conditions (Elraz, 2018). It would be useful for future research efforts to explore the perspectives of employers, as this may also provide useful information to inform interventions or changes in policy to address stigma reduction while considering employer concerns.

Although anti-stigma campaigns have attempted to promote biological explanations of mental health conditions, an approach that would contextualize mental health disabilities as being the same as medical disabilities, this has led to the unintended consequence of increased desire for social distance (Andersson & Harkness; Henderson & Cronholm, 2018). The current study may provide additional insight as to why this approach has failed to reduce negative attitudes toward mental health conditions, as this study directly compared medical and mental health conditions using identical language, symptoms, and context. Despite attempts to treat mental health conditions as being the same as medical conditions, the results of this study suggest that they are perceived as being quite different. Any connotation to mental health, even when presented in the exact same context as a medical condition, appears to negate any potential moderating power of having medical or biological basis.

The inability to talk about mental health without the instant application of stigmatized beliefs contributes to the limitations imposed on individuals with mental health conditions. Though the mediating effects of familiarity offer insight to potential stigma-reduction approaches, the risks of disclosure, even to those who may have the protection of power, do not render opening up about mental health as an appealing prospect in any setting. These risks have potential to be reduced in the workplace, however, as mental health conditions are legally

protected as disabilities under the Americans with Disabilities Act (ADA, 1990) and are

regulated and enforced as protected conditions through the Equal Employment Opportunity

Commission. Following the language in the law, talking about mental health conditions in the

context of disability, rather than the context of being a medical condition, could shift the power

differential imposed by stigmatized beliefs by harnessing legal power to redress the problem.

Through the ADA, equal opportunities are available to individuals with disabilities

through the use of reasonable accommodations. Disabilities, both physical and mental health-

related, present challenges for individuals that interfere with the ability to function and succeed

in the workplace. As prior research has demonstrated, many individuals with mental health

conditions have unique challenges in identifying what support is needed to address mental health

concerns at work due to difficulties in describing their mental health symptoms or reasons they

may struggle to colleagues or managers (Hampson, Watt, Hicks, Bode, & Hampson, 2018).

Despite the existence of ADA law outlining procedures for accessing reasonable

accommodation, these are often beyond the reach of many individuals with mental health

struggles who may have difficulties navigating the day-to-day demands of work life, let alone the

legal processes for establishing protections (Henderson & Cronholm, 2018). In addition to

difficulties in navigating legal systems, discrimination may continue to play a role in the inability

to access accommodations. Although supportive accommodations may be as simple as allowing

flexibility with scheduling (Seberg & Eriksson, 2018) or regular time off to attend appointments,

research demonstrates that these accommodations are often not offered or enforced (Hinshaw,

2007).

Though laws are put in place to provide legal protections against injustices, such as

limitation of rights due to disability, laws are only as effective as those interpreting and enforcing

them. The ADA has put forth rules and processes for setting up accommodations that would help to address needs based on individual circumstances. Despite established outlines for interactive processes, for many individuals with mental health conditions seeking support in the workplace, neither the letter nor the spirit of the law is followed. In cases such as these, it is essential for individuals to advocate for themselves by learning the law, independently identifying possible accommodations, and possibly seeking legal support to ensure procedures to establish accommodations are followed.

As stigma can feel like an insurmountable problem persisting despite reduction efforts, it is important to consider all factors contributing to the issue. Results of this study also support prior research identifying demographic characteristics as potentially moderating factors to stigma (Parcesepe & Cabassa, 2013). Gender and ethnicity were both influential variables in model analysis. Those identifying as female had higher levels of familiarity, lower levels of preferred social distance, and lower perceptions of attribution towards mental health conditions than those identifying as male or non-binary. This effect was not observed when considering medical conditions. It is important to note that there were only five individuals that identified as non-binary in this sample while group differences between male and female participants were relatively equal. Hence, no valid inferences of gender influence for non-binary individuals can be drawn from this study. Ethnicity had a significant impact on perception of attribution when considering both mental health and medical conditions, though specific differences in perceptions between ethnicity groups were unable to be determined from this analysis due to uneven representation of ethnic backgrounds. However, it did not have any observed effect on familiarity or social distance preference for either group.

These findings suggest that gender may be the more influential demographic factor when considering potential moderators to stigma, highlighting the importance of efforts to examine and challenge gender roles when addressing mental health stigma. Though stigmatized beliefs were found to be global for both mental health and medical conditions in this analysis when considering ethnic background, research findings also indicate that examination of cultural perspectives when addressing stigma is important to consider. Further research is needed to establish effects of gender and ethnicity, as replications of stigma research on moderating qualities has been inconsistent (Brown, 2008; Hack, Muralidharan, Brown, Drapalski, & Lucksted, 2019).

Although age was not analyzed in the current study due to poor model fit, it will be important for future studies to examine effects of age on stigma levels, as previous research has indicated that this may be a significant factor to consider (Brown, 2008; Hack, Muralidharan, Brown, Drapalski, & Lucksted, 2019). As this study was mainly comprised of younger adults aged 18 to 24, valid inferences on the effects of age on stigma levels would not have been able to be determined. Better representation of age ranges would help to identify if age is a significant moderator to stigma as an independent factor or if there are other intersecting factors, such as minority status, gender, or other background variables, that influence stigmatized beliefs. Future research on the differences in stigma perceptions that consider intersectionality could broaden understanding of stigmatized views of mental health conditions while considering other types of co-occurring stigma and discrimination.

Limitations

One of the limitations of this study involved the instruments utilized to measure stigma.

Although the SDS has been used in prior stigma research to gauge attitudes toward various groups, including differing occupations, social class, sex, age, and mental illness (Parrillo & Donoghue, 2005), the scale was originally designed to gauge attitudes toward ethnic and religious groups. This shift in intended purpose may have influenced the observed instability of the measure, as one of the seven items needed to be removed from this analysis to improve psychometric properties. The removed item contained potentially confusing wording with contrasting valence to other test items, suggesting that adjustments to language or use of reverse scoring may help to improve internal consistency and reliability in future use of the instrument. Additionally, the measure attempts to gauge comfort in social distance, starting with assessing willingness to marry an individual – the closest degree of social distance – and incrementally assessing lesser degrees of social distance. Presenting items in variable orders, rather than in descending order, may improve reliability of the scale by reducing response sets. Adding additional social roles, such as co-workers or acquaintances, to the scale may also improve reliability by assessing a wider range of preferences for social distance.

Populations sampled also presented a limitation to the study. Although participation was solicited from a participant pool of various backgrounds and demographics, it is unknown what characteristics and potential biases of the individuals choosing to participate were introduced to the study. Research companies may attract participants with similar attributes, potentially introducing selection bias into the study. This sample was also not representative of different age ranges and ethnic backgrounds, with the majority of participants being within the ages of 18 to 24 and of Caucasian descent. Future studies should attempt to have equal representation of different age ranges and ethnic backgrounds to make valid inferences of the impact of these moderating variables.

Conclusions

Although this research does not identify definitive methods for eliminating existing levels of stigma, findings do contribute valuable information to help inform future stigma research and reduction efforts. The problem of stigma is unmistakable in the research. However, the solutions are abundantly less clear due to the long history and complexity of the issue. When researching and implementing approaches for stigma reduction, there are many realities that must be considered. In reality, there is no addressing mental health stigma without calling it by its name. There is no guarantee of immunity from the risks of disclosing a mental health condition in any setting, regardless of any power that one might wield. Despite its intentions, the law does not offer ultimate protection from the discriminatory effects of stigma. There are inherent risks to disclosure that will remain as long as mental health is viewed as a discrediting attribute. However, this does not imply that there is no hope for change. As the research continues, our knowledge of the contributing factors will help to identify realistic approaches to breaking down stereotypes that perpetuate stigmatized beliefs. If we contribute to the public consciousness by sharing our own experiences with mental health, starting with the people that are closest to us, we can promote the narrative that mental health conditions are common, treatable, and not cause for shame. When we recognize our shared experiences, we will be able to stand up to the challenge ahead, as we will know that we are not alone.

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APPENDIX A: FIND PARTICIPANTS

Information about using FindParticipants.com for academic research:

Excerpts taken directly from https://www.findparticipants.com/

FindParticipants provides a direct connection between academic researchers and thousands of research participants through a simple web-based interface. The company also provides research participants the opportunity to be compensated for providing their feedback, ideas, and input to academic researchers around the world. Interested research participants provide information that allows academic researchers to finely tailor and target their research study requests, ensuring that research participants are only contacted when a study matching their data is requested. This means that academic researchers can send requests for participation only to those participants that meet their criteria.

The accessible population of the company includes participants in 129 countries with a wide range of ages, ethnicities, educational backgrounds, and fields of employment. A Basic plan with the company is priced at $34.99 per month and includes the following:

1. Simple messaging interface
2. Random participant selection
3. 5 outgoing messages to participants
4. Research panel management
5. Reminder e-mails
6. Up to 1,000 participants/message

Once registered, researchers can choose the demographic and ethnographic criteria for participants and FindParticipants.com will send a message to participants that meet the search criteria requesting their participation. Participants can access a link to the online survey through the message to complete the study. The company does not provide direct compensation to research participants, but offers researchers the option to pay participants for their time.

APPENDIX B: ATTRIBUTION QUESTIONNAIRE (A-AQ)

Adapted Attribution Questionnaire (A-AQ)

There is a new employee at your place of work that just started last month. You have heard that this employee has a **mental health condition / medical condition**. This employee sometimes appears tired and you have noticed they have a slight tremor. They have already missed work over the past month to attend doctor's appointments.

Answer each of the following questions about this employee. Circle the number of the best answer to each question.

1. I would feel aggravated by this employee

   1   **2**   **3**   **4**   **5**   **6**   **7**   **8**   **9**
not at all   very much

2. I would feel unsafe around this employee.

   1   **2**   **3**   **4**   **5**   **6**   **7**   **8**   **9**
no, not at all   Yes, very much

3. This employee would terrify me.

   1   **2**   **3**   **4**   **5**   **6**   **7**   **8**   **9**
not at all   very much

4. How angry would you feel at this employee?

   1   **2**   **3**   **4**   **5**   **6**   **7**   **8**   **9**
not at all   very much

5. If I were in charge of this employee' treatment, I would require them to take their medication.

   1   **2**   **3**   **4**   **5**   **6**   **7**   **8**   **9**
not at all   very much

6. I think this employee poses a risk to their neighbors unless they are hospitalized.

   1   **2**   **3**   **4**   **5**   **6**   **7**   **8**   **9**
not at all   very much

7. If I were an employer, I would interview this employee for a job.

   1   **2**   **3**   **4**   **5**   **6**   **7**   **8**   **9**
not likely   very likely

8. I would be willing to talk to this employee about their problems.

   1   **2**   **3**   **4**   **5**   **6**   **7**   **8**   **9**
not at all   very much

9. I would feel pity for this employee.

   1   **2**   **3**   **4**   **5**   **6**   **7**   **8**   **9**
not at all   very much

10. I would think that it was this employee's own fault that they are in the present condition.

   1   **2**   **3**   **4**   **5**   **6**   **7**   **8**   **9**
no, not at all   yes, absolutely

11. How controllable, do you think, is the cause of this employee's present condition?

   1   **2**   **3**   **4**   **5**   **6**   **7**   **8**   **9**
not at all under personal control   completely under personal control

12. How irritated would you feel by this employee?

   1   **2**   **3**   **4**   **5**   **6**   **7**   **8**   **9**
not at all   very much

13. How dangerous would you feel this employee is?

   1   **2**   **3**   **4**   **5**   **6**   **7**   **8**   **9**
not at all   very much

14. How much do you agree that this employee should be forced into treatment with their doctor even if they do not want to?

   1   **2**   **3**   **4**   **5**   **6**   **7**   **8**   **9**
not at all   very much

15. I think it would be best for this employee's community if they were put away in a hospital.

   1   **2**   **3**   **4**   **5**   **6**   **7**   **8**   **9**
not at all   very much

16. I would share a car pool with this employee every day.

   1   **2**   **3**   **4**   **5**   **6**   **7**   **8**   **9**
not likely   very much likely

17. How much do you think a locked facility, where this employee can be kept away from their neighbors, is the best place for them?

   1   **2**   **3**   **4**   **5**   **6**   **7**   **8**   **9**
not at all   very much

18. I would feel threatened by this employee.

   1   **2**   **3**   **4**   **5**   **6**   **7**   **8**   **9**
no, not at all   yes, very much

19. How scared of this employee would you feel?

   1   **2**   **3**   **4**   **5**   **6**   **7**   **8**   **9**
not at all   very much

20. How likely is it that you would help this employee?

   1   **2**   **3**   **4**   **5**   **6**   **7**   **8**   **9**
definitely would not help   definitely would help

21. How certain would you feel that you would help this employee?

   1   **2**   **3**   **4**   **5**   **6**   **7**   **8**   **9**
not at all certain   absolutely certain

22. How much sympathy would you feel for this employee?

   1   **2**   **3**   **4**   **5**   **6**   **7**   **8**   **9**
none at all   very much

23. How responsible, do you think, is this employee for their present condition?

   1   **2**   **3**   **4**   **5**   **6**   **7**   **8**   **9**
not at all responsible   very much responsible

24. How frightened of this employee would you feel?

   1   **2**   **3**   **4**   **5**   **6**   **7**   **8**   **9**
not at all   very much

25. If I were in charge of this employee's treatment, I would force them to live in a group home.

   1   2   3   4   5   6   7   8   9
not at all   very much

26. If I were a landlord, I probably would rent an apartment to this employee.

   1   2   3   4   5   6   7   8   9
not likely   very likely

27. How much concern would you feel for this employee?

   1   2   3   4   5   6   7   8   9
none at all   very much

APPENDIX C: LEVEL OF FAMILIARITY (LOF)

Level of Familiarity Scale (LOF)

Please read each of the following statements carefully. After you have read all of the statements below, place a check by every statement that represents your experience with persons with severe (**<u>mental health conditions / medical conditions</u>**).

_____ I have watched a movie or television show in which a character depicted a person with (<u>mental health condition / medical condition</u>).

_____ My job involves providing services/treatment for persons with a severe (<u>mental health condition / medical condition</u>).

_____ I have observed, in passing, a person I believe may have had a severe (<u>mental health condition / medical condition</u>).

_____ I have observed persons with a severe (<u>mental health condition / medical condition</u>) on a frequent basis.

_____ I have a severe (<u>mental health condition / medical condition</u>).

_____ I have worked with a person who had a severe (<u>mental health condition / medical condition</u>) at my place of employment.

_____ I have never observed a person that I was aware had a severe (<u>mental health condition / medical condition</u>).

_____ A friend of the family has a severe (<u>mental health condition / medical condition</u>).

_____ I have a relative who has a severe (<u>mental health condition / medical condition</u>).

_____ I have watched a documentary on television about severe <u>mental health condition / medical condition</u>.

_____ I live with a person who has a severe (<u>mental health condition / medical condition</u>)

APPENDIX D: SOCIAL DISTANCE SCALE

Social Distance Scale (SDS)

There is a new employee at your place of work that just started last month. You have heard that this employee has a **mental health condition / medical condition**. This employee sometimes appears tired and you have noticed they have a slight tremor. They have already missed work over the past month to attend doctor's appointments.

Please consider the scenario above and when answering the following questions. Please choose "Yes" or "No."

1. Would you be willing to marry a person with this type of condition?

   Yes / No

2. Would you be willing to have a person with this type of condition as your close personal friend?

   Yes / No

3. Would you be willing to have a person with this type of condition as your neighbor?

   Yes / No

4. Would you be willing to have a person with this type of condition as your colleague at work?

   Yes / No

5. Would you be willing to have a person with this type of condition as a citizen of your country?

   Yes / No

6. Would you be willing to have a person with this type of condition visit your country as a non-citizen?

   Yes / No

7. Would you be willing to have a person with this type of condition be excluded from associating with your country in any way?

   Yes / No

APPENDIX E: INFORMED CONSENT

Research Title: Workplace dynamics: Exploring views, impressions, and preferences of colleagues with diverse backgrounds and attributes.
Lead Researcher: Emily Broadhurst
Faculty Advisor: Dr. Linda Webster

Dear Participant,

I am conducting a study as a part of an Educational Psychology program at University of the Pacific and am asking for your assistance. I am currently looking for research participants between the ages of 18 and 99 who can read and understand the English language.

Research Description: Your consent is being requested to voluntarily participate in a survey about workplace dynamics. I am curious about your views, impressions, and preferences about colleagues in the workplace. You will be asked to read a short paragraph and answer questions about your opinions and preferences.

Time Involvement: Your participation will take approximately 10-15 minutes.

Risks and Benefits: This study poses minimal risk to participants. Possible risk may involve loss of confidentiality if data were to be made available to unauthorized persons. This may lead to negative consequences for participants, such as possible embarrassment or loss of respect of others. To minimize this risk, all collected data will remain anonymous and any personal information will be protected by this researcher through encryption and secure storage. Benefits of this study include contributing information that will help inform campaigns for social change.

Compensation: You may choose to enter into a random drawing after completing the study for one of three $20 gift certificates to Amazon.com. To be eligible for the drawing, you must provide the lead researcher with your e-mail address.

Participant's Rights: If you have read this form and have decided to participate in this research project, you understand that your participation is entirely voluntary. You are free to discontinue participation at any time without penalty or loss of benefits to which you are otherwise entitled. You also have the right to refuse to answer particular questions.

Confidentiality: All collected data is anonymous and any identifying information will be protected by this researcher through encryption and secure storage. Data collected in this study will be reported in dissertation findings and potentially future research publications and/or conference presentations, but no private or identifying information will be published.

Contact Information: If you have any questions, concerns, or complaints about this research, its procedures, risks, and benefits, you can contact the lead researcher, Emily Broadhurst, at e_broadhurst@u.pacific.edu or the faculty research advisor, Linda Webster, at lwebster@pacific.edu.

Independent Contact: If you are not satisfied with how this study is being conducted, or if you have any concerns, complaints, or general questions about the research or your rights as a participant, please contact the IRB at the Office of Research and Sponsored Programs to speak to someone independent of the research team at (209)-946-3903 or IRB@pacific.edu.

By checking the box below, you are providing your electronic signature to participate in this study. Your signature indicates that you have read and understand the information provided above, that you have been afforded the opportunity to ask, and have answered, any questions that you may have, and that your participation is voluntary. You understand that you may withdraw your consent and discontinue participation at any time without penalty.

APPENDIX F: DEBRIEFING

Workplace dynamics: Exploring views, impressions, and preferences of colleagues with diverse backgrounds and attributes.

Thank you for participating in this study! The general purpose of this research is to better understand stigmatized views of mental health conditions in the current social climate. In order to assess changes in current stigma levels, valid measurement tools are needed to assess existing levels of stigma. Many existing tools used to assess stigma levels present validity issues due to reporting bias, specifically social desirability bias (Hom, Stanley, and Joiner, 2015). Pescosolido and colleagues (2010) suggest that purposefully omitting diagnostic labeling helps to eliminate biased answers. In order to measure stigmatizing beliefs while minimizing the threat of social desirability, this research study utilized an experimental design that compared mental health conditions with medical conditions.

You were randomly assigned to one of these groups and asked to give your opinions of the person described in the vignette. By eliminating diagnoses from presented vignettes and omitting the words "stigma" and "mental health condition" from the description of the study, this study attempted to minimize social desirability to help gain better understanding of specific differences in stigmatized beliefs between medical and mental health conditions. Characteristics of participants sampled in stigma research also present a potential for bias. Stigma research has identified familiarity with mental health conditions as a mediating factor to levels of stigma (Anagnostopoulos & Hantzi, 2011). Considering this, you were asked questions about your familiarity with individual described in the vignette to control for this potential influence.

The following research questions were examined in this study:

Q1: Do people prefer greater degrees of social distance from individuals with mental health conditions than individuals with medical conditions?
Q2: Do people have higher levels of perceived attribution for individuals with mental health conditions as compared to individuals with medical conditions?
Q3: When eliminating the influence of social desirability bias, do people who are less familiar with individuals with mental health conditions prefer greater amounts of social distance than people who are more familiar?
Q4: When eliminating the influence of social desirability bias, do people who are less familiar with individuals with mental health conditions have higher levels of perceived attribution than people who are more familiar?

If you are concerned about any of the tactics used or questions asked in this research, please feel free to contact the lead researcher Emily Broadhurst, at e_broadhurst@u.pacific.edu or the faculty research advisor, Linda Webster, at lwebster@pacific.edu. If you are not satisfied with how this study is being conducted, or if you have any concerns, complaints, or general questions about the research or your rights as a participant, please contact the IRB at the Office of Research and Sponsored Programs to speak to someone independent of the research team at

(209)-946-3903 or IRB@pacific.edu.

Thank you for your participation in this study. If you are interested in research findings, results should be available by contacting the lead researcher after May 2020. Winners of the Amazon.com gift cards will be notified via e-mail by May 2020.

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