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# A Study on the Relationship Between Emotional Intelligence and Mental Illness Stigma

E. Nicole Armstrong  
*Walden University*

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# Walden University

College of Social and Behavioral Sciences

This is to certify that the doctoral dissertation by

E. Nicole Armstrong

has been found to be complete and satisfactory in all respects,  
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## Review Committee

Dr. Anne Morris, Committee Chairperson, Psychology Faculty  
Dr. Derrick Copper, Committee Member, Psychology Faculty  
Dr. Donna Heretick, University Reviewer, Psychology Faculty

Chief Academic Officer  
Eric Riedel, Ph.D.

Walden University  
2015

Abstract

A Study on the Relationship Between Emotional Intelligence and Mental Illness Stigma

by

E. Nicole Armstrong

MS, Walden University, 2011

BS, Brigham Young University, 2009

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Clinical Psychology

Walden University

August 2015

## Abstract

Stigmatizing mental illness involves negative perceptions or attitudes about mental illness and the individuals who have mental illness, generating problematic consequences for both the general population and for people with mental illness. The theory of multiple intelligences proposes that intelligence includes skills and abilities in any area; emotional intelligence (EI), therefore, includes an individual's ability to identify, interpret, and regulate emotions and emotional responses. This study was designed to evaluate level of familiarity with mental illness as a potential predictor for stigmatizing mental illness, to assist in evaluating the relationship between stigmatizing mental illness and EI. The study was specifically designed to determine whether having higher EI is associated with a decreased likelihood to stigmatize mental illness, and whether increased familiarity is associated with greater EI and a decreased likelihood to stigmatize mental illness. It used bivariate correlations and hierarchical regression analyses, respectively, using data collected from a demographic questionnaire, the TEIQue-SF, the AQ-27, and the LOF. The target population consisted of emergency department (ED) staff ( $N = 43$ ). Findings suggested that EI and mental illness stigma are correlated ( $r = -.514, p < .001$ ) and that there is a significant interaction between EI and level of familiarity with mental illness ( $R^2 = .269, F(3, 38) = 4.653, p = .007$ ). ED staff are on the frontline of healthcare and serve as a gateway to systems of care and treatment; as a result, this study's findings are important and are intended to inform healthcare and stigma-combating organizations of factors that can improve the sensitivity and quality of care for individuals with mental illness who admit to healthcare systems.

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## Dedication

To my dear ones, especially my best friend and e-parentals: thanks for all the hugs, love, and laughs as I pushed through this! Thanks for asking questions, for listening to my geeky worries, and for laughing at my dissertation comics. I wouldn't be who I am without you, and I am so grateful for all you've done for me. I love you!

To Team Smith, where I first got hooked on research. Thanks for all the support on those early steps.

And to anyone who needs a reminder of miracles. This project was a result of a long string of accumulating miracles and tender mercies. Believe it!

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## Chapter 1: Introduction to the Study

This study was designed to investigate a potential relationship between participants' emotional intelligence (EI) and their stigmatization of those with mental illness. Mental illness stigma has a variety of harmful effects on health and wellbeing for both individuals with and without mental illness. As a result, identifying EI as a mediating factor of stigmatization was expected to inform future researchers and advocates who work to combat such stigma on the importance of improving EI, thus promoting positive social change. Level of familiarity with mental illness as a social-cognitive process was intended to provide a helpful link in understanding the relationship between EI and mental illness stigma.

In addition to providing an overview of the relevant background on EI and mental illness stigma, this chapter also reviews the problem statement and research gap this study was designed to fill. This study's purpose is examined, along with research questions and hypotheses. The chapter also reviews the theoretical framework of the study, emphasizing the theory of multiple intelligences as well as labeling and attribution theories. It also discusses the methodological rationale and description of the study, relevant operational definitions, and primary assumptions. Finally, the chapter reviews delimitations, limitations, and how they were addressed, as well as the potential significance of the study for positive social change.

### **Background**

#### **Emotional Intelligence**

The concept of emotional intelligence was defined and researched by Gardner (1983) and Goleman (2005), and has early roots primarily in industrial and organizational

psychological research and endeavors (Goleman, 2005; Krishnakumar & Rymph, 2012). Emotional intelligence (EI), which is sometimes called emotional competence, has been defined as encompassing an individual's ability to perceive, interpret, and regulate others' and one's own emotions (Augusto-Landa, Pulido-Martow, & Lopez-Zafra, 2011; Ermer, Kahn, Salovey, & Kiehl, 2012; Gottman & DeClaire, 1997; Hatzenbuehler, McLaughlin, & Nolen-Hoeksema, 2008; Kotsou, Nelis, Gregoire, & Mikolajczak, 2011). Research considering EI as a relevant construct has been expanding to not only include literature specific to industrial-type settings, but has also been used to identify patterns in adaptive attitudes and behaviors (Augusto-Landa et al., 2011; Hatzenbuehler et al., 2008; Kotsou et al., 2011; Krishnakumar & Rymph, 2012). For example, Augusto-Landa, Pulido-Martos, and Lopez-Zafra (2011) identified a positive relationship between emotional regulation as a component of EI and overall psychological well-being. This corresponds with other research that suggests that individuals with higher levels of emotional regulation are at less risk for developing internalizing psychopathology, even when facing potential discrimination as a member of a minority group (Hatzenbuehler et al., 2008; Hatzenbuehler, Nolen-Hoeksema, & Dovidio, 2009). It also corresponds with research that suggests that increasing EI is related to improvements in physical, mental, and social functioning (Kotsou et al., 2011).

The Trait Emotional Intelligence Questionnaire (TEIQue) is a measure that has been used to measure EI while considering both genetic, or trait, influences as well as environmental influences, such as training and different types of experiences that may alter EI from predisposing characteristics (Kotsou et al., 2011; Vernon et al., 2008). Interventions that can contribute to such EI changes include teaching individuals to

accurately identify emotions, understand them and their consequences, and express and regulate them in socially acceptable ways (Elias, Tobias, & Friedlander, 1999; Goleman, 2005; Gottman & DeClaire, 1997; Kotsou et al., 2011). A person's increased EI has been associated with greater well-being and fewer mental illness difficulties, such as through decreased somatic complaints, increased social functioning, and decreased likelihood to develop internalizing mood disorders (Augusto-Landa et al., 2011; Ermer et al., 2012; Hatzenbuehler et al., 2008; Kotsou et al., 2011; Vernon et al., 2008).

Individuals' ability to identify and comprehend emotional information or otherwise demonstrate high EI does not guarantee that they use EI in ways that are positive or that promote interpersonal skills (Ermer et al., 2012). For example, some research suggests that some incarcerated individuals have high EI levels, indicating that their EI may be misused or directed in negative ways (Ermer et al., 2012). It is therefore important to identify if EI helps build tolerance for negative emotions that are often associated with mental illness stigma (Ermer et al., 2012).

### **Mental Illness Stigma**

Mental illness stigma often encompasses negative attitudes and emotions toward individuals with mental illness, a desire to hide mental illness, and difficulty identifying positive aspects of mental illness such as increased understanding and patience with others who struggle (King et al., 2007; Link, Yang, Phelan, & Collins, 2004). According to Bryan and Morrow (2011), mental illness is becoming an increasingly common experience throughout the world, and as stigmatizing persists, so do the difficulties of those who experience the results of stigma. In spite of campaigns and programs designed to combat it, mental illness stigma is commonly carried into private, public, and

professional settings (Henderson, Evans-Lacko, Flach, & Thornicroft, 2012; Knifton et al., 2010; Kobau et al., 2010; Loya, Reddy, & Hinshaw, 2010). For example, individuals with mental illness are often stigmatized against and may consequently lose their jobs or other opportunities (King et al., 2007).

Further, individuals with mental illness sometimes experience stigmatization even among their friends and family (Day, Edgren, & Eshleman, 2007; Kobau et al., 2010; Link & Phelan, 2006; Masuda, Price, Anderson, Schmertz, & Calamaras, 2009). A common consequence of stigmatizing mental illness is that individuals with mental illness are treated as though they are bad or weak (Day et al., 2007; Kobau et al., 2010; Link & Phelan, 2006; Masuda et al., 2009). Stigmatization of mental illness often also results in prejudice against experiencing or expressing problematic symptoms by individuals who have mental illness (Knifton et al., 2010; Kobau et al., 2010; Loya et al., 2010). When faced with such negative attributions, it is often challenging for individuals with mental illness to engage in emotionally intelligent processes that could help in resolving some of the mood difficulties that present as part of mental illness (Corrigan, 2004).

Such barriers raised by stigma frequently make it difficult for some individuals to access or to even want appropriate care and treatment; unfortunately, having a mental illness often already increases those difficulties and stigma can further exacerbate them (Corrigan, 2004; Kobau et al., 2010; Link & Phelan, 2006; Loya et al., 2010). The far-reaching costs of such stigma can include individuals not obtaining services they need, experiencing worsened symptoms and increased distress, and an increased risk for developing physical illnesses or diseases (Day et al., 2007; Kobau et al., 2010; Link &

Phelan, 2006). Two other potential consequences, suicide attempts and suicide, are also some of the costly effects of mental illness that emphasize the importance of overcoming barriers raised by stigmatizing mental illness (Callaly, Berk, & Dodd, 2009).

In an attempt to seek appropriate care and treatment but to avoid being the target of mental illness stigma from people that they know, many individuals with mental illness self-admit to the psychiatric department of medical hospitals instead of to hospitals or treatment centers that are designed solely to treat mental illness (Medicare Payment Advisory Commission, 2010; Zrihen, Ashkenazi, Lubin, & Magnezi, 2007). Admitting to medical hospitals for mental illness treatment often means that individuals with mental illness are less exposed to stigmatizing attitudes that would accompany admittance to a psychiatric hospital; however, these individuals also accrue more financial costs in doing so (Medicare Payment Advisory Commission, 2010; Zrihen et al., 2007). This cost differential seems partially due to the trend for many acute care hospitals to admit most of their psychiatric inpatients from an emergency department (ED; Medicare Payment Advisory Commission, 2010).

There are varying degrees to which medical healthcare providers are trained or familiar with mental illness, and their attitudes have a strong potential to affect treatment recommendations or referrals in ways that do not always adequately address mental illness symptoms (Corrigan, 2004; Ungar & Knaak, 2013; Zrihen et al., 2007). Failure to adequately address such symptoms often leads to multiple hospitalizations, dropping out of treatments, increased likelihood that individuals with mental illness will face mental illness stigma, and increased financial costs (Corrigan, 2004; U.S. Department of Health and Human Services, 2012). For example, the total Medicare payments for treatment at

all inpatient psychiatric facilities in the United States in 2010 were approximately \$4.2 billion; since patients with Medicare coverage represent only a fourth of patients treated in psychiatric hospitals, this suggests that the actual cost was much higher (Medicare Payment Advisory Commission, 2011). The U.S. Department of Health and Human Services (2012) estimated the total burden of mental illness in the United States at around \$317 billion. In light of the heavy consequences of stigmatizing mental illness, research exploring the potential relationship of EI and mental illness stigma is expected to provide valuable insights and support to help further develop awareness and training programs that address this important topic.

### **Problem Statement**

Mental illness stigma is generally defined as consisting of negative attitudes, emotions, or discrimination, and a lack of understanding or acceptance of potentially positive aspects of mental illness that could include increased compassion for others (King et al., 2007; Link et al., 2004). Mental illness stigma has far-reaching costs that negatively impact many people, such as needed services not being sought or obtained (Day et al., 2007; Kobau et al., 2010; Link & Phelan, 2006; Sharfstein, 2012). Emotional intelligence (EI), however, which is often defined to include individuals' abilities to perceive, interpret, and regulate emotions, is considered to have a positive impact on one's well-being by leading to adaptive attitudes or behaviors (Augusto-Landa et al., 2011; Goleman, 2005; Keefer, Holden, & Parker, 2013; Paek, 2006; Vidal, Skeem, & Camp, 2010). There is little research to indicate if the concepts of mental illness stigma and EI are related, and so this study proposed to identify a relationship based on the social-cognitive issue of familiarity.

Research has consistently shown that more severe or extreme conditions such as HIV/AIDS in medical research and schizophrenia in mental illness research are the most likely to be targets of stigmatized attitudes and behaviors (Corrigan, Edwards, Green, Diwan, & Penn, 2001; Huxley, 1993; Kobau et al., 2010; Li et al., 2007; Scambler, 2009). A common predictor for presenting with stigmatized attitudes toward both HIV/AIDS and mental illness is familiarity (Anagnostopoulos & Hantzi, 2011; Corrigan et al., 2001; Ugarte, Hogberg, Valladares, & Essen, 2013; van 't Veer, Kraan, Drosseart, & Modde, 2006). Familiarity with mental illness is often gained through experiences over time, such as by varying degrees of intimacy with people who have mental illness and through education or training (Anagnostopoulos & Hantzi, 2011; Corrigan et al., 2001). Similarly, competence with managing emotional information is often also gained through experiences over time, such as through increased training or personal circumstances that expose individuals to different kinds of emotions or emotional responses; emotional competence, or EI and its adaptive implications, would further likely be related to experiencing less shame or negative emotions about mental illness (see Figure 1; Elias et al., 1999; Goleman, 2005; Gottman & DeClaire, 1997; Kotsou et al., 2011; Rizvi, Steffel, & Carson-Wong, 2013; Wisner & Telch, 1999). Further, as mental illnesses often include emotional components, greater EI was anticipated to be comparable to familiarity with mental illness and consequently associated with reduced levels of mental illness stigma. Therefore, identifying a relationship between EI and mental illness stigma was important for understanding whether targeting mental illness stigma through increasing EI can affect positive social change.

## **Purpose of the Study**

The purpose of this quantitative study was to compare the relationship between individuals' EI and mental illness stigma. EI was the independent variable for this study and was defined as an individual's ability to correctly perceive, interpret, and regulate emotions (Augusto-Landa et al., 2011; Ermer et al., 2012; Gottman & DeClaire, 1997; Hatzenbuehler et al., 2008; Kotsou et al., 2011). Mental illness stigma was the dependent variable, and was defined as including an individual's negative emotions and attitudes toward people with mental illness and difficulty identifying positive aspects of mental illness (King et al., 2007; Link et al., 2004). The study was designed to investigate a potential relationship between individuals' scores for these two variables by considering the degree of participants' familiarity with mental illness, so as to provide insights as to a factor usable as a gateway to combat mental illness stigma and its serious effects on health and wellbeing.

## **Research Questions and Hypotheses**

### **Research Question 1**

The primary research question for this study was: Is having higher emotional intelligence associated with less mental illness stigma? If individuals with greater emotional intelligence had an increased ability to cope with or to tolerate distressing emotions such as shame and embarrassment, it was predicted that they consequently would likely present with less mental illness stigma.

$H_01$ : There is no relationship between emotional intelligence (IV) and mental illness stigma (DV).

*H<sub>1</sub>1*: Having higher emotional intelligence will be associated with less mental illness stigma.

## **Research Question 2**

A secondary research question for this study was: Is increased familiarity with mental illness associated with greater emotional intelligence and less mental illness stigma? Over time, individuals can increase their emotional intelligence through exposure and training, suggesting that having different kinds of experiences may lead to increased emotional intelligence and consequently increased distress tolerance when it comes to shame and embarrassment associated with mental illness stigma.

*H<sub>0</sub>2*: There is no relationship between the level of familiarity with mental illness and emotional intelligence (IV) and mental illness stigma (DV).

*H<sub>1</sub>2*: Differences in level of familiarity with mental illness will relate to increased emotional intelligence and with less mental illness stigma.

## **Theoretical Framework**

The theory of multiple intelligences (Blomberg, 2009; Gardner, 1983; Goleman, 2005) was used as the primary framework for understanding the EI construct. Traditionally, intelligence has been conceptualized more in an academic regard, such as with mathematical and literacy achievement (Blomberg, 2009; Gardner, 1983; Goleman, 2005). However, the theory of multiple intelligences posits that intelligence can be found in nearly any strength or skill (Blomberg, 2009; Gardner, 1983; Goleman, 2005). Thus, EI is considered a viable construct because of this theory, which allows emotional skills to be encompassed in a definition of “intelligence” (Goleman, 2005). As illustrated in Figure 1, EI is proposed to work as individuals are presented with the stimulus of others’

mental illness; they are expected to first perceive their own emotional responses to the illness, and to then correctly interpret the emotional responses from individuals with mental illness. Finally, individuals perceiving the mental illness are then expected to regulate their emotional responses in order to successfully navigate interactions with people who have mental illness.

The second part of this theoretical framework was applied to stigma, which is considered to be the result of devaluing certain social groups based on things such as race, personality traits, or disabilities (Markowitz, 2005). Mental illness stigma, in particular, is conceptualized as negative emotions, attitudes, perceptions, and even behaviors that are consequences of such devaluation (Stromwall, Holley, & Kondrat, 2012). These stigmatizing perceptions and emotions have a foundation in the stigma theories of labeling and attribution, which purport that mental illness conditions are first identified as socially different and are given labels to mark their deviance, and that responsibility for the illness or symptoms are then attributed to varying degrees (see Figure 1; King et al., 2007; Link et al., 2004; Markowitz, 2005).

The social-cognitive process used to link EI and mental illness stigma in this study was familiarity (see Figure 1). Increased familiarity with mental illness is often associated with decreased social distancing, fear, shame, and embarrassment (Anagnostopoulos & Hantzi, 2011; Corrigan et al., 2001; Stromwall et al., 2012). Such negative emotions are often associated with mental illness stigma (Scambler, 2009), but such issues are likely better coped with or tolerated when there is greater EI since EI includes an individual's ability to regulate emotional responses. Thus, a relationship between these two variables is considered to be based on the difference in how such

negative emotions are handled. Although only an extreme mental illness (schizophrenia) was used as part of the stigma measurement, the responses were expected to provide a fairly accurate depiction of participants' levels of mental illness stigma because prior research has indicated that stigmatizing attitudes are more likely to be measurable for more extreme or severe conditions, including in healthcare settings (Corrigan et al., 2001; Huxley, 1993; Kobau et al., 2010; Li et al., 2007; Scambler, 2009).

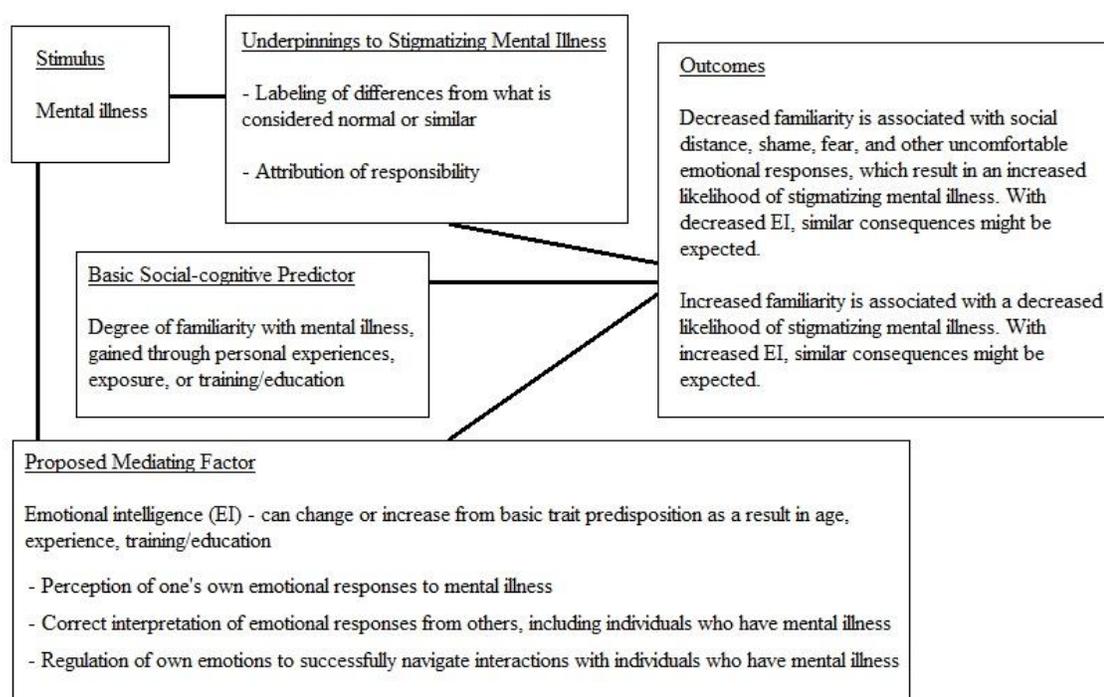


Figure 1. Proposed relationship for EI and mental illness stigma by familiarity.

### Nature of the Study

A nonexperimental, correlational design was used as there were no treatment conditions for this study. Participants were drawn from an emergency department medical staff at a hospital in a Minnesota metropolitan healthcare system. Since

psychoses account for the highest costs and are among the most severe diagnoses (Medicare Payment Advisory Commission, 2010), participants reported their reactions to a stimulus involving schizophrenia. Participants completed questionnaires and responded to questions related to demographics, familiarity with mental illness, EI, and mental illness stigma.

EI was operationalized as individuals' ability to perceive, interpret, and regulate others' and their own emotions, as measured by the short version of the Trait Emotional Intelligence Questionnaire (TEIQue-SF; Petrides, 2009; Petrides & Furnham, 2006). The TEIQue-SF is a 30-item, self-report alternative of the TEIQue (Martskvishvili, Arutinow, & Mestvirishvili, 2013; Mikolajczak, Luminet, Leroy, & Roy, 2007). It uses a 7-point scale from 1 (*Completely disagree*) to 7 (*Completely agree*; Cooper & Petrides, 2010; Martskvishvili et al., 2013; Mikolajczak et al., 2007). This measure has been used with a variety of language and cultural groups with consistent and reliable results (Cooper & Petrides, 2010; Martskvishvili et al., 2013; Mikolajczak et al., 2007; Petrides, 2009).

Mental illness stigma was operationalized as an individual's negative attitudes or emotions, the degree to which the individual tries to conceal mental illness, and a lack of awareness of positive aspects of mental illness, as measured by the Attribution Questionnaire (AQ-27; Corrigan, 2008; Corrigan, Watson, Warpinski, & Gracia, 2004). The AQ-27 is reported to have good reliability and validity (Brown, 2008; Pinto, Hickman, Logsdon, & Burant, 2012). This is a 27-item, self-report measure that is administered along with a brief paragraph about an individual with schizophrenia, bringing special attention to participants' responses to others' mental illness (Corrigan, 2008). The measure's protocol requires participants to note how well each item reflects

their feelings about the individual in the stimulus paragraph from 1 (*not at all*) to 9 (*very much*; Corrigan, 2008).

The degree to which a participant was familiar with mental illness was measured using the Level of Familiarity Scale (LOF; Corrigan et al., 2001; Holmes et al., 1999). This is a demographic-type scale, and participants identify which of the 11 items corresponds with the degree to which they have experienced or been exposed to mental illness (Corrigan et al., 2001; Holmes et al., 1999). A single score denotes the most intimate degree of familiarity, from 1 (never having been exposed to mental illness) to 11 (having personal experience with the illness; Corrigan et al., 2001; Holmes et al., 1999).

The nature of the relationship between EI (the IV) and mental illness stigma (the DV) was assessed using bivariate correlation. In addition, the possible role of familiarity as a mediator variable between EI and stigma was evaluated using multiple regression analyses.

## **Operational Definitions**

### **Attribution**

Attribution is based on a stigma theory that people ascribe varying degrees of responsibility for having mental illness or mental illness symptoms on the person experiencing the illness or symptoms (King et al., 2007; Link et al., 2004; Markowitz, 2005).

### **Emotional Intelligence (EI)**

For the purposes of this study, EI was operationalized as individuals' ability to perceive, interpret, and regulate others' and their own emotions, as measured by the short

version of the Trait Emotional Intelligence Questionnaire (TEIQue-SF; Petrides, 2009; Petrides & Furnham, 2006).

### **Familiarity**

Familiarity with mental illness was operationalized as personal experience or the degree of intimacy that a participant reported with mental illness, ranging from no knowledge or exposure to mental illness up to the most intimate experience of having personally had a mental illness; this was measured by the Level of Familiarity Scale (LOF; Corrigan et al., 2001; Holmes, Corrigan, Williams, Canar, & Kubiak, 1999).

### **Labeling**

Labeling is a key issue for mental illness stigma as it involves the identification of and giving labels to groups that deviate from social norms and may therefore be devalued or otherwise rejected (King et al., 2007; Link et al., 2004; Markowitz, 2005).

### **Mental Illness**

A mental illness is a diagnosable condition where there is impairment in social, occupational, emotional, or cognitive functioning in the context of pertinent cultural or social norms (American Psychiatric Association, 2013).

### **Mental Illness Stigma**

Mental illness stigma was operationalized as individuals' negative attitudes or emotions, the degree to which they try to hide mental illness, and unconsciousness of positive aspects of mental illness, as measured by the Attribution Questionnaire (AQ-27; Corrigan, 2008; Corrigan et al., 2004).

### **Nursing Positions**

The majority of emergency department positions are filled by nursing staff. Participants were asked to select the best description of their current employed position, and the following options were provided: clinical nurse specialists; registered nurses; licensed practical nurses; nursing assistants; nurses' aides; other, with a line for participants to write the appropriate position.

### **Trait**

A trait is operationalized as a type of baseline characteristic that shapes a person's attitudes and temperament (Sutin, Costa, Wethington, & Eaton, 2010; Vernon et al., 2008). Experiences, particularly in the context of an individual's perceptions in different experiences, can aid in changing traits over time (Sutin et al., 2010; Vernon et al., 2008). As a result, a trait-focused measure can be used to capture current conditions, which may include a respondent's original baseline characteristics or the trait changes that have occurred over time.

### **Assumptions**

Several assumptions were proposed for this study. For example, it was assumed that participants could accurately interpret and respond to questionnaire items honestly and completely. A final assumption was that the initially proposed sample size of  $N = 79$  would provide enough data to have sufficient statistical power when comparing EI and mental health stigma.

### **Scope and Delimitations**

Data was obtained from a hospital-based emergency department (ED) in a Minnesota healthcare system, which employs adults from diverse ethnic, cultural, age,

and socioeconomic backgrounds. Although the education level and occupation of participants was one limitation for the generalizability of results, this sample provided information about the relationship of EI and stigma in diverse adults who are fulfilling professional roles. Since many people who are admitted to inpatient psychiatric units are first admitted to EDs (Medicare Payment Advisory Commission, 2010), ED staff might have an influential position to combat mental illness stigma in healthcare settings and potentially reduce costs incurred by inpatient hospitalizations.

### **Limitations**

One limitation for this study was the use of convenience sampling. Sampling ED staff from such a select portion of the hospital was intended to help narrow the statistical findings so that clear patterns could be identified; however, such sampling also limited generalizability of results to the general population because there was not a greater range of represented demographics. Another limitation was using participants from two sites, but as both sites were part of the same healthcare system, with the same values, policies, and procedures, patterns in participant responses were expected to be unaffected by the site difference. Multicultural diversity of some participants was another limitation, and potential error suggesting poor language comprehension or cultural differences that would interfere with accurate analyses was carefully analyzed. However, given the necessity for appropriate reading and verbal skills in the work environment, potential language-barrier difficulties appeared to be minimal or nonexistent. Another aspect of cultural diversity that sometimes relates to response patterns is participants' spiritual or religious differences, but research indicates that increased congruence with living spiritual or religious values tends to relate to emotional competence (Liu, 2010; Paek,

2006). As a result, it was not expected that religiosity or spirituality differences would significantly impact on response patterns. Response biases were also possible limitations, such as with premeditated or collaborative responses, or with socially desirable responses. To combat these potential limitations, procedures and instruments were as neutrally worded as possible to limit conveyance of judgment on participants' responses.

### **Significance and Implications for Positive Social Change**

A review of the literature indicates that understanding the relationship between individuals' EI and the degree to which they stigmatize mental illness would help to fill a research gap. Stigma is associated with more mental distress and high EI is associated with less mental distress, suggesting a natural relationship between the topics. Emotional regulation, which is one of the main constructs of EI, may help to build tolerance for negative emotional experiences such as embarrassment and shame that are often associated with mental illness stigma. However, a relationship between EI and mental illness stigma has not previously been identified. This research was designed to help professionals and volunteers who combat stigma by leading them to a greater understanding of factors that lead to barriers in obtaining care. Overall, by adding to the research on stigma, the findings were intended to lead to positive social change by increasing the knowledge of those who work to improve social perceptions of mental illness and by increasing the support for interventions targeted at increasing EI.

### **Summary**

This chapter presented information on EI and mental illness stigma. Identifying a connection between these two variables using the level of familiarity with mental illness as a linking concept was intended to provide important information on potential positive

social change as it adds to research on factors that mediate mental illness stigma. In Chapter 2, a more thorough background on the literature is provided and the theoretical underpinnings and conceptual framework is more thoroughly explored.

## Chapter 2: Literature Review

The purpose of this study was to identify a potential relationship between emotional intelligence (EI), familiarity, and mental illness stigma. While EI is involved with the perception, interpretation, and regulation of emotions, there has previously been little to indicate the possibility of an EI relationship with mental illness stigma toward others. In order to justify exploring the potential relationship, this chapter provides an overview of specific information on the literature search strategy for this study and a thorough explanation of the primary theoretical framework, which includes the theory of multiple intelligences as well as labeling and attribution theories. A literature review is provided to both expand upon relevant elements identified in Chapter 1 and to address a research gap in the literature. This chapter concludes with an examination of the pertinent research questions for the study and general research design information.

### **Literature Search Strategy**

For the purposes of this study, the primary location from which peer-reviewed articles were obtained was the PsycINFO database. Other sources included the PubMed database, scholarly books, and other online resources. Search terms included: EI; emotional intelligence; emotional competence; multiple intelligences; mental illness stigma; social cognitive processes; HIV/AIDS and stigma; stigma and predictor; familiarity and mental illness; emotional intelligence measure; mental illness stigma measure; costs of mental illness; costs of mental illness stigma; TEIQue; AQ-27; TEIQue psychometrics; and AQ-27 psychometrics. For the purposes of theory review and earliest work available on these topics, the publication years searched was initially left open-ended. However, for relevant statistical information and more current research related to

key concepts, the range of years was limited to 2008-2013. Applicable information from all indicated resources was subsequently compiled to provide an overview of the relevant background for key components of this study.

## **Theoretical Framework**

### **Multiple Intelligences and EI**

This study used the theory of multiple intelligences as the basis for its theoretical framework. While intelligence has often been described as closely linked to academic skills such as mathematics and literacy, the theory of multiple intelligences suggests that intelligence is not a term that can be simplified to this extent (Blomberg, 2009; Gardner, 1983; Goleman, 2005; Kornhaber, Krechevsky, & Gardner, 1990). Multiple intelligences theorists argue that intelligence is, instead, a more complex concept that includes individuals' capacities and abilities to adhere to and engage in both personal and cultural values and interests (Blomberg, 2009; Kornhaber et al., 1990). Therefore, although standard intelligent quotient (IQ) measures provide information related to a more academic perspective of intelligence, this does not mean that there are not other equally viable and measurable constructs of intelligence (Blomberg, 2009; Kornhaber et al., 1990).

The foremost proposition of multiple intelligences theories is that a measurable construct of intelligence can be derived from virtually every important aspect of human life (Blomberg, 2009; Gardner, 1983; Kornhaber et al., 1990). This has provided the foundation for understanding social intelligence, musical intelligence, spatial intelligence (Gardner, 1983; Kornhaber et al., 1990), cultural intelligence (Crowne, 2013), and emotional intelligence (EI; Blomberg, 2009; Crowne, 2013; Goleman, 2005). The

importance of emotional experiences justifies EI as a viable and measurable construct as just one type of intelligence under the theory of multiple intelligences (Augusto-Landa et al., 2011; Blomberg, 2009; Goleman, 2005; Krishnakumar & Rymph, 2012).

The theoretical foundation of EI provides a rational argument for the existence and measurability of EI as a construct (Gardner, 1983; Goleman, 2005). Prior research on EI has previously focused primarily on industrial and organizational psychology considerations, and has been particularly related to developing leadership skills and to successful business management (Goleman, 2005; Krishnakumar & Rymph, 2012). However, the adaptive quality of attitudes and behaviors associated with increased EI (Keefer et al., 2013; Paek, 2006; Vidal et al., 2010), has contributed to a growing body of EI research directed toward the mediating role of EI in other areas of concern. This research has included areas such as success as an adult (Kotsou et al., 2011), well-being (Augusto-Landa et al., 2011), ethical decision-making (Krishnakumar & Rymph, 2012), and stress management when discriminated against by others (Hatzenbuehler et al., 2008; Hatzenbuehler et al., 2009).

The history of EI research suggests that while individuals may have a predisposing EI baseline, such traits can be changed over time (Elias et al., 1999; Goleman, 2005; Gottman & DeClaire, 1997; Kotsou et al., 2011; Sutin et al., 2010). This corresponds with intelligence theories that suggest that while individuals have certain biological predispositions toward different types and levels of intelligence, environmental factors and even personal choices impact the degree to which initial abilities alter (Blomberg, 2009; Kornhaber et al., 1990). The purpose of drawing upon this theoretical and research background was therefore to identify the potential role EI has in mediating

negative emotions often associated with mental illness stigma, thereby reducing stigma and providing more support for EI training.

### **Labeling, Attributions, and Mental Illness Stigma**

Stigma often results from the cognitive and behavioral devaluation of specific groups, and such devaluation frequently derives initially from labeling groups (King et al., 2007; Link et al., 2004; Markowitz, 2005). These kinds of labels are conceptualized by people in order to separate social similarities and differences; when noted differences are more pronounced or conflict more with social norms, the labeled group or status is often devalued, perceived with shame or fear, or otherwise rejected (Markowitz, 2005). When the labeling theory of stigma is applied to mental illness, it can be further compounded in a way explained by the attribution theory (Link et al., 2004). Attribution theory suggests that individuals with mental illness may have varying degrees of perceived responsibility for their symptoms, and as a result may be treated with pity and help or may be punished and rejected; those who have been rejected based on discriminatory labels often learn to try to hide their symptoms or illness (King et al., 2007; Link et al., 2004; Markowitz, 2005). Based on the results of labeling and attributing responsibility for mental illness, mental illness stigma is defined to encompass negative attitudes and emotions surrounding mental illness labels, and also includes difficulty identifying positive aspects of mental illness such as increased understanding and patience with others who struggle (King et al., 2007; Link et al., 2004).

### **Mental Illness Stigma, Familiarity, and EI**

While the labeling theory of stigma suggests that group differences, particularly groups branded with derogatory or negative names, are likely to foster stigma, the

attribution theory has the additional caveat that people may attribute responsibility for the symptoms; this leads to stigma that presents through social distancing, fear, shame, and other negative responses toward mental illness (King et al., 2007; Link et al., 2004; Markowitz, 2005). However, increased familiarity with mental illness is one predictor for a decreased likelihood of stigmatizing mental illness through social distancing, fear, shame, and similar responses (Anagnostopoulos & Hantzi, 2011; Corrigan et al., 2001; Stromwall et al., 2012). Since EI encompasses the ability to manage uncomfortable emotions, such as those that are associated with stigmatizing mental illness, EI was assumed to work on a similar principle as familiarity. This means that individuals with greater levels of EI were expected to present a decreased likelihood for stigmatizing mental illness, and familiarity as a demographic-type factor was specifically used to provide clarity on the relationship between mental illness stigma and EI.

## **Literature Review**

### **Emotional Intelligence (EI)**

**Emotional concepts.** Some of the earliest professional publications connecting emotions to the intellect were in the late 1800s (Bain, 1880; Day, 1877). Such publications often defined emotions based on the principle of seeking pleasure and avoiding pain, particularly physical pain and pleasure (Bain, 1880; Day, 1977). The defined nature and role of emotions changed over time to account for more than just physical considerations (Hollingworth, 1942; Krishnakumar & Rymph, 2012; Myerson, 1921), and as a result, emotions are now understood somewhat differently than they were 100 years ago. Today common conceptions of emotions include naming distinct emotions based on a variety of intensities and across a range of types of internal experiences

(Augusto-Landa et al., 2011; Cooper & Petrides, 2010; Elias et al., 1999). Emotions are understood to help identify needs, such as for safety or for comfort (Goleman, 2005). Emotions are also considered to be involved with but as still separate from other cognitive processes, and some emotions, such as depression and anxiety, are even therapeutically treated when troublesome or overwhelming (American Psychiatric Association, 2013; Goleman, 2005).

**Nature of EI.** Although research and conceptualization of emotions has changed over time, it was not until the late 20<sup>th</sup> century that emotional intelligence (EI) was outlined as a viable construct in psychology and research (Crowne, 2013; Goleman, 2005). The EI construct includes individuals' ability to perceive, interpret, and regulate others' and their own emotions (Augusto-Landa et al., 2011; Ermer et al., 2012; Gottman & DeClaire, 1997; Hatzenbuehler et al., 2009; Kotsou et al., 2011). This has been measured through self-report questionnaires, often in the use of organizational and leadership sectors in order to provide identifiable areas where leadership can improve the application of EI aspects (Crowne, 2013; Goleman, 2005). One potential limitation of these questionnaires is that they have straightforward questions that may be obvious in their intent; as a result, respondents may be more likely to provide biased responses, such as for social desirability (Crowne, 2013). However, an important aspect of EI, as Goleman (2005) indicated, is that self-awareness is a critical component of EI since it provides a foundation for individuals to manage identified emotions, to self-soothe, and to manage impulses based on emotions. Such self-awareness is also an important foundation that enables more awareness of others' emotions and an increased ability to manage interactions with others (Goleman, 2005). Further, the process of using self-

awareness as a means for an individual to manage interactions with others and their emotions can be a means of managing his or her own emotions, as well (Goleman, 2005).

Since greater EI involves a greater ability to accurately interpret and respond to others' emotions, this provided a basis for exploring the relationship between EI and mental illness stigma. Some research has asserted that an individual may have high EI, through identifying, comprehending, and utilizing emotional information, but that this information is sometimes misused (Ermer et al., 2012). One explanation for why some criminals, for example, are so successful at criminal activity and/or avoiding consequences is that they accurately perceive others' emotions and can regulate their own in a manner that permits them to get what they want (Ermer et al., 2012). It is therefore possible for individuals to not always use their EI in ways that are positive or that promote interpersonal skills or well-being (Ermer et al., 2012). For this reason, it was important to identify if EI helps build tolerance for negative emotions that are often associated with mental illness stigma (Ermer et al., 2012).

### **Mental Illness Stigma**

**Stigma concepts.** According to work done by Goffman (1951; 1983), who was an early leader on defining stigma as a relevant social construct, individual assumptions are an important part of interpreting the context of and communicating within various interactions. Just as EI concepts relate to emotional processing (Goleman, 2005), stigma relates to social processing in the manner to which individuals perceive social differences and, in devaluing them, respond in accordance to those differences (Clum, Chung, Ellen, & The Adolescent Medicine Trials Network for HIV/AIDS Interventions, 2009; King et al., 2007; Link et al., 2004; Markowitz, 2005). For example, individuals have historically

identified those with severe medical illnesses such as HIV or AIDS and labeled them as socially different; then they have attributed varying degrees of responsibility for contracting such illnesses and responded with social distancing, fear, and other negative emotions, even to the extent of harming people with HIV or AIDS (Clum et al., 2009; Jewkes, 2006; Li et al., 2007; Scambler, 2009). Research suggests that extreme mental illnesses such as schizophrenia are also often targeted with negative social responses, just as with extreme medical conditions like HIV or AIDS (Corrigan et al., 2001; Huxley, 1993; Kobau et al., 2010). With both extreme medical conditions, like HIV or AIDS, and with extreme mental illnesses like schizophrenia, the degree to which individuals are familiar with the conditions seems to be one predictor for the likelihood of stigmatizing those conditions (Anagnostopoulos & Hantzi, 2011; Corrigan et al., 2001; Ugarte et al., 2013; van 't Veer et al., 2006).

**Mental illness.** Mental illness is diagnosed according to impaired functioning related to cognitive, perceptual, behavioral, mood, or personality difficulties in the context of an individual's social or cultural norms (American Psychiatric Association, 2013). Some research indicates that while awareness of mental illness continues to grow, mental illness itself also becomes an increasingly common experience, such as through the rise in cases of post-traumatic stress disorder (PTSD) resulting from increased encounters with wars and natural disasters (Bryan & Morrow, 2011). In spite of both increased awareness and increased cases of mental illness, some estimates suggest that more than 70% of youth and adults with mental illness go untreated (Henderson, Evans-Lacko, & Thornicroft, 2013). One of the primary barriers to bridging this treatment gap seems to be mental illness stigma (Henderson et al., 2013).

**Nature of mental illness stigma.** Much of the research investigating mental illness stigma is related to the understanding that social acceptance is an important issue and the research is generally conducted through self-report questionnaires (Corrigan et al., 2001; Day et al., 2007). Many studies measure mental illness stigma based upon the perspective of those who are likely to be targeted by stigma (Day et al., 2007; Hatzenbuehler et al., 2009; Jahoda et al., 2010; Link & Phelan, 2006; Loya et al., 2010; Zrihen et al., 2007). Other studies represent the level of stigma an individual has toward others (Henderson et al., 2013; Knifton et al., 2010; Kobau et al., 2010; Loya et al., 2010; Masuda et al., 2009). Although self-report measures introduce the potential limitation that individuals will misrepresent their attitudes in order to maintain social acceptability, it also permits greater possible insight instead of simple supposition into the experiences of those who stigmatize others (Corrigan et al., 2001; Henderson et al., 2013; King et al., 2007). Mental illness stigma is understood to encapsulate negative attitudes and emotions toward individuals with mental illness; it also includes difficulty identifying positive aspects of mental illness, such as increased understanding and patience with others who struggle, which is often associated with increased familiarity with mental illness (Anagnostopoulos & Hantzi, 2011; Corrigan et al., 2001; King et al., 2007; Link et al., 2004). As stigma persists, challenges for both those who experience and for those who bear stigma also persist (Henderson et al., 2013). Employers, politicians, family members, and friends of people with mental illness are not the only individuals who stigmatize mental illness, thereby impacting the likelihood that mentally ill individuals will successfully seek treatment for their mental illness; individuals with mental illness

also may stigmatize against mental illness with the same result (Henderson et al., 2013; King et al., 2007; Kobau et al., 2010).

There are a many campaigns and programs designed to combat mental illness stigma, but such stigma continues to darken private, public, and professional settings (Corrigan, 2008; Henderson et al., 2012; Henderson et al., 2013; Knifton et al., 2010; Kobau et al., 2010; Loya et al., 2010). Mental illness stigma in these settings can include direct discrimination, abuse, and denial of opportunities, such as through rejecting employee candidates or even firing individuals with mental illness (Jahoda, Wilson, Stalker, & Cairney, 2010; King et al., 2007). Mental illness stigma in these settings can also often appear in attitudes and behaviors that suggest individuals are bad or weak when they struggle (Day, Edgren, & Eshleman, 2007; Kobau et al., 2010; Link & Phelan, 2006; Masuda et al., 2009). Such stigma can even present in prejudice against experiencing or expressing problematic symptoms, making it difficult for individuals with mental illness stigma to know how or want to seek help (Henderson et al., 2013; Knifton et al., 2010; Kobau et al., 2010; Loya et al., 2010).

**Costs of mental illness stigma.** Barriers raised by mental illness stigma often make it difficult for individuals to access or to even want appropriate care and treatment (Henderson et al., 2013; Kobau et al., 2010; Link & Phelan, 2006; Loya et al., 2010). The extensive costs of such stigma can include individuals not obtaining services they need, such as the noted estimation that over 70% of individuals with mental illness do not receive services (Henderson et al., 2013). Further, as mental illness stigma prevents access or seeking treatment, one consequence for many individuals has been the experience of worsened symptoms and increased distress (Day et al., 2007; Kobau et al.,

2010; Link & Phelan, 2006; Pinto et al., 2012). For example, mental illnesses such as bipolar disorder and schizophrenia often become worse over time if they are under- or untreated (American Psychiatric Association, 2013; Day et al., 2007; Pinto et al., 2012).

Another cost of mental illness stigma, since it often interferes with treatment, is an increased risk for individuals to develop physical illnesses or diseases (Day et al., 2007; Kobau et al., 2010; Link & Phelan, 2006). This seems at least partially because mental illness sometimes impairs hygiene or safety precautions when exposed to health risks, and sometimes interferes with an individual's awareness of or ability to identify physical needs, discomfort, or illness (Kobau et al., 2010). Of all the costs of mental illness stigma, though, some of the most costly are suicide attempts and suicide (American Psychiatric Association, 2013; Callaly et al., 2009; McIntosh & Drapeau, 2012). Official U.S. data for 2010 (McIntosh & Drapeau, 2012) indicated that suicide was the 10<sup>th</sup> leading cause of death, with one person committing suicide every 13.7 minutes and an estimation of 1,107,144 years of potential life lost.

Finally, mental illness stigma incurs significant economic costs (U.S. Department of Health and Human Services, 2012; Zrihen et al., 2007). When individuals seek treatment for mental illness, mental illness stigma frequently impacts the type of treatment setting they choose (Zrihen et al., 2007). For example, individuals often self-admit to psychiatric departments of medical hospitals in order to limit exposure to stigma that could accompany admittance to a psychiatric hospital (Zrihen et al., 2007). However, they also accrue more financial costs (Zrihen et al., 2007). In 2003, the total costs to Medical Corps for mental illness hospitalizations at general hospitals was estimated at about \$14,600,000, while care at psychiatric hospitals was about \$644,000 (Zrihen et al.,

2007). From 2000 to 2009, total U.S. psychiatric hospital expenses grew from about \$11.9 billion to \$15.1 billion, whereas total U.S. community hospital expenses grew from \$356.6 billion to \$656.2 billion (U.S. Census Bureau, 2012). These estimates suggest that while overall expenses have grown at both psychiatric and community hospitals, expenses are greater at the latter and explain some of the disparity in psychiatric treatment costs. The total recent estimations of the annual mental illness economic burden is over \$300 billion (U.S. Department of Health and Human Services, 2012) and illustrates the growing need for decreased mental illness stigma since it leads to such high financial and other consequences.

### **Emergency Department Medical Staff**

Many people experiencing extreme distress, suicidal thoughts or attempts, or psychotic or manic episodes report to an emergency department (ED) as the first step in crisis care or immediate treatment (Henderson et al., 2013). As a result, the manner in which ED medical professionals, such as nurses and medical technicians, perceive and handle ED admits related to mental illness does not only have the potential to impact treatment planning after admittance (such as transferring to a psychiatric unit); it also has the potential to impact how patient psychiatric needs are acknowledged or dealt with in the future (Corrigan, 2004). Unfortunately, there are varying degrees of familiarity with mental illness or emotional processing, and so stigmatizing mental illness persists to different degrees in the medical healthcare setting in spite of continued efforts to combat mental illness stigma (Corrigan, 2004; Ungar & Knaak, 2013). This seems at least partially related to the attributions that medical providers make in regard to patient responsibility for symptoms (Corrigan et al., 2001; Corrigan, 2004; Ungar & Knaak,

2013). Mital and colleagues' research (as cited in Gever, 2013) indicates that doctors, nurses, and even psychiatrists all have some level of stereotyping in regard to patients with schizophrenia, and that such views often impact treatment planning. This suggests that education, training, or exposure alone, as methods by which increased familiarity with mental illness may be gained, are not sufficient to combat stigma. This study sought to clarify the relationship between ED professionals' levels of EI and mental illness stigma in light of varying degrees of familiarity with mental illness, in order to further develop mental illness stigma research and concepts to assist in combating mental illness stigma in healthcare, particularly in ED settings.

### **Summary**

When individuals label and then attribute responsibility for mental illness, this often results in stigmatizing mental illness. There are great costs associated with mental illness stigma, which include financial, occupational, and mortality problems. The theory of multiple intelligences justifies the use of EI as a viable set of skills and abilities to measure in relation to mental illness stigma. Since EI can change over time, and since there is a need in EDs for emotionally intelligent professional care, this research set out to identify one target population for increased focus on EI training and change. Such potential focus areas include training staff members to accurately perceive, identify, and understand emotions and their consequences, as well as how to express and regulate emotions in socially acceptable ways (Kotsou et al., 2011). Understanding the relationship between EI and mental illness stigma can provide one avenue to combat the consequences of stigma by providing evidence for the importance of EI. In Chapter 3, the

relevant information related to research methodology for exploring this relationship is presented.

### Chapter 3: Research Method

This study was designed to identify the potential relationship between emotional intelligence (EI) and mental illness stigma, using level of familiarity with mental illness as a linking variable. Since EI includes perceptions, interpretations, and the regulation of emotions, EI was predicted to help mediate the negative emotions or effects typically associated with mental illness stigma. Data on these topics were obtained from self-report surveys completed by emergency department (ED) medical staff.

This chapter provides an overview of the design and rationale for this study. It also reviews the study's methodology, which includes information related to the specific population, as well as sampling and procedural information. Additionally, this chapter examines background information related to the instruments and how they measure EI, mental illness stigma, and level of familiarity with mental illness. A discussion is provided on factors relevant to data analysis and potential threats to the validity of this study. Finally, the chapter describes relevant ethical procedures that were incorporated to limit any mistreatment of participants, measures, and collected data.

#### **Research Design and Rationale**

This study employed a cross-sectional, correlational, nonexperimental, quantitative design. This was executed through the use of self-report surveys. This study incorporated bivariate correlations and a multivariate regression analysis to assess magnitude and direction of relationships between levels of EI and mental illness stigma in the context of familiarity with mental illness. The rationale for using bivariate correlations was to identify significant relationships between variables, as well as their

strength and direction. A multivariate regression analysis was used in order to further assess the relationship between the main study variables while controlling for predictors.

## **Methodology**

### **Setting and Sample**

This study specifically examined a healthcare system in Minnesota. The targeted healthcare system was created in the late 1980s, a time when several hospitals in the same metropolitan area of Minnesota joined in order to meet healthcare demands and financing difficulties. At the time of this study, there were several EDs within the targeted healthcare system. Participants were drawn from medical staff at two such hospitals; in this system, nursing staff made up the largest employee group and included clinical nurse specialists, registered nurses, licensed practical nurses, nursing assistants, and nurses' aides. Medical technicians were also represented in the sample. The ED medical staff included adults from a variety of ethnicities, cultures, ages, and socioeconomic backgrounds. Given standard requirements to work in patient care, participants had at least some college or technical education as part of attaining appropriate training to be eligible to work in their appointed positions.

Although I attempted to obtain specific demographic details for the study's target population, this information was not readily available. As a result, I used general information from the U.S. Census Bureau (2014), which indicated that one of the major cities serviced by the targeted healthcare system had an estimated population of nearly 295,000 in 2013; racial demographics from the 2010 census included 60.1% Caucasian, 15.7% African American or Black, 1.1% American Indian or Alaska Native, 15% Asian, and 9.6% Hispanic or Latino. Over a quarter of the population reported a language other

than English as the primary language spoken in the home, and 86.2% reported a high school graduate degree or higher for persons aged 25 and older (U.S. Census Bureau, 2014).

To initially estimate the minimum sample size needed for this study, I used a statistical power of .80 for the planned multiple regression analysis, meaning that there would be an 80% probability of rejecting the null hypothesis when it was indeed false, and a two-tailed test of significance alpha of .05 for rejection of the null hypothesis; this yielded an estimated projection of  $N = 79$  (Cohen, 1992; Soper, 2014). A final sample size of  $N = 43$  was obtained. In order to minimize complicating the workflow of the ED environment, I used convenience sampling by introducing the purpose of the study at a work-related meeting at both hospital campus sites and then allowing participants to voluntarily participate during a break from work responsibilities.

### **Instrumentation and Operationalization**

#### **The Trait Emotional Intelligence Questionnaire–Short Form (TEIQue-SF).**

There are a variety of validated measures that can be used to measure EI (Augusto-Landa et al., 2011; Conte, 2005; Ermer et al., 2012; Kotsou et al., 2011; Liu, 2010). The Trait Emotional Intelligence Questionnaire–Short Form (TEIQue-SF) is an abbreviated form of the Trait Emotional Intelligence Questionnaire (TEIQue), which is one such measure of EI (Kotsou et al., 2011; Mikolajczak et al., 2007; Petrides, 2009). The TEIQue has been validated using individuals from multiple cultural and lingual backgrounds (Freudenthaler et al., 2008; Martskvishvili et al., 2013; Mikolajczak et al., 2007). This self-report, trait-based measure considers self-perceptions and dispositions to

accommodate the relative subjectivity of emotional experiences (Petrides, Pita, & Kokkinaki, 2007).

The TEIQue contains 153 items that explore 15 domains of trait EI: adaptability, assertiveness, emotion perception, emotion expression, emotion management, emotion regulation, impulsiveness, relationships, self-esteem, self-motivation, social awareness, stress management, trait empathy, trait happiness, and trait optimism (Petrides et al., 2007; Vernon et al., 2008). The responses to measure items are on a Likert-type scale, with selections from 1 (*Completely Disagree*) to 7 (*Completely Agree*; Petrides & Furnham, 2006). In a 2013 review comparing EI measures, the TEIQue had better or comparable results in the areas of norms and reference groups, construct validity, criterion-related validity, and reliability when compared to the Emotional Intelligence Questionnaire (EIQ), BarON EQI, and Mayer-Salovey-Caruso Emotional Intelligence Test (British Psychological Society, 2014). This justified using Petrides and Furnham's (2006) work as a valid and reliable measure for EI.

This study used the Trait Emotional Intelligence Questionnaire–Short Form (TEIQue-SF) to collect participant data. This 30-item version of the TEIQue contains two items from each of the 15 domains of trait EI (see Table 1; Petrides & Furnham, 2006). The test designers selected items based on how well each one corresponded with the total subscale scores of the full measure, in order to simultaneously maintain sufficient coverage of the sampling domain constructs and to provide adequate internal consistency of the measure (Petrides & Furnham, 2006). The psychometrics of this short form were tested in a two-part study (Cooper & Petrides, 2010). The first part of the study was comprised of 1,119 individuals, with men and women who were recruited from

universities and general communities, and approximately 97% of whom held at least a high school diploma or higher (Cooper & Petrides, 2010). The second part used 866 men and women, also recruited from universities and general communities, with approximately 90% reporting that they had obtained a high school diploma or higher (Cooper & Petrides, 2010). The results of this study suggested good parameter discrimination, using not only more participants than are often used in other measurement norming, but also with a more rigorous analysis than is often used for EI measures (Cooper & Petrides, 2010; Mikolajczak et al., 2007).

Commercial use of the TEIQue-SF is prohibited by copyright laws, but use for academic research is permitted and a full SPSS syntax for scoring the short form is available to academic users (Petrides & Furnham, 2006). Sub-scores are provided for realms of “well-being”, “self-control”, “emotionality”, and “sociability”, and a global trait EI score is provided as well (Petrides, 2009). The primary reasons for selecting the TEIQue-SF for use in this study were its good reliability and validity (Cooper & Petrides, 2010; Mikolajczak et al., 2007) and the relatively short period of time that participants needed to devote to answering items, decreasing likelihood of response-fatigue or random responding.

Table 1

*Measurement Characteristics*

Measure	Validation	Reliability	Items	Domains	Length of Administration
Trait Emotional Intelligence Questionnaire–Short Form (TEIQue) in: Petrides, K. V. (2009). <i>Technical manual for the Trait Emotional Intelligence Questionnaires (TEIQue)</i> (1 <sup>st</sup> edition, 4 <sup>th</sup> printing). London: London Psychometric Laboratory.	Part 1: 1,119 men and women from universities and general communities; 97% high school diploma or greater Part 2: 866 men and women from universities and general communities; 90% high school diploma or greater Conclusions: Good discrimination and threshold parameters (Cooper & Petrides, 2010)	$\alpha = .87-.88$ (Cooper & Petrides, 2010)	<ul style="list-style-type: none"> <li>• 30 items total</li> <li>• 2 items for each of 15 domains</li> <li>• Responses for a Likert-type scale, from 1 (<i>completely disagree</i>) to 7 (<i>completely agree</i>)</li> </ul>	<ul style="list-style-type: none"> <li>• Adaptability</li> <li>• Assertiveness</li> <li>• Emotion Perception</li> <li>• Emotion Expression</li> <li>• Emotion Management</li> <li>• Emotion Regulation</li> <li>• Impulsiveness</li> <li>• Relationships</li> <li>• Self-esteem</li> <li>• Self-motivation</li> <li>• Social Awareness</li> <li>• Stress Management</li> <li>• Trait Empathy</li> <li>• Trait Happiness</li> <li>• Trait Optimism</li> </ul>	Approx. 3-7 minutes
Attribution Questionnaire-27 (AQ-27) in: Corrigan, P. (2008). <i>A toolkit for evaluating programs meant to erase the stigma of mental illness</i> . Illinois: Illinois Institute of Technology.	Original normative sample: 542 college students, 13 different courses of study, including nursing program (Corrigan et al., 2003) Further psychometric review with comparison to other measures: Part 1: 677 students, just completing the AQ-27 Part 2: 97 students completing other measures as well (Brown, 2008) Conclusions: Increased likelihood of stigmatizing attitudes are reflected by higher scores in expected domains, as comparable to other measures (Brown, 2008; Corrigan et al., 2003)	$\alpha = .74-.90$ (Brown, 2008; Pinto et al., 2012)	<ul style="list-style-type: none"> <li>• 27 items</li> <li>• 3 items for each of 9 domains</li> <li>• Responses for a Likert-type scale, from 1 (<i>not at all</i>) to 9 (<i>very much</i>)</li> </ul>	<ul style="list-style-type: none"> <li>• Blame</li> <li>• Anger</li> <li>• Pity</li> <li>• Help</li> <li>• Dangerousness</li> <li>• Fear</li> <li>• Avoidance</li> <li>• Segregation</li> <li>• Coercion</li> </ul>	Approx. 3-10 minutes

*(table continues)*

Measure	Validation	Reliability	Items	Domains	Length of Administration
Level of Familiarity Scale (LOF) in: Corrigan, P. (2008). <i>A toolkit for evaluating programs meant to erase the stigma of mental illness</i> . Illinois: Illinois Institute of Technology.	Original normative sample: 100 college students used to validate value ranking of items on the continuum (Corrigan et al., 2001)	Interrater reliability of 0.83 (Corrigan et al., 2001; Holmes et al., 1999)	<ul style="list-style-type: none"> <li>• 11 items</li> <li>• Responses on a continuum from 1 (no familiarity) to 11 (personally having a mental illness)</li> </ul>	<ul style="list-style-type: none"> <li>• Level of intimate familiarity with mental illness</li> </ul>	Approx. 2-3 minutes

**The Attribution Questionnaire (AQ-27).** Corrigan (2008; 2008, October) is the principal investigator of the Chicago Consortium for Stigma Research and part of the only research center that is funded by the National Institute of Mental Health (NIMH). Corrigan developed the Attribution Questionnaire and its variants to aid in measuring stigma, particularly in organizational settings that have a greater volume of interactions with individuals who have a mental illness. While there are a variety of mental illness stigma measures, many of these measures are limited in focus to a narrowed construct of mental illness stigma or do not have the same statistical support in stigma literature as the Attribution Questionnaire (Corrigan, 2008; Corrigan et al., 2004; Day et al., 2007; King et al., 2007; Kobau et al., 2010). The Attribution Questionnaire (AQ-27) is the full version of the Attribution Questionnaire and measures perceptions of mental illness based on an individual's negative attitudes or emotions and a lack of awareness of positive aspects of mental illness (Corrigan, 2008; Corrigan et al., 2004). This measure helps address individuals' reactions based mostly on the attribution theory, which suggests respondents' attitudes and emotions will correspond with their perception of an individual's responsibility for symptoms (Corrigan et al., 2003; Corrigan et al., 2004;

Link et al., 2004). Compared to other mental illness stigma or similar measures, attribution measures include not only a reflection on respondents' report of cognitive and behavioral issues related to stigma, but also an evaluation of emotional aspects (Link et al., 2004), providing an important bridge to EI considerations.

The AQ-27 contains 27 items that were developed to address the following stereotypes toward people with mental illness: blame; anger; pity; help; dangerousness; fear; avoidance; segregation; coercion (see Table 1; Corrigan, 2008). The data is scored by hand, with three items corresponding to each of the subscales, and with "avoidance" items being reverse scored (Corrigan, 2008). Original normative data was collected by using a sample of 542 students at a community college, and were recruited from 13 different courses of study, including nursing (Corrigan et al., 2003). Approximately 48% of participants represented racial minorities (Corrigan et al., 2003). Another study was conducted in two parts to further review the psychometrics of the AQ-27 (Brown, 2008). In the first part, 677 student participants completed the AQ-27, and in the second 97 student participants completed the AQ-27, the Social Distance Scale, the Dangerousness Scale, and the Affect Scale, in order to compare statistical integrity (Brown, 2008). The AQ-27 is reported to have good reliability, factors ranging from .74 to .90, and validity, using  $p = .001$ , when compared to the other three stigma measures (Brown, 2008; Pinto et al., 2012).

The AQ-27 is a self-report measure administered along with a brief paragraph about an individual with schizophrenia (Corrigan, 2008). A Likert-type scale from 1 (*not at all*) to 9 (*very much*) is used to note how true each item is in relation to what participants think or feel about the individual in the paragraph (Corrigan, 2008). The

rationale for the use of schizophrenia as an appropriate stimulus is that it is one of the most severe and simultaneously one of the most stigmatized mental illnesses; consequently, it is more likely to elicit a more accurate picture of mental illness stigma even for healthcare professionals than less extreme mental illnesses (Corrigan, 2008; Corrigan et al., 2001; Huxley, 1993; Kobau et al., 2010; Li et al., 2007; Scambler, 2009).

**The Level of Familiarity Scale (LOF).** Familiarity with mental illness is considered to be one important predictor of the likelihood that individuals will stigmatize mental illness, and familiarity may be gained over time through a variety of experiences (Anagnostopoulos & Hantzi, 2011; Corrigan et al., 2001). The Level of Familiarity Scale (LOF; Corrigan et al., 2001; Holmes et al., 1999) is a self-report, demographic-type scale that asks participants to identify the degree to which they are familiar or intimate with mental illness. Similar to how a single value for degree of education may be noted demographically, a single value denoting the most intimate degree of familiarity is obtained, from 1 (having no previous exposure to mental illness) to 11 (having personally had a mental illness; Corrigan et al., 2001; Holmes et al., 1999). Using this scale in order to provide a numerical value for familiarity with mental illness provided a necessary link for studying the relationship between EI and mental illness stigma.

### **Procedures**

Agreement from a Minnesota hospital system was sought for access to an ED work-related meeting at two campuses. I explained the purpose of the study, topics covered, amount of time required to complete the survey, confidentiality, and potential benefits and risks of the study to participants during the meeting at both sites; this information was communicated in person at the first site and by teleconference call at the

second site. Informed consent was sought using IRB-approved procedures to recruit participants. Participants considered their willingness or interest in participation and then volunteered to complete surveys outside of the meeting during a break in their work schedule. The format of the measures was estimated to take most participants no more than approximately 8-10 minutes to complete, and measures were self-administered.

In order to achieve a statistical power of .80 for the planned multiple regression analysis, meaning that there was an 80% probability of rejecting the null hypothesis when it was indeed false, and with a two-tailed test of significance alpha of .05 for rejection of the null hypothesis, an initially estimated minimum sample size of  $N = 79$  was needed (Cohen, 1992; Soper, 2014).

At the first campus of the targeted healthcare system, I attended a staffing meeting and provided the introductory information necessary for participants to make an informed decision regarding their participation. For six days, I was available in the break room so that individuals who were interested in participating could ask questions and complete surveys in the relative privacy of the break room without interfering with the workflow of the unit. This initial data collection process yielded  $n = 34$  surveys, and as this was far below the initial projection of  $N = 79$ , preliminary data analysis was conducted; results indicated that  $N = 45$  would provide sufficient statistical power for this study. To initiate data collection at the second hospital campus, I attended a meeting by teleconference call, providing the same information to the staff at this site as provided to the previous site. The surveys and informed consent forms were sent electronically to this second site's ED clinic director in order to have copies of both the consent form and the surveys printed off and left in the break room. Completed surveys ( $n = 9$ ) were mailed back as a batch by the

hospital after about three weeks. Mailing completed surveys as a batch was intended to provide participant confidentiality while avoiding lost or straggling data. The total number of participants from both campuses within the targeted healthcare organization was  $N = 43$ .

At both sites, informed consent forms were provided to participants and indicated that submitting a completed survey would indicate consent to participate in the study; signed consent forms were not collected in order to protect participant confidentiality as much as possible. No compensation was provided for participation in the study.

All participants were informed of the voluntary nature of participation and the potential risks and benefits. Then these participants were directed to read instructions and complete questions accompanying a demographic form, the Trait Emotional Intelligence Questionnaire–Short Form (TEIQue-SF), the Attribution Questionnaire (AQ-27), and the Level of Familiarity Scale (LOF). All four forms were combined into one stapled packet with a privacy page as the first page of the packet, and participants were instructed to not write their names on these to maintain response anonymity. Contact information was provided in the informed consent form so that any participants who wished could contact me with questions or concerns, and to obtain additional information about the study, such as overall outcomes. Contact information for the research ethics review boards which approved this study was also provided in the informed consent form in case participants had questions or concerns they wished to address. Executive briefings were offered to hospital leadership when the study results were available in order to discuss the implications of the research for practice and training.

## **Permissions**

Institutional Review Board (IRB) approval was first sought through Walden University, the institution from which this research originated. Once university IRB conditional approval was granted, IRB approval through the targeted healthcare system was also sought. After hospital IRB approval was granted, university IRB final approval was obtained. Approval from both institutions was necessary before proceeding with data collection.

## **Data Management**

In order to protect confidential data, the hard copy of collected data will be stored in a double-locked location for five years after the final completion and approval of this dissertation, after which they will be shredded. Data scores entered electronically are password protected. Only aggregated information was shared with interested parties in order to protect participant confidentiality.

## **Data Analysis**

The primary research question for this study was: Is having higher emotional intelligence associated with less mental illness stigma? The secondary question for this study was: Since experiences over time may change perceptions or attitudes, is increased familiarity with mental illness associated with greater emotional intelligence and less mental illness stigma?

## **Hypotheses**

In order to answer the primary and secondary research questions, the following hypotheses were used:

$H_01$ : There is no relationship between emotional intelligence (IV) as measured by the TEIQue-SF and mental illness stigma (DV) as measured by the AQ-27.

$H_11$ : Having higher emotional intelligence, as measured by the TEIQue-SF, will be associated with less mental illness stigma, as measured by the AQ-27.

$H_02$ : There is no relationship between familiarity with mental illness (covariates), and increased emotional intelligence (IV) and mental illness stigma (DV).

$H_12$ : Differences in familiarity with mental illness will relate to increased emotional intelligence as measured by the TEIQue-SF and with less mental illness stigma as measured by the AQ-27.

Data were analyzed using the Statistical Package for the Social Sciences (SPSS) Gradpack software. Each participant's scores derived from Likert-type scales for both an EI measure and a measure of mental illness stigma. Descriptive analyses of the resulting data were conducted in order to ascertain completeness and validity of the data, such as out-of-range values on study variables and patterns of missing data. Sample demographics, means, and standard deviations were summarized. Data were examined for outliers, missing data, and distribution normality and skewness. It was initially estimated that at least  $N = 79$  of ED staff would consent to participate (Cohen, 1992; Soper, 2014), but preliminary analysis using  $n = 34$  suggested that a total of  $N = 45$  would provide sufficient statistical power for the study. With the addition of a second site, the final total was  $N = 43$ .

### **Statistical Analyses**

Hypothesis 1 was tested using a bivariate correlation in order to assess the strength and direction of hypothesized relationships between the independent variable

(IV), emotional intelligence or EI, and the dependent variable (DV), mental illness stigma. This permitted inferences about the relationship between these study variables (Tabachnik & Fidell, 2006). It was anticipated that this analysis would result in a negative correlation between scores of EI and mental illness stigma. Although this statistical process cannot indicate causality, it provided relevant information on the relationship between EI and mental illness stigma (George & Mallery, 2012). The following step was used when conducting bivariate correlations:

Step 1: The bivariate correlation of EI and mental illness stigma was examined using a two-tailed test of significance.

To address Hypothesis 2, hierarchical regression analyses were conducted with mental illness stigma as the dependent variable. The following steps were taken when conducting hierarchical regression analyses, with mental illness stigma as the dependent variable:

Step1: Scores for EI and level of familiarity were entered separately as predictors of mental illness stigma.

Step2: A new variable, "EI X Familiarity" was entered as a predictor of mental illness stigma.

The proportion of variance explained by the dependent variable, mental illness stigma, was assessed for significance at each step of the analysis. After entering EI and level of familiarity into the equation, the significance of the change in R square was examined. This assessed if a significant proportion of unique variance in stigma was accounted for by EI and familiarity with mental illness.

### **Threats to Validity**

One potential threat to the validity of results was the demographic generalizability of results to the population. Another possible threat to validity was the potential of premeditated responding; therefore, to reduce the likelihood of staff collaborating on measures, and thereby threatening the integrity of the measures and associated stimuli, administration of measures for this study was conducted in as few sessions as possible. Also, participants were instructed not to share responses while completing the surveys. Other potential threats to validity included the use of self-report questionnaires to collect data regarding the variables of interest, as well as the possibility of responses based on social desirability. All procedures and instruments were carefully designed to be as neutral as possible in presentation in order to not convey judgment on participants' responses. Additionally, directions to participants emphasized that there were no right or wrong answers to survey questions.

### **Ethical Procedures**

Consent to participate in this study was obtained when prospective participants were verbally informed about the purpose and process of participation, the anonymity of data and results, and that their participation was voluntary and that if they wished to withdraw at any time, that they were free to do so. In order to protect the anonymity of study results, only overall data was shared with hospital leadership; participants were informed during the study's introduction that they could contact me if they wanted information on the overall results, but no participants did so. The purpose of sharing the overall results was to provide insights on potential areas for growth. As part of the introduction, I also explained the anticipated potential risks and benefits of participation

in this study, which were repeated on the informed consent form. Potential risks included some slight discomfort, fatigue, or stress, such as might be encountered in daily life, related to reading the stimulus and answering questions related to personal reflections. There were no personal benefits for participation, but potential social and community benefits were noted to include contributing to research on issues important in healthcare settings. While stigma is an important consideration as well, this term was referred to as “perceptions of mental health” in the informed consent process in order to limit socially acceptable responding.

### **Summary**

This study used bivariate correlations and hierarchical regression analyses of data collected from a demographic questionnaire, the TEIQue-SF, the AQ-27, and the LOF in order to identify a potential relationship between EI and mental illness stigma.

Participants were drawn from metropolitan healthcare ED staff with a total of  $N = 43$ ; they were informed of the voluntary nature of participation, the potential risks and benefits of participation, and that there was no compensation. The analyses were designed to provide important insights into whether EI, in the light of familiarity with mental illness, is indeed a mediating factor for the negative effects of mental illness stigma. The results of these data analyses are shared in Chapter 4.

## Chapter 4: Results

Since this study set out to explore the potential relationship between emotional intelligence (EI) and mental illness stigma while considering participants' level of familiarity with mental illness, participants answered self-report surveys regarding their perceptions of their own emotional processes and attitudes related to mental illness. The total number of participants in this study were  $N = 43$ . The surveys they completed included the Trait Emotional Intelligence Questionnaire–Short Form (TEIQue-SF), the Attribution Questionnaire (AQ-27), the Level of Familiarity Scale (LOF), and demographic questions. This chapter provides information relevant to the statistical findings of the study, including information on how data was collected and managed, descriptive statistics, and statistical analyses and findings for both of the focal research questions and their corresponding hypotheses.

### **Data Collection**

Data collection was initiated with the initial plan of using a single campus in the targeted healthcare system. After six days, it became apparent that the initial projection for  $N = 79$  would be difficult to meet with even the addition of a second campus. I presented the study's introductory information, such as purposes of the study and confidentiality, to participants at a staff meeting, and was then available at the first emergency department (ED) campus for six days; there was an overall participant yield of  $n = 34$ . In order to determine the statistical power of the current information and any potential changes in required  $N$  for statistical significance, the preliminary data was scored and analyzed, yielding an initial correlation of  $r = -.555$  ( $p = .001$ ), an observed R square value of .308, and an effect size of .445 (using Cohen's effect size formula); the

means and standard deviations of the preliminary data yielded Cohen's  $d = 3.385$  (Becker, 2000). After using these initial findings to conduct a preliminary analysis of statistical strength, the effect size .445 was used, with alpha = .05 and a power of .80, to calculate a revised target sample of  $N = 45$  (Soper, 2014), and a second campus in the healthcare system was used to increase the sample size. After three weeks of data collection at the second site,  $n = 9$  was obtained, producing a total study yield of  $N = 43$  (see Table 2).

### **Data Management**

In order to complete data cleaning, surveys were checked for missing or incomplete data, including questions that had multiple answers, and all data was examined for outliers, distribution, and skewness (see Table 3 for scales properties). Only six TEIQue-SF and AQ-27 responses had incomplete data, but all missing responses accounted for less than 33% of each participant's responses, and so the missing items were transformed to be the aggregated value of all the other responses for the corresponding items. One LOF form was not completed and could not be included in analyses related to familiarity of mental illness. Further, nonparametric test analysis was used to ensure that the difference in survey administration at the two sites and differences in current ED position did not impact on overall results; the distribution of the three main variables was statistically the same for both sites and across ED positions, indicating that differences in site and ED position did not impact on the major study variables.

### **Descriptive Analyses**

The participant demographics tracked in this study included information on gender, race/ethnicity, age, level of education, time in the medical field, and position at

the hospital (see Table 2). The majority of participants reported being female, and race/ethnicity responses indicated that the majority of participants also self-identified as White/Caucasian. Percentages in Table 2 demonstrate that participants of White/Caucasian ethnicity were somewhat overrepresented and that ethnic minorities were underrepresented when compared to the general demographics of the metropolitan area serviced by the healthcare system (as discussed in Chapter 3). It was not known how comparable these percentages were to the overall ethnic diversity of the healthcare system's staff. The average age of participants was approximately 43.8 years ( $SD = 12.9$ ). Most participants endorsed education levels with an Associate's (2-year) degree or with a Bachelor's (4-year) degree. On average, participants reported being in the medical field for approximately 19.7 years ( $SD = 12.7$ ). Finally, most participants reported being registered nurses, with only a few participants endorsing positions of nursing assistant, nurses' aides, or as Other (written-in information indicated these were medical technician positions).

Table 2

*Sample Characteristics*

Demographics		Frequency	%	Valid %	Cumulative %
Gender	Male	11	25.6	26.2	26.2
	Female	31	72.1	73.8	100.0
	Total	42	97.7	100.0	
Ethnicity	White/Caucasian	38	88.4	95.0	95.0
	Black/African American	1	2.3	2.5	97.5
	Multiracial/Other	1	2.3	2.5	100.0
	Total	40	93.0	100.0	
Age	Minimum	24	—	—	—
	Maximum	64	—	—	—
	Mean	43.8	—	—	—
	<i>SD</i>	12.9	—	—	—
	Valid <i>N</i>	42	—	—	—
Education	Some vocational/technical training	1	2.3	2.4	2.4
	Associate's degree	17	39.5	41.5	43.9
	Bachelor's degree	20	46.5	48.8	92.7
	Master's degree	2	4.7	4.9	97.6
	Doctoral degree	1	2.3	2.4	100.0
	Total	41	95.3	100.0	
Years in Med Field	Minimum	2	—	—	—
	Maximum	47	—	—	—
	Mean	19.7	—	—	—
	<i>SD</i>	12.7	—	—	—
	Valid <i>N</i>	42	—	—	—
Current Position	Nursing assistant	1	2.3	2.4	2.4
	Registered nurse	34	79.1	81.0	83.3
	Nurses' aide	2	4.7	4.8	88.1
	Other	5	11.6	11.9	100.0
	Total	42	97.7	100.0	

### Statistical Analyses and Findings

The mean for participants' level of EI was approximately  $M = 164.53$  ( $SD = 19.54$ , range = 88.00,  $N = 43$ ; see Table 3) as measured by the Trait Emotional Intelligence Questionnaire–Short Form (TEIQue-SF). Participants responded to how well they agreed with each of 30 items (from 1, *completely disagree*, to 7, *completely agree*, suggesting a possible scale range of 30-210). Higher scores on this measure suggested greater levels of overall emotional intelligence.

Table 3

#### *Scale Means and Standard Deviations*

Indices	EI* (Range = 30-210)	AQ** (Range = 27-243)	LOF*** (Range = 1-11)
Valid $n$	43	43	42
Missing $n$	0	0	1
Mean	164.53	87.35	7.98
$SD$	19.54	23.37	.95
Range	88.00	124.00	2.00
Minimum	109.00	50.00	7.00
Maximum	197.00	174.00	9.00

\*. EI as measured by the Trait Emotional Intelligence Questionnaire–Short Form (TEIQue-SF).

\*\*. AQ as measured by the Attribution Questionnaire (AQ-27).

\*\*\*. LOF as measured by the Level of Familiarity Scale (LOF).

The mean for participants' self-reported level of stigmatizing mental illness was approximately  $M = 87.35$  ( $SD = 23.37$ , range = 124.00,  $N = 43$ ) as measured by the Attribution Questionnaire (AQ-27); participants responded to how true they felt each of 27 items were for themselves (from 1, *not at all*, to 9, *very much*, suggesting a possible

scale range of 27-243). Higher scores suggested greater tendencies to stigmatize mental illness.

The overall mean for level of familiarity was approximately  $M = 7.98$  ( $SD = .95$ , range = 2,  $N = 42$ ) as measured by the Level of Familiarity Scale (LOF). For this measure, participants indicated their level of most intimate familiarity with mental illness (from 1, which indicates no familiarity, to 11, which indicates having a mental illness). Higher scores suggested the greatest possible intimacy or familiarity with mental illness.

### **Research Question 1**

The primary research question for this study was: Is having higher emotional intelligence associated with less mental illness stigma? In order to answer this question, a bivariate correlation was used (see Table 4) to compare participants' scores on an emotional intelligence measure and a measure of mental illness stigma. The following hypotheses were addressed:

$H_01$ : There is no relationship between emotional intelligence (IV) and mental illness stigma (DV).

$H_11$ : Having higher emotional intelligence will be associated with less mental illness stigma.

The bivariate correlation for the independent variable (EI) and the dependent variable (AQ) yielded a Pearson correlation of  $r = -.514$  ( $p < .001$ ,  $N = 43$ ), suggesting that there is a moderately strong relationship between the two variables. Other significant relationships were noted when analyzing demographic-based correlations. Education level and level of familiarity with mental illness (LOF) yielded a Pearson correlation of approximately  $r = -.32$  ( $p = .02$ ,  $n = 41$ ). Age and years in the medical field were

correlated at approximately  $r = .84$  ( $p < .000$ ,  $n = 42$ ). Participants' gender (with male participants coded as "1" and female participants coded as "2") was slightly correlated with their current ED position, yielding a Pearson correlation of approximately  $r = -.32$  ( $p = .021$ ,  $n = 42$ ), which seems best explained by having so many registered nurse females compared to males and other ED positions.

Table 4

*Correlations of Major Study and Demographic Variables*

Variables		EI	AQ	LOF	Gender	Ethnicity	Age	Education	Years in Med Field	Current Position
EI	Pearson Correlation	1	-.514**	.047	.058	.134	-.095	-.049	-.163	.118
	Sig. (2-tailed)		.000	.768	.716	.410	.549	.760	.304	.456
	<i>n</i>	43	43	42	42	40	42	41	42	42
AQ	Pearson Correlation	-.514**	1	-.122	-.191	-.177	.072	.061	.182	.099
	Sig. (2-tailed)	.000		.440	.224	.274	.652	.706	.249	.532
	<i>n</i>	43	43	42	42	40	42	41	42	42
LOF	Pearson Correlation	.047	-.122	1	.100	-.188	-.256	-.323*	-.262	.211
	Sig. (2-tailed)	.768	.440		.527	.246	.102	.039	.094	.180
	<i>n</i>	42	42	42	42	40	42	41	42	42
Gender	Pearson Correlation	.058	-.191	.100	1	-.255	-.060	.074	-.069	-.316*
	Sig. (2-tailed)	.716	.224	.527		.112	.706	.645	.665	.041
	<i>n</i>	42	42	42	42	40	42	41	42	42
Ethnicity	Pearson Correlation	.134	-.177	-.188	-.255	1	-.141	.143	-.217	-.062
	Sig. (2-tailed)	.410	.274	.246	.112		.385	.384	.179	.705
	<i>n</i>	40	40	40	40	40	40	39	40	40
Age	Pearson Correlation	-.095	.072	-.256	-.060	-.141	1	.044	.841**	-.113
	Sig. (2-tailed)	.549	.652	.102	.706	.385		.784	.000	.478
	<i>n</i>	42	42	42	42	40	42	41	42	42
Education	Pearson Correlation	-.049	.061	-.323*	.074	.143	.044	1	.070	-.193
	Sig. (2-tailed)	.760	.706	.039	.645	.384	.784		.665	.227
	<i>n</i>	41	41	41	41	39	41	41	41	41
Years in Med Field	Pearson Correlation	-.163	.182	-.262	-.069	-.217	.841**	.070	1	-.046
	Sig. (2-tailed)	.304	.249	.094	.665	.179	.000	.665		.772
	<i>n</i>	42	42	42	42	40	42	41	42	42
Current Position	Pearson Correlation	.118	.099	.211	-.316*	-.062	-.113	-.193	-.046	1
	Sig. (2-tailed)	.456	.532	.180	.041	.705	.478	.227	.772	
	<i>n</i>	42	42	42	42	40	42	41	42	42

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

## Research Question 2

The secondary research question for this study was: Is increased familiarity with mental illness associated with greater emotional intelligence and less mental illness stigma? This question was answered by conducting hierarchical regression analyses (results illustrated in Figure 2) to address the following hypotheses:

$H_02$ : There is no relationship between the level of familiarity with mental illness and emotional intelligence (IV) and mental illness stigma (DV).

$H_12$ : Differences in level of familiarity with mental illness will relate to increased emotional intelligence and with less mental illness stigma.

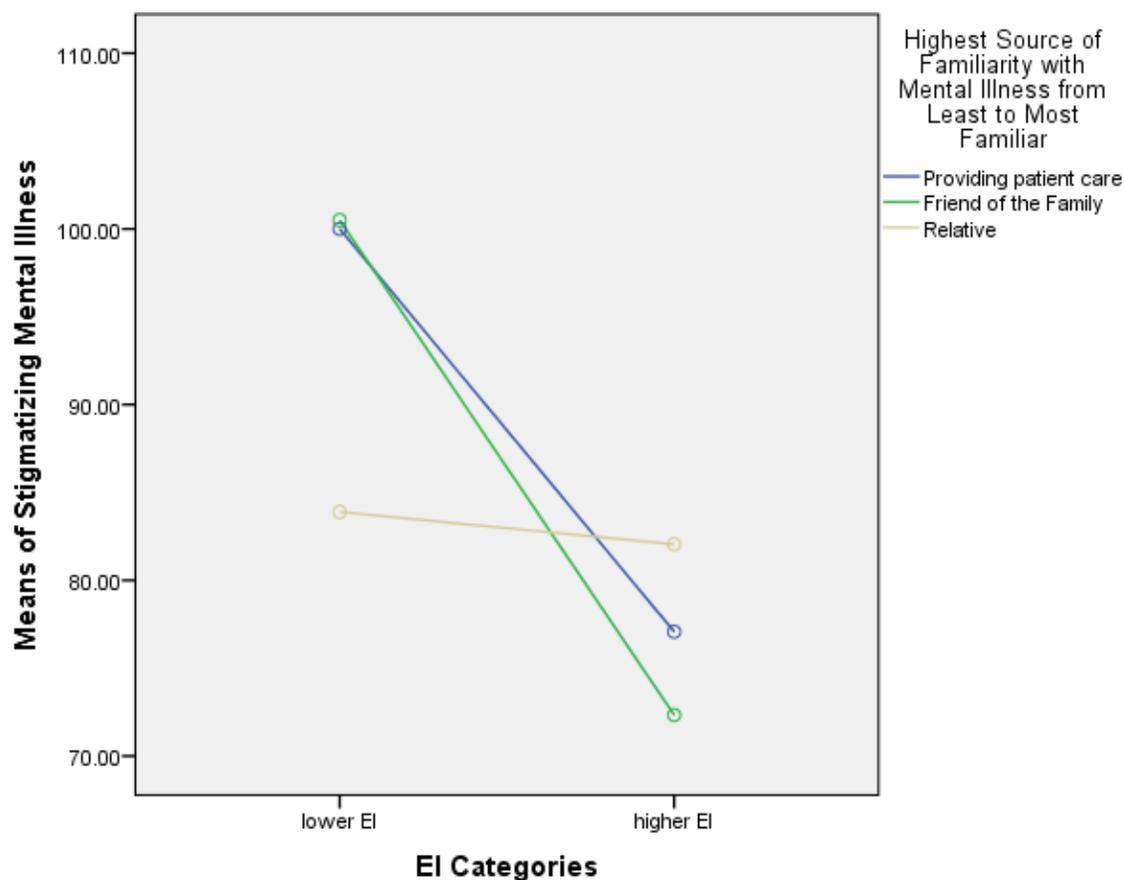


Figure 2. Regression analysis graph with means of stigmatizing mental illness.

Zero-order correlations of demographic variables were assessed in relation to the dependent variable (stigmatizing mental illness, labeled as “AQ”) and indicated no significant relationship between demographic variables and level of mental illness stigma when using Cohen’s definition of effect size of .30 or higher (see Table 2). Consequently, demographic variables were not used as predictors for this analysis. Level of familiarity (LOF) and emotional intelligence (EI) were used as predictors for mental illness stigma (AQ), to control for LOF and assess the change in R square when considering EI (Stockburger, 1998); the change in  $R^2$  after completing this process was .174.

Table 5

*Regression Factors Predicting Stigmatization of Mental Illness*

Model 1 Predictors:	B (SE)	$\beta$	T	95% CI
LOF	-2.11(2.96)	-.10	-.71	-8.09 to 3.88
EI	-.42(.15)	-.40	-2.74**	-.72 to -.11
Adjusted $R^2$ =.13 Change in $R^2$ =.17 $F=4.11(2,39)$ , $p=.024$				
Model 2 Predictors:	B (SE)	$\beta$	T	95% CI
LOF	-61.24(26.85)	-3.02	-2.28*	-115.59 to -6.90
EI	-3.40(1.36)	-3.26	-2.51*	-6.14 to -.66
EIby LOF	.36(.16)	4.19	2.22*	.03 to .69
Adjusted $R^2$ =.21 Change in $R^2$ =.09 F change in $R^2=4.91(1,38)$ , $p=.033$				
* $p<.05$ ** $p<.01$				

The second and final step of this hierarchical regression analysis was analyzing changes in significance based on the interaction term of LOF by EI after controlling for the main effects of LOF and EI. This yielded  $R^2 = .269$ , and a change in  $R^2$  of .094, with a 95% confidence interval of .031 to .686,  $F(3, 38) = 4.653$ ,  $p = .007$  (see Figure 2 for a graph representing the interaction of EI and level of familiarity and Table 5 for regression outcomes).

### Summary

This chapter reviewed the statistical findings related to the two main research questions. The majority of participants ( $N = 43$ ) endorsed being female (72.1%), White/Caucasian (88.4%), registered nurses with an Associate's (2-year) degree or higher (93%). The bivariate correlation used to compare levels of EI and mental illness stigma yielded  $r = -.514$  ( $p < .001$ ), suggesting that the primary null hypothesis that there would be no relationship between level of EI and stigmatization of mental illness should be rejected. The hierarchical regression analyses used to address the second research question indicated that when predicting for the interaction variable created to measure EI by level of familiarity,  $R^2 = .269$ , with a 95% confidence interval of .031 to .686,  $F(3, 38) = 4.653$ ,  $p = .007$ ; this supported rejection of the secondary null hypothesis, that there would be no significant relationship between level of familiarity with mental illness and EI when predicting for stigmatization of mental illness. The final chapter will provide an interpretation of these findings and information about how this might apply to potential social change.

## Chapter 5: Discussion, Conclusions, and Recommendations

This study was designed to address a research gap concerning a potential relationship between emotional intelligence (EI), familiarity, and mental illness stigma in order to inform further research and endeavors to combat mental illness stigma.

Participants were drawn from emergency department (ED) staff, since they often are gateway providers to services for people with mental illness. Data was obtained from a total of  $N = 43$  participants' answers to TEIQue-SF, AQ-27, LOF, and demographic questions. The relationship between the study variables was analyzed using bivariate correlations and hierarchical regression analyses. This chapter presents an interpretation of the findings, discusses limitations of the study, provides recommendations for future research, and discusses the study's implications for positive social change.

### **Interpretation of Results**

#### **Research Question 1**

The primary research question for this study was: Is having higher emotional intelligence associated with less mental illness stigma? The results from the bivariate correlations indicate that there is indeed a significant negative relationship between EI and stigmatization of mental illness. This means that, in general, a person with a higher level of EI tends to be less likely to stigmatize mental illness than someone with a lower level of EI. As a result, the primary null hypothesis indicating no relationship between EI and stigmatizing mental illness was rejected.

Although not directly related to the research question, significant correlations identified among various demographic variables can be adequately explained; many are likely at least partially due to the relatively small sample size and may differ from future

research with the general population. The demographic variable that correlated significantly with participants' familiarity with mental illness was level of education. Higher levels of education tended to be somewhat more correlated with this population's baseline of familiarity with mental illness (familiarity by virtue of providing care to patients with mental illness) instead of with more intimate familiarity (such as having a relative with mental illness). There are several potential explanations for this correlation. These include avoidance or limited exposure to mental illness outside of professional settings or hesitancy to share information about more intimate level of familiarity with mental illness.

Another significant relationship identified by the study, between participants' gender and current ED position, can be attributed to the tendency for the majority of participants to be female and in registered nurse capacities. Future research may not correspond with this correlation if participant pools are larger and more diverse. The final significant correlation was between the demographic variables of age and years in the medical field. There was a strong positive correlation between these variables, which would be expected because a greater age generally provides more years of life experience to devote to the medical field.

## **Research Question 2**

The secondary question for this study was: Since experiences over time may change perceptions or attitudes, is increased familiarity with mental illness associated with greater emotional intelligence and less mental illness stigma? The final step of the hierarchical regression analysis addressed this question. The results were significant and indicated that there was indeed an interaction between participants' level of familiarity

with mental illness and their level of EI as predictors for AQ levels (the dependent variable noting degree of stigmatizing mental illness). As a result, the secondary null hypothesis was rejected. It appears that more intimate familiarity with mental illness and higher levels of EI can both be related to a decreased tendency to stigmatize mental illness. More specifically, the results as graphed in Figure 2 illustrate that when EI levels are reduced, a more intimate level of familiarity such as by having a relative with mental illness may account more for a decreased tendency to stigmatize mental illness; however, this comparably more intimate level of familiarity appears to have less effect on stigmatization of mental illness when EI levels are higher.

It is also interesting to note that individuals with lower EI levels who reported their most intimate level of familiarity with mental illness as either based upon providing patient care or knowing a family friend with mental illness typically presented with higher AQ levels than individuals who reported having a family member with mental illness. The noted higher AQ levels (close to 100 as seen in Figure 2) are only slightly lower than rough estimates for average normative scores (approximately 109) for students in introduction to psychology courses (Brown, 2008). In this context, students in introductory courses typically have less training and exposure to mental illness than medical professionals; therefore, medical professional AQ levels would be expected to be much lower than student scores instead of close to the norm for the general population. As a result, these findings emphasize that familiarity gained from providing healthcare to individuals with mental illness and even having a family friend with mental illness are not sufficient conditions to combat stigmatization of mental illness if an individual's level of EI is low.

### **Study Limitations**

One of the study limitations was the use of convenience sampling to gain participants. While this was necessary to permit voluntary and confidential participation, participant demographics were often very similar, which may interfere with the generalizability of the findings to the overall population. Another related limitation was the smaller sub-sample obtained from the second site; adding the second site was necessary to retain sufficient statistical power for this study's findings, but its small catchment had many demographic similarities which further contributed to the limited generalizability of results to the general population. Further, while all procedural instructions and instruments were as neutrally worded as possible in order to allay socially desirable responding, it is possible that participants may have engaged in some response biases, such as with premeditated or collaborative responses. This was particularly possible at the second site, where I was not physically present during the survey self-administration process. Finally, any self-report survey, such as in the case of this study, depends upon the honest and accurate responses of the participants; since this cannot be guaranteed, it is another area that somewhat limits generalizability of results to other studies and populations. However, it was assumed that participants would respond honestly and accurately, and instructions emphasized that there were no right or wrong answers to encourage honest and accurate responses.

### **Recommendations**

The study results show a need for future research comparing emotional intelligence (EI) and stigmatization of mental illness that uses level of familiarity or other variables as predictors. This follow-up research should be conducted with larger and

more diverse samples in order to make the results more generalizable to the overall population. For example, the lowest noted level of familiarity for all participants was a score of 7, indicating that they were at least familiar with mental illness in the context of having experience providing treatment to individuals with mental illness; the highest score was 9, indicating participants' most intimate level of familiarity was by having a relative with mental illness. For the general population, however, level of familiarity is much broader, ranging from no familiarity at all with mental illness to personally having a mental illness. As a result, conducting a similar study but in a different setting or with a broader catchment of individuals with greater variety in level of familiarity may further inform on patterns noted in this study.

### **Implications for Positive Social Change**

Stigmatization of mental illness is likely going to continue to be an important issue to research and address due to its significant consequences, which include high financial or economic, health, and mortality costs, as noted in Chapter 2. Healthcare organizations and organizations that combat stigma are advised to consider that in this study, level of familiarity by virtue of working with individuals who have mental illness did not appear sufficiently related to decreased tendencies to stigmatize mental illness. This indicates that more than simple work-based familiarity is important in combating this difficulty. Training programs for combating stigma and for increasing emotional intelligence are both likely to benefit from these findings and are encouraged to give attention to emotional competency as one method to decrease the likelihood that their training participants will stigmatize mental illness.

## Conclusion

This study set out to identify a potential relationship between EI and mental illness stigma, with a consideration of how level of familiarity with mental illness impacts on that relationship. Participants were drawn from ED medical staff and the total sample was  $N = 43$ . The findings for this study suggest that there is a moderately negative correlation between EI scores and scores of stigmatizing mental illness. They also suggest that when level of familiarity with mental illness is more intimate, that it may account for reduced stigmatization of mental illness even if EI levels are lower. These findings have some limitations with generalizability to the overall public, given the demographic similarities for many of the participants. However, these findings do support further research and EI training as potentially productive ways to learn more about factors that contribute to stigmatization of mental illness. In pursuing ways to improve overall EI levels, regardless of level of personal familiarity with mental illness, researchers and other professionals will likely be better enabled to combat stigmatization of mental illness and possibly even other conditions in the future.

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## Appendix A: Consent Form

You are invited to take part in a research study on perceptions of mental health and ways that people process information on emotions. The researcher is inviting emergency department staff to be in the study. This form is part of a process called “informed consent” to allow you to understand this study before deciding whether to take part.

This study is being conducted by a researcher named Nicole Armstrong, who is a doctoral student at Walden University. You may already know the researcher as having been an intern, but this study is separate from that role.

### **Background Information:**

The purpose of this research is to study perceptions of mental health and ways that people process information on emotions.

### **Procedures:**

If you agree to be in this study, you will be asked to:

- Read a prompt, read and answer questions related to your own opinions and experiences, and read and answer demographic questions. This process should take no longer than 10-15 minutes.
- Answer all questions honestly and as accurately as possible.
- Not discuss questions or answers with fellow participants.

Here are some sample demographic questions:

- “What is your gender?”
- “What is your current age?”

### **Voluntary Nature of the Study:**

This study is voluntary. Everyone will respect your decision of whether or not you choose to be in the study. No one at [REDACTED] will treat you differently if you decide not to be in the study. If you decide to join the study now, you can still change your mind later. You may stop at any time.

### **Risks and Benefits of Being in the Study:**

Being in this type of study involves some risk of the minor discomforts that can be encountered in daily life, such as fatigue, stress or becoming upset. Being in this study would not pose risk to your safety or wellbeing. There are no personal benefits for participating in this research. Potential social or community benefits that may result from participating in this study include contributing to research that may help provide more information on issues important in healthcare settings.

### **Payment:**

There is no compensation.

### **Privacy:**

Any information you provide will be kept anonymous. The researcher will not use your personal information for any purposes outside of this research project. Also, the researcher will not include your name or anything else that could identify you in the study reports. Data will be kept secure

in a double-locked location and password protected. Data will be kept for a period of at least 5 years, as required by the university.

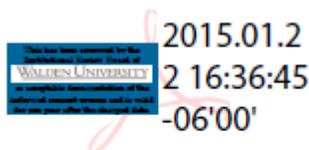
**Contacts and Questions:**

You may ask any questions you have now. Or if you have questions later, you may contact the researcher via [REDACTED]. If you want to talk privately about your rights as a participant, you can call Dr. Leilani Endicott. She is the Walden University representative who can discuss this with you. Her phone number is 612-312-1210. You may also contact [REDACTED], Chair of the [REDACTED] Institutional Review Board, [REDACTED] with questions about your rights as a person in a research study. Walden University's approval number for this study is 11-13-14-0168714 and it expires on November 12, 2015.

Please keep this consent form for your records.

**Statement of Consent:**

I have read the above information and I feel I understand the study well enough to make a decision about my involvement. By returning a completed survey, I understand that I am agreeing to the terms described above.



## Appendix B: Target Site Letter of Cooperation

December 11, 2014

Dear Nicole Armstrong,

Please be advised that the following study and associated informed consent have been approved through expedited review by the [REDACTED] Institutional Review Board on December 11, 2014:

**A Study on the Relationship between Emotional Intelligence and Mental Illness Stigma**

As the primary investigator, you are required to make periodic reports, at least annually, to the IRB. These reports shall include the number of subjects enrolled, progress to date, and an assessment of the study's overall disposition. Any proposed changes to this study that affect human subjects must be brought to the attention of the IRB prior to their initiation. An exception to this rule is any change made in an emergency situation for the protection of human subjects. All investigators are required to notify the IRB of any unanticipated event immediately.

Please reference the following [REDACTED] IRB number for this study in all future correspondences: HE 14 12 002. Approval of this study has been granted for a period of one year and expires on December 11, 2015. You may access our website at [REDACTED] to obtain a copy of the "Project Evaluation and Review Report" form which will be used to complete your annual study review or final report. This review is due no later than November 2, 2015 for the November 16, 2015 IRB meeting.

If you have any questions regarding this communication, please contact our office at [REDACTED].

The [REDACTED] Institutional Review Board wishes you every success with this research study.

Sincerely,

Chair, [REDACTED] Institutional Review Board

## Appendix C: Permissions To Use Measures

Hi;

You have permission to use the *Attribution Questionnaire (AQ-27)* and the *Level of Familiarity Scale*. There are no terms or conditions.

Let us know if you need anything else.

Best of luck in your work.

Dana Kraus, MSW  
On behalf of Dr. Pat Corrigan

Thank you for getting in touch. You do not need special permission to use any TEIQue form, provided it is for academic research purposes. You can download the instruments directly from [www.psychometriclab.com](http://www.psychometriclab.com). Please make sure you read the FAQ section at <http://www.psychometriclab.com/Default.aspx?Content=Page&id=18>. It is important to keep in mind that we do not provide access to norms or feedback reports free of charge. You will find additional relevant information in the links below.

<http://www.psychometriclab.com/Default.aspx?Content=Page&id=14>

<http://www.psychometriclab.com/Default.aspx?Content=Page&id=15>

<http://www.psychometriclab.com/Default.aspx?Content=Links&id=19>

I hope this helps,

Dino