EMPATHY AS A MEDIATOR BETWEEN IMPLICIT AND EXPLICIT BIASES TOWARDS MENTAL ILLNESS AMONG PROSPECTIVE LAW ENFORCEMENT OFFICERS

A Thesis

by

KAYLA M. REDDER

Submitted to the College of Graduate Studies of
Tarleton State University
in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

Chair of Committee,	Stephanie Robertson, PhD
Committee Members,	M. George Eichenberg, PhD
	Trina Geye, PhD
	Jennifer Gibson-Dias, PhD
Head of Department,	Jamie Borchardt, PsyD
Dean, College of Graduate Studies,	Credence Baker, PhD

May 2021

Major Subject: Applied Psychology

ACKNOWLEDGEMENTS

I would first like to thank my mentor, Dr. Stephanie Robertson, for all of her support and encouragement, as well as her thesis and career guidance. Next, I thank my committee members, Dr. Trina Geye, Dr. George Eichenberg, and Dr. Jennifer Dias, for all of the knowledge they have shared, their encouragement, and constructive feedback. Dr. Eichenberg shared his wisdom within the criminal justice field and his expertise in law enforcement, which was an essential component to the study. This incredible group of individuals helped me complete a solid study that allowed me to explore my research interests.

I also give special thanks to Dr. Scott Frankowski and Dr. Tom Faulkenberry. Dr. Scott Frankowski sparked my interest in research and guided me on my very first research project during my undergraduate career. Dr. Tom Faulkenberry played a critical role in helping me construct the Go-No-Go Association Task, as well as assistance with statistical inference. His influence on my project was crucial for a successful outcome. A special thanks to Kris Bowman, Judy Geye, and Dr. Jamie Borchardt for their support and encouragement during this process.

Finally, I would like to thank my family, specifically my mother, father, fiancé, aunt, and uncle for cheering me on. Without their love and encouragement, completing this thesis would have seemed impossible. My parents, aunt, and uncle supported me in listening to my many ideas, problems, and presentations. My fiancé, Jordan, encouraged and comforted me through stressful times and believed in my ability to obtain my master's degree.

ABSTRACT

Redder, Kayla M. Empathy as a Mediator Between Implicit and Explicit Biases Towards Mental Illness Among Prospective Law Enforcement Officers, MASTER OF SCIENCE (Applied Psychology), May 2021, 60 pp., 8 tables, 2 figures, 93 titles.

The criminalization hypothesis states that as a result of deinstitutionalization of mental health patients and lack of available care, law enforcement officers (LEO) are interacting with people with mental illness (PWMI) more often. A lack of accessible care results in untreated mental healthcare symptoms that can lead to crises LEO respond to, which has contributed to an increase of PWMI in the criminal justice system. However, there is a lack in research regarding LEO attitudes towards PWMI. This study measures implicit and explicit bias along with levels of empathy prospective LEO hold towards mental illness. It was expected that: (a) prospective LEO will hold similar explicit bias as non-prospective LEO (b) participants will hold negative implicit bias towards PWMI, (c) implicit bias scores will predict explicit bias scores, and (d) empathy will be a mediator between implicit and explicit bias scores such that: regardless of implicit bias score, participants with high empathy scores will have lower explicit bias scores and participants with low empathy scores will have higher explicit bias scores. Results indicated that prospective LEO did hold similar explicit bias as non-prospective LEO. Both groups viewed PWMI as unpredictable, but did not hold fear/avoidance, malevolence, or authoritarian views towards PWMI. Participants did not hold negative implicit bias towards PWMI, nor did implicit bias scores predict explicit bias socres. Empathy, however, was significantly negatively correlated with explicit bias scores, and was a significant predictor of explicit bias. Participants who scored lower on empathy,

scored higher on explicit bias, while participants with higher empathy scores, scored lower on explicit bias.

TABLE OF CONTENTS

LIST OF GRAPHICS

TABLES **Page**

FIGURES

CHAPTER 1

HISTORY OF STIGMA TOWARDS MENTAL ILLNESS

The National Institute of Mental Health (NIMH; 2019) estimates one in five American adults is affected by mental illness (MI) every year. In addition, in 2017 suicide was the tenth leading cause of death overall in the United States, second leading cause of death for ages 10 to 34, and fourth leading cause of death for ages 35 to 54 (NIMH, 2020). Although MI is experienced by many individuals, people with mental illness (PWMI) experience a great amount of stigma. For the purpose of this paper, PWMI are adults with severe MI, defined as a diagnosable mental, behavioral, or emotional disorder that has been experienced within the past year and causes severe impairment and interferes with one or more major daily functions (Substance Abuse and Mental Health Services Administration [SAMHSA], 2020). Some examples include, but are not limited to, schizophrenia, major depression, and bipolar disorder.

Stigma towards MI began during the middle ages when PWMI were viewed as weak human beings and MI resulted from the inability to remain morally strong (Overton & Medina, 2008). These beliefs are so entwined, that individuals experiencing MI could be rejected by society on moral grounds through conscious and unconscious behavioral associations with deviance (Lane, 2019; Page, 1995). Descriptions of MI somewhat expanded between 1950 and 1996, such that psychosis was the most prevalent description in the 50s but had begun to include anxiety and mood related issues. However, dangerous attitudes towards MI increased during this time period and attitudes have remained consistent (Phelan et al., 2000).

Stigma Towards Mental Illness

Biases are created through schemas and are innate for humans to navigate the environment by categorizing stimuli. *Schemas* are associations developed through experiences

within the environment to be used during automatic processing (Marsh, 2009). Schemas can be positive or negative, depending upon previous experiences, and are used as short cuts during social interactions and new experiences. Stereotypes are created when schemas are used to categorize individuals in the social environment (Marsh, 2009).

Stereotypes are collectively held beliefs about a given social group (Corrigan et al., 2003). Through stereotypes, we are able to quickly identify and categorize individuals to navigate social situations. Stereotypes may also be positive and negative (Marsh, 2009). A positive stereotype holds a favorable characteristic about the social group, while a negative stereotype depicts an unfavorable characteristic about the social group. Stereotypes may or may not be accurate or generalizable to the entire social group. PWMI are predominantly viewed negatively by the general public as a result of accepting false, negative stereotypes (Lauber et al., 2000; Lauber et al., 2002; Lauber et al., 2003). Commonly held stereotypes about PWMI include being violent, dangerous, unpredictable, incompetent, and unstable (Crisp et al., 2000; Crisp et al., 2005; Hengartner et al., 2013; Lauber et al., 2006; Overton & Medina, 2008; Sadler et al., 2012; Wahl, 1999).

Prejudice occurs when an individual(s) agrees with stereotypes and possesses an emotional response towards the stereotyped individual(s) (Corrigan et al., 2001a; Corrigan et al., 2003). Individuals may experience fear, pity, or anger if the individual agrees with common stereotypes held about PWMI (Angermeyer et al., 2004; Corrigan et al., 2002a). For example, according to Corrigan et al. (2002a), individuals who accept the stereotype of PWMI being dangerous, will likely react in fear of the PWMI. Two types of specific prejudicial attitudes towards MI are authoritarianism and benevolence. *Authoritarianism* refers to the belief PWMI

are inferior to normal people and should be handled with coercive treatment. *Benevolence* refers to patronizing behavior towards PWMI (Cohen & Struening, 1962).

Discrimination results from acceptance of a stereotype and an associated emotional response (prejudice), which elicits behaviors such as segregation, avoidance, and hostility towards the out-group (Corrigan et al., 2003). Using the previous example, if an individual accepts the stereotype of PWMI being more dangerous, they will likely experience fear of the PWMI, leading to possible social avoidance of the PWMI (Corrigan et. al., 2002a). Acceptance of stereotypes alone may not result in discriminatory behaviors; evidence suggests discrimination has little correlation with stereotypes, but a significant correlation with prejudice (Dovidio & Gaertner, 1996). Common discriminatory behaviors towards PWMI will be addressed in the section regarding explicit bias.

Stigma is the collective reaction that results from the acceptance of negative stereotypes that have created prejudice and have resulted in discriminatory behavioral responses (Corrigan & Watson, 2002b; Ho et al., 2018; Overton & Medina, 2008). One study examining factors related to stigma discovered high-stigmatizing groups were more likely to: (a) be young men with less contact with PWMI, (b) hold anger towards PWMI, (c) blame the individual for the cause of MI, and (d) perceive PWMI as dangerous and believe PWMI should be segregated from society. Low-stigmatizing groups were more likely to: (a) be older women, (b) be employed part and full-time, (c) have friends and family with MI, and (d) the most desire to assist PWMI (Ho et al., 2018).

Levels of Stigma

There are three different social levels which interact with and contribute to stigma and prejudice attitudes towards MI: structural, public, and self-stigma. Structural stigma refers to

laws and institutions, public stigma refers to the attitudes the general population has towards PWMI, and self-stigma refers to the internalization of societal attitudes by the individual (Corrigan et al., 2002a; Corrigan et al., 2004; Overton & Medina, 2008; Ozer, 2017). These levels of stigma result in negative consequences towards the groups and individuals such as isolation, unemployment, low-income, decreased treatment seeking behaviors, avoidance of disclosing diagnosis, decreased life satisfaction, and decreased self-esteem (Corrigan & Watson, 2002b; Corrigan et al., 2005; Ozer, 2017; Thornicroft et al., 2009; Wahl, 1999).

Explicit Bias

Explicit bias includes prejudices and attitudes an individual is consciously aware they have towards a specific group (Marsh, 2009). Kobau et al. (2010) reported 23% of participants believed PWMI are a danger to others, 38% believed PWMI are unpredictable, and 30% agreed PWMI would never recover from their illness. Prejudice and attitudes like these are associated with discriminatory behaviors such as social distance, limited access to housing and employment (structural stigma), and the level of knowledge and contact with PWMI.

Social distance. Social distance (also known as social avoidance) is an individual's willingness to interact with PWMI (or other outgroups) during everyday interactions (Corrigan et al., 2001a). Individuals who accept negative stereotypes and hold prejudicial attitudes towards PWMI are more likely to maintain social distance from PWMI (Corrigan et al., 2001a; Corrigan et al., 2003; West et al., 2014). Corrigan et al. (2001a) found participants who held authoritarian and benevolent attitudes towards MI were more likely to socially distance from PWMI. Individuals who viewed the cause of MI under the individual's control and PWMI as dangerous were more likely to social distance from, withhold help from, and approve coercive treatment of PMWI (authoritarian attitude) (Corrigan et al., 2003). Other studies have demonstrated

acceptance of the dangerousness stereotype, related to fear of PWMI, and resulted in social distance from PWMI (Angermeyer & Matschinger, 1997; Madianos et al., 1987).

A study examining social distance from PWMI in Nigeria found results comparable to western culture; there was a strong correlation between high social distance and belief in supernatural causes of MI, and high social distance and perceived dangerousness (Adewuya & Makanjuola, 2008). Also, 82% of participants reported they would not marry a PMWI, and 62% reported they would be disturbed about being in the same room as a PWMI. Participants who had cared for PWMI were three times less likely to desire high social distance, compared to those who had never cared for PWMI (Adewuya & Makanjuola, 2008). Lastly, participants 50 years and older were two times more likely to have more social distance than those younger than 50 (Adewuya & Makanjuola, 2008).

Contact and knowledge. Individuals familiar with MI are less likely to accept prejudicial attitudes and less likely to desire social distance from PWMI (Anagnostopoulos & Hantzi, 2010; Angermeyer et al., 2004; Burke et al., 2015; Corrigan et al., 2001a; Corrigan et al., 2001b; Corrigan et al., 2002; Corrigan et al., 2003; Gonzàlez-Sangiuno et al., 2018; Kobu et al., 2010; West et al., 2014). Familiarity about MI decreases the likelihood an individual will perceive PWMI as dangerous. This corresponds with less fear towards PWMI, which is associated with less social distance, compared to individuals without experience with PWMI (Angermeyer et al., 2004). Corrigan et al. (2001b) found similar results, individuals having more knowledge about MI were less likely to stigmatize PWMI on dangerousness, experience less fear, and were less likely to discriminate through social distance. West et al. (2014) demonstrated individuals who had more contact with people with schizophrenia held more favorable attitudes, less social distance or avoidance, and less anxiety and fear during intergroup contact.

Structural stigma. Structural stigma includes social policies restricting PWMI from holding political offices, voting, driving, professional licensure, and prohibiting marriage and childbearing (Melton & Garrison, 1987). Many of these policies were made under the assumption PWMI are incompetent (Melton & Garrison, 1987). Employers and landlords can hold similar attitudes towards PWMI. Individuals in the general public are less likely to hire or lease housing to PWMI (Bordieri & Drehmer, 1986; Page, 1995). In addition, employers assume PWMI are more likely to be absent, dangerous, and unpredictable, and are therefore less likely to hire PWMI (Green et al., 2003). For example, Wahl (1999) found one in three participants said they were turned down for a position they were qualified for after disclosing their mental health status. PWMI can experience issues in obtaining insurance because their mental illness was deemed a pre-existing condition, or were denied treatment because insurance could not cover the costs (Wahl, 1999)

Implicit bias

Implicit bias involves attitudes, prejudice, and stereotypes held below the conscious level and is often referred to as unconscious bias, because they occur through automatic processes used in schemas (Community Relations Service [CRS]; Marsh, 2009). When an individual has a more positive attitude and preference for their in-group than those of an out-group, he/she has an implicit bias (Greenwald et al., 1998; Nosek & Banaji, 2001). Common measures used to evaluate implicit bias include the Implicit Association Test (IAT) and the Go-No-Go Association Test (GNAT).

The IAT is a response-time measurement consisting of two categories: target categories, the object in which attitudes towards are being measured, and attribute categories, characteristics paired with the target (Greenwald et al., 1998). Participants categorize stimuli more efficiently

when attributes are congruent with their attitudes towards the target than when attributes are incongruent to the target category. An implicit bias towards PWMI is indicated through slower response times during incongruent blocks compared to congruent blocks. For example, Peris et al. (2008) used the target categories “Mentally Ill People” and “Welfare Recipients” and good and bad words. In the first condition mentally ill was categorized with good words and welfare with bad words; in the second condition mentally ill was categorized with bad words and welfare with good words.

The GNAT is similar to the IAT in that it measures automatic social cognition, but only for a single target category. Nosek and Banaji (2001) explained limitations of the IAT include the requirement of two target objects within the same condition limits interpretation of an association effect to the comparison target, as well as the inability to analyze data on a trial-by-trial basis due to date collection for the two target categories occurring simultaneously. The GNAT allows for further analysis on a trial-by-trial basis. For example, assessing implicit bias towards mental illness (the target category) with two attributes: dangerousness and harmlessness. Association is measured by an individual’s ability to discriminate between the attribute (dangerousness) belonging to the target category (mental illness) and the distraction attribute (harmlessness) (Nosek & Banaji, 2001). The GNAT will be discussed in further detail in the method section.

Several studies have examined implicit biases towards PWMI. In an analysis of articles evaluating implicit bias toward PWMI, Robb and Stone (2016) found 63% of studies reported a negative implicit bias towards MI in general or towards specific diagnoses. Gonzàlez-Sangiuno et al. (2018) reported an automatic association with bad attributes and MI. Young et al. (2019) also demonstrated a negative implicit bias towards PWMI and automatic associations with

dangerousness and helplessness attitudes, but these biases were reduced after participants received education, bias feed-back, and contact with PWMI. Hengartner et al. (2013) and Lincoln et al. (2008) studied automatic associations for depression and schizophrenia and found a greater negative implicit bias for schizophrenia than depression. Participants are also more likely to associate schizophrenia with criminal attributes than victim attributes (Takahashi et al., 2009).

Results regarding a relationship between implicit and explicit bias are mixed. Some studies have found a relationship between implicit and explicit bias in the prediction of discriminatory behavior. For example, Young et al. (2019) found individuals low in explicit bias but high in implicit bias towards MI (hold negative automatic attitudes) were less avoidant of PWMI than individuals having high explicit and implicit biases but were more avoidant than individuals having low explicit and implicit biases. Individuals low in explicit bias and high on implicit bias were the least willing to help PWMI by donating more towards a diabetes charity than a mental illness charity (Young et al., 2019). However, other studies have shown the relationship between implicit and explicit bias to be weak (Peris et al., 2008; Stull et al., 2013)

Stigmatization Through the Media and Pop Culture

The portrayal of PWMI by the media and movies contributes to the perpetuation of stigma against mental illness. The media often depicts PWMI as violent criminals, despite the fact that only five percent of violent crimes are committed by PWMI, and on average, PWMI are not violent and are more likely to be victims of violence (Choe et al., 2008; Fazel & Grann, 2006). Conversely, media portrayal of individuals who commit violent, heinous crimes (such as mass shootings) as mentally ill when they are not can support the continuation of stereotype acceptance that PWMI are violent and dangerous. Analyzing articles that associate violence with

mental illness (MI) influences people to perceive PWMI as dangerous (Frankham, 2017). Frankham (2017) analyzed stigmatizing language in media reports regarding PWMI killed by police officers (PO). Forty-four percent of reports contained stigmatizing language, which included labeling, cognitive separating, and stereotyping. Labeling included archaic language, devil and demon remarks, and the use of derogatory language about substance abuse. Cognitive separating included the use of phrases such as "not normal". Stereotypes included portrayals of PWMI as unpredictably violent, and violence associated with depictions of MI in media headlines (Frankham, 2017).

PWMI are often portrayed in films, in a similar manner as in the media. Wahl (1997) provides a synopsis into the history of stereotypical portrayals of PWMI in film, a stereotype referred to as the mad murderer. These portrayals span from murderous, mad doctors in films from the 1920's to "psycho" killers in horror movies like *Psycho*, *Halloween*, *Friday the 13th, The Nightmare on Elm Street*, and the cannibal character Hannibal Lecter in *The Silence of the Lambs*. One of the most recent examples of such a stereotype is the movie *Split,* which portrays a man with dissociative identity disorder (DID) as a murderous, evil, supervillain that desires power and revenge.

PWMI are also stigmatized through depictions of violent, dangerous stereotypes in television (TV) shows such as detective/police shows (e.g., *Miami Vice and Hawaii 5-0*), and evil villains in TV shows including *The Teenage Mutant Ninja Turtles* and *Batman* (Wahl, 1997). Gerbner (1989), in a 17-year-long study of television content, found 72% of PWMI were portrayed as violent in TV dramas and 21.6% of these characters with MI killed another character (as cited in Wahl, 1997). Wahl (1997) studied portrayals of PWMI on TV. Participants were asked to choose adjectives that best describe characters with MI from a list of 10 favorable

and 10 unfavorable characteristics. The most common adjectives chosen were active, confused, aggressive, dangerous, and unpredictable. Few positive characteristics were chosen; characters with MI were more often depicted as threatening and dangerous (Wahl, 1997).

Hierarchy of Stigma

Tringo (1970) discovered the hierarchy of preference (also referred to the hierarchy of impairments or the hierarchy of stigma) towards disability groups. Each group is associated with varying levels of attitudes and stereotypes. Groups preferred over others are associated with lesser amounts of stigma. The most preferred group elicits the least amount of stigma and the least preferred group elicits the most amount of stigma. Deal (2003) expanded upon this finding, with the discovery of a hierarchy of preference among people with disabilities. According to this theory, the least to most stigmatized disabilities are as follows: physical, cognitive, intellectual, and psychiatric disabilities (Deal, 2003; Smart, 2016; Tringo, 1970). There is some disagreement on which disability elicits the greatest amount of stigma. Some researchers found facial disfigurements to be the most stigmatized, while others have found psychiatric disabilities to be stigmatized (Smart, 2016). Due to the episodic nature of mental illnesses, PWMI often go through a cycle of experiencing symptom remission and symptom exacerbation. This instability of these illnesses causes uncertainty, that can lead to prejudice and stigma (Smart, 2016).

There may also be a hierarchy of stigma among mental disorders. Supporting a hierarchy among mental illness, schizophrenia is often associated with the most stigma and discrimination (Angermeyer & Dietrich, 2006; Crisp et al., 2005). When comparing attitudes towards schizophrenia and depression, Schizophrenia elicits more social distance, viewed as more dangerous and unpredictable, and having poorer treatment outcomes (Crisp et al., 2005). Sadler et al. (2012) found people with schizophrenia are seen as both hostile and incompetent while

other PWMIs are seen as warm but incompetent. Other mental illnesses associated with greater amounts of stigma include drug addiction and alcoholism. Studies examining attitudes towards different mental illnesses have found schizophrenia, drug addiction, and alcoholism were associated with the most amount of stigma (Crisp et al. 2000; Crisp et al., 2005; Hengartner et al., 2013). Crisp et al. (2000) found 70% of participants viewed these mental illnesses as dangerous, and 80% viewed them as unpredictable.

Theories of Stigma

Social dominance theory, dual process theory, belief in Just-World, and attribution theory provide explanation to prejudicial attitudes. Social dominance theory (SDT) holds behavorial stereotypes and discrimination (individual and systematic) as ways to reinforce social group hierarchies in which all human societies are built upon (Sidanius & Pratto, 1999). Legitimizing dominating myths provides intellectual and moral justifications as to why some groups are inferior to others and why some groups are dominating (Sidanius & Pratto, 1999). The extent an individual varies in the degree they support group dominance is referred to as social dominance orientation (SDO; Pratto et al., 1994; Sidanius & Pratto, 1999). SDO has been found to predict prejudice towards low-status individuals at the bottom of the social hierarchy (Johansson & Kunst, 2017).

Dual process theory (DPT) claims different aspects of prejudicial attitudes can be predicted by SDO and Right-Wing Authoritarianism (RWA; Duckitt & Sibley, 2007). SDO is the assumption the world is competitive, whereas RWA is the assumption the world is an innately dangerous place. These differences in motivation explain why SDO is a predictor of prejudice towards devalued groups, while RWA predicts attitudes towards socially deviant groups (Duckitt & Sibley, 2007). Belief in Just World (BJW) states people tend to believe good

things happen to good people, while bad things happen to bad people. Individuals are at a particular spot on the social hierarchy because they deserve to be there and exhibit victim blaming (Lerner, 1980). Johansson and Kunst (2017) examined whether SDO, RWA, and BJW interacted with social characteristics of PWMI and their diagnosis in a two-part study. The first study indicated SDO was the best predictor of bias towards MI and was associated with more bias towards PWMI. BJW was associated with less empathy towards men with mental illness but not females. This is because individuals scoring high on BJW view men with mental illness as more deserving of their illness than women (Johansson & Kunst, 2017). RWA was not associated with any prejudice. The second study demonstrated SDO as a predicted prejudice towards PWMI, but RWA and BJW did not play as much of a role and the degree of prejudice was affected by diagnosis.

Attribution theory explains discriminating behavior is determined by cognitive-emotional processes (Corrigan et al., 2003). Attributions made regarding etiology and controllability result in conclusion about responsibility of the stigmatized individual, and leads to emotional reactions (e.g., pity, fear, anger) that effect helping behaviors or discriminatory behaviors. Corrigan et al. (2003) found individuals that attribute the cause of MI out of the individual's control hold less discriminatory attitudes toward PWMI then those who attributed the cause within the individual's control. Attribution theory has also been found to predict discriminatory responses about the cause and the perception of dangerousness for MI (Corrigan et al., 2003).

Empathy

Empathy is defined as an other oriented affective response congruent with another's perceived welfare (Batson et al., 1997). There are two specific types of empathy: cognitive and emotional. Cognitive empathy refers to empathy wherein an individual takes the perspective of

another and emotional empathy refers to the emotional response an individual has towards another (Stephan & Finlay, 1999). Emotional empathy can be further broken down to parallel and reactive empathy. Parallel empathy occurs when the individual experiences emotions similar to another individual's emotions, while reactive empathy refers to emotions experienced as a reaction to the emotions of another (Stephan & Finlay, 1999).

Research suggests empathy can mitigate bias towards an out-group. Burke et al. (2015) examined whether contact and empathy served as mediators for implicit and explicit bias towards gay and lesbian people; empathy was a predictor of explicit bias, but not implicit attitudes. Participants with greater cognitive and emotional empathy held more positive explicit attitudes, than participants with low levels of empathy. Other studies have also demonstrated empathy as a mediator in attitudes towards out-groups (Backstrom & Bjoklund, 2007; Foster et al., 2018; Miklikowska, 2018; Sierksma et al., 2015). One study, examining the influence of ambivalent sexism and empathy on LEO attitudes towards partner violence against women, found an influence of empathy on hostile sexism, but not for benevolent sexism (Lila et al., 2013). Inducing empathy towards a stigmatized individual can improve attitudes towards the whole out-group (Batson et al., 1997). However, Teachman et al. (2003) found evoking empathy did not influence implicit or explicit bias towards overweight individuals.

Law Enforcement Officer interaction with PWMI

During the 1960's, treatment of mental illness began to shift from state hospitals to community-based care (deinstitutionalization) through outpatient centers (Browning et al., 2011). Due to a lack of funding many of these outpatient centers began to close. A shortage of available beds in state hospitals resulted in many PWMI not receiving mental health care (Browning et al., 2011). The criminalization hypothesis states that, as a result of deinstitutionalization of mental

health patients and lack of available care, law enforcement officers (LEO) are interacting with PWMI more often. Untreated mental health symptoms create crises, which has contributed to an increase of PWMI in the criminal justice system (Fredrick et al., 2018; Teplin, 1983). According to a 2016 study, one in 100 law enforcement encounters in the United States involved a PWMI (Livingston, 2016). Of these individuals, one in four had prior arrest history and one in 10 interacted with LEO along the way of receiving mental health care.

Law Enforcement Officer Attitudes Toward PWMI

Despite increased interaction between LEO and PWMI, there is a lack of research regarding LEO attitudes towards this social group. Watson et al. (2014) examined how LEO use schemas during calls involving MI and found PO assess these types of calls in terms of dangerous and difficulty levels. Cues (such as substance abuse and visual cues) PO use in determining the presence of MI indicate more dangerous and difficult call schemas. Studies that examined this issue have found LEO have similar attitudes towards PWMI as the general population, such that PWMI are more dangerous and violent than people without MI (Oxburgh et al., 2016; Soomro & Yanos, 2019; Watson et al., 2004). Soomro and Yanos (2019) demonstrated LEO hold negative stereotypes about MI at higher rates than the general public, and LEO are more likely to desire discriminatory behaviors, like social distance, than the general public.

A study in Greece determined LEO reported the PWMI they transported were often or always violent and viewed PWMI as unpredictable. This may be due to the fact LEO are basing beliefs about MI on the PWMI who display this violent behavior and not on the individuals with MI who are aware of their illness, adhere to treatment, are less aggressive, and rarely have contact with LEO or need hospitalization (Psarra et al., 2008). Sixty-eight percent of LEO in this study recognized the need for hospitalization only during the acute phase of MI, but the same

percentage believed PWMI should be hospitalized permanently; indicating a possible lack of knowledge about MI from inadequate training (Psarra et al., 2008). Eighty-four percent of LEO recognized medications reduce the risk of violence in PWMI, but also believed PWMI are a public nuisance, cause family issues, are dangerous to themselves, and are unkempt.

In recent events, LEO interactions with civilians have come under scrutiny. Specifically, the use of force and fatal shootings of civilians by police officers has sparked controversy, concerns for police reform, and has diminished the trust between LEO and minority groups. Attitudes LEO may hold towards minority groups could influence these types of incidents. Due to the increased interaction between PWMI and LEO, it is important to evaluate attitudes LEO may hold towards PWMI that could influence the likelihood of such incidents.

Saleh et al. (2018) examined the prevalence of MI among individuals killed during law enforcement interactions and found, of the 1099 individuals killed in 2015, 23% exhibited signs of MI, and the risk of death during a police interaction was seven times higher for individuals having signs of MI. Characteristics of PWMI killed during law enforcement interaction included PWMI were 2.8 times more likely to be killed during a law enforcement interaction while at home and PWMI were 3.1 times more likely to be in possession of a knife. Drug and alcohol consumption within the past 24 hours or criminal history was not significantly associated (Saleh et al., 2018). However, there is no indication that MI increases the likelihood for use of force or result in injury of PWMI or the LEO during an interaction (Kerr et al., 2010; Morabito & Socia, 2015). Instead, suspect resistance (Kerr et al., 2010) and substance use (alcohol or drugs) (Morabito & Socia, 2015) may be better predictors of injury. Morabito and Socia (2015) explained MI alone may not be a predictor of injury because interactions between LEO and PWMI are not as dangerous as LEO may believe. Substance abuse and comorbidity with MI was

a significant predictor of injury for the individual but not LEO, which may have been due to perceived unpredictability by the LEO (Morabito & Socia, 2015).

Crisis intervention teams (CIT) were created to reduce LEO and PWMI injuries by providing LEO with training on MI. CIT training was first implemented in Memphis, Tennessee after a fatal LEO shooting of a PWMI, and has since been adopted by police departments internationally (e.g., Canada, the UK, and Australia) and nationwide (Rogers et al., 2019; Steadman & Morrissette, 2016). A main component of CIT training is the 40-hour training on MI for LEO, but results of studies examining the effectiveness of CIT training are inconsistent. Studies have found LEO attitudes and stigma towards PWMI significantly improved following CIT training (Ellis, 2014; Mulay et al., 2016) and a reduction in arrests (Teller et al., 2006), while others have not found CIT training to significantly decrease injury during PO interactions (Rogers et al., 2019) or decreases arrest (Steadman & Morrissette, 2016).

Purpose

There are vast amounts of literature examining stigma towards PWMI among the general public. LEO are encountering this population at an increasing rate, and less is known about the attitudes LEO may hold towards PWMI. Due to the large gap in knowledge regarding police officer attitudes towards MI, the purpose of this study is to evaluate prospective LEO attitudes towards PWMI and any effects empathy may have on these attitudes. This study addresses the following questions:

1. What explicit biases do prospective LEOs hold towards PWMI?
2. What implicit bias towards PWMI do prospective LEOs currently hold?
3. Does empathy have any effect if participants hold these biases?

This study addresses the following hypotheses:

1. Prospective LEO will hold similar explicit bias as non-prospective LEO.

2. Participants will hold negative implicit bias towards PWMI.
3. Implicit bias scores will predict explicit bias scores.
4. Empathy will be a mediator between implicit and explicit bias scores such that: regardless of implicit bias score, participants with high empathy scores will have lower explicit bias scores and participants with low empathy scores will have higher explicit bias scores.

CHAPTER II

METHOD

Participants

Participants consisted of undergraduate criminal justice (CJ) and psychology majors who intend/desire to become LEOs. Participants were also at least 18 years of age and were recruited through the TSU criminal justice department by asking professors for their assistance in collecting responses; psychology majors were recruited through the SONA system. Participants who are CJ and psychology majors who do not wish to become LEOs served as a general population to which prospective LEOs scores could be compared. Participants were incentivized to participate in the study by being entered to a raffle to win one of two visa gift cards. Psychology majors were also awarded two Curriculum Vita (CV) points for their participation.

Measures

Implicit Bias

Implicit bias was measured using the GNAT. As previously mentioned, the GNAT is a response time measurement evaluating one category (the object in which attitudes towards are being measured) and two attribute categories (one paired with the target category and one as a distractor) within a given trial. Strength of association is determined by the ability of the participant to discriminate stimuli belonging to that target attribute and target category from distractor attributes. The GNAT was constructed according to Nosek and Banaji (2001), and using target and attribute categories from Young et al., (2019) (i.e., mental illness with positive versus negative, mental illness with harmless versus dangerous, and mental illness with competence vs incompetence).

Implicit bias towards mental illness was assessed using positive and negative attributes. In one condition, participants identified stimuli corresponding with the target category (mental illness) and an attribute (e.g., positive). In a second condition, participants identified stimuli corresponding with the same category but the opposing attribute (e.g., negative). When a presented stimulus corresponded with the target category or the paired attribute, participants indicated so by pressing the space bar (indicating "go"), but if stimuli did not correspond, there was no response (indicating "no-go"). In the go-no go condition mental illness was paired with positive attributes, negative attributes served as the distractor and conversely when mental illness is paired with negative attributes. If a participant responded incorrectly, a red "x" appeared on the screen; if the response was correct, "Correct" in green appeared (Nosek & Banaji, 2001). Each condition consisted of 60 trials (20 practice trials and 40 critical trials for a total of 180 trials). Each trial had a response deadline of 750ms, with a 500ms break between the presentation of a new stimulus. The GNAT was constructed using Opensesame. Latin square counterbalancing was used to minimize order-effects and confound variables. There was a total of 12 different sequences. The three conditions occurred in 6 sequences. The sequences were as follows:

1. positive vs. negative, harmless vs. dangerous, and competent vs. helpless.
2. positive vs. negative, competent vs. helpless, and harmless vs. dangerous.
3. harmless vs. dangerous, competent vs. helpless, and positive vs. negative.
4. harmless vs. dangerous, positive vs. negative, and competent vs. helpless.
5. competent vs. helpless, positive vs. negative, and harmless vs. dangerous.
6. competent vs. helpless, harmless vs. dangerous, and positive vs. negative.

In the remaining 6 sequences, the sequencing of the three conditions remained the same, except the ordering of the trials (e.g., positive vs. negative) were reversed for every condition, such that negative trials preceded positive trials, dangerous preceded harmless, and helpless preceded competent.

Explicit Bias

Explicit bias was measured using the 28-item Prejudice Towards People With Mental Illness (PPMI) scale (Kenny et al., 2018). The PPMI (appendix 1) consisted of the following subscales: (a) fear/avoidance, (b) malevolence, (c) authoritarianism, and (d) unpredictability. Statements (found in appendix 2) were rated on a 9-point Likert scale ranging from very strongly disagree to very strongly agree. The PPMI is reliable and has internal consistency (α=.91; Kenny et al., 2018).

Social Desirability

Social desirability is a form of response bias wherein participants may withhold their true perception in order to appear more socially acceptable. The 13-item version Marlowe-Crowne social desirability scale (M-CSDS-13; appendix 2) was used to assess any social desirability bias a participant exhibited (Reynolds, 1982). The measure was modified from true and false to a 7-point Likert scale (1 = strongly disagree to 7 = strongly agree), as Young et al. (2019) did, in order to maintain consistency within the survey.

Empathy

Empathy was measured using the Toronto Empathy Questionnaire (TEQ; Spreng et al., 2009). The TEQ (appendix 3) is a 16-item questionnaire that evaluates four empathetic attributes: emotional contagion (emotional state stimulated in oneself through another), emotional comprehension, sympathetic physiological arousal, and altruism. Questions were

measured on a 5-point Likert scale (i.e., 0 = never, 1 = rarely, 2 = sometimes, 3 = often, and 4 = always). Negative items (2, 4, 7, 10, 11, 12, 14, 15) are inversely scored and summed with scores on positive items (1, 3, 5, 6, 8, 9, 13, 16) to receive a total score. The TEQ has good internal consistency and high test-retest reliability (α = .87; Spreng et al., 2009).

Career Commitment

Career commitment was used to determine if participants will likely follow through in becoming a police officer. The 12-item Career Commitment Measure (CCM; appendix 4) evaluates three aspects: (a) career identity, (b) career planning, and (c) career resilience (Carson & Bedeian, 1994). The CCM has good construct validity and good reliability (α = .79 - .85 across the 3 aspects). Responses were made on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). Survey items from the CCM can be found in appendix 4.

Procedure

Data collection took place in person. Due to COVID, the following extra precautions were taken: (a) a 45 minute block schedule was used to minimize interaction between participants and allow for cleaning, (b) temperatures were taken with a forehead thermometer; any participant with a temperature of 99 degrees or higher was not able to participate, (c) the keyboard and door handles were sanitized between each participant, (d) physical distancing was maintained, (e) all parties were required to wear masks, and (f) hand sanitizer was kept in the conference room and main office. Participants were first presented with an informed consent form. After consent, participants completed the GNAT, then the questionnaires. Participants were asked if they planned on becoming a LEO. Only participants who answered yes complete the CCM. In addition, demographic questions regarding age, race, and gender were asked. Participants were also asked about any personal, immediate family, extended family, or close

friends with a history of mental illness. The experiment took approximately 30 minutes to complete. Upon completion of the survey, participants who were redirected to a Google form where they were presented with a debriefing statement and were asked to enter information if they would like to be included in the raffle participants and were then thanked for participating.

Statistical Analysis

Practice trials for each block were removed, leaving only critical trials. Mean response times (RT) were then calculated for each condition by filtering out incorrect responses and incongruent trials (trials containing distractor items; Nosek & Banaji, 2001). Stronger associations between the target and an attribute are categorized by faster average response time for that block (Nosek & Banaji, 2001). Paired sample t-tests were conducted to compare mean RTs between positive/negative, harmless/dangerous, and incompetent/competent attribute trials to determine if participants have a negative or positive implicit bias towards PWMI. A combined score was then created for each participant similar to Young et al. (2019) to be included in regression analysis. Response time differences between each condition were averaged for each participant. The overall score was then used to assign participants to an association or no association group. If the average score was positive (meaning the participant took longer to respond to the negative, dangerous, and helpless trials compared to the positive, harmless, and competent trials) the participant was assigned to the no association group. If the average score was negative (meaning the participant responded faster to the negative, dangerous, and helpless trials compared to the positive, harmless, and competent trials), the participant was assigned to the association group.

Scores for explicit bias were calculated for each of the four categories (fear/avoidance, malevolence, authoritarianism, and unpredictability). A composite explicit bias score and

empathy were then computed for further analysis. An ANOVA was conducted to determine if there was any significant difference between age groups in regard to career commitment. Hierarchical multiple regression was conducted to determine if implicit bias was a predictor of explicit bias, and whether implicit bias would predict empathy scores, that would in turn predict explicit bias scores. In addition, social desirability was then added to the model to determine if they predict empathy and explicit bias scores.

CHAPTER III

RESULTS

A total of 33 participants completed the experiment. Seventy-two percent (24) of the sample was between the ages of 18 and 21 years, 24% (8) between the ages of 22 and 25 years, and 3% (1) between the ages of 26 and 29 years. The majority of participants were Caucasian (69.7%), 24.2% (8) Hispanic, and 6.1% (2) African American. Twenty-seven (81.8%) participants were female and six (18.1%) males. Of the 33 participants, 24% (8) were CJ majors and 76% (25) were psychology majors. Eighteen percent (6) of the sample had no experience with MI. Of the remaining 82% (27), 42.4% (14) had experienced MI themselves, 42.4% (14) had experience with MI through an immediate family member, 39.4% had experience with MI through an extended family member, and 54.5% had experience with MI through a close friend. In addition, 51.5% (17) of the participants with experience with MI had more than one contact with MI.

Explicit Bias, Empathy, and Social Desirability Scores

Lower scores on the PTPWMI indicate less prejudicial attitudes towards PWMI. Participants did not hold fear/avoidance, malevolence, or authoritarianism biases towards PWMI (M = -13.9, SD = 9.2, M = -19.2, SD = 7.3, and M = -8.4, SD = 6.6 respectively). However, participants did hold unpredictability biases towards PWMI, although this score was very low (M = 1, SD = 6.443). The average composite score on explicit bias was -40.6 (SD = 22.9), suggesting that overall participants did not hold explicit biases towards PWMI.

Average score on the Social Desirability Scale was 40.5 (SD = 3.9). Higher scores indicate more socially desired responses. This average was higher than the average received in Young et al. (2019). On the Toronto Empathy scale, participants scored an average of 47.7 (SD =

6.8; higher scores indicate higher empathy). The scores on the Toronto Empathy Scale are similar to those demonstrated in another study (an average of 49) whose participants were also United States college students (Greeno et al., 2017). Table 1 provides a summary of correlations between variables. As expected, empathy scores were correlated with explicit bias scores, r = -.404, p = .020. However, implicit bias scores, in any of the three conditions, were not correlated with explicit bias scores: positive versus negative, r = -.139, p = .441, harmless versus dangerous, r = .068, p = .708, and competent versus helpless, r = -.030, p = .870. Social desirability scores were not correlated with either explicit bias nor empathy scores, r = .197, p = .272 and r = -.137, p = .447 respectively.

		1	2	3	4	5	6
1.PTPWMI Total Score	Peason's r	—					
	p - value	—					
2. Empathy Score	Peason's r	-0.404*	—				
	p - value	0.020	—				
3. P/N Difference	Peason's r	-0.116	-0.120	—			
	p - value	0.520	0.505	—			
4. H/D Difference	Peason's r	0.085	-0.209	0.091	—		
	p - value	0.637	0.244	0.614	—		
5. C/H Difference	Peason's r	-0.035	0.064	-0.190	0.140	—	
	p - value	0.847	0.725	0.291	0.437	—	
6. Social Desirability Score	Peason's r	0.197	-0.137	-0.086	0.056	-0.093	—
	p - value	0.272	0.447	0.632	0.758	0.608	—

Note. * p < .05, ** p < .01, *** p < .001

Table 1. A Summary of Relationships Between Variables

Only 15% (5; 3 females and 2 males) of the participants were prospective LEO. Of those participants, 80% (4) were CJ majors and 20% (1) psychology majors. Scores on the PTPWMI suggest prospective LEO did not hold fear/avoidance, malevolence, or authoritarianism biases towards PWMI (*M* = -4.4, *SD* = 9.7, *M* = -11.8, *SD* = 6.4, and *M* = -3.8, *SD* = 9 respectively). Prospective LEO did hold unpredictability bias (*M* = 5.2, *SD* = 5). Average composite score among prospective LEO was -14.8 (*SD* = 23.6), suggesting that prospective LEO did not hold explicit biases toward PWMI. It is worth noting that although LEO did not hold explicit biases in three of the four categories or overall, all scores were higher than non-prospective LEO.

Average on the Social Desirability Scale was 41.4 (*SD* = 4.5), and 40.8 (*SD* = 4.6) on the Toronto Empathy Scale. Only prospective LEO completed the CCM (M= 42.2, *SD* = 4.5). Higher scores on the CCM indicate higher career commitment than lower scores. An Analysis of Variance (ANOVA) was conducted to determine any significant difference between age regarding career commitment. Results revealed there was no significant difference in career commitment between age groups among future LEO, $F(1,3) = 1.434$, $p = .317$, $\omega^2 = 0.080$.

				95% Confidence Interval		
	t	df	p	Lower	Upper	Cohen's d
PTPWMI Total Score	-3.057	31.000	0.005	1.975	14.211	-1.484
Empathy Score	2.698	31.000	0.011	-4.948	2.791	1.310
Social Desirability Score	-0.569	31.000	0.574	-50.586	-10.100	-0.276

Table 2. Independent t-test Results for Prospective LEO Versus Non-prospective LEO

An independent *t*-test was conducted to determine if prospective LEO scored higher on explicit bias than non-prospective LEO (found in table 2). The analysis revealed that there was a significant difference for scores on the PTPWMI such that prospective LEO scored significantly higher on explicit bias with a large effect size, $t(31) = -3.057$, $p = 0.005$, $d = -1.484$. Analysis also revealed prospective LEO scored significantly lower on empathy with a large effect size, but social desirability scores were not significantly different compared to non-prospective LEO $t(31) = 2.698$, $p = 0.01$, $d = 1.310$ and $t(31) = -0.569$, $p = .574$, $d = -0.276$ respectively. Results from a Bayesian *t*-tests supported these findings. Bayes factors provide the likelihood of observed results occurring under two competing hypotheses, the null hypothesis (H_0) and alternative hypothesis (H_1; Faulkenberry, 2018). The observed data are approximately 8.51 times more likely under H_1 than H_0 for explicit bias scores and 4.48 times more likely under H_1 than H_0 for empathy scores, $BF_{10} = 8.51$, and $BF_{10} = 4.48$ respectively.

Cases	Sum of Squares	df	Mean Square	F	p	ω^2
Major	0.072	1.000	0.072	1.638e -4	0.990	0.000
Future LEO	2466.667	1.000	2466.667	5.605	0.025	0.128
Major ∗ Future LEO	115.315	1.000	115.315	0.262	0.613	0.000
Residual	12762.333	29.000	440.080			

Table 3. Differences Between Prospective LEO Status and Majors on Explicit Bias

Cases	Sum of Squares	df	Mean Square	F	p	ω^2
Major	12.893	1.000	12.893	0.427	0.518	0.000
Future LEO	100.677	1.000	100.677	3.338	0.078	0.062
Major ∗ Future LEO	126.380	1.000	126.380	4.190	0.050	0.084
Residual	874.708	29.000	30.162			

Table 4. Differences Between Prospective LEO Status and Majors on Empathy

A 2-way ANOVA was used to compare explicit and empathy scores between criminal justice majors and psychology majors, and whether participants were a prospective LEO. Results are shown in tables 3 and 4. There was a main effect of future LEO, such that there is a significant difference in scores on the PTPWMI between prospective LEO and non-prospective LEO regardless of major $F(1, 29) = 5.605$, $p = 0.025$, $\omega^2 = 0.128$. Further analysis revealed prospective LEO CJ majors scored significantly higher on explicit bias than non-prospective LEO CJ majors $F(1, 29) = 6.391$, $p = .017$ (results are shown in figure 1

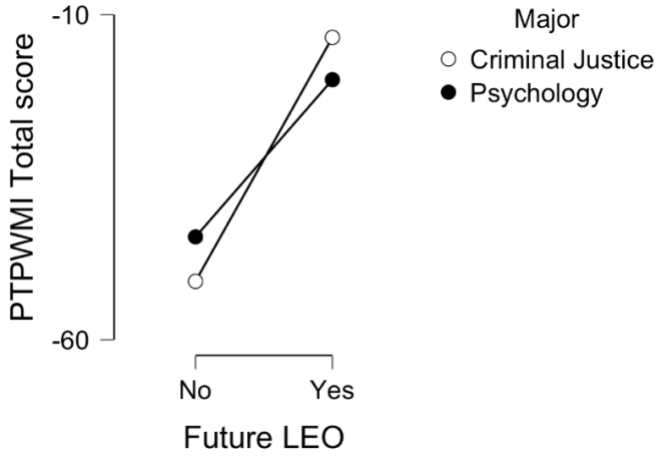

Figure 1. Main effect of Prospective LEO Status on Explicit Bias Scores

Scheffe's post hoc analysis was utilized to correct for the sample size difference between prospective LEO and non-prospective LEO. The analysis confirmed this result $t(1, 29) = -2.367$, $p = 0.025$, $d = -1.508$ 95% CI [-57.470, -4.197]. There was no significant main effect of major or prospective LEO on empathy scores, $F(1, 29) = 0.427$, $p = .518$, $\omega^2 = 0.000$ and $F(1, 29) = 3.338$, $p = .078$, $\omega^2 = 0.062$ respectively. However, there was an interaction effect between major and prospective LEO $F(1, 29) = 4.190$, $p = .050$, $\omega^2 = 0.084$. This interaction suggests that differences in scores on empathy between majors is affected by whether or not the participant is a prospective LEO. Scheffe's post hoc analysis demonstrated that non-prospective LEO CJ majors scored significantly lower on empathy compared to non-prospective LEO psychology majors $t(1, 29) = -3.105$, $p = 0.037$, $d =$ 95% CI [-17.289, -1.127]. These results are shown in figure 2.

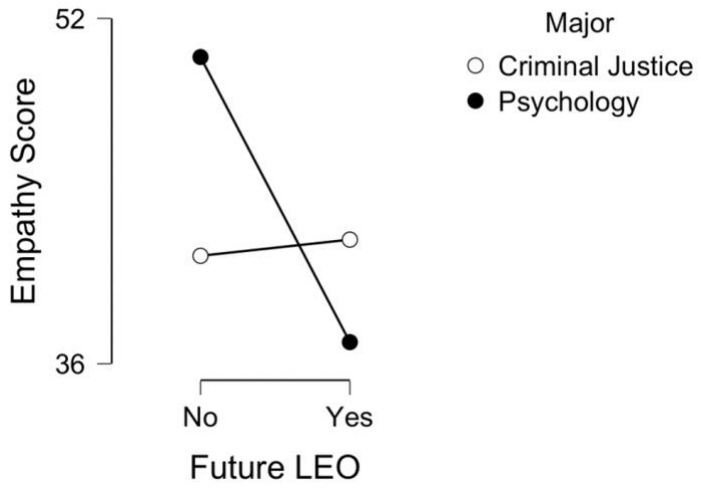

Figure 2. Interaction Between Major and Prospective LEO Status on Empathy Scores

Implicit Bias Scores

Analysis revealed an average response times of 604.5milliseconds (ms; *SD* = 35.1), 604.9ms (*SD* = 30.3), 603.29ms (*SD* = 36.3), 604.54ms (*SD* = 36.6), 600.54ms (*SD* = 35.9), and

596.95ms (*SD* = 37.6) for positive, negative, harmless, dangerous, competent, and helpless respectively. There was an average of -0.426ms (*SD* = 16.1), -1.249ms (*SD* = 18.9), and 3.586ms (*SD* = 16.4) between the positive versus negative trials, harmless versus dangerous trials, and competent versus helpless trials respectively. A paired samples t-test was conducted to determine if there was any significant difference in response times for each trial. Results are shown in table 5. Response time differences between positive versus negative trials, harmless versus dangerous trials, and competent versus helpless trials were not significant $t(32) = 0.152$, $p = 0.880$, $d = 0.027$, 95% CI [-5.272, 6.125], $t(32) = 0.380$, $p = 0.707$, $d = 0.066$, 95% CI [-5.454, 7.952] and $t(32) = -1.257$, $p = 0.218$, $d = -0.219$, 95% CI [-9.395, 2.224] respectively. A Bayesian paired t-test further revealed the observed data are approximately 5.31 times more likely under H_0 than H_1 for positive versus negative, 5.02 times more likely under H_0 than H_1 for harmless versus dangerous, and 2.61 more likely under H_0 than H_1 for competent versus helpless, $BF_{01} = 5.31$, $BF_{01} = 5.02$, and $BF_{01} = 2.61$ respectively.

							95% CI for Mean Difference		
		t	df	p	Mean Difference	SE Difference	Lower	Upper	Cohen's d
Negative	Positive	0.152	32	0.880	0.426	2.798	-5.272	6.125	0.027
Dangerous	Harmless	0.380	32	0.707	1.249	3.291	-5.454	7.952	0.066
Helpless	Competent	-1.257	32	0.218	-3.586	2.852	-9.395	2.224	-0.219

Table 5. Paired Sample t-test for Implicit Bias Scores

Average response time for participants who were prospective LEO are as follows 606.56ms (SD = 38.1) for the positive condition, 600.008ms (SD = 40.4) for the negative condition, 593.601ms (SD = 43) for the harmless condition, 589.014ms (SD =52.5) for the dangerous condition, 583.6ms (SD = 67.5) for the competent condition, and 588.77ms (SD = 65.1) for the helpless condition. Among prospective LEO there was an average of 6.552ms (SD = 7.8) between the positive versus negative trials, 4.586ms (SD = 13.9) between the harmless versus dangerous trails, and -5.174 (SD = 18.2) between the helpless versus competent trials. A MANOVA was conducted to determine if there was any significant difference in average response time differences between prospective LEO and non-prospective LEO. The analysis revealed there were no significant differences, $F(1,31) = 1.029$, $p = 0.394$. Results are shown in table 6

Cases	df	Appro. F	Trace $_{\text{Pillai}}$	Num df	Den df	p
(Intercept)	1	0.624	0.061	3	29.000	0.605
Future LEO	1	1.029	0.096	3	29.000	0.394
Residuals	31					

Table 6. Average Response Times Between Prospective Status

Composite Scores

After computing the composite score for each participant, participants were assigned to either an association group or a no association group. Approximately half the sample (51.5%; 17) were categorized in the association group while the remaining 48.5% (16) were categorized in the no association category. Among the non-prospective LEO group, exactly half (14) were categorized in the non-association group and the other half (14) in the association group. For

prospective LEO, 40% (2) were categorized in the no association group and 60% (3) were categorized in the association group.

Effect of Empathy on Implicit and Explicit Bias

A linear regression analysis was conducted to determine if empathy scores would predict explicit bias scores which indicated that empathy scores did predict explicit bias scores, $F(1,31) = 6.043$, $p = 0.020$, 95% CI [-2.510, -0.234].

A hierarchical multiple regression was conducted to determine if implicit bias scores, empathy scores, and social desirability scores would predict explicit bias scores. In addition, social desirability scores were added to the model to determine if these scores predict empathy and explicit bias scores. In Model 1 the average score differences between the three GNAT blocks were entered. In Model 2 the average score differences for the three blocks and empathy were entered. Finally, in Model 3 the average score differences for the three blocks, empathy, and social desirability scores were entered. None of the models, Model 1, Model 2, or Model 3, were significant, $R^2 = 0.028$, $F(3,29) = .282$, $p = .838$, $R^2 = .193$, $F(4,28) = 1.671$, $p = .185$, and $R^2 = .207$, $F(5,27) = 1.414$, $p = .25$ respectively. In Model 2 there was a significant change in R^2 that resulted in an additional 16.4% of the variance in explicit bias scores $R^2 = .193$, $F(1,28) = 5.702$, $p = .024$. The change in Model 3 was not significant $R^2 = .207$ $F(1,27) = .503$, $p = .484$ and only accounted for an additional 1.5% of the variance in explicit bias scores. The model summary is located in Table 7. Upon further analysis, as demonstrated in the multiple linear regression, empathy scores were found to be the only significant predictor of explicit bias scores in both Models 2 and 3, $\beta = -.418$, $t = -2.388$, $p = 0.024$ and $\beta = -.401$, $t = -2.253$, $p = 0.033$ respectively.

Variable	*B*	95% CI for *B*		SE *B*	β	R^2	ΔR^2
		Lower	Upper				
Step 1						.028	.028
P/N Difference	-0.201	-0.750	0.348	0.268	-0.141		
H/D Difference	0.132	-0.330	0.595	0.226	0.109		
C/H Difference	-0.108	-0.649	0.434	0.265	-0.077		
Step 2						.193	.164*
P/N Difference	-0.252	-0.764	0.259	0.250	-0.171		
H/D Difference	0.025	-0.415	0.464	0.215	0.020		
C/H Difference	-0.063	-0.567	0.442	0.246	-0.045		
Empathy Scores	-1.420*	-2.638	-0.202	0.595	-0.418		
Step 3						.207	.015
P/N Difference	-0.229	-0.751	0.292	0.254	-0.161		
H/D Difference	0.016	-0.429	0.416	0.217	0.013		
C/H Difference	-0.042	-0.55	0.471	0.250	-0.030		
Empathy Scores	-1.364*	-2.606	-0.122	0.605	-0.401		
Social Desirability Score	0.738	-1.396	2.872	1.040	0.124		

Note. *p < .05

Table 7. Hierarchical Multiple Regression Results for Explicit Bias

Multinomial logistic regression analysis was also conducted to determine if implicit bias, explicit bias, and empathy scores would predict whether or not participants were prospective LEO. Results are shown in table 8. Results indicated that the model was significant, $\chi^2 = 11.667$, $p = .009$. However, PTPWMI, empathy, nor automatic association status were significant

predictors of prospective LEO status, $\chi^2 = 4.988$, $p = 0.054$, 95% CI [0.881, 1.001], $\chi^2 = 2.915$, $p = 0.111$, 95% CI [0.956, 1.545] and $\chi^2 = 0.001$, $p = 0.982$ respectively, 95% CI [0.061, 17.410] respectively.

	Effect	Estimate	*SE*	95% CI		*p*
Future LEO				Lower	Upper	
No	Intercept	-8.762	5.557			
	PTPWMI Total Score	-0.063	0.033	0.881	1.001	.054
	Empathy Score	0.195	0.122	0.956	1.545	.111
	Association	0.033	1.441	0.061	17.410	.982

Note. Reference group is prospective LEO

Table 8. Multinomial Logistic Regression: Future LEO and Association Type

CHAPTER IV

DISCUSSION

The purpose of this study was to examine attitudes of prospective LEO towards PWMI. Studies have mainly focused on stigma towards mental illness and PWMI in the general population. However, studies that have examined attitudes toward PWMI among LEO demonstrated that LEO hold similar attitudes compared to the general public, such that LEO accept the common stereotypes held about PWMI. Due to the increasing rate that LEOs are encountering PWMI, it is important to examine attitudes that LEO may hold, because these attitudes may affect interactions with PWMI. Research should continue to examine methods to utilize during LEO training that could reduce bias toward PWMI.

Prospective LEO scored significantly higher on explicit bias compared to non-prospective LEO regardless of the participants major. Although prospective LEO CJ majors scored higher than non-prospective LEO CJ majors, this difference was not significant. These results somewhat support the first hypothesis, such that participants did hold unpredictability bias towards PWMI, with prospective LEO scoring higher than non-prospective LEO. In addition, prospective LEO scored higher in all four categories of explicit bias than non-prospective LEO. This is consistent with a previous finding that LEO hold negative stereotypes regarding MI at higher rates than the general public (Soomro & Yanos, 2019).

Results did not provide support for hypothesis 2. Participants responded, on average, faster to positive attributes with MI than negative attributes with MI, as well as harmless attributes with MI compared to dangerous attributes with MI. This means participants held positive and harmless automatic associations with MI. Although, on average, participants responded faster to helpless attributes with MI than competent attributes with MI, analysis

revealed this difference to be non-significant. These results are inconsistent with previous findings that demonstrate participants hold negative automatic associations towards PWMI (Gonzalez-Sangiuno et al., 2018; Robb & Stone, 2016; Young et al., 2019) and may be due to the study's sample size. Furthermore, prospective LEO had a faster average response time to all trials except the positive with MI trial compared to non-prospective LEO. Prospective LEO had faster average response times for the negative with MI than positive with MI, dangerous with MI compared to harmless with MI, but not for helpless with MI compared to competent with MI. However, analysis suggested there was no significant difference in response times between prospective LEO and non-prospective LEO.

Implicit bias scores and explicit bias scores were not significantly related, nor did implicit bias scores did not significantly predict explicit bias scores. This result does not provide support for the third hypothesis. This finding is also inconsistent with previous findings that implicit and explicit bias scores are related and can predict discriminatory behavior (Young et al., 2019) and that there is a weak relationship between implicit and explicit bias (Stull et al., 2013). This result could also be due to the small sample size.

There was a moderate to large negative correlation between explicit bias scores and empathy scores. This means that as explicit bias scores increase, empathy scores decrease and vice versa, which provides support for hypothesis 4. In addition, empathy was the only significant predictor of explicit bias scores. Previous studies have also found that empathy scores were predictive of explicit bias scores (Backstrom & Bjoklund, 2007; Burk et al., 2015; Foster et al., 2018; Miklikowska, 2018; Sierksma et al., 2015).

In addition to scoring significantly higher on explicit bias, prospective LEO scored significantly lower on empathy than non-prospective LEO. Specifically, prospective LEO who

were CJ majors scored significantly lower than non-prospective LEO psychology majors. However, empathy was not a significant predictor of whether a participant was a prospective LEO or non-prospective LEO; Explicit bias score was the only significant predictor.

In summary, the major findings of this study include: (a) prospective LEO participants accept the same unpredictable bias about PWMI as the general public, and that LEO participants scored significantly higher on explicit bias than non-prospective LEO. A possible explanation could be the knowledge about MI that psychology majors (given that majority of non-prospective LEO were psychology majors) are exposed to in psychology courses reduces the acceptance of stereotypes and explicit biases; if this were true, perhaps more knowledge about MI would reduce explicit bias scores among prospective LEO; (b) participants did not hold negative, dangerous, or helpless automatic associations with MI, nor did implicit bias predict or correlate with explicit bias. These results may indicate implicit biases do not affect one's explicit biases as originally thought or could merely be due to sample size; and (c) there was a negative correlation between empathy and explicit bias scores, and empathy was the only predictive variable of explicit bias scores. This suggests, perhaps activating or promoting empathy may be a method to reduce biases towards PWMI in training for LEO. Studies have received conflicting results when inducing empathy to improve explicit bias scores (Batson et al., 1997; Teachman et al., 2003). Future studies should continue to determine if invoking empathy will reduce explicit biases.

Limitations

Limitations of this study include the impact of COVID-19 and conducting data collection in-person on recruiting participants, the impact of a historic winter storm on data collection, and the sample for both non-prospective LEO and prospective LEO. An attempt to have participants

complete the experiment online was made, but due to complicated coding that was not able to be acquired, the counterbalancing aspect of the study did not properly run. A decision was made to conduct data collection in-person, with extra COVID precautions in place. However, the overall number of participants to be recruited were limited, as Tarleton was offering hyflex courses that allowed students to attend courses via Zoom. This resulted in less students to recruit and participate in-person, on campus.

During the week of February 14th, 2021, Texas experienced a historic winter event with ice, snow, and sub-freezing temperatures. Due to the weather, the college where data collection was taking place was closed, and ultimately put a hold on data collection. This halt in data collection had an impact on the number of participants that were recruited the week of and week following this winter storm.

Caution must be taken when generalizing the results of this study to the rest of the prospective LEO (CJ or psychology major) population, and to other CJ and psychology majors. The sample size of this study was relatively small, although large enough to gather normally distributed data (more than 32 participants). There were only five participants who were prospective LEO. This sample size is not necessarily indicative of the remaining population's beliefs and attitudes towards PWMI. A large sample size of prospective LEO is needed to make more conclusive, generalizable results.

Future Research

The results of this study indicate that empathy is a mediator of explicit bias. However, due to the small sample size, more research is required to further determine if empathy is correlated to and predicts explicit bias scores. The inclusion of a measure for discriminatory behaviors may also assist in determining whether explicit biases may impact decisions LEO

make during interactions with PWMI. Given rates of interaction between LEO and PWMI, contact should also be included in a future study to determine if contact reduces explicit biases as studies have demonstrated in the general population (Anagnostopoulos & Hantzi, 2010; Angermeyer et al., 2004; Burke et al., 2015; Corrigan et al., 2001a; Corrigan et al. 2001b; Corrigan et al. 2002; Corrigan et al., 2003; Gonzàlez-Sangiuno et al., 2018; Kobu et al. 2010; West et al., 2014). Contact and its effects on the prejudicial attitudes and discriminatory behaviors may be especially important given that LEO do not have a choice to socially distance themselves from PWMI while on duty.

REFERENCES

Adewuya, A. O. & Makanjuola, R. O. A. (2008). Social distance towards people with mental illness on southwestern Nigeria. *Australian and New Zealand Journal of Psychiatry, 42*, 389-395. http://doi.org/10.1080/00048670801961115

Anagnostopoulos, F. & Hantzi, A. (2011). Familiarity with and social distance from people with mental illness: Testing the mediating effects of prejudiced attitudes. *Journal of Community & Applied Social Psychology, 21*, 451-460. http://doi.org/10.1002/casp.1082

Angermeyer, M. C. & Dietrich, S. (2006). Public beliefs about the attitudes towards people with mental illness: A review of population studies. *Acta Psychiatr Scand, 113*, 163-179. http://doi.org/10.1111/j.1600-0447.2005.00699.x

Angermeyer, M. C. & Matschinger, H. (1997). Social distance towards the mentally ill: Results of a representative study in the Federal Republic of Germany. *Psychological Medicine, 27*, 131-141. http://doi.org/10.1017/s0033291796004205

Angermeyer, M. C., Matschinger, H., & Corrigan, P. W. (2004). Familiarity with mental illness and social distance from people with schizophrenia and major depression: Testing a model using data from a representative population survey. *Schizophrenia Research, 69*, 175-182. http://doi.org/10.1016/S0920-9964(03)00186-5

Backstrom, M. & Bjorklund, F. (2007). Structural modeling of generalized prejudice: The role of social dominance, authoritarianism, and empathy. *Journal of Individual Differences, 28*(1), 10-17. http://doi.org/10.1027/1614-0001.28.1.10

Batson, C. D., Polycarpou, M. P., Harmon-Jones, E., Imhoff, H. J., Michener, E. C., Bednar, L. L., Klein, T. R., & Highberger, L. (1997). Empathy and attitudes: Can feeling for a member of a stigmatized group improve feelings toward the group? *Journal of*

Personality and Social Psychology, 72(1), 105-118. http://doi.org/10.1037/0022-3514.72.1.105

Bordier, J. E. & Drehmer, D. E. (1986). Hiring decisions for disabled workers: Looking for a cause. *Journal of Applied Social Psychology, 16*(3), 197-208. http://doi.org/10.1111/j.1559-1816.1986.tb01135.x

Browning, S. L., Hasselt, V. B., Tucker, A. S., & Vecchi, G. M. (2011). Dealing with individuals who have mental illness: Crisis Intervention Team (CIT) in law enforcement. *The British Journal of Forensic Practice, 13*(4), 235-243. http://doi.org/10.1108/14636641111189990

Buke, S. E., Dovidio, J. F., Przedworski, J. M., Hardeman, R. R., Perry, S. P., Phelan, S. M., Nelson, D. B., Burgess, D. J., Yeazel, M. W., & Ryn, M. V. (2015). Do contact and empathy mitigate bias against gay and lesbian people among heterosexual medical students? A report from medical student changes. *Academic Medicine, 90*(5), 645-651. http://doi.org/10.1097/ACM.0000000000000661

Carson, K. D. & Bedeian, A. G. (1994). Career commitment: Construction of a measure and examination of its psychometric properties. *Journal of Vocational Behavior, 44,* 237-262.

Choe, J. Y., Teplin, L. A., & Abram, K. M. (2008). Perceptions of violence, violent victimization, and severe mental illness: Balancing public health concerns. *Psychiatric Services, 59*(2). 153-164. http://doi.org/10.1176/appi.ps.59.2.153

Cohen, J. & Struening, E. L. (1962). Opinions about mental illness in the personnel of two large mental hospitals. *Journal of Abnormal and Social Psychology, 64*(5), 349-360.

Community Relations Service (CRS). Understanding bias: A resource guide. Retrieved, September 28, 2020, from https://www.justice.gov/crs/file/836431/download

Corrigan, P. W., Edwards, A. B., Green, A., Diwan, S. L., & Penn, D. L. (2001a) Prejudice, social distance, and familiarity with mental illness. *Schizophrenia Bulletin, 27*(2), 219-225. http://doi.org/10.1093/oxfordjournals.schbul.a006868

Corrigan, P. W., Green, A., Lundin, R., Kubiak, M., & Penn, D. L. (2001b). Familiarity with and social distance from people who have serious mental illness. *Psychiatric Services, 52*(7), 953-958. http://doi.org/10.1176/appi.ps.52.7.95

Corrigan, P. W., Kerr, A., & Knudsen, L. (2005). The stigma of mental illness: Explanatory models and methods for change. *Applied and Preventive Psychology, 11*, 179-190. http://doi.org/10.1016/j.appsy.2005.07.001

Corrigan, P., Markowitz, F. E., & Watson, A. (2004). Structural levels of mental illness stigma and discrimination. *Schizophrenia Bulletin, 30*(3), 481-491. http://doi.org/10.1093/oxfordjournals.schbul.a007096

Corrigan, P., Markowitz, F. E., Watson, A., Rowan, D., Kubiak, M. A. (2003). An attribution model of public discrimination towards persons with mental illness. *Journal of Health and Social Behavior, 44*, 162-179. http://doi.org/10.2307/1519806

Corrigan P.W., Rowan, D., Green, A., Lundin, R., River, P., Uphoff-Wasowski, K., White, K., & Kubiak, M. (2002a). Challenging two mental illness stigmas: Personal responsibility and dangerousness. *Schizophrenia Bulletin, 28*(2), 293-309. http://doi.org/10.1093/oxfordjournals.schbul.a006939

Corrigan, P. W., & Watson, A. C. (2002b). The paradox of self-stigma and mental illness. *Clinical Psychology: Science and Practice, 9*, 35-53. http://doi.org/10.1093/clipsy.9.1.35

Crisp, A. H., Gelder, M. G., Goddard, E., & Meltzer, H. (2005). Stigmatization of people with mental illness: A follow-up study within the changing minds campaign of the royal college of psychiatrists. *World Psychiatry, 4*(2), 106-113.

Crisp, A. H., Gelder, M. G., Rix, S., Meltzer, H. I., & Rowlands O. J. (2000). Stigmatisation of people with mental illness. *World Psychology, 4*(2), 106-113. http://doi.org/10.1192/bjp.177.1.4

Deal, M. (2003). Disabled people's attitudes toward other impairment groups: A hierarchy of impairments. *Disability & Society, 18*(7), 897-910. http://doi.org/10.1080/0968759032000127317

Dovidio, J. F., & Gaertner, S. L. (1996). Affirmative action, unintentional racial biases, and intergroup relations. *Journal of Social Issues, 52*(4), 51-75. http://doi.org/10.1111/j.1540-4560.1996.tb01848.x

Duckitt, J. & Sibley, C. G. (2007). Right wing authoritarianism, social dominance orientation and the dimensions of generalized prejudice. *European Journal of Personality, 21,* 113-130. http://doi.org/10.1002/per.614

Ellis, H. A. (2014). Effects of a crisis intervention team (CIT) training program upon police officers before and after crisis intervention team training. *Archives of Psychiatric Nursing, 28.* 10-16. http://doi.org/10.1016/j.apnu.2013.10.003

Faulkenberry, T. J. (2018). Computing Bayes factors to measure evidence from experiments: An expansion of the BIC approximation. *Biometrical Letters*, *55*(1). 31-43. http://doi.org/10.2478/bile-2018-0003

Fazel, S., & Grann, M. (2006). The population impact of severe mental illness on violent crime. *The American Journal of Psychiatry, 163,* 1397–1403. http://dx.doi.org/10.1176/ajp.2006.163.8.1397

Foster, S. D., Elischberger, H. B., & Hill, E. D. (2018). Examining the link between socioeconomic status and mental illness prejudice: The roles of knowledge about mental illness and empathy. *Stigma and Health, 3*(2), 139-151. http://dx.doi.org/10.1037/sah0000084

Frankham, E. (2017). Modified framework for identifying stigma: News coverage of persons with mental illness killed by police. *Stigma and Health, 4*(1), 62-71. http://dx.doi.org/10.1037/sah0000121

Fredrick, T., O'Conner, C., & Koziarski, J. (2018). Police interactions with people perceived to have a mental health problem: A critical review of frames, terminology, and definitions. *Victims & Offenders, 13*(8), 1037-1054. https://doi.org/10.1080/15564886.2018.1512024

Gonzalez-Sanguino, A., Muñoz, M., Castellanos, M. A., Pérez-Sanotos, E., & Orihuela-Villameriel, T. (2019). Study of the relationship between implicit and explicit stigmas associated with mental illness. *Psychiatry Research, 272,* 663-668. https://doi.org/10.1016/j.psychres.2018.12.172

Green, G., Hayes, C., Dickinson, D., Whittaker, A., & Gileany, B. (2003). A mental health service users perspective to stigmatisation. *Journal of Mental Health, 12*(3), 223-234. http://doi.org/10.1080/0963823031000118212

Greeno, E. J., Ting, L., Pecukonis, E., Hodorowicz, M., & Wade, K. (2017). The role of empathy in training social work students in motivational interviewing. *Social Work Education, 36*(7). 794-808. http://doi.org/10.1080/02615479.2017.1346071

Greenwald, A. G., Mcghee, D E., & Schwartz, J. L. K. (1998). Measuring individual differences in implicit cognition: The implicit association test. *Journal of Personality and Social Psychology, 74*(6), 1464-1480. http://doi.org/10.1037/0022-3514.74.6.1464

Hengartner, M. P., Loch, A.A., Lawson, F. L., Guarniero, F. B., Wang, Y.-P., Rossler, W., & Gattaz, W. F. (2013). Public stigmatization of different mental disorders: A comprehensive attitude survey. *Epidemiology and Psychiatric Sciences*, *22*, 269–274. http://doi.org/10.1017/S2045796012000376

Ho, A. H. Y., Fong, T. C. T., Potash, J. S., Ho, V. F L., Chen, E. Y. H., & Ho, R. T. H. (2018). Deconstructing patterns of stigma toward people living with mental illness. *Social Work Research, 42*(4), 302-311. http://doi.org/10.1093/swr/svy022

Johansson, O. J., & Kunst, J. R. (2017). Explaining prejudice toward the mentally ill: A test of sociopolitical, demographic, and socioeconomic factors. *Journal of Applied Social Psychology, 47,* 682-695. http://doi.org/10.1111/jasp.12483

Kenny, A., Bizumic, B., & Griffiths, K. (2018). The prejudice towards people with mental illness (PPMI) scale: Structure and validity. *BMC Psychiatry*, *18*(293), 1-13 https://doi.org/10.1186/s12888-018-1871-z

Kerr, A. N., Morabito, M. M., & Watson, A. C. (2010). Police encounters, mental illness, and injury: An exploratory investigation. *Journal of Police Crisis Negotiations, 10,* 116-132. http://doi.org/10.1080/15332581003757198

Kobau, R., DiIorio, C., Chapman, D., Delvecchio, P., & SAMHSA/CDC Mental Illness Stigma Panel Members. (2010). Attitudes about mental illness and its treatment: Validation of a generic scale for public health surveillance of mental illness associated stigma. *Community Mental Health Journal, 46,* 164-176. http://doi.org/10.1007/s10597-009-

9191-x

Lane, R. (2019). “I’m a police officer not a social worker or mental health nurse”: Online discourses of exclusion and resistance regarding mental health-related police work. *Journal of Community & Applied Social Psychology, 29*, 429-442. https://doi.org/10.1002/casp.2410

Lauber, C., Falcato L., Nordt, C., & Rossler, W. (2003). Lay beliefs about causes of depression. *Acta Psychiatrica Scandinavica, 108* (418), 96-99. http://doi.org/10.1034/j.1600-0447.108.s418.19.x

Lauber, C., Nordt, C., Braunschweig, C., & Rossler, W. (2006). Do mental health professionals stigmatise their patients? *Ada Psychiatrica Scandinavica, 113*(429), 51-59. http://doi.org/10.1111/j.1600-0447.2005.00718.x

Lauber, C., Nordt, C., Falcato, L., & Rossler, W. (2002). Public attitude to compulsory admission of mentally ill people. *Acta Psychiatrica Scandinavica, 105*, 385-389. http://doi.org/10.1034/j.1600-0447.2002.1o267.x

Lauber. C., Nordt, C., Sartorius, N., Falcato, L., & Rossler, W. (2000). Public acceptance of restrictions on mentally ill people. *Ada Psychiatrica Scandinavica, 102*(407), 26-32. http://doi.org/ 10.1034/j.1600-0447.2000.00005.x

Lerner, M. J. (1980). The belief in a just world: A fundamental delusion. New York, NY: Plenum Press.

Lila, M., Gracia, E., & Garcia, F. (2013). Ambivalent sexism, empathy, and law enforcement attitudes towards partner violence against women among male police officers. *Psychology, Crime, & Law, 19*(10), 907-919. http://dx.doi.org/10.1080/1068316X.2012.719619

Lincoln, T. M., Arens, E., Berger, C., & Rief, W. (2008). Can anti-stigma campaigns be improved? A test of the impact of biogenetic vs psychosocial causal explanations on implicit and explicit attitudes to schizophrenia. *Schizophrenia Bulletin, 34*(5), 984-994. http://doi.org/10.1093/schbul/sbm131

Livingston, J. D. (2016). Contact between police and people with mental disorders: A review of rates. *Psychiatric Services, 67*(8), 850-857. http://doi.org /10.1176/appi.ps.201500312

Madianos, M. G., Madianou, D., Vlachonikolis, J., & Stefanis, C. N. (1987). Attitudes towards mental illness in the Athens area: Implications for community mental health intervention. *Acta Psychiatr Scand, 75,* 158-165. http://doi.org/10.1111/j.1600-0447.1987.tb02768.x

Marsh, S. C. (2009). The lens of implicit bias. *Juvenile and Family Justice Today*. https://www.ncjfcj.org/wp-content/uploads/2012/09/The-Lens-of-Implicit-Bias_0.pdf

Melton, G. B., & Garrison, E. G. (1987). Fear, prejudice, and neglect: Discrimination against mentally disabled persons. *American Psychologist, 42*(11), 1007-1026. http://doi.org/10.1037/0003-066X.42.11.1007

Miklikowska, M. (2018). Empathy trumps prejudice: The longitudinal relation between empathy and anti-immigrant attitudes in adolescence. *Developmental Psychology, 54*(4), 703-717. http://doi.org/10.1037/dev0000474

Morabito, M. S. & Socia, K. M. (2015). Is dangerousness a myth? Injuries and police encounters with people with mental illness. *Criminology & Public Policy, 14*(2), 253-276. http://doi.org/10.1111/1745-9133.12127

Mulay A. L., Vayshenker, B., West, M. L., & Kelly, E. (2016) Crisis intervention training and implicit stigma toward mental illness: Reducing bias among criminal justice personnel. *International Journal of Forensic Mental Health*, *15*(4), 369-381.

http://doi.org/10.1080/14999013.2016.1208308

Nosek, B. A. & Banaji, M. R. (2001). The go/no-go association task. *Social Cognition, 19*(6), 625-664. http://doi.org/10.1521/soco.19.6.625.20886

National Institute of Mental Health. (2019). *Mental illness*. Retrieved October 6, 2020, from https://www.nimh.nih.gov/health/statistics/mental-illness.shtml

National Institute of Mental Health. (2020). *Suicide*. Retrieved October 6, 2020, from https://www.nimh.nih.gov/health/statistics/suicide.shtml

Oxburgh, L., Gabbert, F., Milne, R., & Cherryman, J. (2016). Police officers' perceptions and experiences with mentally disordered suspects. *International Journal of Law and Psychiatry, 49,* 138-146. http://dx.doi.org/10.1016/j.ijlp.2016.08.008

Overton S. L. & Medina S. L. (2008) The stigma of mental illness. *Journal of Counseling and Development, 86*(2), 143-151. https://doi.org/10.1002/j.1556-6678.2008.tb00491.x

Ozer, U., Varlik, C., Ceri, V., Ince, B., & Delice, M. A. (2017). Change starts with us: Stigmatizing attitudes towards mental illnesses and the use of stigmatizing language among mental health professionals. *The Journal of Psychiatry and Neurological Sciences, 30,* 224-232. http://doi.org/10.5350/DAJPN2017300306

Page, S. (1995). Effects of the mental illness label in 1993: Acceptance and rejection in the community. *Journal of Health & Social Policy, 7*(2), 61-68. http://doi.org/10.1300/J045v07n02_05

Peris, T. S., Teachman, B. A., & Nosek, B. A. (2008). Implicit and explicit stigma of mental illness: Links to clinical care. *Journal of Personality and Social Psychology, 196,* 752-760. http://doi.org/10.1097/NMD.0b013e3181879dfd

Phelan, J. C., Link, B. G., Stueve, A., & Pescosolido, B. A. (2000). Public conceptions of mental

illness in 1950 and 1996: What is mental illness and is it to be feared? *Journal of Health and Social Behavior, 41*(2), 188-207. http://doi.org/10.2307/2676305

Pratto, F., Sidanius, J., Stallworth, L. M., & Malle, B. F. (1994). Social dominance orientation: A personality variable predicting social and political attitudes. *Journal of Personality and Social Psychology, 67*(4), 741-763. http://doi.org/10.1037/0022-3514.67.4.741

Psarra, V., Sestini, M., Santa, Z., Petsas, D., Gerontas, A., Garnetas, C., & Kontis, K. (2008). Greek police officers' attitudes towards the mentally ill. *International Journal of Law and Psychiatry, 31*, 77-85. http://doi.org/10.1016/j.ijlp.2007.11.011

Reynolds, W. (1982). Development of reliable and valid short forms of the Marlow-Crowne social desirability scale. *Journal of Clinical Psychology, 38*(1), 119- 125. http://doi.org/10.1002/1097-4679(198201)38:13.0.CO;2-I

Robb, J. & Stone, J. (2016). Implicit bias towards people with mental illness: A systematic literature review. *Journal of Rehabilitation, 82*(4), 3-13.

Rogers, M. S., McNiel, D. E., & Binder, R. L. (2019) Effectiveness of police crisis intervention training programs. *Journal of the American Academy of Psychiatry and the Law, (47)*, 1-8. http://doi.org/10.29158/JAAPL.003863-19

Sadler, M. S., Meagor, E. L., & Kaye, K. E. (2012), Stereotypes of mental disorders differ in competence and warmth. *Social Science & Medicine, 74*, 915-922. http://doi.org/10.1016/j.socscimed.2011.12.019

Saleh, A. Z., Appelbaum, P. S., Liu, X., Stroup, S., & Wall, M. (2018). Deaths of people with mental illness during interactions with law enforcement. *International Journal of Law and Psychiatry, 58*, 110-116. https://doi.org/10.1016/j.ijlp.2018.03.003

Sidanius, J., & Pratto, F. (1999). Social Dominance theory: A new synthesis. *Social dominance:*

An intergroup theory of social hierarchy and oppression. New York, NY: Cambridge University Press.

Sierksma, J., Thijs, J., & Verkuyten, M. (2015). In-group bias in children's intention to help can be overpowered by inducing empathy. *British of Developmental Psychology, 33,* 45-56. http://doi.org/10.1111/bjdp.12065

Smart, E. (2016). Prejudice against people with disabilities, part 1. In. *Disability, society, and the individual* (3rd ed., pp. 99-141). Pro-ed.

Soomro, S. & Yanos, P. T. (2019) Predictors of mental health stigma among police officers: The role of trauma and PTSD. *Journal for Police and Criminal Psychology, 34,* 175-183. http://doi.org/10.1007/s11896-018-9285-x

Spreng, R. N., McKinnon, M. C., Mar, R. A., & Levine, B. (2009). The toronto empathy questionnaire: Scale development and initial validation of a factor-analytic solution to multiple empathy measures. *Journal of Personality Assessment, 91*(1). 62-71. http://doi.org/10.1080/00223890802484381

Stephan, W. G. & Finlay, K. (1999). The role of empathy in improving intergroup relations. *Journal of Social Issues, 55*(4), 729-743. http://doi.org/10.1111/0022-4537.00144

Steadman, H. J. & Morrissette, D. (2016). Police responses to persons with mental illness: Going beyond CIT training. *Psychiatric Services, 67,* 1054-1056. http://doi.org/10.1176/appi.ps.201600348

Stull, L. G., McGrew, J. H., Salyers, M. P., & Ashburn-Nardo, L. (2013). Implicit and explicit stigma of mental illness. *The Journal of Nervous and Mental Disease, 201,* 1072-1079. http://doi.org/10.1097/NMD.0000000000000056

Substance Abuse and Mental Health Services Administration (SAMHSA). (2020). Adults with

SMI and children/youth with SED. Retrieved, October 12, 2020, from https://www.samhsa.gov/dbhis-collections/smi

Takahashi, H., Ideno, T., Okubo, S., Matsui, H., Takemura, K., Matsuura, M., Kato, M., & Okubo, Y. (2009). Impact of changing the Japanese term for "schizophrenia" for reasons of stereotypical beliefs of schizophrenia in Japanese youth. *Schizophrenia Research, 112*, 149-152. http://doi.org/10.1016/j.schres.2009.03.037

Teachman, B. A., Gapinski, K. D., Brownell, K. D., Rawlins, M., & Jeyaram, S. (2003). Demonstrations of implicit anti-fat bias: Impact of providing causal information and evoking empathy. *Health Psychology*, *22*(1), 68-78. http://doi.org/10.1037/0278-6133.22.1.68

Teller, J. L. S., Munetz, M. R., Gil, K. M., & Ritter, C. R. (2006). Crisis intervention team training for police officers responding to mental disturbance calls. *Psychiatric Services, 57.* http://doi.org/10.1176/appi.ps.57.2.232

Teplin, L. A. (1983). The criminalization of the mentally ill: Speculation in search of data. *Psychological Bulletin, 94*(1), 54-67. http://doi.org/10.1037/0033-2909.94.1.54

Thornicroft, G., Brohan, E., Rose, D., Sartorius, N., & Leese, M. (2009). Global pattern of experienced and anticipated discrimination against people with schizophrenia: A cross-sectional survery. *Lancet, 373*, 408-415. http:///doi.org/10.1016/S0140- 6736(08)61817-6

Tringo, J. L. (1970). The hierarchy of preference toward disability groups. *The Journal of Special Education, 4*(3), 295-306. http://doi.org/10.1177/002246697000400306

Wahl, O. F. (1997). Murder and Mayhem. In, *Media Madness: Public Images of Mental Illness* (pp. 56-86). Rutgers University Press.

Watson, A. C., Corrigan, P. W., & Ottati, V. (2004). Police officer attitudes towards and

decisions about persons with mental illness. *Psychiatric Services*, *55,* 49-53. http://doi.org/10.1176/appi.ps.55.1.49

Watson, A. C., Swartz, J., Bohrman, C., Kriegel, L. S., & Draine, J. (2014). Understanding how police officers think about mental/emotional disturbance calls. *International Journal of Law and Psychiatry*, *37,* 251-358. http://doi.org/10.1016/j.ijlp.2014.02.005

West, K., Hewstone, M., & Lolliot, S. (2014). Intergroup contact and prejudice against people with schizophrenia. *The Journal of Social Psychology*, *154,* 217-232. http://doi.org/10.1080/00224545.2014.888327

Young, R. E., Goldberg, J. O., Struthers, C. W., McCann, D., & Phills, C. E. (2019). The subtle side of stigma: Understanding and reducing mental illness stigma from a contemporary prejudice perspective. *Journal of Social Issues 75*(3), 943-971. http:/doi.org/10.1111/josi.12343

APPENDICES

Appendix 1

Prejudice Towards People with Mental Illness

Item
Fear/Avoidance
I would find it hard to talk to someone who has a mental illness
I would be less likely to become romantically involved with someone if I knew they were mentally ill
It is best to avoid people who have mental illness
I would feel unsafe being around someone who is mentally ill
I would be just as happy to invite a person with mental illness into my home as I would anyone else*
I would feel relaxed if I had to talk to someone who was mentally ill*
I am not scared of people with mental illness*
In general, it is easy to interact with someone who has mental illness*
Malevolence
People who are mentally ill are avoiding the difficulties of everyday life
People with mental illness should support themselves and not expect handouts
People who develop mental illness are genetically inferior to other people
People with mental illness do not deserve our sympathy
We, as a society, should be spending much more money on helping people with mental illness*
People who become mentally ill are not failures in life*
We need to support and care for people who become mentally ill*
Under certain circumstances, anyone can experience mental illness*
Authoritarianism
People who are mentally ill need to be controlled by any means necessary
Those who have serious mental illness should not be allowed to have children
People who are mentally ill should be forced to have treatment

	People who are mentally ill should be free to make their own decisions*
	People who are mentally ill should be allowed to live their life any way they want*
	Society does not have a right to limit the freedom of people with mental illness*
Unpredictability	
	The behaviour of people with mental illness is unpredictable
	People with mental illness often do unexpected things
	In general, you cannot predict how people with mental illness will behave
	The behaviour of people with mental illness is just as predictable as that of people who are mentally healthy*
	People with mental illness behave in ways that are foreseeable*
	I usually find people with mental illness to be consistent in their behaviour*

Note. * = items are reverse-scored.

Appendix 2

Marlowe-Crowne Social Desirability scale

Item
It is sometimes hard for me to go on with my work if I am not encouraged.
I sometimes feel resentful when I don't get my way
On a few occasions, I have given up doing something because I thought too little of my ability.
There have been times when I felt like rebelling against people in authority even though I knew they were night.
No matter who I'm talking to, I'm always a good listener.
There have been occasions when I took advantage of someone.
I'm always willing to admit it when I make a mistake.
I sometimes try to get even rather than forgive and forget.
I am always courteous, even to people who are disagreeable.
I have never been irked when people expressed ideas very different from my own.
There have been times when I was quite jealous of the good fortune of others.
I am sometimes irritated by people who ask favors of me.
I have never deliberately said something that hurt someone's feelings.

Appendix 3

Toronto Empathy Questionnaire

Item
When someone else is feeling excited, I tend to get excited too
Other people's misfortunes do not disturb me a great deal*
It upsets me to see someone being treated disrespectfully
I remain unaffected when someone close to me is happy*
I enjoy making other people feel better
I have tender, concerned feelings for people less fortunate than me
When a friend starts to talk about his\her problems, I try to steer the conversation towards something else*
I can tell when others are sad even when they do not say anything
I find that I am "in tune" with other people's moods
I do not feel sympathy for people who cause their own serious illnesses*
I become irritated when someone cries*
I am not really interested in how other people feel*
I get a strong urge to help when I see someone who is upset
When I see someone being treated unfairly, I do not feel very much pity for them*
I find it silly for people to cry out of happiness*
When I see someone being taken advantage of, I feel kind of protective towards them

Note. * = items are reverse-scored

Appendix 4

Career Commitment Measure

Item
My line of work/career field is an important part of who I am.
This line of work/career field has a great deal of personal meaning to me.
I do not feel "emotionally attached" to this line of work/career field.*
I strongly identify with my chosen line of work/career field.
I do not have a strategy for achieving my goals in this line of work/career field.*
I have created a plan for my development in this line of work/career field.
I do not identify specific goals for my development in this line of work/career field.*
I do not often think about my personal development in this line of work/career field.*
The costs associated with my line of work/career field sometimes seem too great.*
Given the problems I encounter in this line of work/career field, I sometimes wonder if I get enough out of it*
Given the problems in this line of work/career field, I sometimes wonder if the personal burden is worth*
The discomforts associated with my line of work/career field sometimes seem too great

Note. * = items are reverse-scored.