

ON 'CLEAR AND PRESENT DANGER': THE INFLUENCE OF
FIREARM LEGISLATION ON COLLEGE STUDENT
PERCEPTIONS OF MENTAL ILLNESS AND
TREATMENT-SEEKING INTENTIONS

A DISSERTATION IN
Psychology

Presented to the Faculty of the University
of Missouri – Kansas City in partial fulfillment of
the requirements for the degree

DOCTOR OF PHILOSOPHY

By

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Kansas City, Missouri
2017

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ABSTRACT

Mental illness (MI) stigma is considered a primary barrier to seeking and remaining in treatment. Mental health experts argue that directly targeting persons with MI in an effort to reduce gun violence may increase public stigma via further associating MI with dangerousness and increasing public preferences for social distance. The present study experimentally investigated whether firearm laws targeting persons with MI who are considered to be a 'clear and present danger' to themselves and others can increase MI stigma (i.e., dangerousness, social distance) and ultimately decrease treatment-seeking intentions among college students. Examining mental health reporting practices imposed by such laws poses important questions about their influence on whether people are less likely to seek necessary treatments pending personal distress. The empirical evidence from a variety of research studies largely does not support the effectiveness of these laws. The current study differs from previous research by directly exposing participants to how these reporting provisions impact limits to confidentiality in the therapy process to determine

whether they influence differences in treatment-seeking intentions and MI stigma. Additionally, this study examined whether perceived dangerousness and preference for social distance mediate the relationships between exposure to these reporting provisions and treatment-seeking intention. Two-hundred and twenty-nine undergraduate students were randomly-assigned by gender to read a therapy consent form containing clear and present danger reporting laws (CPD) or a standard therapy consent without these laws (control). Participants then completed measures of treatment-seeking intentions, perceived dangerousness, and preference for social distance. Contrary to hypotheses, perceived dangerousness, preference for social distance, and treatment-seeking intentions did not differ between the CPD and control conditions. Furthermore, dangerousness and social distance did not mediate the relationship between CPD conditions and intention to seek treatment. Findings do not support concerns that firearm laws directly targeting MI populations may increase stigma and decrease treatment-seeking intentions. Implications for MI populations, future research, and CPD laws are discussed.

APPROVAL PAGE

The faculty listed below, appointed by the Dean of the College of Arts and Sciences have examined a thesis titled “On ‘Clear and Present Danger’: The Influence of Firearm Legislation on College Student Perceptions of Mental Illness and Treatment-Seeking Intentions,” presented by Christopher Anthony Fowler, candidate for the Doctor of Philosophy degree, and hereby certify that in their opinion it is worthy of acceptance.

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ACKNOWLEDGEMENTS

I would like to start by thanking my incredibly helpful dissertation committee members Drs. Kymberly Bennett, Ricardo Marte, Tamera Murdock, and Joah Williams. Most of all, I would like to thank Dr. Melisa Rempfer for her mentorship, patience, support and encouragement throughout my graduate career. Her guidance and ability to handle my stubborn perfectionism was a vital component to my successes in this program. I wish to thank my laboratory mates, the future Drs. Elise Racette and Laura Faith for their feedback in the early stages of this project which was important in its success. Finally, I want to thank my past laboratory mates Drs. Amy Barnes and Meghan Murphy for their continued collaboration and support beyond their time in this program.

In addition, I would like thank Dr. Shawn Zembles and Professor Haley Mickelson for their interest in this study and willingness to offer extra credit to their students in exchange for participation. Their kindness and support was essential to the success of this project. Finally, I would like to thank Cathy Rawlings for her continued administrative support throughout this program. We do not succeed in becoming doctors without it.

Thank you to all of the colleagues and friends that I have made throughout this journey. I am grateful for all of the encouragement and support that I have received. I am forever indebted to the encouragement of my parents my parents Charlotte and Tony Fowler, my grandmother Angie Gauna, and my grandparents Fred and Mary Fowler that are no longer with us to see this day. Most of all I would like to thank my incredible partner Allison Osburn, I could not have done the last three years without you.

DEDICATION

This dissertation is dedicated to my family, friends, and partner. Without their encouragement and support, this would not have been possible. I would also like to dedicate this project to people living with a psychological disorder for showing me that true recovery happens with illness, not outside of it. Like all great artists, every scientist needs their muse.

CHAPTER 1

OVERVIEW

The purpose of this study was to experimentally investigate whether firearm laws targeting persons with mental illness (MI) increase stigma and ultimately decrease treatment-seeking intentions among college students. Several recent public and mass shootings were committed by people that had utilized mental health services (Graziano & Pulcini, 2013; Mozingo, Covarrubias, & Winton, 2014). Since the widely-publicized Sandy Hook shooting (2012), several states have passed legislation requiring health-service providers to report any individual they believe to be a ‘clear and present danger’ to themselves or others to the state. These individuals may then be included in the National Instant Criminal Background Check System at the state and possibly federal level (Illinois Department of Human Services, 2014; Nahmias, 2013; Swanson et al., 2013). Mental health professionals have spoken out against this practice.

Mental health experts have argued that these reporting practices lack an empirical foundation (Appelbaum & Swanson, 2010; Swanson, 2013). Evidence does suggest a modest increase in violent behaviors when comparing MI to the general population (Torrey, 2011; Van Dorn, Volavka, & Johnson, 2011), but this is not the case for firearm-related violence (Matejkowski et al., 2014). Additionally, most persons with MI are not violent and they are also more likely to be victims rather than perpetrators of violence (Monahan & Steadman, 2012; Torrey, 2011; Van Dorn et al., 2011). Others have argued

that these reporting practices further associate MI with dangerousness, a primary component of stigma (Fisher & Lieberman, 2013; Gold, 2013). This is a particularly concerning possibility because MI stigma is considered to be a primary barrier to seeking and remaining in mental health treatment (Corrigan, 2004; Corrigan, Druss, & Perlick, 2014). Finally, violent and homicidal behaviors committed by persons with MI decreases exponentially following treatment initiation (Large & Neilssen, 2008; Nielssen & Large, 2010; Torrey, 2011; Van Dorn et al., 2011). Given the implications for public health and safety, these issues are worthy of empirical investigation.

The empirical evidence suggests there is validity to the argument that clear and present danger reporting practices may be more harmful than helpful for persons with MI. Still, the current study is the first to directly examine this hypothesis. University students were randomly-assigned by gender to be exposed to these reporting provisions in a psychotherapy consent form to determine if they deter treatment-seeking intention compared to a control group that was exposed to a therapy consent form without these provisions. This study examined whether these clear and present danger reporting practices (CPD) increased perceived dangerousness of and preference for social distance from persons with MI (i.e., stigma) compared to the control group. Furthermore, this study examined whether dangerousness and social distance mediated the relationship between clear and present danger reporting conditions and treatment-seeking intention. Results indicated that participants in the CPD condition did not perceive people with MI to be more dangerous or have greater preference for social distance than the control condition.

Similarly, treatment-seeking intentions did not differ between the CPD and control conditions. Finally, dangerousness and social distance did not mediate the relationship between CPD conditions and treatment-seeking intention. Each of these findings was contrary to hypotheses. These results further our understanding of how reporting provisions from CPD laws impact MI stigma and treatment-seeking intentions among college students. Understanding whether these laws negatively impact treatment-seeking intentions and MI stigma can be useful in determining their utility as a preventive measure against gun violence. Implications for MI populations, CPD laws, and areas for future research are discussed.

CHAPTER 2

LITERATURE REVIEW

Clear and Present Danger Laws

In recent years, highly-publicized mass shootings have brought negative attention upon mental health communities (Appelbaum & Swanson, 2010; Graziano & Pulcini, 2013). Incidents including Lafayette (2015), Isla Vista (2014), Newtown (2012), Aurora (2012), and Tucson (2011) involved perpetrators who were consumers of the mental health service system (Mozingo et al., 2014). To that end, several states have passed laws strengthening restrictions on firearm possession by persons with mental illness (MI; Gold, 2013). However, mental health experts have warned that this crisis-driven policy unfairly targets MI populations, lacks an empirical foundation, and writing effective laws to address this issue may not be feasible in limited time frames (Appelbaum & Swanson, 2010; Swanson, 2013). Improving mental health service access and quality in an effort to reduce gun violence may also associate MI with dangerousness and increase public stigma (Fisher & Lieberman, 2013; Gold, 2013), a primary barrier to seeking and remaining in treatment (Corrigan, 2004). The impact of mass shootings and firearm laws on future treatment-seeking is an issue worthy of empirical investigation.

Firearm laws targeting MI populations date back over four decades. The Gun Control Act of 1968 aimed to prevent firearm purchases if a person “has been adjudicated as a *mental defective* or has been committed to any mental institution” (18 U.S.C. § 922;

Federal Bureau of Investigation, 2011). The Brady Violence Handgun Prevention Act of 1993 established the National Instant Criminal Background Checks System (NICS) to help regulate legal firearm purchases (including adjudicated “mental defects”; Federal Bureau of Investigation, 2006). The aftermath of the Virginia Tech shooting (2007) saw congress pass the NICS Improvement Act which allocated \$250 million to individual states and \$150 million to court systems to incentivize improvement of poor NICS reporting at both state and federal levels (Barlas, 2008; Legal Community Against Violence, 2008). In the wake of the Newtown tragedy, several states enacted changes to gun laws that impact mental health communities. New York and Indiana passed stricter gun laws that require mental health professionals to report individuals believed to be a ‘clear and present danger’ to themselves and others to state-level NICS databases (Nahmias, 2013; Swanson et al., 2013). Illinois now requires that clear and present danger suspects be reported to the state within 24 hours and *all* admissions to inpatient facilities within seven days of intake and discharge, even if voluntary. Inexplicably, this law applies to MI alone and not substance abuse (SA) treatments (unless comorbid with MI; Illinois Department of Human Services, 2014). These laws pose numerous concerns for mental health consumers, treatment providers, and policy-makers.

Mental health experts argue that these laws may impede treatment provisions for persons with MI. First, these changes may lead to over identification of individuals as at-risk resulting in infringement upon their basic rights without cause (Appelbaum & Swanson, 2010). Second, reporting requirements in these states may put individuals at

greater risk of danger. For example, Maryland proposed mandatory reporting requirements for individuals considered a clear and present danger to others, but not themselves (Davis & Wagner, 2013). This leaves individuals with high suicide risk (the largest at-risk MI group) with access to firearms despite mental health experts supporting reasonable gun control measures to combat suicide among MI populations (Fisher & Lieberman, 2013; Gold, 2013). Third, these laws can undermine client-provider confidentiality that is currently protected under HIPAA guidelines. This includes the provider's ability to help at-risk clients without further confidentiality violations (e.g., inpatient hospitalization, psychiatric referral; Swanson, 2013). Finally, these laws could lead to individuals choosing not to seek treatment due to increased social and legal consequences.

These possibilities warrant concern because persons with MI engage in greater frequencies of violent and homicidal behaviors than the general public, which is considered a primary cause of stigma (Torrey, 2011). Stigma acts as a barrier to treatment, but violent (Van Dorn et al., 2011) and homicidal behaviors (Large & Nielssen, 2008; Nielssen & Large, 2010) decrease exponentially following treatment initiation. Hence, passing firearms legislation that selectively targets MI populations may delay treatment and increase MI-related violence which perpetuates, and correspondingly, exacerbates public stigma (Large, Nielssen, Ryan, & Hayes, 2008). Furthermore, such legislation may not prevent mass shootings because they are still considered a statistical anomaly that is undetectable by even the best risk assessment procedures currently available (Gold, 2013; Graziano & Pulcini, 2013; Swanson, 2013). Finally, the effectiveness of current NICS

reporting and legislation on preventing mass shootings is questionable. While persons with MI currently comprise 29.30% ($n=3,774,301$) of all records in the federal NICS database ($n=12,881,223$), they are only responsible for 1.4% ($n=16,669$) of its attributable firearm purchase denials since its inception ($n=1,116,676$; Federal Bureau of Investigation, 2014). Thus, reported individuals with MI do not appear to be attempting to purchase firearms. The percentage of NICS records for persons with MI and purchase denials for persons with MI can be seen in Figure 1.

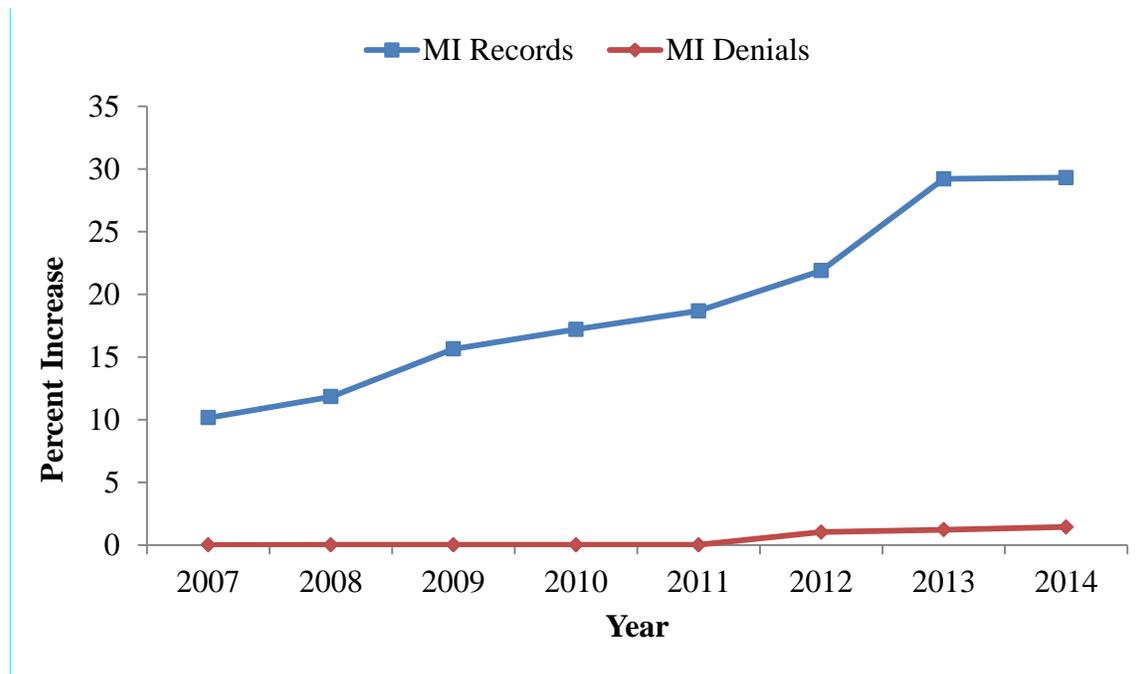


Figure 1. Percentage of NICS Records and Denials for Persons with MI from 2007-2014.

Note. Percentages based on the cumulative totals for records and denials in the NICS database. The year 2007 was selected as a baseline because it was the year before the NICS Improvement Act was passed. Data adapted from the 2014 NICS Operations Report (Federal Bureau of Investigation, 2014).

Public Stigma of Mental Illness: A Brief Overview

The World Health Organization (2001) defines stigma as “a mark of shame, disgrace, or disapproval which results in an individual being rejected, discriminated against, and excluded from participating in a number of different areas of society” (p. 16). Persons with MI experience stigma that compromises their ability to function in society, even over and above the impact of their symptoms (Hinshaw & Stier, 2008). Stigma is recognized as the greatest problem facing persons with MI (New Freedom Commission, 2003; Surgeon General, 1999) and may negatively impact all life domains (Dovidio, Crocker, & Major, 2000). Despite evidence that MI stigma has increased (or remained static) over the past several decades (Pescosolido et al., 2010) the general public believes it is decreasing (Angermeyer & Matschinger, 2005). Public stigma is perpetuated by beliefs about violence and negative perceptions of persons with MI.

Mental Illness and Violent Behavior

Beliefs that individuals with MI are dangerous increased two-and-a-half times from 1950-1996 (Phelan, Link, Steuve, & Pescosolido, 2000) and remained unchanged from 1996-2006 (Pescosolido et al., 2010). This increase is contingent upon belief that having MI increases the likelihood of engaging in violence, which is not entirely unfounded (Torrey, 2011). Estimates suggest a modest but consistent increase in violent behaviors when comparing even the most at-risk persons with MI to the general population (e.g.,

psychotic disorders, substance use disorders; Van Dorn et al., 2011). However, social fears and desire for social distance may exceed the available evidence.

Prevalence of Homicides Committed by Persons with Mental Illness

The proportion of homicides by individuals with MI has increased over the past 50 years. The rate of homicides committed by persons with MI in America was $\leq 2\%$ from 1900-1950 (Cassity, 1941 Wolfgang, 1958) compared to roughly 9.3% after 1950 (Torrey, 2008). Still, the highest post-1950 rates occurred during the failed deinstitutionalization of the 1970's and remained infrequent even by the highest state-level estimates (i.e., 8/48 in New York, 7/71 in California; Grunberg, Klinger, & Grumet, 1977, 1978). Associations between MI and murder rates may be over-estimated and differ by MI-type, victim relationships, and pre-treatment psychosis (Nielssen, Westmore, Large, & Hayes, 2007).

Limited U.S. data suggests that persons with MI commit 10% of all homicides in the U.S. (Matejkowski, Cullen, & Solomon, 2008). It is accepted that 1:3000 persons with schizophrenia-spectrum disorders (SZ) commit homicide (Wallace et al., 1998). Still, evidence suggests that there may be a low rate of stranger homicides by individuals with MI compared to non-strangers (a potential cause for fear, dangerousness, social distance; Shaw et al., 2004). A meta-analysis by Nielssen and colleagues (2009) examined the rate of stranger homicide by individuals with SZ (the most at-risk MI group for homicide) across six industrialized nations (no U.S. data were available for examination). The pooled variance suggested that strangers comprised 9% of homicides committed by individuals with SZ. The authors estimated that the likelihood of a random individual being murdered

by a stranger with SZ was 1:14 million (95% $CI=11.5-18.9$ million) across these nations. Given that SZ occurs in roughly 1% of the general population, these estimates suggest that homicide committed by persons with SZ is about 1:140,000. Offenders were more likely to be homeless, have a childhood history of conduct disorder, and antisocial behaviors. This evidence is consistent with a state-level examination of murder rates in Indiana between 1990-2002 which found that a serious mental illness (SMI) diagnosis was not significantly associated with homicide of strangers, multiple murders, or *firearm use* as a murder weapon (Matejkowski, Fairfax-Columbo, Cullen, Marcus, & Solomon, 2014).

Nielssen and Large (2010) examined studies that reported homicide offenders with psychotic disorders that had and had not received treatment before their offense. They estimated that roughly 38.5% of homicide by persons with psychosis, or about 1 of every 629 diagnosed, occurred during their first episode (estimated prevalence of 1.59:1000, 95% $CI=1.06-2.40$). The ratio for individuals who had initiated treatment was 0.11:1000 (95% $CI=.07-.16$), roughly a 15-fold decrease in homicidal behavior. Previously, Large and Nielssen (2008) found that homicide rates by persons with psychotic disorders increase with the duration of untreated psychosis. Hence, the accepted homicide rate of 1:3000 for persons with SMI may be over-generalized and moderated by factors including relational status, treatment initiation, and duration of untreated psychosis.

Prevalence of Violence Committed by Persons with Mental Illness

Similar to homicide statistics, individuals with MI may be more likely to engage in higher frequencies of violent behaviors than the general public. The most comprehensive

national data available suggests that persons with MI are responsible for 3-5% of all violent acts (Monahan, Steadman, Silver, & Appelbaum, 2001). This relationship is also complex and has multiple moderators. Elbogen and Johnson (2009) used the longitudinal National Epidemiological Survey on Alcohol and Related Conditions (NESARC) database and found that this association could be explained by comorbid substance use. However, they compared persons with SMI to a heterogeneous control group (e.g., personality disorders, general public, etc.) and did not account for notable developmental risk-factors (e.g., premorbid conditions; Matejkowski et al., 2008). The limitations led to criticisms of their findings that MI does not predict violence over and above comorbid SA.

Van Dorn et al. (2011) re-examined the NESARC database controlling for these flaws in the Elbogen and Johnson (2009) study. The overall base rate of violent behaviors in this sample was relatively low. Individuals with SMI and SA were at the highest risk for violent behaviors (9.97%) followed by other MI and SA (7.29%; poly-substance use was highest, MDD was an exception), SMI alone (2.88%), SA alone (2.86%), other MI alone (1.82%), and no MI or SA (.83%), respectively. Again, offenders were more likely to have a history of antisocial behavior and adverse life events (2-fold increase).

Outpatient treatment was not associated with reduced violence, but only 12.8% of the sample had received treatment prior to data collection. This latter finding may also be partially explained by examining violence without accounting for severity, treatment type, and duration of untreated psychosis. Specifically, a previous meta-analysis by Large and Nielssen (2010) found that involuntary treatment increased the odds of higher overall (OR

= 3.84) and serious violence (OR = 5.71). Additionally, duration of untreated psychosis was associated with higher odds of severe (OR = 2.76) than overall violence (OR = 1.56).

Recent studies have utilized data from the MacArthur Violence Risk Assessment Study to examine whether psychotic symptomatology (e.g., delusions, hallucinations) is an antecedent to violent behavior among repeat offenders (Monahan & Steadman, 2012; Skeem, Kennealy, Monahan, Peterson, & Appelbaum, 2015). Interviews were conducted with 100 repeat-offending individuals with psychotic disorders one year after inpatient hospitalization and their responses were rated by clinicians. Baseline data suggested that only 11% of participants were experiencing psychotic symptoms at the time of the violent act (Monahan & Steadman, 2012). Similarly, of the 305 reported violent acts overall, only 11.5% were preceded by psychotic symptoms. Of the 182 violent acts committed by repeat offenders, 19.2% were preceded by psychotic symptoms with no differences being observed between those who committed two versus three-or-more violent acts. While the findings suggested that the type of violence committed is relatively consistent ($ICC=.42$), a large majority of violence is not preceded by psychosis (Skeem et al., 2015).

Evidence suggests that people with MI are at higher risk of engaging in violent behaviors than members of the general public. However, this relationship is hardly straightforward and may be complicated by a variety of factors (Large & Nielssen, 2010; Van Dorn et al., 2011). Supporting evidence has led to empirical acceptance that most acts of violence are not committed by persons with MI, most individuals with MI are not violent, psychosis seldom predicts violence, persons with MI are more likely to be victims

rather than perpetrators of violence, and comorbid SA greatly exacerbates violent behavior among MI populations (Monahan & Steadman, 2012; Skeem et al., 2015; Torrey, 2011; Van Dorn et al., 2011). Further, even if estimates are correct and persons with MI commit 3-5% of violent acts, most of these acts do not involve guns (Matejkowski et al., 2014; Monahan, et al., 2001). Finally, treatment initiation is associated with a large decrease in homicidal and severe violent behaviors (Nielssen et al., 2009; Nielssen & Large, 2010). Thus, public stigma (e.g., dangerousness, preference for social distance) and support to limit access to firearms as a violence deterrent presents a potentially misguided reaction to MI based on what is suggested by the available data.

Mental Illness and Perceived Dangerousness

Beliefs that persons with MI are inherently dangerous are robust and higher in the U.S. than other industrialized nations (Jorm, Reavley, & Ross, 2012). Factor analyses suggest that dangerousness reflects a unique component of MI stigma with endorsed items including: violent, frightening, lacking control, and necessary institutionalization (Corrigan et al., 2002; Penn et al., 1994). Pescosolido and colleagues (2000; 2010) found that public beliefs that persons with MI are dangerous have increased over the past six decades. These findings occurred despite an increase in available public information to combat stigma. Several studies have assessed the nature of these beliefs.

Effects of Diagnostic Labels on Perceived Dangerousness

Labeling effects emerge when people have the opportunity to associate MI with dangerousness. Participants who attribute MI to a vignette character perceive them as more dangerous than those whom do not label them with MI (Pescosolido, Fettes, Martin, Monahan, & McLeod, 2007; Wright & Jorm, 2011). Studies also suggest that labeling effects are moderated by different MI diagnoses when experimentally manipulated or if participants are allowed to apply diagnostic labels (Angermeyer & Matschinger, 2003; Jorm & Griffiths, 2008). Specifically, persons with SZ are perceived as more dangerous than those with anxiety, major depression (MDD; Bell, Johns, & Chen, 2006), and bipolar disorders (BP; Martinez, Piff, Mendoza-Denton, & Hinshaw, 2011). Labeling MI as ‘psychosis’ or a person as ‘insane’ is perceived as more dangerous than ‘mentally ill’ which is considered to be more dangerous than ‘depressed’ (Goodfellow, Defromont, Calandreau, & Roelandt, 2010; Phelan et al., 2000). Diagnostic and stigmatizing labels have long been implicated for their role in beliefs that people with MI are dangerous, but other factors including social contact also may impact this association.

Effects of Social Contact on Dangerous Beliefs

Associations between MI and dangerousness tend to be lower among people that have greater familiarity with MI. However, this may be contingent upon the quality and type of social contact (Alexander & Link, 2003; Couture & Penn, 2003). Positive social contact with family and friends with MI may decrease perceived dangerousness (Graumgruber, Meise, Katschnig, Schöny, & Fleischhacker, 2007; Penn, Kommana,

Mansfield, & Link, 1999). However, negative experiences are associated with increased dangerous beliefs regardless of antecedent social contact (Phelan & Link, 2004). The nature of social contact may also impact perceived dangerousness. Involuntary contact with persons with MI (e.g., family members) predicts lower perceived dangerousness than voluntary contact (e.g., volunteering at mental health facilities; Link & Cullen, 1986). Having a psychological disorder has been found to have little-to-no impact on dangerousness beliefs (Jorm et al. 2012). Perceived dangerousness may depend on situational factors and the behavior of persons with MI as important explanatory factors for the effects of social contact.

Mental Illness and Preference for Social Distance

Preference for social distance from individuals with MI is the most commonly examined component of MI stigma (Jorm & Oh, 2009; Link, Yang, Phelan, & Collins, 2004). The World Health Organization (2001) recognizes social distance (i.e., social exclusion, rejection) in their definition of stigma. Similar to dangerousness, psychometric evidence suggests that social distance is a distinct component of MI stigma (Griffiths, Christensen, & Jorm, 2008; Jorm & Wright, 2008; Watson, Miller, & Lyons, 2005). Social distance and dangerousness are related ($r=.20-.60$) and share similar correlates, but they present unique outcomes (Link, Phelan, Bresnahan, Steuve, & Pescosolido, 1999; Penn et al., 1994, 1999; Phelan & Basow, 2007).

Effects of Diagnostic Labels on Preference for Social Distance

Labelling persons with MI is inconsistently associated with preference for social distance regardless of whether the participants are allowed to label persons with MI or being exposed to experimental manipulations (Martin, Pescosolido, Olafsdottir, & McCleod, 2007; Martin, Pescosolido, & Tuch, 2000). Reavley and Jorm (2011a) argued this relationship may be complicated by a limited public understanding of MI and distinguishing diagnoses. Specific MI labels such as ‘schizophrenia’, ‘paranoid’, or ‘neurotic’ may increase social distance compared to generic labels (e.g., ‘former mental patient’, ‘mentally ill’; Bag, Yilmaz, & Kirpinar, 2006; Lauber, Nordt, Falcato, & Rossler, 2004). Penn and Nowlin-Drummond (2001) found *progressive* politically correct labels (PC; e.g., ‘consumer of mental health services’) were associated with less social distance than *traditional* PC (e.g., ‘person with schizophrenia’) and non-PC (e.g., ‘schizophrenic’) terminology. Finally, Reavley and Jorm (2011b) manipulated MI labels (e.g., SZ, MDD with and without SI, SA, PTSD, social phobia, no MI) using a vignette given to Australian teens and young adults. Participants had a greater preference for social distance from all MI labels compared to the no-MI control. The greatest preference was from SZ and the lowest from PTSD. Thus, specific MI labels may have a larger impact on social distance than generic labels with greater preferences being from persons with SZ than other forms of MI (Reavley & Jorm, 2011c).

Effects of Social Contact on Preference for Social Distance

Similar to dangerousness, desire for social distance is lower among those that are familiar with people with MI and may be dependent upon the quality of contact (Alexander & Link, 2003; Dietrich, Heider, Matschinger, & Angermeyer, 2006). Researchers debate whether social contact leads to decreased social distance or better attitudes towards persons with MI increase people's willingness to have contact. Angermeyer and Matschinger (1996) tested this hypothesis finding that involuntary contact was associated with lower social distance from people with SZ than voluntary contact. This was not the case for persons with MDD. Similarly, people who report stronger rather than weaker past relationships with a person with MI prefer less social distance (Martin et al., 2007). Greater knowledge about SZ and MDD (e.g., relationships, education) also predicts less social distance (Jorm & Oh, 2009). However, preferences for social distance among mental and general health providers have been shown not to differ from the general public despite involuntary and voluntary contact (Lauber et al., 2004; Nordt, Rossler, & Lauber, 2006; Van Dorn, Swanson, Elbogen, & Schwartz, 2005). While the effects of antecedent contact on social distance are mixed, findings differ by MI diagnosis (i.e., SZ, MDD) and quality of contact, but not by career choice (e.g., extent to which professionals want to work with MI populations).

Desire for social distance from persons with MI is not predicted as consistently as dangerousness. However, this may be due to the varying degrees of social distance (e.g., willingness to befriend, work with persons with MI, etc.). Still social distance has similar

correlates and potential implications as perceived dangerousness. Hence, desire for social distance may contribute to targeting persons with MI for policy changes following mass shootings and impact treatment-seeking intentions.

Mental Illness Stigma and Treatment-Seeking Behaviors

Stigma against persons with MI is a public health concern as evidenced by its impact on treatment-seeking behavior (Corrigan, 2004; Corrigan et al., 2014). Greater MI stigma predicts lower levels of treatment initiation, adherence, and greater attrition (Bathje & Pryor, 2011; Ben-Porath, 2002; Sirey et al., 2001a, 2001b). Stigma is also associated with lower treatment quality from providers (Abbey et al., 2011; Covarrubias & Han, 2011). Seeking treatment also carries its own stigma including perceptions that consumers are insecure, mentally weak, unsociable, and defensive (Judge, 1997; Sibicky & Dovidio, 1986). Finally, people with MI may not seek treatment due to fear of diagnostic disclosure (Corrigan, 2004; King et al., 2007) and subsequent negative social response (i.e., stigma; Lysaker, Davis, Warman, Strasburg, & Beattie, 2007; Schomerus, Matschinger, & Angermeyer, 2006; Wahl, 1999). Not surprisingly, social reactions influence persons with MI and play an important role in getting necessary care.

How Mental Illness Stigma Impacts Treatment in the General Public

Most research suggesting that stigma is a barrier to treatment has examined attitudes towards therapy, but not MI itself (Mojtabai, 2007, 2010). Limited available evidence regarding whether stigmatizing beliefs about MI may impact whether members of

the general public seek treatment for psychological concerns is mixed. At the aggregate level, the more people perceive that they will be stigmatized predicts lower anti-depressant adherence (Sirey et al., 2001b). Interestingly, younger adults (18-64 years) may perceive more stigma towards seeking treatment than older adults (65+ years), but they were less likely to discontinue treatment as a result (Sirey et al., 2001a). Using a structural model, Vogel and colleagues (2007) found that higher perceived public stigma toward seeking help influenced greater self-stigma for seeking help, this in-turn led to worse attitudes about seeking professional help, and interestingly greater intentions to seek counseling. Limited research has also examined more specific components of stigma.

Examining individual factors of stigma may explain these mixed results. Vogel et al.'s (2007) findings were supported in the European Union where public beliefs that people with MI are dangerous or living in communities where similar beliefs are prevalent is associated with higher willingness to seek treatment pending MI onset (Mojtabai, 2010). In a Brazilian sample, Peluso and Blay (2009) found that when participants attribute MI to vignette characters, they believe they are less dangerous if the character is in treatment. Beliefs that persons with MI are uncontrollable or to blame for MI may have the opposite effect as dangerousness (Mojtabai, 2010; Weiner, Perry, & Magnusson, 1988). Preference for social distance from persons with MI decreased willingness to seek psychiatric care among individuals with and without current depressive disorders. Anticipated discrimination for seeking care did not (Schomerus et al., 2006). Similar attitudes are observed among college students.

How Mental Illness Stigma Impacts Treatment among College Students

Much more research has targeted adolescent and college student attitudes and beliefs about, and endorsement of, how MI stigma impacts treatment-seeking. Aggregate knowledge that persons with MI are stigmatized by the general public has been shown not to impact treatment-seeking intentions among college students (Eisenberg, Downs, Golberstein, & Zivin, 2009; Golberstein, Eisenberg, & Gollust, 2008; Yap & Jorm, 2011). However, similar to adults, the personal stigma that adolescents (Penn et al., 2005) and college students (Eisenberg et al., 2009) have against persons with MI predicts decreased help seeking. Persons aged 12-25 years old who correctly labeled a vignette character as having a depressive and psychotic disorder were more likely to recommend the character to seek psychological or psychiatric care. Incorrect labelling led to higher recommendations of substance-related coping or dealing with the problem alone (Wright, Jorm, Meredith, & McGorry, 2007). Again, examining separate components of stigma assists in further understanding of these findings.

Similar to adults, individual stigma factors may lead to better understanding of these effects. Believing that people with MI are dangerous is associated with greater intent to seek treatment pending MI onset (Yap, Wright, & Jorm, 2011) and higher endorsement of helping others with MI get the help they need (Yap & Jorm, 2011). Knowledge that persons with MI are in treatment (Romer & Bock, 2008) or have completed treatment (Olmsted & Durham, 1976) decreases perceived dangerousness compared to knowledge that they are not. Belief that persons with MI are responsible for their illness predicts

lower treatment seeking (Cooper, Corrigan, & Watson, 2003). Interestingly, college students may prefer greater social distance from individuals who sought treatment for conveying mild or non-symptomatic behaviors, but only for those respondents without MI (Jorm & Oh, 2009). College students and adults may be more likely to initiate treatment if they can properly label MI and perceive MI as dangerous, but less likely when they prefer social distance and cast blame.

Stigma presents an important barrier for seeking MI treatment. Still, how MI stigma manifests in individual beliefs (i.e., perceived dangerousness, preference for social distance) could have a differential impact on likelihood of seeking treatment. Hence, exposure to the gun control debate including clear and present danger laws may perpetuate such social beliefs and impact treatment-seeking intentions. Future studies examining clear and present danger laws, as well as individual differences including dangerousness and social distance that may impact one's position on mental health issues, remain a noteworthy target for future research.

The Current Study

Laws designed to improve access to mental health services and prevent mass shootings are feared to increase negative public perceptions of persons with MI including perceived dangerousness and preference for social distance (Fisher & Lieberman, 2013; Gold, 2013). In addition to reinforcing public stigma, legislation to include persons with MI in government-run criminal background check databases is considered to target and

differentially impact MI populations, which may also have a detrimental impact on treatment-seeking intentions (Large et al., 2008; Large & Nielssen, 2010). These arguments warrant further empirical examination.

The current study experimentally examined the role of reporting provisions specified in clear and present danger laws on intent to seek treatment (pending onset of distress), perceived dangerousness, and preferences for social distance among college students. As of 2012, roughly 41% ($SE=.62\%$) of 18-24 year-olds are enrolled in degree-granting institutions (National Center for Education Statistics, 2012). College students represent an at-risk population because onset of roughly 75% of major psychological disorders occurs by age 24 (Kessler et al., 2005). Multiple studies have examined predictors of seeking treatment among college students including dangerousness and social distance. Still, there is ample commentary in the empirical literature on the potentially harmful implications of clear and present danger laws on the stigma of persons with MI and treatment-seeking intentions. To date, no studies have examined how these laws may impact college student (or public) perceptions of MI and whether they would seek treatment pending personal distress.

The current study examined this issue of whether firearm legislation that selectively targets MI populations negatively affects seeking mental health treatment in an at-risk population. In particular, this study tested the assumptions of mental health experts that clear and present danger laws are detrimental to public perceptions of MI (i.e., dangerousness, social distance) and will deter treatment-seeking intentions among at-risk

individuals. A final aim was the addition of examining whether perceptions of persons with MI (i.e., dangerousness, social distance) mediate the hypothesized relationship between exposure to clear and present danger laws and treatment-seeking intentions.

Primary Hypotheses

Clear and Present Danger Hypotheses

The primary aim of the clear and present danger hypotheses was to examine the hypothesized (but untested) concerns of mental health professionals that these laws will have a detrimental impact on public perceptions of MI and future treatment-seeking intent. First, due to their select targeting of MI populations, clear and present danger laws are believed to associate MI with dangerousness which may exacerbate public stigma (Fisher & Lieberman, 2013; Gold, 2013; Large et al., 2008). Second, beliefs that persons with MI are dangerous are associated with an increased preference for social distance, a primary manifestation of stigma (Pescosolido et al., 2010; Phelan et al., 2000; Siltan, Flanely, Milstein, & Vaaler, 2011). Third, evidence suggests that personal stigmatizing beliefs that people have toward persons with MI are considered a primary treatment barrier (Corrigan et al., 2014; Eisenberg et al., 2009; Penn, Waldheter, Perkins, Mueser, & Lieberman, 2005). Hence, these laws were hypothesized to deter treatment-seeking intentions among at-risk individuals.

For all clear and present danger hypotheses, the control group was exposed to a ‘standard’ psychotherapy consent document which includes the conditions in which a

provider may break confidentiality (e.g., danger to self and others, subpoena, etc.). The experimental condition was given the same consent form with additional information regarding the ramifications of clear and present danger laws (e.g., mandatory reporting, NICS database inclusion, etc.). *Hypothesis 1:* Participants exposed to the consent form with clear and present danger law provisions will perceive persons with MI to be more dangerous than participants exposed to the standard consent form. *Hypothesis 2:* Participants in the clear and present danger condition will have greater preferences for social distance from persons with MI than those in the control condition. *Hypothesis 3:* Participants in the clear and present danger condition will have lower treatment-seeking intentions than participants in the control condition.

Exploratory Hypotheses

Mediation Hypotheses

The final set of hypotheses explored the hypothesis that differences between clear and present danger laws on treatment-seeking intentions are mediated by perceived dangerousness and preference for social distance.¹ Evidence suggests that dangerousness and social distance have distinct effects on seeking mental health treatment. Perceptions that people with MI are dangerous are associated with greater treatment-seeking intentions among college students (Yap et al., 2011; Yap & Jorm, 2011) and adults (Mojtabai, 2010). Unlike dangerousness, preference for social distance from persons with MI is associated

¹ These hypotheses are considered exploratory because the mediation relies on the direct effects between the IV's and DV's specified in hypotheses 1-3. Hence, not all of these hypotheses may be testable as mediational relationships. However, they still may be tested as indirect effects.

with a decrease in treatment-seeking intentions among college students (Jorm & Oh, 2009) and adults (Schomerus et al., 2006). Hence, these hypotheses examined whether perceived dangerousness and preference for social distance differentially mediate the relationships between clear and present danger laws with treatment-seeking intentions.

The Mediating Role of Perceived Dangerousness

Hypotheses four suggests that perceived dangerousness will mediate the relationships between clear and present danger laws and treatment-seeking intentions.

Hypothesis 4: As stated in hypothesis one, participants in the clear and present danger condition will perceive persons with MI to be more dangerous than in the control condition. This hypothesis proposes that this increase in perceived dangerousness will in-turn will predict *greater* treatment-seeking intentions. Figure 2 conveys the hypothesized mediating impact of perceived dangerousness on the between-group differences for clear and present danger laws on treatment-seeking intentions.

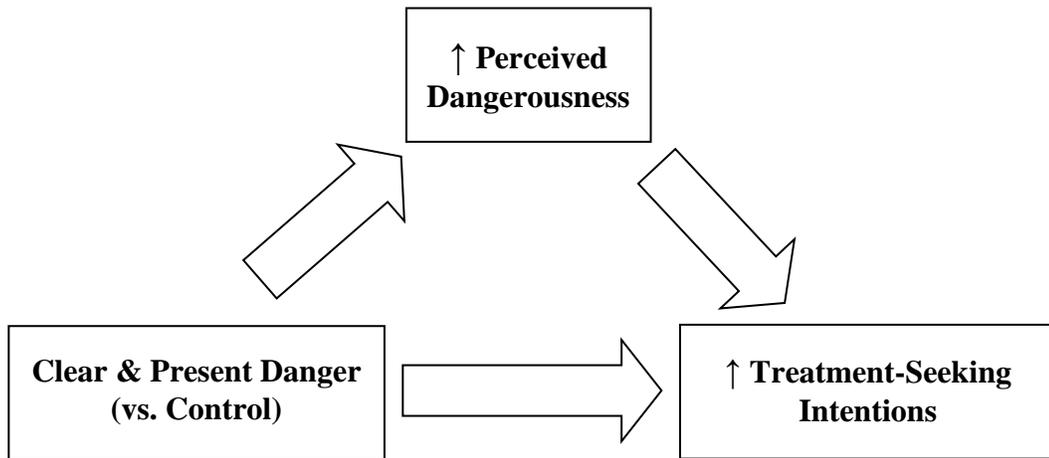


Figure 2. Perceived dangerousness will mediate the relationship between and clear and present danger laws with treatment-seeking intentions.

The Mediating Role of Social Distance

Hypotheses five suggests that preference for social distance will mediate the relationships between clear and present danger laws and treatment-seeking intentions.

Hypothesis 5: As stated in hypothesis two, participants in the clear and present danger condition have a greater preference for social distance from persons with MI than in the control condition. This hypothesis proposes that this increase in preference for social distance will in-turn predict *lower* treatment-seeking intentions. See figure 3.

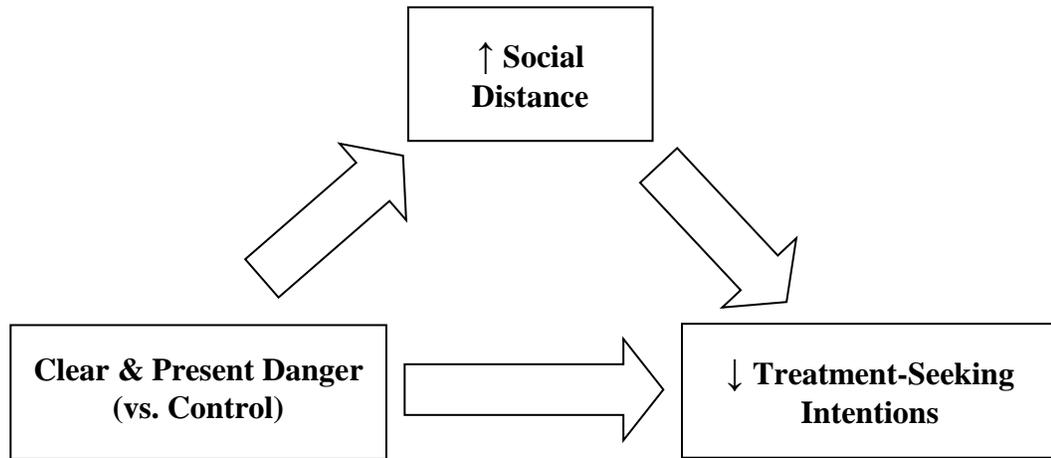


Figure 3. Preference for social distance will mediate the relationships between media framing and clear and present danger laws with treatment-seeking intentions.

CHAPTER 3

METHODOLOGY

Participants

A total of 374 participants at the University of Missouri-Kansas City (UMKC) signed up for the current study. One-hundred and forty-three participants were removed from analyses due to repeat participant sign-ups ($n=78$) and repeat consenters ($n=65$). Additionally, two participants did not complete the study because they were under 18 years of age ($n=2$). The final sample included 229 students being considered for analyses. Participants enrolled in general psychology courses participated in return for partial fulfillment of a course requirement and were recruited from the UMKC psychology research participant pool (Psych Pool). Participants not enrolled in general psychology were recruited from courses if their professor was willing to offer extra credit to their students for study participation. These students also signed up for the study via Psych Pool. All study procedures received approval from the UMKC institutional review board prior to data collection.

Two-hundred and twenty-nine UMKC students (79.04% female) ranging from 18-53 years old ($m=23.92$, $sd=8.19$) consented participation in the current study. Ninety-four participants (41.05%) had initiated mental health treatment at some point. Racial and ethnic composition of the sample was as follows: 61.13% ($n=140$) of participants reported being European American/Caucasian, 11.35% ($n=26$) were African American/Black,

11.35% ($n=26$) were Asian American or Pacific Islander, 5.68% ($n=13$) were Hispanic/Latino(a)/ Chicano(a), 4.37% ($n=10$) were Middle Eastern, 2.18% ($n=5$) identified with being of biracial or multi-racial descent, 1.75% ($n=4$) identified as International/Non-U.S. Citizen, 1.31% ($n=3$) reported being of ‘other’ racial and ethnic background, .44% ($n=1$) was American Indian or Alaskan Native, and .44% ($n=1$) did not provide their background. College grade-level composition of the sample was as follows: 28.82% ($n=66$) of participants reported being freshmen, 16.59% ($n=38$) were sophomores, 24.45% ($n=56$) were juniors, 27.95% ($n=64$) were seniors, and 2.19% ($n=5$) reported being of ‘other’ college grade level (e.g., high school, graduate student). Political affiliations for the sample were as follows: 48.03% ($n=110$) of participants reported being democrats, 22.71% ($n=52$) were independents, 21.40% ($n=49$) were republicans, and 7.42% ($n=17$) reported being of ‘other’ political affiliation (e.g., libertarian, independent, don’t know), and .44% ($n=1$) did not provide their political affiliation. All participants were consented prior to administration of testing materials. Demographic characteristics are reported in table 1.

Table 1

Participant demographic characteristics for entire student sample.

Participants	<i>n</i> =229
Age (<i>m</i> ± <i>sd</i>)	23.92±8.19 years
Gender <i>n</i> (%)	
• Female	181(79.04%)
• Male	48(20.96%)
Previous Treatment <i>n</i> (%)	
• No	135(58.95%)
• Yes	94(41.05%)
Ethnicity <i>n</i> (%)	
• African American/Black	26(11.35%)
• American Indian or Alaskan Native	1(.44%)
• Asian American or Pacific Islander	26(11.35%)
• Caucasian/White	140(61.13%)
• Hispanic American	13(5.68%)
• International/Non-U.S. Citizen	4(1.75%)
• Middle Eastern	10(4.37%)
• Multi-Racial	5(2.18%)
• Other Racial/Ethnic Group	3(1.31%)
• Missing	1(.44%)
Grade-Level <i>n</i> (%)	
• Freshmen	66(28.82%)
• Sophomore	38(16.59%)
• Junior	56(24.45%)
• Senior	64(27.95%)
• Other	5(2.19%)
Political Affiliation <i>n</i> (%)	
• Democrat	110(48.03%)
• Independent	52(22.71%)
• Republican	49(21.40%)
• Other	17(7.42%)
• Missing	1(.44%)

Several participants were excluded from final analyses. Thirteen individuals ($n=6$ control, $n=7$ experimental) who were randomized to conditions did not complete the second part of the study (i.e., manipulation and study measures). Nine participants ($n=4$ control, $n=5$ experimental) were excluded for failing the consent form quiz, several of which took breaks (hours to days)² during testing and were also not able to recall any information on the memory recall ($n=6$). Four participants in the control condition were excluded as univariate and multivariate outliers. The sample for final analyses comprised of 203 participants. This analysis indicated an 89.62% chance of detecting a medium effect size (*Pillai's V* = .0625; Tabachnick & Fidell, 2012) using a multivariate analysis of variance (MANCOVA) with a sample of 203 participants. A more detailed description of participant exclusions is discussed in subsequent sections. For a comprehensive view of participant recruitment and participation see Figure 4.

² This was confirmed using time stamp feature in REDCap (Harris et al., 2009) which recorded the time of completion for each instrument.

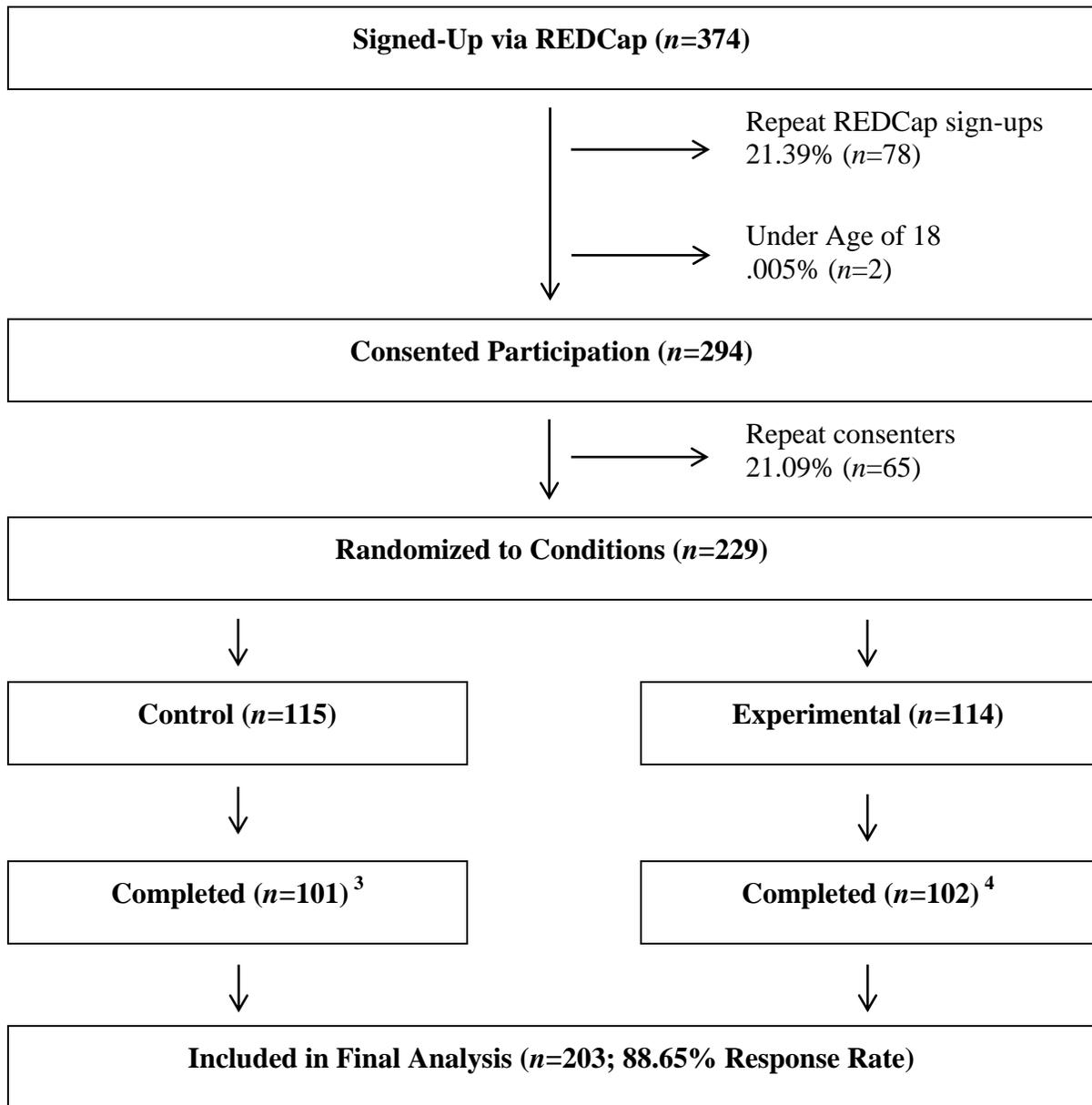


Figure 4. Overview of student recruitment and participation for current study.

Note. Participant recruitment reporting standards adapted from the CONSORT 2010 guidelines for reporting randomized controlled trials (Moher et al., 2012).

³ 4 participants were excluded from the control condition for scoring below the pre-determined cutoff on the consent form quiz; 4 control participants were excluded as outliers; 6 did not complete part 2 of the study.

⁴ 5 participants were excluded from the experimental condition for scoring below the cutoff on the consent form quiz; 7 participants did not complete part 2 of the study.

Design

Participants were randomly-assigned to a 2 group (*Clear and Present Danger Laws*: Clear and Present Danger Consent, Standard Consent) between-participants experimental design. As mentioned above, the ‘Standard Consent’ condition served as the control group. Participants were stratified by gender during random assignment to ensure a balanced gender ratio across the experimental and control conditions. To account for the gender imbalance as well as gender differences on outcome measures, gender groups were weighted and factored into the design. A more detailed description of these procedures is described in the next chapter. The gender-stratified randomization scheme was conducted using the randomization module in REDCap data capture software (Harris et al., 2009) and is demonstrated in table 2.

Table 2

Gender-stratified randomization scheme for experimental and control conditions in the current study.

Participant	Condition	Gender
1	1	1
2	2	1
3	1	2
4	2	2
5	1	1
6	2	1
7	1	2
8	2	2

Note. For randomization purposes condition was coded as follows (Control=1; Experimental=2); Gender is coded as follows (Female=1, Male=2).

Materials

Clear and Present Danger Manipulation

Prior to exposure to the experimental manipulation, participants received the following instructions:

“Imagine that you are considering seeking therapy for psychological or personal concerns. Please read the following psychotherapy consent form very carefully. It contains information about the therapy process and your rights to confidentiality as a therapy client. You will receive a brief quiz on the information contained in this consent form on the next screen. You will not be able to continue unless you score 80% or higher on this quiz.”

Participants assigned to the control condition then read a standard psychotherapy consent form which included limitations to confidentiality (e.g., court subpoena, child/elder abuse, danger to self or others, etc.; Appendix A). Participants assigned to the ‘Clear and Present Danger’ condition (CPD) read the following key points from clear and present danger laws pertaining to persons receiving mental health treatment.

In addition, if the therapist determines that a client is a clear and present danger to themselves or others state law now requires:

- *The therapist must report individuals believed to be a danger to themselves and others to the Department of Health and Human Services within 24 hours.*
- *Inpatient psychiatric hospitals must report all individuals receiving inpatient mental health treatment to the state within 7 days of hospital admission and discharge even if admission is voluntary.*
- *Reported individuals will be included in state-level criminal background check databases, may lose legal rights to purchase firearms for a period of 5 years or more, and require clearance from a mental health practitioner that they are no longer a clear and present danger to themselves and others.*

This information was embedded into the danger to self and others section of the standard psychotherapy consent form (Appendix B). Information for this manipulation was adapted

from Firearm Owner Identification reporting requirement of the Illinois Conceal and Carry Act (PA 98-0063; Illinois Department of Human Services, 2014).

While the states most relevant to this sample (i.e., Kansas, Missouri) have yet to adopt these exact reporting policies, for methodological considerations specific states in which these laws are in effect were not explicitly mentioned until debriefing. Specifically, participant responses regarding intentions to seek treatment could have been biased if they believed that the ‘Clear and Present Danger’ law manipulation did not apply to them. Participants assigned to the control condition read the same standard consent form, but without the clear and present danger provisions.

Consent Form Quiz

The consent form quiz is a 5-item True-False measure designed to ensure that participants read the mock therapy consent forms (Appendix C). All items assess limitations to confidentiality in the therapy process. Participants that score $\geq 80\%$ on this quiz were considered to have read the mock consent form. Overall, participants performed well on this quiz as evidenced by the negative skew of the data (*median*=80%), with nine participants being excluded for not meeting this criteria.

Primary Measures

The following measures were administered to examine primary hypotheses: Intentions to Seek Counseling Inventory (ISCI; Cash, Begley, McCown, & Weise, 1975), the Dangerousness Scale (DS; Link, Cullen, Frank, & Wozniak, 1987), the Social Distance Scale (SDS; Link et al., 1987) and the General Help-Seeking Questionnaire (GHSQ;

Wilson, Deane, Ciarrochi, & Rickwood, 2007). All primary measures are available in the public domain. The measures including their psychometric properties in college student samples are discussed below. Means, standard deviations, and internal reliability of all primary measures for the current study are reported in table 3.

Table 3

Reliability (Cronbach's α) and between-condition factor scores ($m \pm sd$) for all primary measures before and after multiple imputation of missing data.

Measure	Pre-Imputation		Post-Imputation	
	Control	CPD	Control	CPD
ISCI				
Full Scale ($\alpha=.90$)	56.21 \pm 17.00	57.89 \pm 16.02	56.85 \pm 17.03	57.60 \pm 15.97
Interpersonal ($\alpha=.89$)	34.08 \pm 11.58	34.08 \pm 10.39	34.19 \pm 11.07	33.83 \pm 10.36
Academic ($\alpha=.76$)	12.19 \pm 4.86	12.52 \pm 4.53	12.36 \pm 4.98	12.61 \pm 4.48
Substance ($\alpha=.90$)	7.78 \pm 3.33	8.49 \pm 3.35	7.78 \pm 3.33	8.38 \pm 3.40
DS				
Full Scale ($\alpha=.80$)	24.53 \pm 9.14	25.30 \pm 7.10	25.11 \pm 8.26	25.68 \pm 7.29
SDS				
Full Scale ($\alpha=.88$)	13.06 \pm 4.11	12.05 \pm 3.84	13.06 \pm 4.11	12.05 \pm 3.84
GHSQ				
Full Scale ($\alpha=.59$)	3.67 \pm .73	3.65 \pm 0.79	3.69 \pm .73	3.65 \pm 0.77

Notes. Missing data was imputed using multiple imputations. Descriptive information for observed and imputed data was reported as evidence that the imputation model was similar to the original data (Manly & Wells, 2015). Mean and standard deviations for the SDS remained unchanged due to no missing data. Multiple imputation procedures are described in the next section.

Principal components for each primary measure and decisions regarding scale/item selection are discussed in their respective sections below.

Intentions to Seek Counseling Inventory

The ISCI (Cash et al., 1975; Appendix D) is a 17-item questionnaire designed to measure how likely college students would seek treatment if they were (or currently are) experiencing each of 17 problems. All items are measured on 6-pt. Likert-type scales anchored by 1 (*very unlikely*) and 6 (*very likely*). Several studies using the ISCI have utilized a unidimensional factor (Hobson, 2008; Vogel & Wester, 2003). Other studies have found evidence for a 3-factor structure to measure intentions of seeking counseling for issues likely to be experienced by college students including psychological and interpersonal (10 items; e.g., depression, parental conflict), academic concerns (4 items including choosing major, test anxiety, etc.), and substance use (2 items; e.g., alcohol and drug problems; Cepeda-Benito & Short, 1998; Vogel et al., 2007). Summative scores can be calculated for each subscale or as a full scale score with higher values indicating greater intentions of seeking counseling pending personal distress (Cepeda-Benito & Short, 1998).

The full-scale ISCI has ‘good’ to ‘excellent’⁵ internal reliability across studies utilizing college student samples ($\alpha=.84-.95$; Hobson, 2008; Kelly & Achter, 1995; Solberg, Ritsma, Davis, Tata, & Jolly, 1994; Vogel & Wester, 2003; Vogel, Wade, & Haake, 2006). The interpersonal concerns ($\alpha=.90$), academic concerns ($\alpha=.71$), and substance abuse ($\alpha=.86$) subscales demonstrated acceptable reliability in their initial validation (Cepeda-Benito & Short, 1998). In college student and adolescent samples, the ISCI is correlated with positive attitudes toward seeking professional help ($r=.31-.50$;

⁵ Discussions of internal consistency are based on the following (albeit subjective) classifications of coefficient alpha suggested by Cronbach & Shavelson (2004): ‘Excellent’ ($\alpha \geq .90$), ‘Good’ ($\alpha = .80-.89$), ‘Acceptable’ ($\alpha = .70-.79$), ‘Questionable’ ($\alpha = .60-.69$), and ‘Poor’ ($\alpha < .60$).

Kelly & Achter, 1995; Lopez, Melendez, Sauer, Berger, & Wyssmann, 1998; Vogel et al., 2007) as well as greater interpersonal concerns ($r=.30$) and the seeking help from counselors item of the GHSQ ($r=.32$; Radziwon, 2009), providing evidence of concurrent validity. Hence, the ISCI has demonstrated acceptable psychometric properties in the population of interest.

An unrotated principal components analysis (PCA) and follow-up reliability analysis were utilized to examine convergent validity among ISCI items to determine whether the full scale score was appropriate for use in the current study (Judd & Sadler, 2003). Costello and Osborne (2005) described a ‘clean’ factor or component structure to have item loadings $\geq .30$, contain ≥ 3 items, and no or few items loading onto multiple components (cross-loadings). This criterion was adopted for the current study. While the full scale did demonstrate excellent reliability ($\alpha=.900$), the analysis proposed a two-component solution which explained 53.37% of the scale variance (*eigenvalues*=2.157-6.917). Item loadings for the substance use were nearly twice as high for a second separate component ($\lambda=.742$ - $.782$) than the first ($\lambda=.387$ - $.399$). Furthermore, the depression item cross-loaded onto both components.

A separate unrotated PCA examining the 10-items from the ‘psychological and interpersonal concerns’ subscale demonstrated a single-component solution ($\lambda=.545$ - $.796$) that explained 51.88% of the variance (*eigenvalue*=5.188).⁶ This component also had good reliability ($\alpha=.894$). Bartlett’s Test of Sphericity also indicated that the 10 scale items

⁶ The ‘Psychological and Interpersonal Concerns’ scale was chosen for the PCA given that this factor explains the most variance of the three ISCI subscales and had the highest internal consistency in previous studies among college students ($\alpha \geq .90$; Cepeda-Benito & Short, 1998; Vogel et al., 2007).

were adequate for reduction (into fewer components), $\chi^2(45)=950.407, p<.001$.⁷ Based on the PCA's and reliability, the interpersonal concerns subscale of the ISCI was utilized for the current study because the full scale was not as good of fit with the data.

The Dangerousness Scale

The DS (Link et al., 1987; Appendix E) is an 8-item questionnaire designed to measure people's general beliefs about whether persons currently or previously diagnosed with MI are dangerous (e.g., violent, homicidal). All items are measured on 7-pt. Likert-type scales anchored by 1 (*strongly agree*) and 7 (*strongly disagree*). Items were summed to give a single composite measure of perceived dangerousness. For interpretive considerations items two and six were reverse-scored so that higher scores indicate greater perceived dangerousness. This scale was selected because it measures general beliefs about MI and dangerousness rather than individual beliefs about vignette characters.

The DS has demonstrated acceptable to good internal ($\alpha=.70-.82$; Brown, 2008; Penn et al., 1994, 1999; Penn, Chamberlin, & Mueser, 2003) and fair test-retest reliability (Brown, 2008; $\rho=.61-.68$) across MI stigma studies utilizing college student samples. Greater dangerousness scores on the DS are associated with greater social distance ($r=.21-.46$; Alexander & Link, 2003; Penn et al., 1994) and negative affect ($r=.35$; Penn et al., 1994) as well as greater dangerousness ($r=-.54$), forced treatment beliefs ($r=-.58$), negative emotions ($r=-.47$), and lower willingness to help or interact with persons with MI scores on

⁷ The null hypothesis for Bartlett's Test of Sphericity suggests that the individual scale items should remain unchanged (identity matrix).

the Attribution Questionnaire (AQ; Brown, 2008).⁸ Finally, the DS is also positively correlated with implicit associations that persons with MI are ‘bad’ ($r=.34$; Teachman, Wilson, & Komarovskaya, 2006). Hence, the DS has demonstrated concurrent validity with the SDS, AQ, and implicit MI stigma among college students.

An unrotated PCA was conducted on the DS items. While the full scale had adequate reliability ($\alpha=.79$), this analysis yielded a two component solution which explained 54.08% of the variance (*eigenvalues*=1.032-3.352). Item six (letting young children play near the house of a person with MI) was the only item that significantly loaded onto the second component ($\lambda=.817$) and with a much higher loading than the first ($\lambda=.404$). Furthermore, this item lowered the overall scale reliability.

Costello and Osborne (2005) suggest dropping problematic items (e.g., cross-loading, free standing, low item loading, etc.) and rerunning the PCA can be a suitable approach in attempting to determine adequate component structure. A second PCA was conducted to determine whether a single component solution could be reached excluding item six which did not fit as well with other scale items in the current study. This analysis yielded a single component ($\lambda=.606-.760$) with good reliability ($\alpha=.80$) that explained 46.01% of the variance (*eigenvalue*= 5.188). Bartlett’s Test of Sphericity also indicated that these seven scale items were adequate for reduction, $\chi^2(21)=355.671, p<.001$. Based on the PCA’s and reliability, the decision was made to drop item six and proceed with this 7-item version of the DS for the current study.

⁸ Penn et al (1994) reverse-scored the DS such that higher scores indicate greater dangerousness while Brown (2008) did not resulting in lower scores indicating greater dangerousness. Hence, both positive and negative coefficients are associated with greater dangerousness as measures by the DS.

The Social Distance Scale

The SDS (Link et al., 1987; Appendix F) is a 7-item questionnaire referring to people's interactions with persons with MI and their preference for social distance across multiple contexts (e.g., social, occupational, family relationships). All items are measured on 4-pt. Likert-type scales anchored by 0 (*definitely unwilling*) and 3 (*definitely willing*). All items were summed with higher scores indicating greater preference for social distance. The SDS has demonstrated acceptable to excellent internal ($\alpha=.75-.90$; Brown, 2008; Couture & Penn, 2006; Link et al., 2004; Penn et al., 1994, 2003) and good test-retest reliability ($\rho=.84$; Brown 2008) across MI stigma studies utilizing college student samples. As mentioned above, SDS scores are positively associated with DS scores as well as negative affect ($r=.42$) and characteristic attributions toward persons with MI ($r=.38$; Penn et al., 1994). Additionally, social distance scores on the SDS are positively associated with dangerousness ($r=.49$), forced treatment beliefs ($r=.49$), negative emotions ($r=.48$), and negatively associated with willingness to help or interact with persons with MI ($r=-.62$) on the AQ (Brown, 2008). Thus, the SDS has demonstrated concurrent validity with the DS, AQ, and negative affect among college students.

An unrotated PCA revealed a single component with good reliability ($\alpha=.88$) for the SDS items ($\lambda=.688-.816$). This SDS component explained 58.09% of the variance (*eigenvalue*=4.066). Bartlett's Test of Sphericity also indicated that these 7 scale items were adequate for reduction, $\chi^2(21)=685.754, p<.001$. Based on the PCA's and reliability, the SDS was used in its original form for the current study.

General Help-Seeking Questionnaire

The GHSQ (Wilson et al., 2007; Appendix G) is an 11-item questionnaire designed to measure intentions to seek help for social and emotional problems from a multitude of sources (e.g., romantic partner, mental health professional, family, medical practitioner, etc.). All items are measured on 7-pt. Likert-type scales anchored by 1 (*extremely unlikely*) and 7 (*extremely likely*). An additional open-ended item allows participants the opportunity to fill-in any additional source of help they intend to seek pending distress. Items are averaged with higher mean scores indicating greater help-seeking intentions.

The GHSQ has acceptable-to-good internal consistency ($\alpha=.70-.85$) and test-retest reliability at three week follow-up ($\rho=.86-.92$; Wilson et al., 2007). The GHSQ was included in this study because younger individuals may be more likely to seek help from non-psychological resources (e.g., friends, family) or deal with the problem alone (Boldero & Fallon, 1995; Rickwood, Deane, Wilson, & Ciarrochi, 2005). Thus, assessment of treatment-seeking intentions from more than just psychological sources may be beneficial.⁹

While previous studies have utilized the full GHSQ scale, no studies have examined its true factor structure.¹⁰ In the current sample, the full GHSQ scale had poor reliability ($\alpha=.59$). An unrotated PCA yielded a two component solution that explained 43.63% of the item variance. The first component contained 7-items and explained

⁹ Pending whether there is no evidence for hypothesized relationships with the ISCI, exploratory examination of the GHSQ may be employed.

¹⁰ Given that the GHSQ is a secondary measure of treatment-seeking intentions, a full exploratory factor analysis (EFA) was not conducted for this study. The goal of this analysis was to identify a linear combination of items that could be used as a composite measure of general help-seeking intentions. The author plans to conduct an EFA to examine the factor structure of the GHSQ for a follow-up manuscript.

26.99% of the variance (*eigenvalue*=2.970). Five items pertained to seeking help from people who are healthcare and other professionals (i.e., mental health professional, family doctor, teacher, religious figure, help line) with the other two items pertaining to family (i.e., parents, other family member). A second component contained only two items (i.e., not seeking help from anyone, seeking help from someone not listed) and explained 16.63% of the variance (*eigenvalue*=1.829). Two items failed to load onto either component: significant other, friend. This component also had poor reliability ($\alpha=.41$).

A second PCA containing only items from the first component was conducted to gain further clarification on the seemingly disparate item sets (i.e., family vs. professional). Bartlett's Test of Sphericity indicated that these 7 scale items were adequate for reduction, $\chi^2(21)=345.478, p<.001$. As expected, this analysis demonstrated a two-component solution explaining 58.12% of the variance. The first component contained the five professional items ($\lambda=.587-.817$) and explained 40.34% of the variance (*eigenvalue*=2.824). This professional component also had acceptable reliability ($\alpha=.75$). The second component contained the two family items ($\lambda=.688-.751$) which explained 17.78% of the total variance (*eigenvalue*=1.244). However, both of these items cross-loaded onto the first component ($\lambda=.394-.476$) and had questionable reliability ($\alpha=.61$) suggesting that this component may not be unique or reliable in the current study. Hence, only the 5-item 'professional' subscale (GHSQ-P) was utilized in the current study.

Manipulation Check

Following exposure to the experimental manipulation and completion of primary measures participants engaged in a recall task (Appendix H). Specifically, participants in the ‘Clear and Present Danger’ condition were asked to recall the top three things they remembered from the study materials (i.e., mock therapy consent form). Recall tasks can be used to determine whether participants remember details specific to their level of an experimental manipulation (Huber, Clark, Curran, & Winkelman, 2008; MacLeod, Saunders, & Chalmers, 2010). Recall tasks are also commonly used to determine whether participants are competent to understand and provide informed consent for both treatment and research (Dunn, Nowrangi, Palmer, Jeste, & Saks, 2006). The manipulation would be considered successful if participants in the experimental condition are more likely than not to recall information that is unique to their condition (i.e., ‘Clear and Present Danger’ reporting provisions).

Distraction Task

Following completion of the primary measures and manipulation check (experimental condition), participants completed a distraction task. The distraction task did not serve as part of the experiment, but was operationalized in an attempt to nullify the impact of the experimental manipulation prior to administration of the control measures. Hence, the purpose of the distraction task in the current study was to help ensure that the experimental manipulation did not influence participant responses to the control measures.

The current study utilized a domain-specific distraction task. Domain-specific distraction tasks are designed to cognitively interfere with experimental manipulations via their qualitative similarity to the original task (Craik, 2014; Lin & Yeh, 2014). In the current study, the distraction task was operationalized by having participants read a mock dental consent form (Appendix I), complete another 5-item True-False consent quiz based on the mock dental consent (Appendix J), and complete the 14-item Dental Satisfaction Questionnaire (DSQ; Davies & Ware, 1981; Appendix K). All DSQ items are measured on 5-pt. Likert-type scales anchored by 1 (*Strongly Agree*) and 5 (*Strongly Disagree*). The DSQ is available in the public domain. Because this task was utilized to nullify the impact of the experimental manipulation before administration of the control measures, the DSQ and dental consent data were not examined in the current study.

Control Measures

In addition to primary measures, additional measures were included to control for their potential impact on treatment-seeking intentions and their relationships with other outcome measures in previous studies. These include: the Contact Scale (CS; Link & Cullen, 1986), the 8-item version of the Marlowe-Crowne Social Desirability Scale (MCS-8; Greenwald & Satow, 1970), the Violence Enabling Scale (VES; McConochie, 2010), and the 21-item version of the Hopkins Symptom Checklist (HSCL-21; Green, Walkey, McCormick, & Taylor, 1988). All control measures are available in the public domain. These psychometric properties of these measures, their correlations with primary measures, and their reason for inclusion in the current study are briefly discussed below.

The Contact Scale

The CS (Link & Cullen, 1986; Appendix L) is a 7-item questionnaire used to determine level of previous contact with persons with MI. Participants are asked to respond either ‘yes’ (coded 1) or ‘No’ (coded 0) to each item. Scores were summed with higher scores indicating a greater degree of previous social contact with MI populations. The CS has demonstrated acceptable internal consistency ($\alpha=.70-.76$; Couture & Penn, 2006; Link & Cullen, 1986; Penn & Corrigan, 2002) and was chosen for the current study because previous contact with persons with MI is associated with lower MI stigma (Couture & Penn, 2006; Link & Cullen, 1986; Jorm et al. 2012; Reinke, Corrigan, Leonhard, Lundin, & Kubiak, 2004).¹¹

An unrotated principal components for categorical data (CATPCA) was conducted to account for the dichotomous items on the CS. All seven items loaded onto a single component ($\lambda=.503-.696$; *eigenvalue*=3.903) with good reliability ($\alpha=.87$). Based on the CATPCA and reliability, the CS was used in its original form for the current study.

The Marlowe-Crowne Social Desirability Scale

The 8-item MCS-8 (Greenwald & Satow, 1970; Appendix M) was derived from the original 33-item Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1960) designed to measure socially desirable response tendencies. All items are measured using True-False scales coded 0 (*false*) and 1 (*true*). Scores were summed with higher scores indicating greater socially desirable response patterns. For interpretive considerations

¹¹ The CS has been utilized as a between-groups independent and control variable in numerous studies utilizing the DS and/or SDS (Couture & Penn, 2006; Penn et al., 1999; Penn & Link, 2002). However, correlations between CS scores with the DS and SDS have not been reported in the empirical literature.

items one, three, five, and seven were reverse-scored so that higher scores indicate greater perceived social desirability. The MCS-8 has been shown to have acceptable reliability in college student samples ($r=.77$; Ray, 1984). The MCS-8 was utilized in this study because like other forms stigma, MI stigma may be subject to people exhibiting social desirability bias to uphold their image (Dovidio et al., 2000; Link et al., 2004).

An unrotated CATPCA was conducted on MCS-8 items. All eight items loaded onto a single component ($\lambda=.503-.696$; *eigenvalue*=3.865) with good reliability ($\alpha=.85$). Based on the CATPCA and reliability, the MCS-8 was used in its original form for the current study.

The Violence Enabling Scale

The VES (McConochie 2010; Appendix N) is a 14-item measure designed to measure support for citizen rights to own firearms, military development, and lower violence prevention efforts. All items are measured on 5-pt. Likert-type scales anchored by 1 (*strongly disagree*) and 5 (*strongly agree*). Items were averaged with higher scores indicating greater violence enabling. The VES has good internal consistency ($\alpha=.89$) and greater violence enabling has demonstrated concurrent validity with conservative ($r=.31$) and divergent validity with liberal worldviews ($r=-.48$). The VES was included in this study because greater political conservatism predicts dangerousness and social distance scores regarding persons with MI (Alexander & Link, 2003). Additionally, because news outlets tend to frame mass shootings as a mental health rather than a gun control issue and clear and present danger laws present as firearm deterrents, participant attitudes toward

gun ownership and violence enablement may confound with ‘Clear and Present Danger’ laws and the primary dependent variables.

An unrotated PCA resulted in a two-component solution that explained 57.75% of the item variance. This first component consisted of 13 of the 14 VES items ($\lambda=.507\text{-}754$) and explained 40.79% of the variance ($eigenvalue=5.710$). The second component included item 10 (criminal executions; $\lambda\leq.281$) and three cross-loaded items ($\lambda=.324\text{-}370$) and explained 16.96% of the variance ($eigenvalue=2.375$). Because item 10 loaded uniquely onto a separate factor and the cross-loaded items were much weaker on component two, a second PCA was conducted excluding item 10. These 13 items yielded a single component with good reliability ($\alpha=.88$) for the VES items ($\lambda=.477\text{-}.754$). This VES component explained 43.31% of the variance ($eigenvalue=5.630$). Bartlett’s Test of Sphericity also indicated that these 13 scale items were adequate for reduction, $\chi^2(78)=1527.372, p<.001$. Based on the PCA’s and reliability, this 13-item VES component was used in its original form for the current study.

The Hopkins Symptom Checklist

The HSCL-21 (Green et al., 1988) was derived from the original 58-item Hopkins Symptom Checklist (Derogatis, Lipman, Rickels, Uhlenhuth, & Covi, 1974) designed to measure psychological distress. All are measured on 4-pt. Likert-type scales anchored by 1 (*not at all*) and 4 (*extremely*). The HSCL-21 (Appendix O) can be utilized as a full scale indicating total distress or 3 sub-scales (somatic, performance difficult, and general feelings of distress; Deane, Leathem, & Spicer, 1992). Because general distress (HSCL-

21) is being utilized as a potential covariate for treatment-seeking intentions rather than a predictor or outcome, the full-scale was used in favor of sub-scales. Items were summed with higher scores indicate greater distress. The HSCL-21 has been shown to have good to excellent internal reliability among college students ($\alpha=.88-.90$; Cepeda-Benito & Short, 1998; Vogel & Wei, 2005) including among those at this university ($\alpha=.90$; Krycak, 2013). The HSCL-21 was chosen as a measure of psychological distress because it has been shown to have a modest correlation with the ISCI ($r=.21$) and may be independent of attitudes towards seeking professional counseling ($r=.01$; Cepeda-Benito & Short, 1998).

An unrotated PCA set to extract one component was conducted. This component explained 35.27% of the variance (*eigenvalue*=7.407). All 21-items had acceptable loadings ($\lambda=.353-.700$) with the full component having excellent reliability ($\alpha=.91$). Bartlett's Test of Sphericity also indicated that these items were adequate for reduction, $\chi^2(210)=1958.705, p<.001$. Based on the PCA and reliability, the HSCL-21 was used in its original form for the current study.

Debriefing

Separate debriefing forms were utilized for each condition. This was to avoid confusion to persons not exposed to the 'Clear and Present Danger' reporting provisions. The debriefing form for the control condition (Appendix P) appeared on the screen following completion of the control measures. Participants could also download the debriefing form for their own records. Participants were informed of the study's purpose, why clear and present danger laws are considered a barrier to persons seeking mental

treatment by mental health providers and that the current study aimed to assess this hypothesis. Participants were also informed that general confidentiality procedures as discussed in the consent forms apply to treatment providers nationwide, but ‘Clear and Present Danger’ laws in Kansas and Missouri only apply if the courts have determined you to be “mentally disabled” in a court of law and/or involuntary commitment to inpatient mental health facilities. The debriefing form in the ‘Clear and Present Danger’ condition explicitly stated that the reporting provisions used in the experimental manipulation (i.e., mandatory reporting of suspected individuals) do not currently apply to them (Appendix Q). This additional precaution was to inform participants that persons seeking treatment in Missouri and Kansas will not be personally impacted by the ‘Clear and Present Danger’ laws they were exposed to in this study. As part of the debriefing, all participants also received a short list of affordable and accessible mental health service providers and helplines available to them if they experience psychological distress (e.g., university counseling center, sliding scale community counseling clinics, mental health hotlines; see Appendix R). Finally, participants were reminded that the informed consent form states that they are not to discuss the details of the current study with their fellow students.

Procedure

Solicitation of Professors

Professors from multiple Liberal Arts and Sciences Departments at UMKC (i.e., Nursing, Criminal Justice and Criminology, Political Science, Psychology) that were

currently teaching undergraduate courses were contacted via e-mail (Appendix S).

Specifically, professors were asked whether they were willing to offer extra credit to students in their courses for participating in the current study. Interested professors were sent a detailed description of the study (Appendix T) as well as a copy of the online study posting (Appendix U) and instructions for how to sign up for the Psychology Research Participant Pool (Psych Pool; Appendix V) to forward along to their students.

Psychology Research Participant Pool

This study was also posted in the Psych Pool, the online participant recruitment system maintained by the UMKC Department of Psychology. Psych Pool is available to any UMKC students that wish to sign-up. Interested participants received a username and password that allowed them to login to the Psych Pool system. This allowed interested students to read the study description (see Appendix U) for the current project and sign up if they chose to participate. The description for Psych Pool contained basic information about the study including the purpose of the study and indication of what was required for participation. The study was described as an examination of how consenting procedures in healthcare impact intentions to seek treatment and perceptions of chronic health conditions. All participant sign-ups for this study were managed using UMKC Psych Pool.

Informed Consent Procedure

All data was collected online using REDCap (Harris et al., 2009) data capture software. Once participants signed-up via Psych Pool, they clicked a link directing them to the study in REDCap. Prior to administration of the informed consent participants were

asked to verify if they are at least 18 years old via a Yes/No question. Participants who selected 'No' were thanked for their participation. If they selected 'Yes', they proceeded to the informed consent.

Given that this was an online study, participant signatures were obtained by participants providing an electronic signature line using the REDCap e-Consent feature. The informed consent in REDCap also contained a link which allowed participants to download a copy of the consent form for their records (Appendix W). After signing the informed consent participants were instructed to check a box labeled 'Yes' if they agreed with the terms of study participation as stated in the informed consent. By clicking yes participants proceeded to the study. If participants checked a separate box labeled 'No', participants were thanked for their participation and the study ended. This was to give participants an option to opt out of the study if they did not wish to sign the consent.

Study Participation

Part 1. Following consenting procedures, participants completed a demographics questionnaire (Appendix X). Upon completion, they were thanked for their participation and informed that the study administrator would send them a link to the second portion of the study within 24 hours. Participants were then randomly-assigned to conditions based on the gender stratification and sent the appropriate link to part two of the study.¹²

Part 2 – Primary Measures. Participants read the mock therapy consent form and completed the consent form quiz. Following these tasks participants completed the

¹² Because the random assignment tool in REDCap is not linked to the separate study arms, the author manually assigned participants to conditions. The author then sent participants a link to either the experimental or control arm of the study.

primary measures assessing intentions to seek counseling (ISCI), perceived dangerousness (DS), and preferred social distance (SDS) as well as the secondary measure of general help-seeking (GHSQ-P). Primary measures were counter-balanced so that they were administered in a different randomized order every 40 participants to control for potential order effects (Osterlind, 2009).¹³ Participants then completed the manipulation check (recall task) following the primary measures.

Distraction Task. Following completion of the primary measures, participants read the mock dental consent form. Participants then completed the dental consent form quiz. Finally, participants completed the DSQ.

Control Measures. Participants then completed the control measures regarding previous social contact with persons with MI (CS), social desirability (MCS-8), violence enabling (VES), and symptom severity (HSCL-21). Control measures were also counter-balanced. For a list of instruments and their administration see Table 4.

¹³ Administration of scales in a single order may result in previous scales influencing responses on a later scale. Administration of scales in a random order may help control for such order effects.

Table 4

Assessments administered after experimental manipulation and distraction task.

	Measure	Post-Manipulation	Post-Distracton
Primary Outcomes	Therapy Consent Quiz	X	
	ISCI	X	
	DS	X	
	SDS	X	
	GHSQ	X	
	Recall Task	X	
Distraction Task	Dental Consent Quiz	-	-
	DSQ	-	-
Control Variables	CS		X
	MCS-8		X
	VES		X
	HSCCL-21		X

Debriefing. Upon completion of the study, participants read a debriefing form discussing the purpose of the current study as well as how ‘Clear and Present Danger’ laws apply to them in Kansas and Missouri. Participants were also provided a sheet containing resources for seeking mental health treatment pending the student experiences psychological distress. Participants were also able to download both of these debriefing forms from REDCap.

Statistical Analyses

Primary Hypotheses

A primary aim of the current study was to examine differences between the clear and present danger condition on perceived dangerousness and preference for social distance. Clear and present danger hypotheses (1-2) were examined using an omnibus multivariate analysis of covariance (MANCOVA)¹⁴ to account for the linear relationship between perceived dangerousness and social distance ($r=.20-.46$; Alexander & Link, 2003; Link et al., 1999; Penn et al., 1994; Phelan & Basow, 2007). Within this MANCOVA *perceived dangerousness* (DS) and *social distance* (SDS) were entered as DV's with the clear and present danger law variable being entered as the IV to determine the differences between conditions with gender and previous contact as covariates.¹⁵ For observed group differences, two separate follow-up univariate ANCOVAs were then conducted with *perceived dangerousness* (DS) and *social distance* (SDS) as the DV's for each respective analysis. Hence, the analytic discussion for these hypotheses placed greater emphasis on follow-up ANCOVAs. This includes the DV and IV of interest.

Another primary aim of the current study was to examine differences between the clear and present danger conditions on intentions to seek counseling. Hypothesis three which utilized *intentions to seek counseling* as the DV was assessed using a multiple regression analysis. The clear and present danger condition, perceived dangerousness,

¹⁴ While a MANOVA with follow-up ANOVAs were previously considered to test these hypotheses, gender and previous contact with people with MI were included as covariates based on their relationships with dangerousness and social distance.

¹⁵ Rationale for the selection of these covariates is discussed in the next chapter.

preference for social distance, gender, and their interactions were entered as predictors.

Including interactions between IV's in the ANCOVA's helps ensure less biased estimates of between-group differences (Hull, Tedlie, & Lehn, 1992; Yzerbyt, Muller, & Judd, 2004).¹⁶

For interpretive considerations in primary analyses, the clear and present danger conditions were contrast coded to reflect hypothesized differences between the two conditions. Dangerousness and social distance were expected to be greater in the clear and present danger condition than in the standard consent (control) condition. The clear and present danger condition was coded with a positive value (+1) while the control condition was coded with a negative value (-1).¹⁷ Hence, positive coefficients (β) would indicate that the mean of the DV's is greater in the clear and present danger condition with negative coefficients indicating the mean of the DV's is greater in the control condition. For the regression model, the clear and present danger condition was coded in the negative (-1) and the control condition was coded positive (+1) to reflect the hypothesis that treatment-seeking intentions would be greater in the control condition. To control for experiment-wise error rate, a Bonferroni correction was applied to the three analyses (i.e., both follow-up ANCOVA's in the MANCOVA procedure, the multiple regression analysis). For the primary hypotheses, the threshold for statistical significance was set to $p=.0169$ to preserve

¹⁶ Excluding interactions between the IV's in an analysis can result in more conservative main effects estimates due to higher standard error (Yzerbyt et al., 2004).

¹⁷ Contrast codes do not change the value of means being compared between groups, just the interpretations of the coefficients which are coded to align with hypotheses (Judd, McClelland, & Ryan., 2008).

Type I Error Rate to 5% across all three analyses (Kromrey & LaRocca, 1995; Olejnik, Li, Suppatathum, & Huberty, 1997).

Hypothesis One

The first hypothesis stated that participants exposed to the consent form with clear and present danger provisions would perceive persons with MI to be more dangerous than participants exposed to the standard consent form. To test this hypothesis, a follow-up one-way ANCOVA was conducted with dangerousness (DS) entered as the DV with clear and present danger conditions being entered as the IV with gender, contact, and their interactions with the IV as covariates.

Hypothesis Two

Hypothesis two stated that participants in the clear and present danger condition would have greater preferences for social distance than those in the control condition. To test this hypothesis, a follow-up one-way ANCOVA was conducted with social distance (SDS) entered as the DV with clear and present danger conditions being entered as the IV controlling for the effects of gender, contact, and their interactions with the IV.

Hypothesis Three

Hypothesis three stated that participants in the clear and present danger condition would have lower treatment-seeking intentions than participants in the control condition. To test this hypothesis, a multiple regression analysis was conducted with intentions to seek counseling (ISCI) entered as the DV with clear and present danger being entered as

the IV controlling for dangerousness, social distance, gender, and their interactions with the clear and present danger conditions.

Exploratory Hypotheses

Another primary aim of this study was to examine whether dangerousness and social distance differentially mediate the following relationship: clear and present danger laws and intentions to seek treatment. The same multiple regression analysis utilized in hypothesis three with intentions to seeking counseling (ISCI) entered as the DV, clear and present danger laws as the IV, dangerousness (DS) and social distance (SDS) as mediators, and gender as a covariate was utilized and conducted using the PROCESS v2.13 macro for SPSS (Hayes, 2013). Bias-corrected boot-strapping was used to estimate mediation effects (Bollen & Stine, 1990). Bootstrapping is a powerful approach for estimating bias-corrected confidence intervals for testing indirect effects (i.e., mediation), particularly in models that utilize more than a single mediator (Hayes, 2013; Preacher & Hayes, 2008).

Hypothesis Four

Hypothesis four suggested that preference for perceived dangerousness will mediate the relationship between clear and present danger laws and treatment-seeking intentions. Hypothesis one stated that participants in the clear and present danger condition would perceive persons with MI to be more dangerous than those in the control condition. This hypothesis proposed that this increase in perceived dangerousness (stated in hypothesis one) would in-turn predict *greater* treatment-seeking intentions. In the regression model, treatment-seeking intentions (ISCI) was entered as the DV with clear

and present danger being entered as the IV and perceived dangerousness (DS) as the mediator of interest respectively. Social distance, gender, and their interactions with the clear and present danger conditions and dangerousness were treated as covariates.

Hypothesis Five

Hypothesis five suggested that preference for social distance would mediate the relationship between clear and present danger laws and treatment-seeking intentions. As stated in hypothesis two, participants in the clear and present danger condition would have greater preferences for social distance than participants in the control condition. This hypothesis proposed that the increase in social distance (stated in hypothesis two) would in-turn predict *lower* treatment-seeking intentions. In the regression model, treatment-seeking intentions (ISCI) was entered as the DV with clear and present danger being treated as the IV and social distance (SDS) as the mediator of interest respectively. Dangerousness, gender, and their interactions with the clear and present danger conditions and social distance were treated as covariates.

CHAPTER 4

RESULTS

Data Screening

Missing Data Analysis

Missing data procedures followed the recommendations of Baraldi and Enders (2010) as well as Howell (2007). The multiple imputation method (MIM) was utilized to estimate missing values. Evidence suggests that MIM produces unbiased estimates for missing values when missing data does not adhere to a predictable pattern (i.e., missing completely at random; Baraldi & Enders, 2010; Howell, 2007). For the 216 participants that were considered for missing value analysis, the total number of missing values was 246 (1.162%) across 31 (31.63%) scale items. While there is no well-established cutoff for an acceptable level of missing data (Dong & Peng, 2013), data simulations ($n=10-10,000$) have demonstrated that correlations between original and imputed data are very large ($r=.98$) for the MIM when missing data equals less than 5% (Cheema, 2014). Little's Missing Completely at Random Test (MCAR; Rubin & Little, 2002) was conducted on all scale items and indicated that data were missing completely at random across primary (ISCI, DS, SDS, GHSQ) and control measures (CS, MCS-8, HSCL-21, VES), $\chi^2(314)=260.960, p=.987$. Still, a visual examination of a missing values plot yielded a noteworthy pattern that four participants did not complete control measures (3 in the experimental condition and 1 in the control group). Instead of trying to impute entire

scales, these participants were excluded from MIM procedures.¹⁸ Accounting for these participants, there were 53 remaining missing values (.255%).

Missing values were imputed using the linear regression method in MIM. All scale items and demographic characteristics were included in the MIM analysis. Items with missing values were specified as to receive imputed values and as predictors for the estimation of other missing values. Items without missing data and demographic characteristics were specified as predictors. Five datasets were imputed, each containing an estimate for missing data points. The pooled values of these five estimates were then used as the value for each missing data point.

Outlier Analysis

Several different types of outliers were examined in the current study: univariate, multivariate, dependent variables, independent variables, and the relationship between the independent and dependent variables. Univariate outliers were assessed via examination of Z-Scores on all primary and control variables (≥ 3 *sd* from the mean). In total, six univariate outliers were observed across three variables: DS ($Z=3.12-3.65$), HSCL-21 ($Z=3.92-4.02$), and VES ($Z=3.35-3.68$). Cook's distances scores suggested no significant outliers ($d > 1$; Cook, 1977; Cook & Weisberg, 1982) were influencing the predicted scores of any of the dependent variables for MANCOVA (DS, SDS) or regression analyses (ISCI, GHSQ-P), $d = .000-.352$. Standardized DFBETAS indicated that one participant's DS score may have had significant impact ($SDFBETA > 1$) on the slope of the DS and ISCI compared

¹⁸ Because these participants did complete primary measures and the manipulation check, they were still considered for primary analyses.

to other participants, $SDFBETAS=-1.015$. Another participant score on the DSxGENDER interaction was also influential, $SDFBETAS=1.127$. Leverage scores did not indicate undue leverage ($h>.5$; Hoaglin & Welsch, 1978) between predictor and criterion variable relationships for each participant in the regression models, $h=.008-.345$. Finally, a Mahalanobis Distance Test (Mahalanobis, 1936) was conducted to determine potential multivariate outliers. Stevens (1984) suggested using a cutoff of 22.59 for a sample of 200 participants. Four participants were identified as multivariate outliers, $d=29.750-71.728$. Furthermore, these four participants were also identified as outliers using at least one of the other criteria discussed above. These participants were excluded from primary analyses.

Manipulation Check

Chi-square tests were used to determine the likelihood of participants in the experimental condition ($n=102$) recalling information regarding the CPD manipulation (e.g., reporting to human services, NICS database inclusion, etc.). For this analysis, participants who recalled information specific to CPD laws were indicated by a different code (1) compared to participants that did not (0). The analysis revealed that 92 participants (84.40%) *did not* recall information unique to the CPD manipulation, $\chi^2(1)=44.299, p<.001$. The odds of recalling information specific to the CPD manipulation were only .098:1 with the median recall being zero (of three possible items). Interestingly, 66 participants (64.71%) were more likely than not to recall information regarding limitations to confidentiality overall, but this information was available in both versions of the therapy consent form (e.g., court subpoena, duty to warn, duty to protect, etc.),

$\chi^2(1)=9.202, p=.002$. The odds of recalling information regarding more general limitations to confidentiality were 1.886:1 ($md=2$). While these results suggested that participants did attend to limitations to confidentiality overall, there is little evidence to suggest that mandated reporting that was unique to the CPD condition had a significant impact on participants' responses to primary outcome measures. Results should be interpreted with this consideration.

Measurement Model

Items from the ISCI, DS, SDS, and GHSQ-P (see previous chapter) were entered into a PCA with an oblique (promax) rotation to establish discriminant validity among primary measures (Judd & Sadler, 2003). The PCA was set to extract four components (i.e., one per outcome measure). This analysis demonstrated that items from the ISCI ($\lambda=.534-796$; $eigenvalue=6.939$), DS ($\lambda=.517-694$; $eigenvalue=4.932$), SDS ($\lambda=.520-815$; $eigenvalue=1.989$), and GHSQ-P ($\lambda=.626-828$; $eigenvalue=1.412$) loaded onto separate components with minimal weaker cross-loadings ($\lambda \leq .369$). This four component solution explained 52.66% of the variance. Bartlett's Test of Sphericity also indicated that these items were adequate for reduction, $\chi^2(406)=2638.904, p<.001$. Based on these results, components were considered unique and to be analyzed as separate outcomes.

Demographic Characteristics

A series of independent-Samples *t*-Tests was conducted to determine gender differences on the DVs (ISCI, DS, SDS, GHSQ-P). Independent-samples *t*-Tests yielded gender differences on three of the four outcomes. On average, females ($m=35.02$) had

greater intentions to seek counseling than males ($m=30.25$), $t(201)=2.535$, $p=.012$, $d=.358$. On average, females ($m=13.02$) also had greater preference for social distance from people with MI than males ($m=10.85$), $t(201)=3.236$ $p=.001$, $d=.456$. Finally, males ($m=24.72$) perceived people with MI to be more dangerous than females ($m=20.30$), $t(201)=3.766$ $p<.001$, $d=.531$. No differences were observed for general health professionals, $t(201)=.095$, *ns*. Thus, gender was included as a covariate in primary analyses. A weighted effects code was applied to the gender variable to account for the imbalance. This code was calculated by taking the proportion of female participants in the analysis ($n=162$) and dividing by the total proportion of male participants ($n=41$) and applying this code (3.951) to the smaller group (Sweeney & Ulveling, 1972). Given that males had lower means on two of three outcome variables they were negatively coded (-3.951) and females were coded as positive (+1). Weighted effects coding allows for estimates from the gender variable in primary analyses to reflect the (unbalanced) sample mean rather than the grand mean which assumes an equal number of observations in each condition (Sweeney & Ulveling, 1972).

To account for the positive skew for age, Spearman correlations were utilized to examine correlations between age and the DVs. However, no such relationships were observed ($\rho=-.009-.038$, *ns*). One-way ANOVAs were used to determine other between-group in demographic characteristics on the DVs. With regard to ethnicity, between-group differences were not observed on the ISCI, GHSQ-P, or DS, $F(8, 194)=.625-1.570$, *ns*. Between-group differences were observed on the SDS, $F(8, 194)=2.197$, $p=.029$, *Adj*.

$R^2=.083$. Specifically, the 'International/Non-US Citizen' group ($m=3.00$) was more than 9-points lower than the grand mean of other ethnic groups ($m=12.58$). However, there were only two participants in this group and this effect became non-significant after accounting for these two participants, $F(7, 193)=.699, ns$. Thus, ethnicity was not utilized as a covariate. A separate one-way ANOVA indicated no differences between college grade-level on any of the primary measures, $F(4, 194)=.200-1.080, ns$. A one-way ANOVA also revealed similar findings for political affiliation, $F(1, 197)=.611-2.113, ns$. Finally, no order effects were observed in the current study, $F(5, 197)=.980-1.431, ns$. Neither political affiliation, grade-level, or order were used as covariates.

MANCOVA Assumptions

Assumptions of MANCOVA were explored following the recommendations of Tabachnick and Fidell (2012). As previously mentioned, four participants were excluded after they were identified as multivariate outliers. A bivariate correlation analysis indicated a significant relationship between the DS and SDS ($r=-.666, p<.001$), but not at the multicollinear level ($r\geq.80$). Box's Test of Equality of Covariance Matrices indicated homogeneity of variance and covariance parameters, $Box's M=7.680, p=.582$. Furthermore, equal variances were observed across groups in the individuals ANCOVAs, $F(3, 199)=.635-2.334, p=.075-.593$. An examination of normal probability ($Q-Q$) and scatterplots indicated that outcome measures were normally distributed across groups.

OLS Regression Assumptions

Assumptions of OLS regression procedures were explored for both the ISCI and GHSQ-P. Several steps were taken to ensure that OLS regression assumptions were met (Judd et al., 2008). Linearity was determined using visual examination of a scatterplot between observed and predicted values. A diagonal slope was observed with a symmetrical distribution of data points with relatively constant variance in both analyses. Homoscedasticity was also determined via visual examination of a scatterplot. A horizontal (flat) slope was observed with a symmetrical distribution of scores with mostly constant variance in both analyses. Normality of was determined through visual examination of normal probability (*Q-Q*) and scatterplots of regression residuals. Both plots indicated normal distribution for each analysis. The independent errors assumption was tested using the Durbin-Watson Test (D-W; Durbin & Watson, 1951). The DW statistics ranging from 1.5-2.5 are considered to have an absence of autocorrelation (Jose, Nau, & Winkler, 2009) and was observed in both regression models (1.862-1.886). Variance Inflation Factors (*VIF*; Fox, 1991) were examined for evidence of problematic multicollinearity. A $VIF \geq 4$ is considered problematic (Robinson & Schumacker, 2009). However, there was no evidence of correlations among predictors artificially inflating predicted values of the DV, $VIF=1.066-1.909$. Finally, equal variances were observed across conditions and gender groups, $F(3, 199)=.889, ns$.

Preliminary Analyses

Bivariate Correlations

Correlation analyses were conducted to examine relationships between primary and control measures. With regard to primary measures, Pearson correlations revealed that intention to seek counseling was positively associated with preference for social distance ($r=.177, p=.012$) and general help-seeking from a professional ($r=.421, p<.001$) as well as negatively associated with perceived dangerousness ($r=-.140, p=.046$). However, given the large sample size and small magnitude of the correlations with dangerousness and social distance, it should be noted that these significant correlations could have occurred by chance.¹⁹ Perceived dangerousness was negatively associated with social distance ($r=-.666, p<.001$) but not general help-seeking intentions ($r=-.017, ns$). Social distance was also not associated with general help-seeking ($r=.059, ns$). With regard to control measures, neither intentions to seek counseling ($r=-.056, -.069, ns$), general help-seeking ($r=.047-.047, ns$), or social distance ($r=-.006-.058, ns$) were associated with social desirability or violence enabling. Dangerousness was positively associated with violence enabling ($r=.155, p=.029$) but not with social desirability ($r=.025, ns$). Violence enabling and social desirability were not used as a covariate in subsequent analyses due to the smaller correlation coefficients.

The HSCL-21 and CS were both positively-skewed in the current study. Spearman correlations were conducted to determine their relationships with primary measures.

¹⁹ Effect sizes for correlation coefficients were as follows: small ($r=.10$), medium, ($r=.30$), and large ($r=.50$; Cohen, 1992).

Symptom severity was not associated with dangerousness ($\rho=-.053$, *ns*), social distance ($\rho=.082$, *ns*), or general help-seeking intentions ($\rho=-.005$, *ns*). Symptom severity was positively associated with intention to seek counseling ($\rho=.185$, $p=.009$), but the magnitude of this effect was small. Previous contact with persons with MI was not associated with intention to seek counseling ($\rho=.125$, *ns*), general help-seeking ($\rho=.063$, *ns*), or dangerousness ($\rho=-.137$, *ns*). Interestingly, previous contact was associated with greater preference for social distance ($\rho=.287$, $p<.001$) which is inconsistent with previous research. Thus, social contact was included as a covariate in the MANOVA. For a comprehensive set of bivariate correlations see table 5.

Table 5

Bivariate correlations (two-tailed) between primary and control measures.

	ISCI	DS	SDS	GHSQ-P	VES	MCS-8	CS	HSCL-21
ISCI	1.000							
Sig.								
<i>N</i>								
DS	-.140*	1.000						
Sig.	.046							
<i>N</i>	203							
SDS	.177*	-.666***	1.000					
Sig.	.012	.000						
<i>N</i>	203	203						
GHSQ-P	.421***	-.017	.059	1.000				
Sig.	.000	.807	.401					
<i>N</i>	203	203	203					
VES	-.069	.155*	-.006	.047	1.000			
Sig.	.334	.029	.935	.507				
<i>N</i>	200	200	200	200				
MCS-8	-.056	.025	.058	.047	.068	1.000		
Sig.	.429	.728	.410	.505	.341			
<i>N</i>	201	201	201	201	201			
CS	.125	-.137	.287***	.063	.092	-.038	1.000	
Sig.	.078	.053	.000	.381	.199	.599		
<i>N</i>	199	199	199	199	199	199		
HSCL-21	.185**	-.053	.092	-.005	-.199**	-.209*	.031	1.000
Sig.	.009	.457	.197	.949	.007	.003	.660	
<i>N</i>	200	200	200	200	200	200	199	

Note. Pearson correlations are reported for all correlations except those involving the CS and HSCL-21. Spearman's rho was utilized to account for positive skew of these variables.

* $p < .05$

** $p < .01$

*** $p < .001$

Primary Hypotheses

Hypotheses One and Two

Hypothesis one stated that participants exposed to the consent form with clear and present danger provisions would perceive persons with MI to be more dangerous than participants exposed to the standard consent form. The second hypothesis stated that participants in the CPD condition would have greater preferences for social distance than those in the control condition. To account for the effects of previous contact on the preference for social distance and gender of both outcomes, a multivariate analysis of covariance (MANCOVA) was conducted to examine hypotheses one and two. Perceived dangerousness and social distance were entered as DV's, the Clear and Present Danger Condition variables as the IV, as well as gender, previous contact, and the interactions with the IV being examined as covariates. To account for experiment-wise error rate, the threshold for statistical significance was set to $p=.0167$ using a Bonferroni adjustment. Contrary to hypotheses one and two, there were not a statistically significant differences between the CPD and control conditions on dangerousness and social distance, $F(2, 191)=1.202, p=.303, \text{Wilks' } \Lambda=.988, \text{Adj. } R^2=.012$. Consistent with the MANOVA, there were no significant CPD condition differences for either univariate ANOVA, $F(1, 192)=.012-1.261, ns$. However, there were significant gender differences on DS and SDS scores, $F(2, 191)=8.369, p<.001, \text{Wilks' } \Lambda=.919, \text{Adj. } R^2=.081$. To determine significant differences between gender groups, follow-up univariate ANOVAs were examined. On average, males perceived people with MI to be more dangerous ($B=-8.209$) than females,

$F(1, 192)=16.826, p<.001, Adj. R^2=.081$. Conversely, females had greater preference for social distance from persons with MI ($B=2.956$) than males, $F(1, 192)=9.902, p=.009, Adj. R^2=.035$. Furthermore, the MANCOVA also revealed a significant effect of previous contact on the SDS, $F(2, 191)=7.331, p=.009, Wilks' \Lambda=.929, Adj. R^2=.071$. Each one point increase on the CS was associated with a .475 point increase in preference for social distance, $F(1, 192)=14.087, p<.001, Adj. R^2=.068$. Higher previous contact was not associated with perceived dangerousness $F(1, 192)=3.143, p=.078, Adj. R^2=.016$. No significant interactions were observed between the CPD variable and covariates, $F(2, 191)=.880-1.100, ns, Wilks' \Lambda=.989-.992$. These analyses failed to reject the null hypotheses that no significant differences between the CPD and control conditions would be observed on dangerousness and preference for social distance. Group differences can be seen in Figure 5.

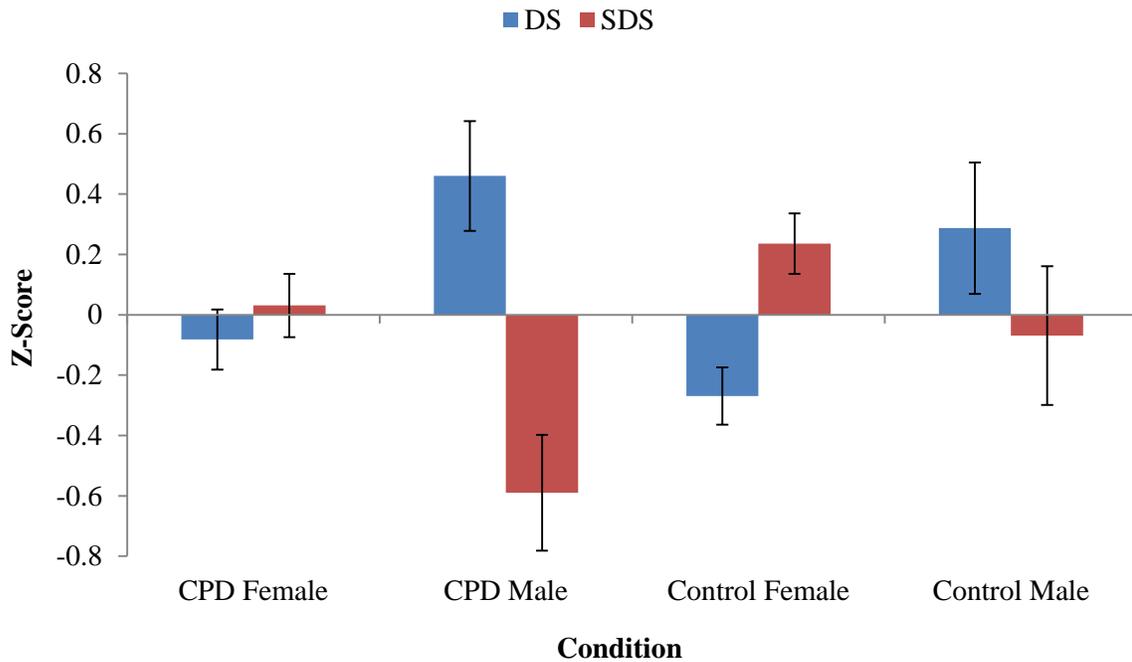


Figure 5. Adjusted differences in dangerousness and social distance between CPD conditions and gender.

Note. Group differences reported in Z-scores to account for scale differences between the SD and SDS.

Hypothesis Three

Hypothesis three stated that participants in the CPD condition would have lower treatment-seeking intentions than participants in the control condition. To examine this hypothesis, a multiple regression analysis was conducted using the PROCESS v2.13 macro for SPSS (Hayes, 2013). For this analysis, the ISCI was entered as the DV, the CPD variable being entered as an IV, the DS and SDS as mediators, as well as gender and interactions between the IV and mediators as covariates. With regard to hypothesis three,

the DS and SDS variables were also examined as covariates. The full regression model including the IV and covariates explained only 4.8% of the variance in intentions to seek counseling and was not significant based on the Bonferroni adjusted alpha ($p=.0167$), $F(7, 195)=2.452$, $p=.0197$, $Adj, R^2=.048$. On average, there were no significant differences between the CPD and control conditions when controlling for other covariates, $t(195)=-1.004$, ns . No additional covariates or their interactions with the CPD variable were significant, $t(195)=-.186-1.883$, ns . These analyses failed to reject the null hypotheses that no significant differences between the CPD and control conditions would be observed for intentions to seek counseling. See Figure 6.

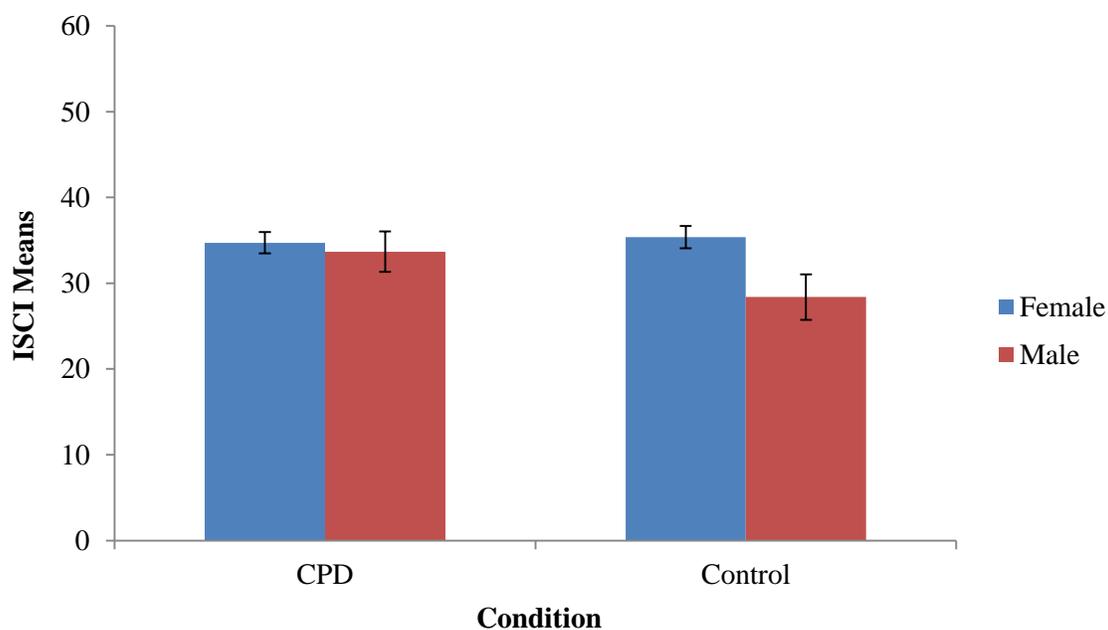


Figure 6. Adjusted differences in intention to seek counseling between CPD conditions and gender.

As mentioned above, if the treatment-seeking intention hypotheses (3-5) were not supported with a measure of counseling, the more general GHSQ-P would also be examined as a criterion variable. Using a Bonferroni correction, the alpha ratio was set to $p=.0127$ to account for this additional analysis with regard to experiment-wise error rate. This same multiple regression for hypothesis three was conducted using PROCESS v2.13 only with the GHSQ-P being entered as the DV rather than the ISCI. However, the full regression model only explained 1.8% of the variance and was not statistically significant, $F(7, 195)=1.529, p=.159$. Furthermore, no differences between the CPD and control conditions were observed on the GHSQ-P, $t(195)=-.184, ns$. No additional covariates or their interactions with the CPD variable were significant, $t(195)=-.882-1.481, ns$. This analysis provided further evidence for accepting the null hypothesis.

Hypothesis Four

Hypotheses four indicated that perceived dangerousness would mediate the relationships between clear and present danger laws and treatment-seeking intentions. Hypothesis one stated that participants in the CPD condition would perceive persons with MI to be more dangerous than those in the control condition. This hypothesis proposed that this increase in perceived dangerousness (stated in hypothesis one) would in-turn predict *greater* treatment-seeking intentions. The same multiple regression analysis that was used to test hypothesis three was also used to test hypotheses four and five. The regression analysis did not reveal a direct relationship between the CPD variable and the ISCI (see hypothesis three). This indicated a failure to meet criteria for mediation.

Furthermore, perceived dangerousness did not predict intention to seek counseling, $t(195)=-.002, ns$. The bias-corrected confidence intervals also suggested a non-significant indirect effect of dangerousness on the relationship between the CPD variable and intention to seek counseling (95% $CI=-2.288-14.949$). Similar results were observed when examining whether the indirect effect of dangerousness on the relationship between CPD conditions and general help-seeking intentions (95% $CI=-.251-.502$). These findings failed to reject the null hypothesis that perceived dangerousness would not mediate the relationship between the CPD conditions and treatment-seeking intentions.

Hypothesis Five

Hypotheses five stated that preference for social distance would mediate the relationship between clear and present danger laws and treatment-seeking intentions. As stated in hypothesis two, participants in the CPD condition would have greater preferences for social distance from people with MI than participants in the control condition. This hypothesis proposed that the increase in social distance (stated in hypothesis two) would in-turn predict *lower* treatment-seeking intentions. As mentioned above, the absence of a direct relationship between CPD conditions and the ISCI indicated a failure to meet criteria for mediation. Additionally, social distance did not predict intentions to seek counseling, $t(195)=.801, ns$. The bias-corrected confidence intervals also did not reveal a significant indirect effect of social distance on the relationship between CPD and intentions to seek counseling (95% $CI=-2.595-2.620$). Similar results were observed when examining whether the indirect effect of social distance on the relationship between CPD conditions

and general help-seeking intentions (95% $CI=-.341-.185$). These results failed to reject the null hypothesis that preference for social distance would not mediate the relationship between the CPD conditions and treatment-seeking intentions.

CHAPTER 5

DISCUSSION

The purpose of this study was to investigate whether reporting provisions specified in CPD laws can impact MI stigma (dangerousness, social distance) and treatment-seeking intentions in a college student population. Given the common media and political practice of framing mass shootings and firearm violence as a mental health concern, it is important for researchers to develop empirical evidence to inform this timely issue. The link between public perceptions that people with MI are dangerous and discussion of the potential relevance for influencing proposed state and federal legislation to limit firearm access among this population is well documented (Price & Norris, 2008; McGinty, Webster, & Barry, 2014; Silver, Fisher, & Silver, 2015). There is also significant concern as to the role firearm policy may act as a barrier to seeking mental health treatment as well as increase stigma (Appelbaum & Swanson, 2010; Fisher & Lieberman, 2013; Gold, 2013). The current experimental study aimed to test these concerns. Specifically, the current examination differed from previous research and policy discussions by examining whether changes to provider reporting policy as identified in such laws impacted MI stigma and treatment-seeking intentions among an at-risk mental health group.

Implications for MI Stigma and Policy

Hypotheses one and two stated that exposure to CPD reporting provisions may increase perceptions that people with MI are dangerous and preference for social distance. These hypotheses were not supported. Findings from the current study are inconsistent with concerns of mental health experts that firearm legislation targeting mental health communities would increase MI stigma, particularly perceived dangerousness (Fisher & Lieberman, 2013; Gostin & Record, 2011). These results do have some consistency with research from media framing and policy research.

To date, this is the first study that has investigated the impact of firearm policy on MI stigma and treatment-seeking intentions. However, two studies have examined the role of public attitudes towards MI and support for firearm policy targeting this population. McGinty, Webster, and Barry (2013) conducted an experiment to examine the role of media framing on public attitudes towards SMI and support of gun policies. In this study, a large nationally-representative sample was randomly-assigned to read a brief, fictitious news story describing a mass shooting by a person with SMI or a control group who did not read a news story. Participants in the news story group were then assigned to one of three groups. These groups received either a brief thematically framed addition to the news story suggesting that we need to “*keep guns out of the hands of dangerous people*”, “*keep dangerous guns off our streets*”, or only the initial mass shooting story. Participants in all three news story conditions reported higher preference for social distance from persons with SMI compared to the control group. Participants receiving the mass shooting

story alone also reported higher perceived dangerousness than the control group while the two thematic groups (i.e., *dangerous guns* theme, *dangerous people* theme) did not. No differences in dangerousness or social distance were observed between the three news story conditions. Finally, participants that read the news story discussing the mass shooting by a person with MI and the importance of banning *dangerous guns* were more likely to support policy restricting guns from people with SMI compared to the control group. However, participants who read the news story with the mass shooting and the importance of keeping guns from *dangerous people* were no more likely than the control group to support gun restriction policies for people with SMI. Thus, participants may have not been in favor of limiting firearm access to people with MI specifically, but limiting access to dangerous firearms in general.

A separate study examining college students used path modeling to better understand whether increased fear of people with MI following Sandy Hook mediated the relationship between dangerousness and support for policy targeting MI populations to reduce gun violence (Rosenberg, Rosenberg, Ellefson, & Corrigan, 2015). Policy support was the aggregate of two-items including support for a national database comprised of people with MI and beliefs that gun violence would be reduced if people with MI were confined to psychiatric hospitals. The authors found a small but significant association between dangerousness and increased fear of people with MI following Sandy Hook. This increased fear was in-turn associated with increased support for policy targeting people with MI to reduce firearm violence. The authors concluded that events like the Sandy

Hook shooting increase public stigma of MI and support for measures to regulate this population as a means to control the more global issue of firearm violence.

Results obtained from the current and aforementioned studies suggest mixed support for the MI community's concern that gun restrictions towards persons with MI may worsen public attitudes. With regard for experimental investigation, evidence from the current study suggests that exposure to provider-reporting policy may not increase MI stigma (i.e., dangerousness, social distance). The unsuccessful manipulation check may also reveal that college students do not actually attend to this type of technical information compared to how they may attend to information they may be exposed to via media outlets (e.g., details and images mass shooting events, polarized opinion; McGinty et al., 2013). Exposure to media indicating people with MI are dangerous alone may continue to have a detrimental impact on public stigma and has been well-documented for decades (McGinty et al., 2014; Nawka et al., 2012; Wahl, 1992, 2003). Still, the mechanisms in which media can impact this issue may also involve complex processes. As McGinty and colleagues (2013) demonstrated, a media-based manipulation that exposed participants to a mass shooting increased perceived dangerousness and preference for social distance compared to the no news story control group. However, adding policy-inspired information pertaining to the need to keep firearms out of the hands of 'dangerous people' with MI was not sufficient for increasing perceived dangerousness compared to the control group. Additionally, exposure to this additional manipulation was not effective in increasing social distance over and above exposure to a news story about a person with MI

committing a mass shooting. Furthermore, Rosenberg and colleagues (2015) found that the impact of dangerousness on policy may be an indirect one that is influenced by potential mediators and moderators (i.e., fear). Finally, mixed findings from these studies also provide evidence for a unidirectional relationship in which stigma may have a stronger impact on policy endorsement than policy has on stigma.

Given that policy targeting people with MI as dangerous and unfit for firearm ownership may not further exacerbate stigma (i.e., dangerousness and social distance) could also suggest a potential ceiling effect of stigma among the general population (McGinty, 2017). This effect may be evidenced by rates of stigma from the General Social Survey remaining stagnant from 1996-2006 (Phelan et al., 2010) after experiencing a two-and-a-half fold increase from 1950-1996 (Phelan et al., 2000). While the current evidence does not suggest that firearm reporting policy may negatively impact public MI stigma, additional research is still necessary to determine whether such policy has any benefit for people with MI (i.e., greater access to care) and the general population (i.e., increased public safety).

Implications for Policy, Stigma, and Treatment-Seeking Intentions

Hypothesis three stated that exposure to CPD provisions would decrease treatment-seeking intentions compared to the control group. Hypotheses four and five suggested that dangerousness and social distance would mediate the relationship between CPD conditions and treatment-seeking intentions. None of these hypotheses were supported. In recent

years, there has been considerable effort in prevention and early intervention models for people with mental illness, particularly for psychotic disorders (Dixon et al., 2015; Thompson et al., 2015). Combating stigma as a barrier to treatment and recovery among people with MI has also received a considerable increase in research attention over the past decade (Clement et al., 2015; Corrigan, Gause, Michaels, Buchholz, & Larson, 2015). Changing beliefs about stigma among people with MI has even become its own target for treatment with at least six interventions dedicated to this goal (Yanos, Lucksted, Drapalski, Roe, & Lysaker, 2015). Despite these notable efforts as well as ample social and empirically-driven commentary, there is possibly even less research examining how firearm policy targeting MI populations may decrease treatment-seeking intentions than there is for MI stigma (as described in the previous section). To our knowledge, this is the only empirical examination that has directly addressed this issue. A paucity of research has examined how stigma towards MI impacts treatment-seeking among college students.

Studies examining how college student's stigmatizing attitudes towards people with MI effects treatment-seeking have produced mixed findings. Eisenberg and colleagues (2009) found that worse stigmatizing attitudes towards people with MI was associated with lower of odds psychotropic medication use, therapy, and perceived need for treatment over the previous 12 months. Conversely, Vogel and colleagues (2007) found a positive relationship between MI stigma and help-seeking that was mediated by greater self-stigma and worse attitudes about seeking treatment. Perceived dangerousness has shown a positive association with help-seeking among college students (Yap et al., 2011) while

social distance has demonstrated a negative association (Jorm & Oh, 2009). Findings from the current study are largely inconsistent with any of these previous patterns. Specifically, dangerous was negatively associated with treatment-seeking intention while social distance was positively associated. However, these associations were small and non-significant in the regression models. Given these inconsistent patterns of findings, it is difficult to specify the relationship between MI stigma and treatment-seeking among college students. Future research should focus on examining potential mediators and moderators than may explain these mixed results.

Concerns that mandatory reporting provisions may become intrusive to client-provider confidentiality, reduce treatment-seeking behaviors, and subsequently increase violent behavior are not new. Providers expressed similar concerns when Tarasoff laws including ‘Duty to Warn, Duty to Protect’ were introduced in the 1970’s (Weinstock & Weinstock, 1989; Wise, 1978). Findings from the current study did not provide evidence that firearm policy reduced treatment seeking intentions. Interestingly, evidence from the manipulation check also suggested that participants did recall limitations to confidentiality including those introduced by Tarasoff (duty to warn, duty to protect), just not information unique to CPD reporting provisions. This may indicate that CPD laws do not present unique or more cautionary information than is already presented by Tarasoff. From the perspective of the mental health community, the current findings may be considered somewhat positive given that at least 16 states have passed laws targeting mental health in efforts to reduce firearm violence following Sandy Hook (McGinty et al., 2014; Rosenberg

et al., 2015). Still, the larger goal for prominent organizations including the National Alliance for Mental Illness (NAMI), the American Psychological Association, and the American Psychiatric Association include opposing legislation that weakens HIPAA (Rosenberg, 2014). NAMI has argued that NICS reporting laws are based on the largely unfounded relationship between mental health and gun violence and that people with MI should not receive differential treatment in firearm legislation (Fitzpatrick, 2013). This argument is empirically-supported as people with MI are significantly more likely to be victims rather than perpetrators of general and firearm-related violence (Choe, Teplin, & Abram, 2008; Metzler & MacLeash, 2015) and the majority of mass shooters do not have psychotic symptoms (Fox & Fredel, 2016). Epidemiological evidence also suggests that victimization of people with MI and suicide are far greater threats to public health than violence perpetuation (Choe et al., 2008; Crisafi, Myers, Vernick, & Webster, 2015).

The CPD reporting provisions used in the current study were introduced as part of a concealed carry act (Illinois Department of Human Services, 2014). A study of conceal carry laws in North Carolina suggested that conceal and carry acts were not effective in reducing gun fatalities, the severity of mass shootings, and are not likely to reduce perpetrators planning these attacks (Bowles, 2016). Still, National tragedies like Sandy Hook and Virginia Tech can serve to reinforce over-generalized public beliefs in the link between MI and dangerousness (Rosenberg et al., 2015; Swanson, McGinty, Fazel, & Mays, 2015). The problem with this association is that the true link between mental health and firearms is the heightened suicide risk which has been well-established (Crisafi et al.,

2015; Miller, Swanson, & Azrael, 2016; Swanson et al., 2015). Recent data suggests that 21-44% of suicide completions involve guns and over 60% of gun deaths may be attributable to suicide. This is nearly double that other firearm-related deaths (e.g., murder, accidents; National Center for Health Statistics, 2015). Additionally, 47-74% of relative suicide risk may be attributable to MI (Cavanaugh, Carson, Sharpe, & Lawrie, 2003; Li, Page, Martin, & Taylor, 2011). Improving access to mental healthcare and broader health promotion approaches (e.g., community awareness, enhanced confidentiality policies, stigma reduction) may be essential for suicide prevention efforts (David-Ferdon et al., 2016; Jones & Cipriani, 2016).

Public awareness for MI-related suicide, stigma reduction, and the benefits of mental health treatment are not the common form of media representation regarding this issue. An examination of randomly-selected news stories ($n=400$) suggests that this association between mental health, firearms, and suicide may get overshadowed by (38% vs. 29%) or conflated with stories of violence in the media (McGinty, Kennedy-Hendricks, Chosky, & Barry, 2016). Either way, reports of violence and suicide among people with MI (55%) received much greater media coverage than treatment effectiveness (26%) and success stories involving treatment and recovery (14%). A separate content analysis of 364 sampled American news articles about MI from 1997-2012 found that 75-80% were published following mass shootings (McGinty, Webster, Jarlenski, & Barry, 2014). Gun-policy proposals for people with MI were mentioned in 57% of articles within two weeks following a mass shooting (range=44%, Aurora to 76%, Newtown) compared to 19% of

articles outside two weeks. Less than 10% of the articles mentioned key factors about MI that are important for raising public awareness of stigma (e.g., people with MI are highly stigmatized, negative public attitudes may prevent treatment-seeking, most people with MI are not violent). These studies indicate that more work is necessary to better understand ways to improve access to mental health treatment and increase public awareness of the link between MI and suicide without increasing public stigma.

Introducing policy that emphasizes the best interests of people with MI as well as public health, safety, and support presents its own set of challenges. As previously discussed, research suggests that mass shootings may reinforce public beliefs that people with MI are dangerous as well as support for more punitive measures for this population (e.g., databases; Barry, McGinty, Vernick, & Webster, 2013; Rosenberg et al., 2015). Mass shootings can also have detrimental psychological effects at the individual and community levels (e.g., trauma, anxiety, depression; Lowe & Galea, 2017; Schultz et al., 2014). Following the largest recorded mass shooting in 2011, Norway has become a model for prompt delivery of mental health services for affected community members. This emphasizes the importance of training crisis and disaster relief teams to assess the mental health needs of victims as well as improvement of access to services in the community which may lessen the impact of violence (Crepeau-Hobson, Sievering, Armstrong, & Stonis, 2012; Lowe & Galea, 2017). In America, studies by Barry and colleagues (2013, 2015) suggest that 59-61% of people do support the government spending more money to improve mental health service access following Newtown.

However, support drops to 40% when people are asked whether they would favor raising taxes to do so (Barry, McGinty, Vernick, & Barry, 2015). Thus, people are more likely to be in favor of these resources provided they do not have to pay for it.

Limitations

The current study had several limitations. The primary limitation was the gender imbalance of the sample. Previous research suggests that females are more likely to engage in mental health services and have less stigmatizing attitudes towards MI than males which may begin as early as adolescence (Chondra & Minkovitz, 2006). Thus, findings were more reflective of the female gender which may have more positive attitudes towards treatment and people with MI compared to males. In retrospect, college students may have been a valid but non-ideal sample for investigation. While college students represent an at-risk mental health population, the distribution of VES scores was near the lower half of the scale which indicated weaker attitudes toward gun ownership. This may reflect an important limitation in the current study given that this sample may not actually have much at stake with losing their gun purchasing rights. Follow-up studies on this issue may fare better studying other populations, particularly those who may be more likely to support gun ownership such as Veterans.

In addition to the potential sample limitations, there were important threats to validity. The unsupported manipulation check was the primary threat to validity in the current study. Specifically, participants were not likely to recall reporting laws specific to

the CPD manipulation. Similar provisions have been discussed in the media including executive actions proposed by President Obama that the reporting of mental health information while maintaining HIPAA compliance to improve NICS reporting (White House, 2016). Hence, people may have been exposed to information similar to the experimental manipulation prior to their participation. Given that participants were more likely to recall Tarasoff laws and other limitations to confidentiality (e.g., court subpoena), this information could have been more novel to participants. Finally, the current study exposed students to CPD laws based on hypothetically rather than actually seeking treatment. This limited the ecological validity of the current study.

Future Directions

Findings from the current study do not provide evidence that reporting provisions from gun laws increase stigma or reduce treatment-seeking intention. Still, the paucity of evidence for the effectiveness of these types of laws is mixed at best. As previously mentioned, conceal and carry laws may not be effective in reducing the severity or likelihood of mass shootings (Bowles, 2016). A separate study examining the effects of firearm restriction policy in Connecticut from 2002-2009 found a significant decrease in violent crime when comparing people with MI that were banned from owning firearms to those who were not banned (Swanson et al., 2013). However, this effect was minimal and only 7% of this cohort was actually banned from firearm ownership. Given the available

evidence, studying the effects of firearm laws that have been passed since Newtown on the mental health and suicide link presents an important target for future research.

The lack of significant findings from the current study does not necessarily mean that research in this area should cease. While results did not support a link between CPD policy, MI stigma, and treatment-seeking intentions among college students data from this sample also suggests that support for firearm-related initiatives was low. This could also help explain why they were more likely to recall Tarasoff-related reporting provisions than CPD provisions. A recent study examined gun ownership among 465 Veterans seeking PTSD treatment and found that 28% of the sample reported owning guns (Heinz, Cohen, Holleran, Alvarez, & Bonn-Miller, 2016). Most of the gun-owning Veterans had more than one firearm ($md=3$; $range=40$). This presents opportunities for future research including examining potential links between CPD reporting provisions, MI stigma, and treatment-seeking intentions.

Future policy should also focus on the public health and safety of people with MI in addition to the general population. It has been suggested that people with MI are victims rather than perpetrators of in roughly 85% of all cases involving firearms (Metzl & MacLeash, 2015). This is consistent with epidemiological evidence that most people with MI are not violent and they are much more likely to be victims than sources of violence (Crisafi et al., 2015; Monahan & Steadman, 2012; Torrey, 2011; Van Dorn et al., 2011). Future firearm policy may benefit from equally emphasizing the safety of people with MI rather than emphasizing punitive measures that tend to be biased towards protecting people

without MI. To support this effort, additional research is necessary to determine strategies to reduce violent victimization of people with MI and improve suicide prevention efforts. Furthermore, research efforts should also continue to focus on development of early intervention strategies for reducing the increase in violent behavior among people with psychotic disorders during first episode when the risk is at its greatest (Large & Nielssen, 2008; Nielssen & Large, 2010).

Finally, more work needs to be done to change the media image of people with MI. Mainstream media outlets (e.g., movies, newspapers, internet, etc.) have long been accused of portraying people with MI as violent, homicidal, dependent on others, and lacking control (Jorm & Reavley, 2013; Nawka et al., 2012; Thornicroft et al., 2013; Wahl, 1992, 2003). Public attitudes may be heavily influenced by media portrayals of individuals and social groups, particularly when people have little social experience with the group in question (Zillman & Brosius, 2000). The influence of American beliefs on dangerousness of MI may be “exported” to other industrialized nations as American news media is the most viewed worldwide (Jorm & Reavley, 2013). News articles in particular have been implicated as a source of structural stigma (Pugh, Hatzenbuehler, & Link, 2015).

Multiple international anti-stigma campaigns have purposely targeted influencing the media to convey more positive, comprehensive, and accurate portrayals of MI and have been met with mixed findings. Results from New Zealand’s ‘Like Minds, Like Mine’ campaign demonstrated an increase in positive reporting with a decrease in negative reporting over 3-month periods in 1997, 1998, and 2004 (Mental Health Commission,

2005). Scotland's 'See Me' campaign included detailed published accounts from consumers about living with MI with studies finding mixed results as to whether this campaign weakened the link between MI and dangerousness over a 5-year period (Clement & Foster, 2008; Knifton & Quinn, 2008). England's 'Time to Change' campaign saw an increase in positive reporting from 2008-2011 but no decrease in negative reporting (Thornicroft et al., 2011). Still, positive news stories about recovery and the effectiveness of treatment remain rare in America (Corrigan et al., 2005; McGinty et al., 2014). Most people report not (knowingly) having personal experience with MI and that news media is their most common form of exposure (Frank & Glied, 2006; Jorm & Reavley, 2013). Improving the rate of positive news stories about recovery and effective mental health treatment may be an essential target for improving public perceptions of MI and reducing the over-generalized association with dangerousness (McGinty et al., 2014). Organizations including the Rosalynn Carter Foundation offer fellowships in mental health journalism to improve the accuracy of reporting to increase public understanding of MI and dispel misleading stigma ("The Rosalynn Carter Fellowships for Mental Health Journalism," 2017). Providing journalists with the proper training to understand and accurately inform public awareness of mental health issues presents a promising opportunity for social change.

APPENDIX A

STANDARD PSYCHOTHERAPY CONSENT FORM

Instructions: *Imagine that you are considering seeking therapy for psychological or personal concerns. Please read the following psychotherapy consent form very carefully. It contains information about the therapy process and your rights to confidentiality as a therapy client. You will receive a brief quiz on the information contained in this consent form on the next screen. You will not be able to continue unless you score 80% or higher on this quiz.*

COUNSELING AND PSYCHOLOGICAL SERVICES CLIENT CONSENT FORM AND CONFIDENTIALITY POLICY

I. What Can I Expect From Therapy?

Mental health services such as counseling and psychotherapy are structured and tailored to meet your individual needs. The therapy process involves sharing sensitive and personal information with your therapist. While this experience may be distressing at times it can be essential to addressing your concerns and developing effective coping skills to accomplish your treatment goals. Therapy outcomes typically result in at least some level of relief, development of effective coping skills, and a greater self-understanding. Your therapist will be available to help and support you through any anticipated and unanticipated life changes that occur as a result of the therapy process.

II. Client Confidentiality

Client confidentiality is considered essential to the therapy process. All communications that you have with this clinic including scheduling, treatment progress, and discussions with your therapist will be documented in your confidential medical records. Specific information regarding your medical records and contact with the clinic may be requested and shared with your written permission.

III. Exceptions to Client Confidentiality

There are notable exceptions to confidentiality that you should be aware of before beginning the therapy process:

Professional Consultation

- Therapists often work together as a team for professional and training purposes. Your therapist may discuss your treatment with other therapists to help provide you with the best possible care.

Minors/Guardianship

- Parents or legal guardians may have access to your medical record if you are under the age of 18 and not legally emancipated.

Court Order

- A judge may issue a court order requiring your therapist to release information contained in your medical record or require your therapist to testify if you are involved in a court proceeding.

Abuse of Child, Elder, and Vulnerable Adults

- If you report knowledge of abuse or neglect of a child, person with a disability, or an elderly individual, your therapist is required to report this information to the appropriate social service and/or legal authorities.

Duty to Warn and Duty to Protect

- If you disclose information that leads your therapist to believe that you are currently a danger to yourself or others, your therapist is required to report this information to the appropriate authorities. This may entail police notification or other necessary steps including inpatient hospitalization for the client.

I certify that I have read and understand the Yes information above. I understand the risks and No benefits of the therapy process, the nature and limits of confidentiality, and what is expected from me as a therapy client.

- Yes
- No

APPENDIX B

CLEAR AND PRESENT DANGER PSYCHOTHERAPY CONSENT FORM

Instructions: *Imagine that you are considering seeking therapy for psychological or personal concerns. Please read the following psychotherapy consent form very carefully. It contains information about the therapy process and your rights to confidentiality as a therapy client. You will receive a brief quiz on the information contained in this consent form on the next screen. You will not be able to continue unless you score 80% or higher on this quiz.*

COUNSELING AND PSYCHOLOGICAL SERVICES CLIENT CONSENT FORM AND CONFIDENTIALITY POLICY

I. What Can I Expect From Therapy?

Mental health services such as counseling and psychotherapy are structured and tailored to meet your individual needs. The therapy process involves sharing sensitive and personal information with your therapist. While this experience may be distressing at times it can be essential to addressing your concerns and developing effective coping skills to accomplish your treatment goals. Therapy outcomes typically result in at least some level of relief, development of effective coping skills, and a greater self-understanding. Your therapist will be available to help and support you through any anticipated and unanticipated life changes that occur as a result of the therapy process.

II. Client Confidentiality

Client confidentiality is considered essential to the therapy process. All communications that you have with this clinic including scheduling, treatment progress, and discussions with your therapist will be documented in your confidential medical records. Specific information regarding your medical records and contact with the clinic may be requested and shared with your written permission.

III. Exceptions to Client Confidentiality

There are notable exceptions to confidentiality that you should be aware of before beginning the therapy process:

Professional Consultation

- Therapists often work together as a team for professional and training purposes. Your therapist may discuss your treatment with other therapists to help provide you with the best possible care.

Minors/Guardianship

- Parents or legal guardians may have access to your medical record if you are under the age of 18 and not legally emancipated.

Court Order

- A judge may issue a court order requiring your therapist to release information contained in your medical record or require your therapist to testify if you are involved in a court proceeding.

Abuse of Child, Elder, and Vulnerable Adults

- If you report knowledge of abuse or neglect of a child, person with a disability, or an elderly individual, your therapist is required to report this information to the appropriate social service and/or legal authorities.

Duty to Warn and Duty to Protect

- If you disclose information that leads your therapist to believe that you are currently a danger to yourself or others, your therapist is required to report this information to the appropriate authorities. This may entail police notification or other necessary steps including inpatient hospitalization for the client.

In addition, if the therapist determines that a client is a clear and present danger to themselves or others state law now requires:

- The therapist must report individuals believed to be a danger to themselves and others to the Department of Health and Human Services within 24 hours.
- Inpatient psychiatric hospitals must report all individuals receiving inpatient mental health treatment to the state within 7 days of hospital admission and discharge even if admission is voluntary.
- Reported individuals will be included in state-level criminal background check databases, may lose legal access to purchase firearms for a period of 5 years or more, and require clearance from a mental health practitioner that they are no longer a clear and present danger to themselves and others.

I certify that I have read and understand the information above. I understand the risks and benefits of the therapy process, the nature and limits of confidentiality, and what is expected from me as a therapy client.

- Yes
- No

APPENDIX C

Consent Form Quiz: (CFQ)

Please answer the following questions about the consent form on the previous page. Please check true or false for each question. You must score 80% or higher to proceed onto the next part of the study.

1) My medical records can be requested from my therapist by other healthcare providers and shared without my written permission?

False True

2) A court order may require your therapist to release information from your medical records or testify in True a court case that you are involved in?

False True

3) My therapist may discuss my case with other providers as part of a treatment team in order to offer me the True best possible healthcare?

False True

4) My therapist is not required to report suspected child and elder abuse to the appropriate social services or legal authorities?

False True

5) If my therapist suspects that I present a danger to myself or others, they are required to take the appropriate steps to ensure the safety of myself or other involved individuals including alerting the appropriate authorities?

False True

APPENDIX D

The Intentions to Seek Counseling Inventory: (ISCI)

Below is a list of issues people commonly bring to counseling. How likely would you be to seek counseling if you were experiencing these problems? Please circle the corresponding answer.

	Very Unlikely	Unlikely	Somewhat Unlikely	Somewhat Likely	Likely	Very Likely
1.) Weight control	1	2	3	4	5	6
2.) Excessive alcohol use	1	2	3	4	5	6
3.) Relationship differences	1	2	3	4	5	6
4.) Concerns about sexuality	1	2	3	4	5	6
5.) Depression	1	2	3	4	5	6
6.) Conflict with parents	1	2	3	4	5	6
7.) Speech anxiety	1	2	3	4	5	6
8.) Difficulties dating	1	2	3	4	5	6
9.) Choosing a major	1	2	3	4	5	6
10.) Difficulty sleeping	1	2	3	4	5	6
11.) Drug problems	1	2	3	4	5	6
12.) Inferiority feelings	1	2	3	4	5	6
13.) Test anxiety	1	2	3	4	5	6
14.) Difficulty with friends	1	2	3	4	5	6
15.) Academic work procrastination	1	2	3	4	5	6

16.) Self-understanding	1	2	3	4	5	6
17.) Loneliness	1	2	3	4	5	6

APPENDIX E

The Dangerousness Scale: (DS)

Please answer the following questions about people that were formerly patients at mental health treatment hospitals.

	Strongly Disagree		Neither Agree or Disagree			Strongly Agree	
1.) If a group of former patients with mental illness lived nearby, I would not allow my children to go to the movie theater alone.	1	2	3	4	5	6	7
2.) If a former patient with mental illness applied for a teaching position at a grade school and was qualified for the job, I would recommend hiring him/her. (R)	1	2	3	4	5	6	7
3.) One important thing about persons with mental illness is that you cannot tell what they will do from one minute to the next.	1	2	3	4	5	6	7
4.) If I know a person has been a mental health patient, I will be less likely to trust them.	1	2	3	4	5	6	7
5.) The main purpose of mental hospitals should be to protect the public from people with mental illness.	1	2	3	4	5	6	7
6.) If a former patient with mental illness lived nearby, I would not hesitate to allow young children under my care on the sidewalk. (R)	1	2	3	4	5	6	7
7.) Although some people with mental illness may seem all	1	2	3	4	5	6	7

right, it is dangerous to forget for a moment that they have a mental illness.							
8.) There should be a law forbidding former patients with mental illness the right to obtain a hunting license.	1	2	3	4	5	6	7

APPENDIX F

The Social Distance Scale: (SDS)

Please answer the questions below, indicating the extent of your willingness or unwillingness to engage in the scenarios described, using the following scale:

	Definitely Unwilling	Probably Unwilling	Probably Willing	Definitely Willing
1.) How would you feel about renting a room in your home to someone with a mental illness?	0	1	2	3
2.) How would you feel about working with someone with a mental illness?	0	1	2	3
3.) How would you feel about having someone with a mental illness as your neighbor?	0	1	2	3
4.) How would you feel about having someone with a mental illness as the caretaker of your children?	0	1	2	3
5.) How would you feel about having your children marry someone with a mental illness?	0	1	2	3
6.) How would you feel about introducing someone with a mental illness to your friends?	0	1	2	3
7.) How would you feel about recommending someone with a mental illness for a job working with someone you know?	0	1	2	3

APPENDIX G

General Help-Seeking Questionnaire: (GHSQ)

Below is a list of people who you might seek help or advice from if you were experiencing a personal or emotional problem. Please circle the number that shows how likely is it that you would seek help from each of these people for a personal or emotional problem during the next 4 weeks?

	Extremely Unlikely		Unlikely		Likely		Extremely Likely
1a.) Partner (e.g., significant boyfriend or girlfriend)	1	2	3	4	5	6	7
1b.) Friend (not related to you)	1	2	3	4	5	6	7
1c.) Parent	1	2	3	4	5	6	7
1d.) Other relative/family member	1	2	3	4	5	6	7
1e.) Mental health professional (e.g., school counselor, psychologist, psychiatrist)	1	2	3	4	5	6	7
1f.) Phone help line (e.g., Lifeline, kids help line)	1	2	3	4	5	6	7
1g.) Family Doctor/General Practitioner	1	2	3	4	5	6	7
1h.) Minister or religious leader (e.g., priest, rabbi)	1	2	3	4	5	6	7
1i.) Teacher (e.g., classroom,	1	2	3	4	5	6	7

professor)							
1j.) I would not seek help from anyone	1	2	3	4	5	6	7
1k.) I would seek help from someone not listed above	1	2	3	4	5	6	7
Please describe the person you would seek in the previous question:	_____						
						No	Yes
2a.) Have you ever seen a mental health professional (e.g., school counselor, counselor, psychologist, psychiatrist) to get help for personal problems?						0	1
If you circled “no” in question 2a, you are finished this section. If you circled “yes” please complete 2b, 2c, and 2d below.							
2b.) How many visits did you have with the mental health professional?	_____						
2c.) Do you know what type of mental health professional(s) you’ve seen? If so, please list their titles (e. g., counselor, psychologist, psychiatrist, social worker):	_____						
	Extremely Unhelpful					Extremely Helpful	
2d.) How helpful was the visit to the mental health professional(s)?	1	2	3	4	5		

APPENDIX H

Manipulation Check

Please recall the top three pieces of information that you remember from the psychotherapy consent form:

1.) _____

2.) _____

3.) _____

APPENDIX I

DENTAL CONSENT FORM

Instructions: *Imagine that you are considering treatment for dental hygiene. Please read the following dental treatment consent form very carefully. It contains information about the dental treatment process and your rights to confidentiality as a dental patient. You will receive a brief assessment on the information contained in this consent form on the next screen.*

DENTAL SERVICES PATIENT CONSENT FORM AND CONFIDENTIALITY POLICY

Informed consent is an important and necessary part of the dentistry process. Consent indicates that you accept the positive benefits and risks associated with dental treatment. Please read the following information carefully.

Dental practice is tailored to meet your needs. This process involves sharing personal health information with your dentist. During your first appointment you will receive a comprehensive health screening and X-rays to determine your dental needs. A dental hygienist will review your medical history and provide an oral examination. Your dentist will then develop a treatment plan that best suits your needs. You will learn about your dental needs, cost of treatment, and the length of time treatment may take. By consenting to this document, you agree to the following:

1. I authorize the dental staff to perform or assist in my dental care.
2. I understand that my treatment plan is designed to improve or maintain my current dental health, but that positive results cannot be guaranteed.
3. I understand that any treatment options that are not specified in my treatment plan will be discussed with my dentist before treatment occurs.
4. I understand that I have the right to refuse consent to any treatments specified in my treatment plan and additional treatments that may be recommended by my dentist.
5. I understand that all communications that I have with this clinic including scheduling, treatment progress, and discussions with my dentist will be documented in my private medical records and shared only with other providers at the clinic.

6. I understand that specific information regarding my medical records and contact with the clinic may be requested and shared with my written permission.

I certify that I have read and understand the information above. I understand the risks and benefits of the dental treatment process, the nature and limits of confidentiality, and what is expected from me as a dental patient.

Yes

No

APPENDIX J

Consent Form Quiz: (CFQ)

Please answer the following questions about the consent form on the previous page. Please check true or false for each question. You must score 80% or higher to proceed onto the next part of the study.

1) Dentists can guarantee positive results from their False treatment plan?

False True

2) Any treatment procedures not specified in the treatment plan will be discussed with the dentist before the procedures are administered?

False True

3) I have the right to refuse any treatments proposed by the dentist?

False True

4) Your dental records can be requested from your dentist by other healthcare providers and shared without your written permission?

False True

5) All communications with the clinic including scheduling, treatment progress, and discussions with the dentist will be included in my private medical record?

False True

APPENDIX K

Dental Satisfaction Questionnaire: (DSQ)

Here are some things people say about dentists and dental care. Please read each one carefully, keeping in mind dental care that you are receiving now. If you have not received dental care recently, think about what you would expect if you needed care today.

Please click one of the numbers on each line to indicate whether you strongly agree with the statement, agree with it, are not sure, disagree, or strongly disagree. There is no right or wrong answers. We just want your opinion.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1.) There are things about the dental care I receive that could be better.	1	2	3	4	5
2.) Dentists are very careful to check everything when examining their patients.	1	2	3	4	5
3.) The fees dentists charge are too high.	1	2	3	4	5
4.) Dentists always do their best to keep the patient from worrying.	1	2	3	4	5
5.) People are usually kept waiting a long time when they are at the dentist's office.	1	2	3	4	5
6.) Dentists always treat their patients with respect.	1	2	3	4	5
7.) There are enough dentists around here.	1	2	3	4	5
8.) Dentists should do more to keep from causing pain.	1	2	3	4	5
9.) Places where you can get dental care are very conveniently located.	1	2	3	4	5

10.) Dentists always avoid unnecessary patient expenses.	1	2	3	4	5
11.) Dentists are not as thorough as they should be.	1	2	3	4	5
12.) Dentists are not as thorough as they should be.	1	2	3	4	5
13.) In an emergency, it's very hard to get dental care quickly.	1	2	3	4	5
14.) Dentists are able to relieve or cure most dental problems that people have.	1	2	3	4	5

APPENDIX L

Contact Scale: (CS)

Please answer the following questions about your previous contact with persons that have a mental illness:

	No	Yes
1.) Have you ever known a person who was hospitalized in a mental institution?	0	1
2.) Have you ever worked for pay or done volunteer work with people who have been hospitalized for a mental illness?	0	1
3.) Do you have any friends who work for pay with people who have been hospitalized for a mental illness?	0	1
4.) Do you have any friends who do volunteer work with people who have been hospitalized for a mental illness?	0	1
5.) Have you ever visited an agency in a community where former mental health patients are given job training?	0	1
6.) Have you ever been in a psychiatric hospital as a visitor?	0	1
7.) Have you ever visited a mental health clinic or mental health center?	0	1

APPENDIX M

Marlowe-Crown Social Desirability Scale: (MCS-8)

Please answer the following questions about your interactions with other people:

	False	True
1.) I sometimes feel resentful when I don't get my way. (R)	0	1
2.) No matter who I'm talking to, I'm always a good listener.	0	1
3.) There have been occasions when I have taken advantage of someone. (R)	0	1
4.) I'm always willing to admit it when I make a mistake.	0	1
5.) I sometimes try to get even rather than forgive and forget. (R)	0	1
6.) I am always courteous, even to people who are disagreeable.	0	1
7.) I have sometimes taken unfair advantage of another person. (R)	0	1
8.) I am quick to admit making a mistake.	0	1

APPENDIX N

Violence Enabling Scale: (VES)

Please circle the number that corresponds with the extent you agree or disagree with the statements below:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1.) I support the National Rifle Association's interest in citizen access to firearms.	1	2	3	4	5
2.) Adult citizens should be allowed to own rifles and shotguns.	1	2	3	4	5
3.) Adult citizens should be allowed to own pistols.	1	2	3	4	5
4.) Citizens should be allowed to hunt game birds and rabbits.	1	2	3	4	5
5.) Citizens should be allowed to own military handguns, including automatic rifles.	1	2	3	4	5
6.) Children should be allowed to own and shoot air guns (e.g. BB guns).	1	2	3	4	5
7.) We should build more prisons rather than provide more rehabilitation counseling and education to criminals.	1	2	3	4	5
8.) We should put more money into police forces than into school counseling for violence-prone children.	1	2	3	4	5
9.) We should spend more to research new military weapons than to research the causes of youth	1	2	3	4	5

violence.					
10.) We should execute criminals convicted of rape or murder.	1	2	3	4	5
11.) We should let children play violent video games to help prepare them for possible future military combat.	1	2	3	4	5
12.) We should promote violent sports like football and boxing to help prepare children for military combat.	1	2	3	4	5
13.) We should support Boy and Girl Scout programs to help prepare youngsters for possible future military combat.	1	2	3	4	5
14.) We should encourage citizen access to movies and television programs about war to keep them ready for war.	1	2	3	4	5

APPENDIX O

Hopkins Symptom Checklist-21: (HSCL-21)

Use of the numbers below to describe how distressing you found statements in these 21 items to be over the past 7 days including today.

	Not At All	A Little	Quite a Bit	Extremely
1.) Difficulty in speaking when you are excited	1	2	3	4
2.) Trouble remembering things	1	2	3	4
3.) Worried about sloppiness or carelessness	1	2	3	4
4.) Blaming yourself for things	1	2	3	4
5.) Pains in the lower part of your back	1	2	3	4
6.) Feeling lonely	1	2	3	4
7.) Feeling blue	1	2	3	4
8.) Your feelings being easily hurt	1	2	3	4
9.) Feeling others do not understand you or are unsympathetic	1	2	3	4
10.) Feeling that people are unfriendly or dislike you	1	2	3	4
11.) Having to do things very slowly in order to be sure you are doing them right	1	2	3	4
12.) Feeling inferior to others	1	2	3	4
13.) Soreness of your muscles	1	2	3	4

14.) Having to check and double-check what you do	1	2	3	4
15.) Hot or cold spells	1	2	3	4
16.) Your mind going blank	1	2	3	4
17.) Numbness or tingling in parts of your body	1	2	3	4
18.) A lump in your throat	1	2	3	4
19.) Trouble concentrating	1	2	3	4
20.) Weakness in parts of your body	1	2	3	4
21.) Heavy feelings in your arms or legs	1	2	3	4

APPENDIX P

Debriefing Form:

Purpose of Current Study:

In recent years, highly-publicized mass shootings have brought negative attention upon mental health communities. As a result multiple states (e.g., New York, Illinois) have passed laws designed to limit access to firearms for persons with mental illness. These laws include having health service providers identify therapy clients they believe to be a ‘Clear and Present Danger’ to themselves or others to the state Department of Health and Human Services within 24 hours. Additionally, inpatient mental health facilities must report all individuals receiving inpatient mental health treatment to the state within 7 days of hospital admission and discharge even if admission is voluntary. Finally, reported individuals will be included in state criminal background check databases, may lose legal access to firearms for a period of 5 years or more, and require clearance from a mental health practitioner that they are no longer a danger to themselves and others.

Numerous mental health experts believe that the mandatory reporting to the state and inclusion in criminal background check databases required by these ‘Clear and Present Danger’ laws may actually reduce treatment-seeking among individuals that may benefit from mental health services. This study sought to determine whether mandatory reporting to criminal background check databases may reduce treatment-seeking intentions among college students and worsen their attitudes toward persons with psychological disorders.

How Clear and Present Danger Laws Apply to You:

As mentioned in the therapy consent forms, not all information can be kept confidential. If you provide information regarding abuse of children and vulnerable adults (e.g., elderly adults, adults with a disability) or if you are considered to be a danger to yourself or others, your therapist may be legally required to report this information to the appropriate authorities.

HOWEVER, the ‘Clear and Present Danger’ law provisions mentioned above are based on the Illinois Conceal and Carry Act (2014). These exact policies are NOT currently laws if you seek mental health treatment in Missouri or Kansas. If someone seeks mental health treatment for personal concerns in Missouri or Kansas, they can ONLY be reported to criminal background check systems if:

- The therapist must report individuals believed to be a danger to themselves and others to the Department of Human Services within 24 hours.

- They have been determined to be “mentally disabled” in a court of law
- They have been subject to INVOLUNTARY commitment to an inpatient mental health facility

Thus, a therapist is not required to report someone to the state for purposes of inclusion to criminal background check systems in KS and MO.

Questions: If you have any questions or concerns regarding this study, or if any problems arise, you may call the study investigator, Dr. Melisa Rempfer, at (816) 235-8850. You may also contact the UMKC Social Sciences Institutional Review Board at (816) 235-5927.

Please download a copy this debriefing form for your records by clicking the link below.
[Attachment: “Debriefing Form.docx”]

APPENDIX Q

Debriefing Form:

Purpose of Current Study:

In recent years, highly-publicized mass shootings have brought negative attention upon mental health communities. As a result multiple states (e.g., New York, Illinois) have passed laws designed to limit access to firearms for persons with mental illness. These laws include having health service providers identify therapy clients they believe to be a 'clear and present danger' to themselves or others to the state Department of Health and Human Services within 24 hours. Additionally, inpatient mental health facilities must report all individuals receiving inpatient mental health treatment to the state within 7 days of hospital admission and discharge even if admission is voluntary. Finally, reported individuals will be included in state criminal background check databases, may lose legal access to firearms for a period of 5 years or more, and require clearance from a mental health practitioner that they are no longer a danger to themselves and others.

Numerous mental health experts believe that the mandatory reporting to the state and inclusion in criminal background check databases required by these 'Clear and Present Danger' laws may actually reduce treatment-seeking among individuals that may benefit from mental health services. This study sought to determine whether mandatory reporting to criminal background check databases may reduce treatment-seeking intentions among college students and worsen their attitudes toward persons with psychological disorders.

How Clear and Present Danger Laws Apply to You:

As mentioned in the therapy consent forms, not all information can be kept confidential. If you provide information regarding abuse of children and vulnerable adults (e.g., elderly adults, adults with a disability) or if you are considered to be a danger to yourself or others, your therapist may be legally required to report this information to the appropriate authorities. HOWEVER, the following 'Clear and Present Danger' law provisions that you may have been exposed to in this study DO NOT apply to you:

- The therapist must report when an individual is believed to be a danger to themselves and others to the Department of Human Services within 24 hours.
- Inpatient mental health facilities must report all individuals receiving inpatient mental health treatment to the state within 7 days of hospital admission and discharge even if admission is voluntary.
- Reported individuals will be included in state-level criminal background check databases, may lose legal access to firearms for a period of 5 years or more, and

require clearance from a mental health practitioner that they are no longer a clear and present danger to themselves and others.

These provisions were based on the Illinois Conceal and Carry Act (2014). These exact policies are NOT currently laws if you seek mental health treatment in Missouri or Kansas. If someone seeks mental health treatment for personal concerns in Missouri or Kansas, they can ONLY be reported to criminal background check systems if:

- They have been determined to be “mentally disabled” in a court of law
- They have been subject to INVOLUNTARY commitment to an inpatient mental health facility

Thus, a therapist is not required to report someone to the state for purposes of inclusion to criminal background check systems in KS and MO.

- They have been determined to be “mentally disabled” in a court of law
- They have been subject to INVOLUNTARY commitment to an inpatient mental health facility

Thus, a therapist is not required to report someone to the state for purposes of inclusion to criminal background check systems in KS and MO.

Questions: If you have any questions or concerns regarding this study, or if any problems arise, you may call the study investigator, Dr. Melisa Rempfer, at (816) 235-8850. You may also contact the UMKC Social Sciences Institutional Review Board at (816) 235-5927.

Please download a copy this debriefing form for your records by clicking the link below. [Attachment: “Debriefing Form.docx”]

APPENDIX R

Mental Health Services and Resources

Access to Mental Health Services in Your Area:

If you experience personal or psychological distress or do currently or at some point during your time at UMKC it may be important to seek mental health treatment. Below is a list of accessible and affordable psychological services available to you through UMKC or in the surrounding community. Your well-being and access to quality services is important to us.

UMKC-Affiliated Services:

Center	Location	Phone	E-Mail	Cost
UMKC Counseling Center	4825 Troost Ave Suite 206, Kansas City, MO 64110	(816) 235-1635	chtc@umkc.edu	8 free sessions per academic year; \$15 per each additional session
UMKC Community Counseling & Assessment Services (CCAS)	UMKC School of Education Suite 212, 615 E. 52 nd Street Kansas City, MO 64110	(816) 235-2725	N/A	Sliding scale fee structure based on yearly household income and the number of people living in the client's household. In 2012, the average fee per counseling session was \$14.05.

Community Mental Health Clinics:

Center	Location	Phone	Cost
Kansas City Care Clinic (KC Care)	3515 Broadway, Kansas City, MO 64111	(816) 753-5144	Sliding scale fee structure

Mental Health and Crisis Hotlines:

Center	Phone	Cost
County Crisis Line	(913) 831-1773	Free to call
Mental Health Help Line	(913) 281-1234	Free to Call
MHAH Compassionate Ear Warmline	(866) WARMEAR (927-6327)	Free to call: 4-10pm daily
MHAH Information and Referral	(913) 281-2221	Providing referrals to local community resources and information about treatment options.
National Suicide Prevention Lifeline	(800) 273-TALK (8255)	Free to Call
National Youth Crisis Hotline	(800) 442-HOPE (4673)	Free to Call
Teen Connection Helpline	(913) 281-2299	Free to Call
Wyandotte Mental Health Center 24-Hr Crisis Line	(913) 788-4200	Free to call

APPENDIX S

Professor Solicitation E-Mail

Dear Dr. _____,

My name is Chris Fowler and I am a doctoral candidate in the Department of Psychology. I am contacting you today because I am recruiting undergraduate students for my dissertation study. My research project will examine whether firearm legislation targeting mental health populations impacts mental health stigma and deters treatment-seeking intentions among college students. Because my project has implications for multiple disciplines including psychology, sociology, criminal justice/criminology, health sciences and political science I am trying to recruit an undergraduate student sample reflective of these disciplines. Furthermore, implications for this study may be relevant to information that is covered in your Introduction to Social Justice Course.

If you are offering extra credit opportunities for your students this semester I wanted to ask if you would consider giving your students the opportunity to participate in this study for extra credit. This study has been approved by the UMKC Social Sciences Institutional Review Board and will be conducted over the fall semester. Participation from all students will be completely confidential, voluntary, and they can withdraw their participation at any time without penalty. The study will take place entirely online using UMKC's REDCap program and should take 30-45 minutes for completion.

If you are interested and would like more information please let me know. I am more than willing to send more information about the proposed study or discuss things further at your convenience.

Thank you in advance for your time,

-Chris

Christopher A. Fowler, M.A.
Clinical Health Psychology Doctoral Candidate
Department of Psychology
University of Missouri-Kansas City
T: (619)647-4470
cafpr3@umkc.edu

APPENDIX T

Faculty Study Description

Professor _____,

Thank you very much for offering participation in my dissertation as an extra credit opportunity in your course. This is an experimental study so participants will not know its full purpose until they complete the study. This precaution is taken to try and limit potential biases students may toward people with mental illness or firearm laws from influencing their participation in this study. Below I have included a description of the study purpose as well as details on the experimental manipulation. I have also attached the study description that participants will see when they sign-up as well as their Debriefing Form which reveals the full purpose of the study.

Note. As you can imagine, one thing that we ask is that you not share information from this e-mail with your students as we would not like them to know the full purpose of this study until their participation is completed.

Background and Purpose:

In recent years, highly-publicized mass shootings have brought negative attention upon mental health communities. As a result multiple states (e.g., New York, Illinois) have passed laws designed to limit access to firearms for persons with mental illness. These laws include having health service providers (e.g., psychologists, physicians, etc.) report clients/patients they believe to be a ‘Clear and Present Danger’ to themselves or others to the state Department of Health and Human Services within 24 hours. Additionally, inpatient mental health facilities must report all individuals receiving inpatient mental health treatment to the state within 7 days of hospital admission and discharge even if admission is voluntary. Finally, reported individuals will be included in state instant criminal background check databases, may lose legal access to firearms for a period of 5 years or more, and require clearance from a mental health practitioner that they are no longer a danger to themselves and others.

As you may already know, health experts have argued that this crisis-driven policy unfairly targets mental health populations, lacks an empirical foundation, and that writing effective laws to address this complex issue may not be accomplished in limited time frames. Health service providers also believe that these mandatory reporting requirements may interfere with the patient-provider relationship due to violation of client confidentiality, over-identification of at-risk patients, and patient reluctance to seek

treatment due to fear of social and legal consequences. Furthermore, improving mental health service access and quality in an effort to reduce gun violence may further associate mental illness with dangerousness and increase public stigma, a primary barrier to people seeking and remaining in treatment. Finally, such legislation may not prevent mass shootings because they are a statistical anomaly that is not reliably detectable by even the best risk assessment procedures currently available.

Despite notable concerns from health experts that firearm legislation designed to prevent mass shootings and firearm violence may negatively impact mental health populations (e.g., stigma) and the treatment process, no studies have tested these hypotheses. The current study will test such hypotheses by experimentally examining the role of reporting provisions specified in 'Clear and Present Danger' laws on mental illness stigma (i.e., dangerousness, social distance) and treatment-seeking intentions in an at-risk mental health population (i.e., college students).

Current Study:

As mentioned above, participants will not know the purpose of this study until completion to limit potential biases about mental illness and firearm legislation on study results. Participants will be told they are participating in a research study that will “examine how informed consent procedures in healthcare influence college student perceptions of people with chronic health conditions and seeking health treatment.” In the control condition participants will be exposed to a mock psychotherapy consent form which includes the conditions in which a provider may break confidentiality (e.g., danger to self and others, subpoena, etc.). However, in the experimental condition participants will be given the same consent form with additional information regarding ramifications of 'Clear and Present Danger' law reporting provisions based on the Illinois Conceal and Carry Act (2014; e.g., mandatory reporting, inclusion in background check databases, loss of firearm access). These conditions allow for testing of the hypotheses of mental health experts that clear and present danger laws may be detrimental to public perceptions of mental illness including stigma (i.e., dangerousness, social distance) and may deter treatment-seeking intentions among at-risk individuals. Additional variables, such as general help-seeking from non-mental health providers, mental health symptomatology, and firearm beliefs use will also be explored.

-Chris

APPENDIX U

Psych Pool Study Description

You are invited to participate in a research study that will examine how informed consent procedures in healthcare influence college student perceptions of people with chronic health conditions and seeking health treatment. If you choose to participate, you will sign-up for a two-part study which will take entirely online. During the study you will be asked about your thoughts, beliefs, and emotions about chronic health conditions and seeking health treatment. You will also be asked to provide demographic information but no personal identifying information will be collected. Survey information you provide for this study will remain completely confidential. Before, during, or after consenting to take part in the study, you can decide whether or not you would like to participate in the full study and will have the option to discontinue at any time without penalty. Once the survey is complete or if you should choose to discontinue the survey, you will receive credit for participation.

APPENDIX V

Psych Pool Sign-Up Instructions

Perceptions of Illness and Seeking Health Treatment Study

Study Description: You are invited to participate in a research study that will examine how informed consent procedures in healthcare influence college student perceptions of people with chronic health conditions and seeking health treatment. If you choose to participate, you will sign-up for a two-part study which will take entirely online. Your overall participation should take 30-45 minutes. During the study you will be asked about your thoughts, beliefs, and emotions about chronic health conditions and seeking health treatment. You will also be asked to provide demographic information but no personal identifying information will be collected. Survey information you provide for this study will remain completely confidential. Before, during, or after consenting to take part in the study, you can decide whether or not you would like to participate in the full study and will have the option to discontinue at any time without penalty. Once the survey is complete or if you should choose to discontinue the survey without penalty and you will receive credit for any participation.

Participation: To sign-up for this study you will need to create an account with the UMKC Department of Psychology Research Participant Pool (Psych Pool). The Psych Pool system tracks your participation to ensure you receive credit for the correct course. If you do not already have a Psych Pool account, please follow these instructions to sign-up to participate in this study:

1. Use the following link to access the UMKC Psychology Research Participant Pool: <https://umkc.sona-systems.com>
2. Select 'Create an Account'
3. Enter Your Personal Information and create a User ID
4. Select your course from the list of courses (the course that you wish to receive credit for)
5. Click 'Request Account'
6. You will receive a confirmation e-mail containing a username and password
Note: If you have not received an e-mail within 24 hours check your junk mail folder. If the confirmation e-mail is not in your junk folder contact the Psych Pool administrator at umkcpsychpool@umkc.edu for further instruction).
7. Return to <https://umkc.sona-systems.com> and enter your username and password

Note. You may be asked to change your password and answer a few pre-screen questions on this screen. The pre-screen information will not be used in the current study so you may opt out of providing this information if the option is available.

8. On the next screen click 'View Available Studies'
9. Find the 'Perceptions of Illness and Seeking Health Treatment Study' and click 'View Available Timeslots' or on the study title
10. You must now sign-up for the study to view the study URL
11. Follow the URL to the study website to begin participation

For additional questions about acquiring a Psych Pool account contact the UMKC Psych Pool administrator at umkcpsychpool@umkc.edu or refer to the following tutorial https://www.youtube.com/watch?v=_1OnT2ZU6QQ.

For additional questions about this study please contact the principal investigator Chris Fowler at fowlerca@umkc.edu.

APPENDIX W

Informed Consent

Consent for Participation in a Research Study Perceptions of Illness and Seeking Health Treatment Christopher Fowler, M.A. and Melisa Rempfer, Ph.D.

Invitation to Participate

You are being asked to take part in a research study. This study is being conducted online through the University of Missouri - Kansas City, Department of Psychology. The investigators in charge of the study are Christopher Fowler, M.A. and Melisa Rempfer, Ph.D. of the Department of Psychology at the University of Missouri - Kansas City.

Who Will Participate

You are only eligible to participate if you currently enrolled in undergraduate coursework at the University of Missouri - Kansas City. Approximately 130 undergraduate students from the University of Missouri - Kansas City will be invited to participate in this study.

Purpose

The purpose of this study is to examine how consenting procedures in healthcare may influence college student perceptions of health conditions and treatment-seeking intentions.

Study Procedures

If you agree to take part in this study, you will be asked to complete two online testing sessions. During the first session you will be administered this consent form. If you consent to participate in this study you will also complete a demographics questionnaire. Following informed consent and completion of session one, you will be e-mailed a link for session two within 24 hours. During the second session you will be exposed to multiple treatment consent forms similar to those utilized in various treatment settings. You will also be asked to complete surveys about your perceptions of persons with chronic health conditions and attitudes towards seeking treatment. Altogether, your study participation will last approximately 30-45 minutes.

Voluntary Participation

Your participation in this study is completely voluntary at all times. You may choose to not participate or to withdraw your participation at any time without penalty. If you decide to leave the study, the information you have already provided will be used by the researchers unless you request otherwise.

Fees and Expenses

There is no cost to take part in this study.

Compensation

If you are enrolled in Psychology 210 you will receive 1.0 hours of research credit toward your course research requirement for your participation in this study. If you are enrolled in another course you may be compensated with extra credit at your instructor's discretion.

Risks and Inconveniences

The risks associated with this study are minimal. You will be asked to answer some questions about stress you may or have previously experienced, whether you have sought previous health treatment, and personal beliefs about persons with chronic health conditions which may be slightly uncomfortable. If you experience any concerns as a result of participating in this study, please contact the UMKC Counseling, Health, and Testing Center at 816-235-1635. In addition, you will receive information for several additional mental health resources including affordable community mental health clinics and hotlines. This information sheet is yours to keep.

Benefits

There are no direct benefits to you for participating in this study. However, your participation will provide researchers with scientific knowledge that will help understand perceptions about healthcare treatment consent forms and perceptions about seeking treatment.

Alternatives to Study Participation

The alternative is to not participate. Fulfillment of the course requirement for Psychology 210 can be attained through an alternative research requirement.

Confidentiality

In order to protect your confidentiality, the study researchers will not identify you by name on any of the testing forms. Information you provide to the researchers will be kept on a password-protected university hard drive that will only be accessed from a password protected computer in a locked laboratory at the Department of Psychology in Cherry Hall. Results of this research may be published for scientific purposes, or presented to scientific groups. However, you will not be identified by name in any way.

While every effort will be made to keep confidential all of the information you complete and share, it cannot be absolutely guaranteed. Individuals from the University of Missouri – Kansas City Institutional Review Board (a committee that reviews and approves research studies), Research Protections Program, and Federal regulatory agencies may look at records related to this study for quality improvement and regulatory functions.

In Case of Injury

The University of Missouri - Kansas City appreciates people who help it gain knowledge by being in research studies. It is not the University's policy to pay for or provide medical treatment for persons who are in studies. If you think you have been harmed because of your participation in this study, please call the researcher, Dr. Melisa Rempfer at (816) 235-8850.

Questions

If you have any questions or concerns regarding this study, or if any problems arise, you may call the study investigator, Dr. Melisa Rempfer, at (816) 235-8850. You may also contact UMKC's Institutional Review Board at (816) 235-5927.

Authorization

You have read this Consent for Research or it has been read to you. Further, the purpose of the study, risks involved, and procedures that will be performed have been explained to you in this form. You have had the chance to ask questions via contacting the principle investigators and you may ask questions at any time during the course of the study.

Participant Name: _____

Date: _____

BY ADDING YOUR SIGNATURE IT WILL BE ACCEPTED THAT YOU ARE IN AGREEMENT THAT YOU HAVE READ AND UNDERSTOOD THE INFORMATION PRESENTED IN THIS CONSENT FORM. FURTHERMORE, THAT YOU AGREE TO PARTICIPATE IN THE CURRENT STUDY.

BY PROCEEDING BEYOND THIS PAGE IT WILL BE ACCEPTED THAT YOU ARE IN AGREEMENT THAT YOU HAVE READ AND UNDERSTOOD THE INFORMATION PRESENTED IN THIS CONSENT FORM. FURTHERMORE, THAT YOU AGREE TO PARTICIPATE IN THE CURRENT STUDY.

No _____

Yes _____

APPENDIX X

Demographics Questionnaire

Please answer the following questions about yourself by placing a check mark next to the appropriate response or fill in the blank.

a.) What is your current age? _____

b.) What is your gender?

_____ 1.) Male

_____ 2.) Female

_____ 3.) Other (Please Specify: _____)

c.) What is your race/ethnicity?

_____ 1.) African American/Black

_____ 2.) American Indian or Alaskan Native

_____ 3.) Asian American or Pacific Islander

_____ 4.) Biracial/Multiracial

_____ 5.) European American/Caucasian

_____ 6.) Hispanic/Latino(a)/ Chicano(a)

_____ 7.) International/Non-U.S. Citizen

_____ 8.) Middle Eastern

_____ 9.) Other (Please Specify: _____)

d.) What is your college grade-level?

- 1.) Freshman
- 2.) Sophomore
- 3.) Junior
- 4.) Senior
- 5.) Other (Please Specify: _____)

e.) What is your political affiliation?

- 1.) Democratic
- 2.) Independent
- 3.) Republican
- 4.) Other (Please Specify: _____)

f.) Specify your college major or area of emphasis (e.g., Psychology, Communications, Social Work): _____

g.) What is the name of the course in which you heard about this study?

h.) Do you consent to provide your e-mail address so that Yes you can be e-mailed the link to the second session No of this study?

No Yes

i.) What is your e-mail address ? _____
(This is the e-mail that is going to be used for the second portion of this study.)

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VITA

Christopher Anthony Fowler was born on March 19, 1984 in La Mesa, California. He was educated in the public school system in El Cajon, California and he graduated from Valhalla High School in 2002. Chris attended San Diego State University (SDSU) from 2006 to 2010. He was on the Dean's list from Fall 2007-Spring 2009 and was the recipient of the Minority Biomedical Research Support-Initiative for Maximizing Student Development Fellowship from the National Institute of General Medical Sciences from 2007-2010. Chris presented research at several regional, national, and international academic research conferences and received the Outstanding Oral Presentation for Social and Behavioral Sciences from at the Annual Biomedical Research Conference for Minority Students in 2008. During this time, he also founded and served as director of the SDSU Research Assistant Application Program which helped more than 160 students gain research assistantships with faculty mentors. In 2010 Chris graduated earned a Bachelor of Arts degree from SDSU graduating with distinction with a major in Psychology.

In 2010, Chris was accepted to the Clinical Health Psychology program at the University of Missouri- Kansas City (UMKC). He earned his Master of Arts Degree from UMKC in 2013 with his project titled "Examining psychological recovery in persons with serious mental illness: The role of experienced stigma and the insight paradox." Faculty in the Department of Psychology nominated his project for the School of Graduate Studies Distinguished Master's Thesis Award. Chris is a two-time recipient of the Minority Doctoral Fellowship and one-time recipient of the Graduate Opportunity Fellowship from

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