Violent and Unpredictable: Perceptions of Victims of Crime Who Are Living with a Mental Health Problem

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Attestation of Authorship

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor used artificial intelligence tools or generative artificial intelligence tools (unless it is clearly stated, and referenced, along with the purpose of use), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.

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Abstract

Public perceptions of mental illness are largely derived from stigmas and social norms that perpetuate punitive and discriminative rhetoric. In regard to illnesses like schizophrenia, these perceptions are overwhelmingly associated with violence and the threat of harm. Recent academic literature has questioned this notion. Our study explored how varying stigmas can influence perceptions of mock newspaper articles that depict a violent assault of which the victim has a mental illness. Members of the public (n = 106) were randomly assigned to one of six newspaper depictions of a violent assault, of which the victim was reported to have a mental illness (schizophrenia, depression, no mental illness). To test for the influence of substance use comorbidity, the presence of methamphetamine was also a variable in each mental illness condition. After reading the mock newspaper articles, participants then responded to the Social Distance Scale (Link et al., 1987) to assess participants desired social distance from the victim in the newspaper vignette. Participants also responded to several covariate measures that helped us better understand the judgements made in relation to the vignette. The results of our study suggest that mental illness alone did not substantially alter participant perceptions of mental illness. However, when factoring for methamphetamine presence, participants in the schizophrenia conditions reported significantly lower levels of desired social distance and subsequent stigma than those in control conditions. Future research could seek to better explore the interaction between mental illness and crime victimisation. As such, the implications of research in this domain work to resolve the prevalence of discriminative social stigma both within academic and public spheres.

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Chapter 1:

Introduction

Psychology, as a scientific field, is influenced by the prevailing constructions of any given society by which it is practiced. It is important to acknowledge the significant impact that societal norms and biases have on decision-making processes in individuals and communities worldwide. It is through negative rhetoric perpetuated by a society as 'stigmas', that multifaceted, highly problematic, and unjust practices are seen throughout all levels of social and institutional functioning. Regarding psychology, the stigmatisation of mental illness is a contentious area of social research. By examining the perceptual causes of stigma, the practices that aid in perpetuating stigma, and the influence of prior knowledge, we can enhance our understanding of the truly negative consequences stigma has on individuals with serious mental illnesses.

Psychological research, being constrained by social norms, raises significant ethical concerns in the way we frame and conduct research. Failing to consider the impact of stigmatised influence on ourselves and our research poses a massive disservice to the communities we seek to better comprehend and help as psychologists. One prominent example within research is the historical representation of mental illness, namely schizophrenia. Such research has largely echoed punitive sentiments ingrained in society for as long as we have attempted to understand the disorder. Connotations of senseless violence, unpredictability, and a strong emphasis on medical intervention are not only backed through

deeply embedded stigma, but also through historical positivist research as being located within, and thus subject to these stigmas. Recent research has sought to challenge these understandings of schizophrenia, instead exploring the lived experience of those impacted by the illness. It is through shifting our perspective as researchers, that we have begun to better understand the influence of societal stigma on both science and social constructions of mental illness.

Therefore, research promoting a paradigm shift in the perception of mental illness and its relation to crime holds vast implications for advancing both social science and public policy. By advocating for further education about the diverse experiences of mental illness, we can contribute to the establishment of more robust support systems both socially and institutionally. This in turn, can catalyse broader sociological change. Additionally, such research provides valuable insight into societal shortcomings pertaining to the perceived expectations of mental illness when compared to real life examples. By exploring this disparity, we can open new avenues for research, offering a deeper understanding of how varying illnesses operate.

Chapter 2:

Literature Review

Defining Stigma

The study of mental health stigma holds a unique position, researching the influence of society on perceptions of mental illness, as well as the researchers' susceptibility to the same social norms and pressures. Consequently, research within the field of perception and mental health stigma is both expansive and contentious, evolving in tandem with our broader understanding of psychology. Therefore, we must establish a general foundation by which "stigma" will be used for the remainder of this study. Early academic literature such as Stafford & Scott (1986), put forth stigma as a product of two key functions: the social unit and collective quality. They provide the example of fattening houses in Africa to contrast the condemnation of obesity in western social structures. As such, stigma is defined as "a characteristic of persons that is contrary to the norm of the social unit". Goffman (1963) posits 3 types of stigma: 1. Abominations of the body (physical deformities) 2. Blemishes of individual character (mental illness) 3. Association with a particular race, religion etc. Being aligned with any one of the three stigmas "discredits" a person, placing them at the mercy of the "normals". Regarding the actions of "normals", Goffman elaborates that "a person with stigma is not quite human", thus we exercise discrimination in a way that we "often unthinkingly, reduce life chances" both institutionally and socially (Corrigan et al., 2004). Jones (1984) expands on Goffman's theory by introducing a "mark", acquired through

association with an undesirable stereotype within a society. Link & Phelan (2001) further expand the previously mentioned theories, proposing 4 components that converge to create what they deem 'stigma'. They argue that stigmatisation occurs when labels pertaining to human differences are made and linked to culturally driven undesirable characteristics (stereotypes). This then establishes a nature of othering, fostering a sense of "us" and "them" that leads to status loss and unequal outcomes through discrimination by more socially powerful peers. The operations of this othering can be understood under two scales: the Social Distance Scale and the Perceived Dangerousness Scale (Link et al., 1987). Bruce Link's collective work has cumulated into what is considered a highly influential theory amongst academic literature today and will serve as the foundation for what is referred to as "stigma" for the remainder of this study.

Prior Knowledge

An important distinction must be made between prior knowledge and stigma. Unlike stigma, prior knowledge importantly does not inherently carry notions of negativity. Where stigma finds its roots in othering and is associated with specific aspects of one's character, prior knowledge has potential for positivity within the realm of social science. When prior knowledge is influenced by stigmas, it can lead to problematic reasoning. We see this potential for positivity in concepts such as the 'halo effect' (Thorndike, 1920), by which positive initial interactions influence proceeding cognitively biased assumptions about one's character. For instance, seeing someone well-dressed may bridge assumptions about that person, ranging from personal hygiene to socioeconomic status. In this scenario, prior knowledge acts as a determining force for future impressions. However, if this initial

interaction was disrupted by intuitive stigma, negative future assumptions may develop, underscoring the importance of understanding how prior knowledge influences reasoning.

Research in this domain is driven by the need to demystifying and debunk inaccurate stigmas, often rooted in biased or reductionist positivist research. Literature on stigma heavily emphasises the importance of prior knowledge, or lack thereof, as a driving factor for stigma (Simmons et al., 2017). Research has shown that educated individuals not only exhibit more positive attitudes towards mental illness, but also harbor fewer stigmatised beliefs overall (Högberg et al., 2012). Furthermore, to combat stigma as a result of lack of understanding, educational intervention strategies have been implemented in studies that have also yielded greater positive attitudes coinciding with an increase in education regarding mental illness (Gustafsson & Borglin, 2013). For instance, within the criminal justice system, police officers exposed to mental illness education reported an increase in positive attitudes towards those with severe mental illness. They also expressed a desire for less social distance from those with severe mental illness as well as being generally more supportive of treatment programs (Compton et al., 2006). As such, an approach of education seems to be the most viable remedy to stigma, as echoed by recent academic literature. This is in direct contrast to earlier research that dismisses the significance of exposure. This highlights the ongoing debate, and the need for broader perspective within the field of research and psychology as a whole.

The Manifestation of Stigma

Early Representations of Stigma

Mental illnesses are both massively complex and often misunderstood. For many, they may never establish meaningful connections with those afflicted by serious mental illness. For these individuals, their understanding of, and experience with serious mental illness may (for the most part) be derived solely through representations presented to them via media sources. These representations are however heavily subjected to the social norms and interests that drive notions of newsworthiness. Thus, it is far more common to see depictions of mental illness such as schizophrenia that coincide with violent crime (Markowitz, 2011; Angermeyer & Matschinger, 2004). These depictions reify existing biases that paint those with mental illness as being unpredictable, violent and a threat to public safety (Sörman et al., 2020). These biases vary, however there are three key prevailing stigmas amongst society regarding mental health in general. These are that people who suffer from mental illness are dangerous, difficult to communicate with, and are responsible for their condition (Crisp et al., 2000). This results in a desire for social distance and distrust for those with serious mental illnesses such as schizophrenia (Sörman et al., 2020; Durand-Zaleski et al., 2012). These depictions align with academic literature, which focuses on illnesses such as substance use disorder, bipolar disorder and primarily schizophrenia as coinciding with labels of violence. Consequently, my focus of analysis largely centres on schizophrenia, as research suggests those with schizophrenia experience a high risk of public stigmatisation in relation to notions of violence.

Earlier understandings as to the causes of stigmatisation regarding violent mental illnesses such as schizophrenia are largely rooted in the ideas of a cyclical self-serving pattern of violence, derived from select symptomatic expression. Torrey (2011), for instance posits that stigma related to schizophrenia is the result of schizophrenics causing violent crime. He argues that treating the symptoms of schizophrenia would prevent individuals with illness

from engaging in violent crime, thus averting stigmatisation. However, this approach oversimplifies the understanding of both schizophrenia and the development of stigmas. This approach struggles to consider how acts of violent crime become known to the public i.e., how does the public know that both a violent crime has occurred, and that it was committed by someone with schizophrenia? It also asserts violence as a fixed trait inherent in individuals with schizophrenia, thus nullifying any benefits of mental health education. Torrey argued that "a lack of knowledge is not an important cause of stigma, but violent episodes by mentally ill individuals are". This critique of utilising education to remedy stigma is however entirely hopeless, inspiring no real cause for change other than placing increased weight on the mentally ill and emphasising treatment in a way that heavily mirrors news media discourse at the time. Torrey's perspective reinforces the idea of schizophrenia as a fixed condition both in terms of the patient's diagnosis and the public's understanding. Education to Torrey does not matter because the salient nature of violent crime reporting favours notions of cognitive dissonance. It is far easier and less cognitively taxing to accept that those with schizophrenia are a threat of violence than to assume most with the illness are not, especially when exposure to mental illness is through media that reinforces stigmatised notions of violence. Later literature has largely criticized Torrey for being too narrow-minded and overly reliant on positivist data interpretation. Instead, recent literature has emphasised broader sociological factors and underscores the paramount influence of the media.

The Power of Media

The media plays a pivotal role in shaping societal culture, wielding significant influence in determining social norms and biases. Stigma is largely acquired through ones pre-existing prior knowledge, typically gained through forms of media (Lam et al., 2010),

where approximately 40% of portrayals of mental illness are negative in some manner (Whitley & Berry, 2013). Jorm & Reavley (2014), challenge Torrey (2011), asserting that media reporting of violent crime acts as the sole driver for stigma, employing moral panic theory (Cohen, 2011). They delve heavily into the societal influences at play, particularly in the United States, asserting that a culture of sensationalized violence and facilitated firearm availability, shapes notions of newsworthiness and subsequent media stigmatisation.

Other literature shares this sentiment of media-based influence, with particular concern about "the fact that media portrayals of mental illness almost exclusively take place in the context of court and police reporting" (Schulze & Angermeyer, 2003). (Corrigan, Markowitz & Watson (2004) further expanded on Jorm and Reavley (2014), by examining two crucial manifestations of stigma. Firstly, they evaluate policies from private and governmental institutions that intentionally restrict the opportunities of people with mental illness (legal restrictions and terminology, news media representations of illness). Secondly, they assess policies with unintended consequences that hinder the quality of life for those with mental illness, such as mental health insurance parity and psycho-legal terminology. The consensus amongst academic literature following Torrey (2011) posits these factors as the key drivers for mental health stigma amongst any given society.

Analysing the terminology used in news media publications from 1970 to 2000, Markowitz & Watson (2004) discovered that "as many as 86% of stories dealing with mental illness focus on violence". More recent studies indicate a decline in the prevalence of violence in media coverage, with one-third of stories still centred around violence. However, the majority of remaining stories concentrate on undesirable and antisocial traits or medical

treatment (Shain & Phillips, 1991 ; Wahlt et al., 2002 as cited in Corrigan, Markowitz & Watson, 2004).

Self-Stigma

Stigma, often driven by external social constructs, can also be internalized, creating what Rüsch et al., (2005) refers to as the "double problem". This concept suggests that individuals with serious mental illness, not only contend with the debilitating symptomatic expression of their diagnosis, but also face discrimination from others due to undesirable social stigmas associated with that illness (Corrigan, Markowitz & Watson, 2004). This dual challenge results in variations in the individual's quality of life, access to adequate treatment, and ability to engage meaningfully in society through relationships or employment (Thornicroft et al., 2009; Harangozo et al., 2014; Knight, Wykes & Hayward, 2003; Seeman, 2009). Frequently, this results in "self-stigma", where one internalizes societal stigmas pertaining to their mental illness, significantly diminishing their overall sense of self.

We see this notion of self-stigma explored in more recent studies such as Harris et al. (2022), which analysed the impact of self-perception and awareness of one's stigmatisation as resulting in further victimization. They identified "a clear pattern of victimization risk increasing as perceived stigma increases" with the predicted probability of violent victimization reaching 40% and 50% at 1 and 2 standard deviations above mean level stigma, respectively. Additionally, Schulze & Angermeyer (2003) highlight how "patients perceive negative media reports as an indication for a hostile social climate towards people with

schizophrenia", leading to further isolation due to fears of stigmatisation and rejection. Moreover, they noted that many patients obtain their knowledge about mental health issues from the same media sources as the general public, sharing similar prejudiced sentiments and resulting in a lack of successful psychiatric treatment.

In Actuality

Academic research on the connection between violence and schizophrenia is highly contentious due to a lack of consistency in variables, considering the numerous risk factors present in individuals with schizophrenia (Cho et al., 2019). Cross-cultural comparisons, like those by Khalifeh et al. (2015) or Fazel et al. (2009), analysed the Swedish register for all hospital admissions and criminal convictions instead of focusing on American populations. From a sample size of 98,082 over a 13-year period, they found that for every 1000 inhabitants, there were 45 crimes of which only 2 were attributable to a registered patient with a severe mental illness. Comparatively, data from the US that suggests 3.7 per 1000 assaults are committed by those with schizophrenia, while in Sweden, it is 4.1 per 1000 (Fazel et al., 2009). This contrast helps shed light on the nature of both the treatment and legal systems in America. While Fazel et al. (2009) suggests greater violent crime in Sweden, one must also factor for the vast differences in reporting and inferior mental health services in the US. These factors collectively act as drivers not only for violent crime statistics but also perceived threat of violent crime, with even 42% of American adults perceiving a child with depression as a threat of violence (Jorm & Reavley, 2014). This focus on those with severe mental illness as being violent and deviant heightens the general public's fear of victimisation, despite individuals with schizophrenia being up to 120% more likely to be victims of a violent crime than the general public (Brekke et al., 2001). Furthermore,

individuals with schizophrenia "are at least 14 times more likely to be the victim of a violent crime than to be arrested for one" (Brekke et al., 2001); and in some instances, up to 140 times more likely to be the victim of a violent crime than the general population as a whole (Maniglio, 2009). This starkly illustrates the significant disparity between the publics perceived and actual threat of violent victimization. The increased victimisation of those with severe mental illness can largely be attributed to past traumas, social involvement, and substance use (de Mooij et al., 2015; Maniglio, 2009). In the case of schizophrenia, research even suggests that these factors are far more responsible for victimisation than the symptoms of schizophrenia itself (Buchanan et al., 2023). Other key factors include mania and psychosis, often coinciding with substance use comorbidity such as methamphetamine use, wherein victims may find themselves in scenarios more prone to victimisation due to presence of substances. For many, self-stigma can promote an incredibly reclusive and problematic lifestyle, hindering psychosocial functioning and heavily impacting the quality of life for the person involved. As such, this can result in greater involvement in anti-social activities, putting the individuals in situations where they may be perceived as dangerous or have their safety compromised (Hodgins et al., 2009).

Varying Attribution of Stigma Between Mental Illnesses

Schizophrenia

Schizophrenia is in the unique position of facing widespread misrepresentations through media, whilst also having very limited public exposure to those affected due to its rarity. Individuals with schizophrenia are often depicted as violent, dangerous and an all-round threat to the financial, emotional, and physical security of all those around them,

including themselves. This portrayal emphasises a perceived threat of violence, linked to the notion of a mental "snap" or "break" (Quintero Johnson & Miller, 2016) in which, someone loses control of themselves and their actions, acting in a way that is completely otherwise out of character (oftentimes regarding violence).

Building on the foundational stigma of violence and unpredictability, those with schizophrenia are also perceived as being out of control of their actions. This notion of being out of control often contributes to an "othering" effect, stripping individuals with schizophrenia of their humanity and seemingly infantilising them. It is also a notion deeply rooted in the very history of how psychologists have understood schizophrenia, with initial understandings of adjacent disorders like "dementia praecox", with one of three key "fundamental disorders" marking the illness being executive dysfunction; "the loss of mastery over volitional action" (Jablensky, 2010).

This notion is evident in early understandings of psychosis and the historical nature of the insanity defence. One of the earliest foundational psycho-legal understandings of crime and psychosis is that of the M'Naghten Rule. First put forth in 1843, this rule exempted individuals from punishment given they could not discriminate right from wrong whilst committing a crime. Before M'Naghten, legal decisions pertaining to criminal responsibility and understandings of severe mental illness were dictated by what has been deemed the "wild beast test". Largely attributed to English Judge Henry de Bracton in 1256, the "wild beast" test attributed exemption to 'the insane' as they could not be held morally accountable, likening them to wild beasts (Platt, 1965). Although emphasis on awareness of moral wrongfulness eventually gained acceptance, associations of individuals with mental illness as akin to wild beasts, brutes, and infants persisted throughout historical legal discourse (Allnutt

et al., 2007; Platt, 1965). As such, understanding notions of controllability in relation to severe mental illness is vital ill demystifying certain stigmas. By establishing those with schizophrenia as ‘out of control’, we as a society, perpetuate historic ideologies that have stripped those with severe mental illness of their humanity for centuries.

Depression

While depression, like schizophrenia, faces stigmatisation, its representation differs significantly. Stigmas pertaining to depression often focus less of potential danger to others and more on the individual’s own well-being. It is important to recognise depression as being highly comorbid with other mental illnesses like schizophrenia. Arguably, depression in itself does not carry the same level of stigma as schizophrenia due to heightened public exposure and awareness. It is through exposure to mental illnesses that stigmas start to lose their salience, and perceptions begin to change (Jorm & Reavley, 2014).

For example, when analysing the prevalence rates for depression, we see an estimated 280 million diagnoses globally and a rate of 3.8% (WHO, 2023). Compare this with schizophrenia, which recent data from New Zealand sees prevalence rates as low as 0.67% (Gibb et al., 2021), with global data reporting a prevalence rate of 1 in 300 people (0.32%) (WHO, 2023). Emphasising exposure here is crucial. Depression may face stigma rooted in social norms rather than media misrepresentation of symptoms, as it is not stigmatised similarly to schizophrenia regarding violence, likely because the illness is less ambiguous in the public eye.

Most individuals have some experience with depression or know someone who has, contributing to a more nuanced understanding. However, for those unfamiliar with depressive disorders, or have repressed emotions to maintain strict social norms, “the pain of severe depression is quite unimaginable to those who have not suffered it” (Styron, 1992). As such, stigmas of weakness and shame are all too common for those with depression, originating from societal expectations and also internalized by the individuals themselves (Wolpert, 2001). This is evident in notions of hegemonic masculinity, where expressing negative emotions is viewed as shameful and weak due to its deviation from rigid social norms. This dynamic can also lead to self-stigma, where individuals struggling with depression feel shame and embarrassment due to social policing or frustration with misunderstandings about their illness.

Substance Use Disorder

Where schizophrenia forfeits connotations of control, perceptions of substance use disorder are heavily influenced by understandings of the disorder as being controllable (Termeer & Szeto, 2021). This contrast to schizophrenia becomes especially important when discussing similarities in stigmas, particularly those related to violence. Schizophrenia is typically seen as involving uncontrollable violence, contrasting with the perception that individuals with substance use disorder have control over their violent tendencies. This makes them more likely to be held responsible, with increased punitive response (Termeer & Szeto, 2021). This sense of control applies to both behaviours of violence, and substance use. Consequently, both disorders are labelled violent, but only one may garner any form of sympathy from the public. Additionally, when considering psychosis, of which prevalence is high amongst methamphetamine users (Glasner-Edwards & Mooney, 2014), individuals

might be seen as more culpable for their psychosis if substance use is more salient than any potential coexisting schizophrenia.

Why Perceptions of Crime and Mental Health Matter

Crime occurs whether the public is aware of it or not. What matters is how we as members of the public, within a given society, are exposed to and perceive varying facets of crime. An important aspect of this is victimization, particularly in regard to fear. The notion of fear is vital because exposure to crime, whether directly or through media, can lead to an increased fear of becoming the victim of crime. As such, it is important to note the prevalence of availability bias, where overreporting of specific crimes and associated themes, may lead to an increase in social response fuelled by heightened fear (Cohen, 2011). This social response varies massively, encompassing increased fear of victimization, entrenched stigma, and governmental or legislative action.

We can understand the weight of this notion through the lens of moral panic theory (Cohen, 2011), of which the role of news media cannot be understated. News media is flawed in its being subject to society and thus, subject to social norms and stigmas. Therefore, the construction of crime within the lens of news media, is also subject to societal norms and pressures that disenfranchise vulnerable communities that are disproportionately subject to varying facets of crime. As such, the same media influences that govern mental health

representations also govern representations of crime, oftentimes in conjunction with one another.

Overrepresentation within Carceral System

The combination of mental illness discourse with themes of crime matters because the association of one with the other not only puts forth, but further cements incredibly dangerous and stigmatised rhetoric. This rhetoric oftentimes results in real world punitive action, exemplified by the overrepresentation of those with serious mental illness within prison institutions (Department of Corrections, 1999; Prins, 2011; Prins, 2014; Vogel, 2014; Peterson & Heinz, 2016). A report from Ara Poutama Aotearoa | The New Zealand Department of Corrections, revealed that nearly 60% of all inmates have at least one major personality disorder. Furthermore, they determined that it would be necessary for all of those with schizophrenia to undergo psychiatric treatment, despite 68.8% of male inmates, and just over half of the female inmates reporting having received no treatment prior to incarceration (Department of Corrections, 1999).

The reasoning behind this overrepresentation is debated, however a general consensus appears to weight the majority of the responsibility on "deinstitutionalisation, combined with inadequate funding of community-based treatment for individuals in need of mental health services" (Prins, 2011). This aligns with the widely accepted hypothesis of transinstitutionalisation (Steadman et al., 1984), of which the overrepresentation of severe mental illness in prisons is explained by understanding state psychiatric hospitals and criminal justice systems as being "functionally interdependent" (Prins, 2011). Thus, the closure of state psychiatric hospitals displaces those with severe mental illnesses with little to

no community treatment alternative. As such, increasing state psychiatric institutions and community aid should effectively prevent contact within the criminal justice system. Others argue wider sociological and systemic issues are responsible, such as misallocation of government resources, lack of affordable housing, and high comorbidity of drug use (Osher & Han, 2002).

Jury Bias

Jury samples are susceptible to and influenced by the prevailing norms of the society by which they are called upon. Juries are therefore not immune to stigmatisation and can perpetuate and facilitate these biases within criminal justice settings. Termeer & Szeto (2021) argued that juries are influenced by Attribution theory (Weiner, 1985), in which mental illnesses that present as more controllable (substance use disorder) are more likely to be stigmatised and seen negatively by a society than illnesses that present with more uncontrollable behaviour (schizophrenia, depression) (Boyson & Vogel , 2008).

This pattern of stigma is evident in cases of jury bias. Studies have shown that societal biases seep into the courtroom and influence jury verdicts in studies examining insanity (Louden & Skeem, 2007), substance abuse and obsessive-compulsive disorder (Mossière & Maeder (2015, 2016), schizophrenia and, depression (Termeer & Szeto, 2021). Of these illnesses, substance use disorder was the most likely to be regarded as controllable, therefore making the offender deemed more guilty for their behaviour (Termeer & Szeto, 2021). A key driver for this attribution is that of general experience with the disorder. Alcohol for example is both highly commercialised and normalised throughout mainstream media; particularly in

places like New Zealand (Newcombe, 2019). Additionally, substance use disorder is far more likely to be associated with undesirable traits such as homelessness and violence (Grinspoon, 2021), with those afflicted facing highly damaging social distancing (Shahid & Asmat, 2023; Van Boekel et al., 2015), and cyclical self-stigmatisation (Cheetham, 2022).

Inadequate Police Training

Outside of courthouse settings, those with severe mental illnesses are largely at the mercy of law enforcement. A significant issue contributing to this challenge is the limited mental health training that police officers receive, despite calls for increased education in this area (Lorey, 2021; Rohrer, 2021; Steadman, 2016). Research in the United States has found that of the allotted 652-hour basic training curricula for police, on average only 1.1% or about 7 and a half hours are dedicated to mental health training; Furthermore, best-case scenario sees a police recruit spend 10.65 hours on both mental health and disability training (Cohen & Bagwell, 2023). As such, it is safe to assume that the amount of mental health training (or lack thereof) means that large portions of the police force may be practicing police discretion in a way that operates within the realms of social stigmas.

This is not far from what academic literature suggests. Regarding schizophrenia, there is an immense distrust and reluctance to approach the police about their victimization (Knight, Wykes & Hayward, 2003; Harangozo, 2014) as a result of reported discrimination surpassing the general population or those with other mental illnesses such as depression (Corker , 2015). Statistically, individuals exhibiting signs of a mental illness are 67% more

likely to be arrested than those not showing signs of mental illness, with mentally ill subjects "clearly being treated as criminals" (Teplin, 2000; Godfredson et al., 2010). This brings into question the comparative nature of symptomatic expression across a range of disorders in relation to police discretion. For individuals with disorders such as schizophrenia, it may be far harder to hide their disorder when faced with the cognitive load of police interaction, resulting in an increased likelihood of arrest due to behaviour deemed as 'odd' (Brekke et al., 2001). This becomes especially more apparent when factoring for treatment after disclosure of diagnosis, of which 39% of respondents in Pandya et al. (2011) report being treated worse by police after the fact, than by any other social group (employers healthcare, workers, family etc).

Inadequate Treatment

Individuals with severe mental illness often lack access to adequate mental health treatment both inside and outside of the criminal justice system. Research has argued that biased treatment by doctors plays a crucial role in the incredibly high rate of premature death for those with schizophrenia (Pandya et al., 2011). This treatment becomes especially problematic in instances where an offender with mental illness is found guilty of a crime. There is a 56% chance that a prisoner has a mental health problem, however there is only a 34% chance any of these prisoners will receive any treatment since incarceration (Allen , 2008; James & Glaze, 2006). Alternative treatment data also shows findings as low as 16.3% in 1999 and 64% in 2006 regarding reported mental health prevalence (Steadman et al., 2009).

In regard to violent crime and schizophrenia, calls for greater screening and subsequent treatment have been made by researchers, with treatment greatly reducing future risk of reoffending (Igoumenou , Kallis & Coid, 2015). This treatment is, however, incredibly difficult given prevailing penal populism practices and the drastic increases in recent prison populations that have made both screening and treating incredibly difficult. When addressing the treatment of comorbid schizophrenia – with up to 92% of schizophrenics in prison having comorbid psychopathology (Diamond et al., 2001), questions arise about the role of prisons in serving the rehabilitation of these individuals if not psychiatric treatment. Do prisons function for rehabilitation or for public safety from the mentally ill? Furthermore, does the overincarceration of seriously mentally ill individuals feed into socially established norms and stigmas about specific mental illnesses such as schizophrenia?

Fellner (2006) notes how prisons maintain a rigid and strict structure, by which all inmates are expected to comply with the same rules the same way, despite mentally ill prisoners "not having the same capacity to comply" as other prisoners. As such, this may exacerbate schizophrenic or psychotic symptoms, resulting in behaviour that is deemed misconduct and therefore punishable. This ties back to Brekke et al. (2001) and the notion of harsher police treatment when making arrests due to 'odd' behaviour. The carceral system in its current form perpetuates the cyclical nature of both external and internal stigma for those with serious mental illness. Enforcing purely punitive practices that do not aid in the rehabilitation of prisoners. Instead, the system as is, fails vulnerable communities and the public by not addressing risk of reoffence in those with serious mental illnesses, whilst exacerbating their symptomatic expression and general hardship integrating into society both before and after incarceration.

This culmination of systemic, institutional disenfranchisement is believed to have resulted in the overall criminalisation of mental illness. Unfortunately, sensationalised headlines adopted by news media work incredibly well at what they are designed to do… draw in as many eyes as possible. As a business, there are financial, social, and personal incentives that promote such headlines (Sutter, 2004). As such, news media sources may have "objectives based on self-interest… that have a strategic role in influencing public sentiment and hence the outcomes of private and public politics" (Baron, 2005). This results in the incentivised dehumanisation and disenfranchisement of those with mental health illnesses because stories involving mental illness are deemed incredibly newsworthy. Both crime and mental illness are incredibly effective at garnering attention, thus combining two makes a story much more marketable.

Chapter 3:

Methods

Research Aims and Objectives

Historically, research on associations between crime and mental illnesses such as schizophrenia have generally been with a focus on those with severe mental illness as violent offenders, reifying social stigmas that work to diminish the quality of life for those with schizophrenia diagnoses (Torrey, 2011). This is despite vast academic data being incongruent with these stigmas, instead suggesting that people with schizophrenia are far more likely to be the victims of violent crime than the offender (Jorm & Reavley, 2014; Brekke et al., 2001). As such, this research aims to explore public perceptions of violent assault against those with diagnoses of schizophrenia.

Furthermore, the study aims to explore how these perceptions may change when drug-use (often as an attempt at self-medication) is included in the mix. Substance use disorder is highly comorbid with schizophrenia, and carry additional stigmas of violence and

unpredictability and may differentially affect perceptions of culpability. As such, those with substance use disorder are generally seen as more culpable for their involvement in a crime's occurrence, even as victims of crime. This is because substance use disorder is perceived as more controllable than schizophrenia, potentially overshadowing the nature of comorbidity in attributing blame.

Hypotheses

1. We expect on average that people who are assigned to the methamphetamine conditions, irrespective of mental health condition, will report higher social distancing scores.
2. We expect the social distancing scores to be lowest in the depression group, second highest in the control group, and highest in the schizophrenia group, irrespective of the methamphetamine condition.
3. We expect that the mental health and methamphetamine conditions will interact and that:
    a. In the no methamphetamine use condition, social distancing scores will be highest for schizophrenia, and lowest for depression.
    b. In the methamphetamine use condition, participants will be more likely to report a desire for social distance in control and schizophrenia conditions in comparison to those in depression conditions.

Participants

Participation was open to anyone above the age of 16, with recruitment occurring through posters either physically, on campus at The Auckland University of Technology, in public spaces or digitally through social media. Participants were incentivised with the option of entering into a prize draw to win 1 of 10 cash $50 cash vouchers. The total responses (n = 160) were reduced due to unfinished or unsubmitted responses. The final participants (n = 106) were predominantly Female 71.2% (n = 74), NZ European 79.2% (n=84) with a mean age of 33.8 (SD = 15.5). Demographic data pertaining to gender was simplified and split dichotomously, omitting gender diverse data due to a lack of respondent data for non-binary (n = 5) and 'other' (n = 1) demographic options. Regarding ethnicity, the remaining participant data consisted of Māori (n = 10), Asian (n = 4), African (4), Pasifika (n = 1), and other (n = 4). Recent level of education results were fairly close between those with a university degree (27.9%, n = 29) and those who only had only completed secondary school (25%, N = 24), however it is likely that a large portion of these participants are currently undergraduate students. It is important to note that, regarding age, although the mean age is 33.8, the data is heavily positively skewed, with a median age of 22 and a range of 18 – 66 years old.

Materials and Instruments

Vignettes

Participants read a vignette in the style of a newspaper article depicting a violent crime, with variations depending on the participants random sorting. These vignettes followed a 3x2 design with a focus on mental health diagnosis (schizophrenia, depression, no

mental illness) and substance use (methamphetamine use, no methamphetamine use) respectively. In contrast to prevailing research on stigma and mental illness, the vignettes place a focus on those diagnosed as the victim and not the perpetrator. Additionally, the inclusion of methamphetamine use allows for assessment of perspectives regarding the salience of symptomatic expression of mental illness with the stigmas and assumptions associated with drug use.

The vignettes were largely derived from real world news media examples touching on prevailing themes throughout representations of mental illness. As such, the vignettes largely highlighted themes of violence and a need for treatment. Additionally, the headline for schizophrenia conditions specifically used the terminology “schizophrenic man”, drawing from identity first ideology, of which a person first “man with schizophrenia” approach may have worked to separate the person from the illness, which was not wanted in this instance. In the three methamphetamine conditions, a single sentence was added at the end of the paragraph about the victim’s hospital admission. This simply stated that methamphetamine was found on the victim’s person; it did not explicitly state that methamphetamine was found in the victim’s system. As such, we can assess potential stigmas in perception regarding substance use comorbidity.

The vignette uses non-fictional locations as it is put forth to participants as a real local news article. The vignette for the ‘schizophrenia’ + ‘methamphetamine use’ condition, as seen by participants, can be seen below in Figure 1. Other conditions followed the same template for consistency, only removing condition specific phrases and terminology (see Appendix A for all versions):

Home / New Zealand / Crime

Schizophrenic man hospitalised after Auckland CBD assault.

By: Isaac Block and George Davidson
25 Sep, 2023 10:16 AM Quick Read

Police were called to the scene. Photo / Blair Gregson.

Will Johnson, a 22-year-old man from Auckland, was arrested after violently beating Ben Campbell, a man with a history of living with schizophrenia.

Witnesses to the assault reported that Campbell (aged 53) approached Johnson at around 1am, and asked Johnson for a lighter. They were surprised to see Johnson lash out, who repeatedly punched Campbell in the head. Campbell then dropped to the ground attempting to shield himself, but Johnson then began kicking him in the stomach and chest.

Nearby police were able to intervene, but not before Campbell was left seriously injured and unconscious.

Campbell was rushed to Auckland Hospital and is recovering with a broken nose, cheek, and several fractured ribs. As Campbell was brought into the hospital's Accident and Emergency clinic, police found a small quantity of methamphetamine on Campbell's person.

Following his arrest Johnson alleged that Campbell was talking to himself and acting strange. 'I was worried for my safety', Johnson said during his arrest, noting Campbell's unusual and erratic behaviour, and claims he was acting in self-defense.

A close family member of Mr Campbell's told the Herald that, because of his ongoing struggles with mental health, Campbell was having financial difficulties and that this was exacerbating Mr Campbell's mental health. Furthermore, he believed that it was highly likely Mr Campbell had stopped taking the medication that had been prescribed for his schizophrenia.

Mr Johnson is to appear in the Auckland District Court today on a charge of wounding with intent to cause grievous bodily harm.

Figure 1:

Schizophrenia + Methamphetamine Vignette

Main Outcome Variable

Social Distance Scale.

To assess the effect of mental illness and substance use on participants perceptions of violent crime victimisation, we asked participants to complete the Social Distance Scale (Link et al., 1987). The Social Distance Scale assesses the participants' desired physical distance from the subject in question, in this case, the victim of the assault. This scale had strong internal consistency within the study (α = .87) (original study α = .92). The scale includes six items in a forced choice, 4-point response scale (1 = *definitely willing*, 4 = *definitely unwilling*). These include items such as "how would you feel about renting a room in your house to someone like Campbell [the victim]?", and "how about as the caretaker of your children for a couple of hours?". A composite score for each participant was then obtained by calculating the average of their overall responses with a range of 1 – 4. Higher composite scores on this scale indicate a greater desire for social distance from the subject, further indicating stigmatised influence or 'impression negativity' on the participants perspective of the crime despite the subject being the victim.

Covariates

To control the main analysis for potential confounding effects of individual difference in responding, we also measured participants general levels of stigma regarding both personal views on mental illness, as well as how they think others would view substance use disorder. Additionally, we measured participants beliefs about people with mental illness as potentially being harmful, as well participants overall experience with mental illness throughout their lives.

Stigma Scale.

Adopted and modified from the Depression Stigma Scale (Griffiths et al., 2004), this scale assesses participants general stigmatising attitudes irrespective of the vignette, utilizing a 4-point response scale (1 = *strongly disagree,* 4 = *strongly agree*). This scale had an acceptable internal consistency within this study (α = .76) and the original study (α = .76). The 9 items in the scale highlight prevailing misconceptions regarding mental illness such as dangerousness, unpredictability, and instability. It does so through potentially confronting items such as "someone with a mental illness could snap out of it" and "I would not employ someone if I knew they had been diagnosed with a mental illness". Composite scores were collected for each participant by calculating an average overall response score with a range of 1 – 4. Higher composite scores represent higher stigmatising beliefs regarding general attitudes towards those with mental illness. The use of the word "depression" has been substituted with "mental illness" for better consistency across all conditions.

Perceived Dangerousness of Mental Health Patients Scale.

The Perceived Dangerousness of Mental Health Patient's Scale (Link et al., 1987) measures the general perceived threat of mental health patients. This scale assesses general attitudes towards mental illness irrespective of the vignettes. When setting up the items in Qualtrics, an error was made in the wording in one of the items: "there should be a law forbidding a former mental health patient the right to obtain a ***hunting licence***". However, only one of the conditions (the meth-schizophrenia condition) used the original wording referring to a 'hunting licence'. However, in the remaining 5 conditions, the item referred to a 'gun licence' (ie, "there should be a law forbidding a former mental health patient the right to obtain a ***gun licence***"). We opted to remove this item as we believe that participants would have responded differently to these items irrespective of their assigned condition.

As such, the final scale consisted of 7 items on a forced choice 6-point response scale (1 = *strongly disagree,* 6 = *strongly agree*). Items on this scale are specifically honed on prevailing notions of dangerousness and a need to be protected from those with mental illnesses through treatment and legal action. Examples of items asked within the scale include: "If a group of former mental health patients lived nearby, I would not allow my children to go to the movie theatre alone", and "The main purpose of mental health hospitals should be to protect the public from mentally ill people". Importantly, items 2 ("If a former mental health patient applied for a teaching position at a grade school and was made qualified for the job, I would recommend hiring them) and 6 ("If a former mental health patient lived nearby, I would not hesitate to allow young children under my care to play on the sidewalk") were reverse coded. This scale had an acceptable internal consistency within our current study ($\alpha = .78$) and the original study ($\alpha = .85$). Higher collective scores denote greater perceived dangerousness in those with mental illnesses, with no particular mental illness named.

Perceived Stigma of Substance Abuse Stigma Scale.

The Perceived Stigma of Substance Abuse Stigma Scale (Luoma et al., 2010) assess participants stigmatising beliefs specifically in regards to how they believe others perceive substance use. Although methamphetamine use is not apparent in every condition, this scale was used in all conditions to test negative assumptions of substance use comorbidity and for general consistency across conditions; being under the guise of 'general attitudes about mental health' in non-substance use conditions. The scale uses 8 items across a forced choice 4-point response scale (1 = *strongly disagree,* 4 = *strongly agree*). Items in this scale include "Most people believe that someone who has been treated for substance use is just as trustworthy as the average citizen", and "Most people would hire someone who has been

treated for substance use". Importantly, item 7 ("Most employers will pass over the application of someone who has been treated for substance use in favour of another applicant") was reverse coded. Lower scores denote higher stigmatising beliefs in participants towards those with substance use issues. This scale had good internal consistency within the study (α = 0.86). This is higher than the original study by Luoma et al, (2010) (α = .73); however, this may be due to the original study utilising a neutral option on a 5-item scale, compared to our forced choice 4-item scale. The questions in this scale can be used to further understand comorbidity and potential salience regarding the direction of a participants prevailing stigmatised thoughts. This scale also utilises a perceived bias scale over the personal bias scale we have chosen to use in the other stigma scale conditions. This means questions are directed more towards exploring bias in how participants view others' perceptions in a way that is seemingly irrespective of their own.

Level of Contact and Demographic Questions.

The Level of Contact Scale (Holmes et al. 1999) is a 12-item scale of which each question is ranked to denote the participants involvement and experience with mental illness. These items scores ranged from 1 = "I have never observed a person that I was aware had a severe mental illness" to 12 = "I have a severe mental illness". By collecting the average rank score based on all of the participants claimed levels of contact, we could establish a score of the participants exposure to mental illness. Of these, higher scores denote higher levels of contact with mental illness. Holmes et al (1999) suggests using the participants highest rank order score, overruling lesser rank orders. However, for the current study, we instead opted to use participants mean rank score. This allows for a much more normal distribution amongst the data, whilst also working to remedy issues of over-reporting and the potential of selecting

multiple low exposure options but getting a lower rank score than someone who selected just one singular high option.

Final demographic questions were asked pertaining to the participants age (years), most recent level of education, ethnicity, and gender. Key demographic information for covariate analysis largely pertains to categorical age and education level data, with both age and status as a student typically associated with political alignment and thus, potential correlation with stigmatised belief.

Culpability

Two items were added to test prevailing attitudes of perceived culpability and victim blaming (with relevance to the participants sorted vignette). These standalone items were "Campbell would not have been assaulted had they received adequate mental health treatment" which was asked to all participants, and "Campbell would not have been assaulted had they not been under the influence of methamphetamine", which was only asked to those in the methamphetamine conditions. These items were placed alongside a 4-point response scale (1 = *strongly disagree,* 4 = *strongly agree*). Higher scores denoted greater stigma towards those with serious mental illness or substance abuse issues.

Procedure

Participants were recruited by encountering either physical posters or online social media posts. To reduce socially desirable responding, these posters did not mention terms such as 'stigma', 'mental illness', or 'substance use', instead focusing on general 'perceptions of crime'. These posters provided a link to an online survey using the Qualtrics platform

(Qualtrics, 2020). Participants were told that they would be reading a newspaper article depicting a violent assault, of which they would then be asked a series of questions, some relating the article and some more general questions about varying mental health subjects. Participants were then randomly assigned to one of six conditions using a 3 (schizophrenia, depression, no mental illness) by 2 (methamphetamine use, no methamphetamine use) design, and presented their article. After reading the article, participants were then prompted with the Social Distance Scale, and reminded that their answers were completely anonymous. Furthermore, participants were further reminded that their answers are anonymous before every set of questions as to best work to counteract socially desirable responding. Participants were then prompted with the modified Stigma Scale and the Perceived Dangerousness of Mental Patients Scale. Once these individual belief scales are completed, participants across all conditions (both for consistency and general information) were then prompted with the Substance Use Stigma Scale. Participants were finally prompted with the Level of Contact Scale, and then the remainder of the demographic questions. After all of the items had been completed, participants were prompted with the option of entering the prize draw before concluding their participation.

Chapter 4:

Results

Preliminary Analysis

As can be seen in Table 1, there were no sex differences for any of the measures. Although, male participants did prefer slightly greater social distance from the victim in the news articles. Male participants also scored higher for general stigma and tended to perceive the victim in the news articles as less dangerous, these differences were not statistically significant. Male and female participants reported very similar scores on the measure of substance use stigma and were similar in age and level of education. And although the female participants reported slightly higher levels of contact with mental health issues, again, this was not statistically significant.

Table 1:

Means and Standard Deviations of Desired Distance, Alternate Stigma Scales, and Perceived Dangerousness Scores, Including Demographic Information for Males and Females.

	Male (n = 32)	Female (n = 74)		
	M (SD)	M (SD)	t	p
Desired Distance	2.91 (0.47)	2.80 (0.60)	0.79	.434
Stigma	1.87 (0.48)	1.71 (0.36)	1.76	.081
Perceived Danger	2.47 (0.51)	2.62 (0.72)	0.93	.352
Substance Use Stigma	2.81 (0.47)	2.85 (0.51)	0.28	.773
Level of Contact	2.08 (0.94)	2.36 (1.51)	0.85	.396
Education	3.54 (1.47)	3.73 (1.60)	0.51	.611
Age	34.50 (17.30)	34.66 (15.29)	0.04	.968

Correlations were conducted to determine the salience of varying facets of stigma on participants perception of crime and mental illness (See Table 2.). As expected, participants who reported that their preference was for greater social distance from the victim, also tended

to have more stigmatising attitudes towards people with mental illness, and believed the victim was perceived as a greater threat (both $p < .001$). Expectedly, participants that reported a desire for greater social distance also scored lower for average experience with mental illness ($p < .001$). Furthermore, those that scored higher on the Stigma Scale also saw the victim as a greater perceived threat and reported lower levels of contact with mental illness (both $p < .001$). Additionally, participants reporting higher stigma, also tended to be older than participants reporting lower levels of stigma ($p < .001$). Participants that reported the victim as a perceived threat, also tended to have far less contact with the mental illness ($p < .001$) and were interestingly younger than participants that reported greater perceived threat ($p = .003$). This means that a participant's stigma was correlated with their desired distance from the example in the vignette. Furthermore, it means that the more contact and exposure one has to people that have a severe mental illness, the less likely they are to uphold stigma, desire social distance, or perceive the those with mental illnesses as threats to public safety.

Table 2:

Correlations Between Study Variables and Demographic Information

	1.	2.	3.	4.	5.	6	7
1. Desired Distance	-						
2. Stigma	.50 ***	-					
3. Perceived Threat	.47 ***	.60 ***	-				
4. Level of Contact	-.32 ***	-.33 ***	-.39 ***	-			
5. Age	.17	.24 *	-.30 **	-.32 **	-		
6. Education	-.16	-.04	.02	.02	.10	-	
7. Substance Use Stigma	.02	-.04	-.10	.11	-.12	-.12 *	-

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

Primary Analyses

Social distance Scale:

Firstly, a 2 (methamphetamine use, no methamphetamine use) x 3 (schizophrenia, depression, no mental illness) between-groups analysis of variance (ANOVA) was conducted

to explore the impact of methamphetamine use and mental illness on levels of stigma, as measured by the Social Distance Scale (See Table 3; Model 1.).

When looking at Table 3, we see that there was a main effect for mental health condition: those who received the control articles (ie, the news article that did not mention that the victim suffered from a mental illness irrespective of the methamphetamine reference) had, on average, higher social distance score (M=3.00, SD= 0.64) than those who received the depression vignettes (M=2.88, SD= 0.49), although this difference was not statistically significant (p=.265). Those who received the schizophrenia version, had slightly lower social distance scores (M=2.68, SD= 0.52) than those in the depression condition, but again this difference was not statistically significant (p=.122). However, the social distance scores from those in the schizophrenia condition were lower than those who were allocated to the control condition (p=.008).

We also found a main effect for the methamphetamine condition: those who read news articles that mentioned methamphetamine was discovered on the victim, reported significantly higher social distance scores (M=2.96, SD=0.57) than those assigned to the non-meth condition (M=2.74, SD=0.54; p=.041). However, Table 3 also shows we found a statistically significant interaction. When looking at Figure 2, we see that the social distance scores for those who viewed the news articles without the reference to methamphetamine were very similar, irrespective of mental health condition. However, the social distance scores for the three mental health versions did vary when the article also mentioned the discovery of methamphetamine on the victims person: the average scores were highest for participants who read the control condition article (ie, the news article that did not mention that the victim suffered from a mental illness); lower if the article mentioned that the victim

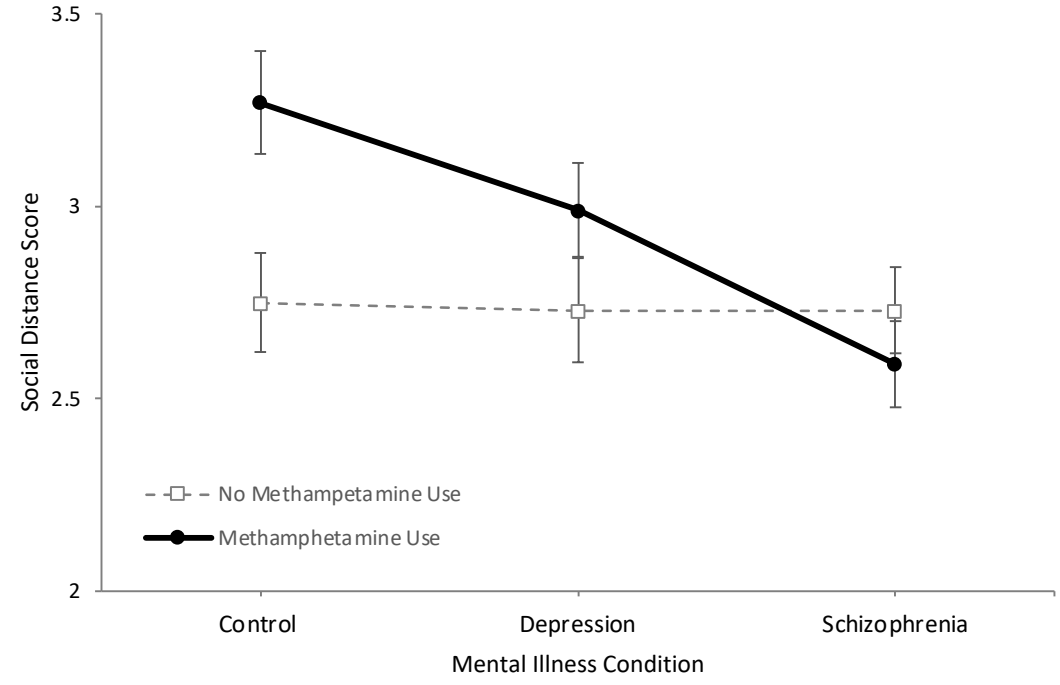
suffered from depression; and lowest (and similar to the no meth condition) in the article mentioned that the victim suffered from schizophrenia.

Table 3:
Multiple Model: 1. One-Way Analysis of Variance (ANOVA) for Methamphetamine Use and Mental Illness Conditions Against Desired Social Distance Scores. 2. Modification of Model 1 Including Demographic Information. 3. Modification of Model 2 Including Stigma, Perceived Threat, and Level of Contact Scores.

	F	p	ηp2
Model 1			
Mental Illness Condition	3.70	.028	.07
Meth Use Condition	4.30	.041	.04
Mental Health By Meth Use Interaction	3.52	.033	.07
Model 2			
Mental Illness Condition	4.43	.015	.15
Meth Use Condition	5.55	.021	.06
Mental Health By Meth Use Interaction	4.82	.011	.11
Age	5.76	.019	.07
Education	1.85	.177	.02
Gender	0.77	.384	.01
Model 3			
Mental Illness Condition	3.56	.031	.06
Meth Use Condition	4.85	.033	.08
Mental Illness By Meth Use Interaction	2.57	.083	.06
Age	0.99	.324	.01
Education	1.18	.280	.02
Gender	0.58	.447	<.01
Stigma	2.51	.117	.03
Perceived Threat	0.71	.403	<.01
Level of Contact	0.51	.475	.01
Substance Use Stigma	1.15	.287	.02

Figure 2:

Estimated Marginal Means of Social Distance Scores Against Mental Illness Type and Methamphetamine Use.



Note: Error bars = 1 standard error

Covariates

Adjusting the analyses for demographic covariates gender, age, and level of education (Table 1, Model 2), didn't materially affect the results, and the main effects for mental health condition, and methamphetamine use, remained.

When further adjusting for perceived stigma, prior exposure to mental illness and perceived substance use stigma (Table 1, Model 3), the main effects remained, and although the interaction effect failed to reach the accepted level of statistical significance (p=.083), the pattern we saw in Model 1 (and Figure 2.) remained the same. In fact, the covariates in model 3 were not affected by the news articles (all p>.15; see Appendix B for details).

Chapter 5:

Discussion

The study aimed to investigate how unconscious stigma influences participants' perceptions of crime when the victim has a mental illness. Vignettes were employed in the study, incorporating themes, terminology, and messages commonly found in contemporary portrayals of crime and mental illness within the media. Unlike previous research, we took a different approach by challenging the common portrayal of mentally ill individuals as attackers, instead presenting them as victims of violent assaults.

When considering our first hypothesis, our findings are largely in line with what was expected. In conditions where the presence of methamphetamine was stated, desire for social distance was on average, higher than in that of the no methamphetamine use conditions. This is to be expected from prevailing norms and associations of violence with methamphetamine use (Brecht & Herbeck, 2013; Sommers & Baskin, 2006; Tyner & Fremouw, 2008). Therefore, irrespective of mental illness conditions, people desire greater social distance from those that they know, or suspect, are under the influence of methamphetamine (Krendl & Perry, 2023). As such, it makes sense that the prevalence of methamphetamine generally bolstered participants desires for social distance when compared to conditions with no methamphetamine presence, even though direct use of the substance is not stated in the vignettes. This becomes especially remarkable when considering how little variation in social distance scores was reported in conditions where methamphetamine use was not stated. Participants reported drastically higher levels of desired social distance with the addition of just one sentence alone, [*As Campbell was brought into the hospital's Accident and Emergency clinic, police found a small quantity of methamphetamine on Campbell's*

person]. This suggests that the mere mention of methamphetamine presence is highly salient when forming perceptions crime irrespective of mental illness.

When assessing second hypothesis, the results of the study were largely unexpected. When we were factoring for mental illness irrespective of methamphetamine use, we predicted schizophrenia to have the highest level of desired social distance and stigma in comparison to control and depression conditions. We instead found very little change in participant perception. If anything, the control condition scored slightly higher for desired social distance than schizophrenia and depression. This may be due to the subject's role as 'victim', with participants generally feeling more sympathetic towards someone with a reported mental illness than someone who didn't. Although, we did find that participants that already exhibited higher levels of stigma and had less personal experience with mental illness, also tended to report higher levels of overall desired social distance.

However, we also found a significant interaction effect. Regarding 3a, we found somewhat consistent reports of desired social distance across all three conditions when methamphetamine presence was not stated (See Figure 2.). Although marginal, within the no methamphetamine conditions, control was unexpectedly the highest in regard to desired social distance with schizophrenia and depression having the same mean desired social distance.

This can also be seen, with regard to hypothesis 3b, of which there was a marked decrease in overall desired social distance for depression and schizophrenia in comparison to the control groups in conditions where methamphetamine presence was stated (See Figure 2.). Furthermore, the average reported desired social distance in the schizophrenia conditions

was lower in methamphetamine use conditions than in conditions that did not mention the presence of methamphetamine. This is in stark contrast to what we expected, of which we assumed the opposite would occur, with schizophrenia expected to garner more desired social distance. As such, within the methamphetamine use conditions, it appears that participants average desired social distance scores peaked for the control conditions and decreased for depression. Furthermore, participants were more likely to have lower social distance averages if the victim had schizophrenia and the presence of methamphetamine had been stated than in any other condition.

We can understand this outcome through a lens of 'controllability' and Weiner's (1985) Attribution theory. The victim having no reported mental illness and having methamphetamine found on their person associates them with the role of 'drug addict', alongside all the stigmas that come with it. It is purely negative of which generally, sympathy is seldom expressed due to substance use holding status amongst society as "controllable" (Earnshaw, 2020). Furthermore, in this scenario, with this label, it is far easier to believe the offender's argument that they were "worried for their safety" and defending themselves than in conditions where the victim was not found with methamphetamine. This could be why the control conditions in both methamphetamine conditions scored the highest for social distance comparative to mental illness conditions.

We can directly contrast this with vignettes in which the victim had schizophrenia, of which participants were potentially more sympathetic due to their combined status as a severely mentally ill victim with a potential substance use problem. As such, regardless of shared stigma between schizophrenia and substance use, the presence and potential use of methamphetamine is considered more "uncontrollable" (Ayu et al., 2016; Witte et al., 2019),

thus garnering more sympathy from participants. We also saw this decrease in desired social distance in the depression conditions, although not as extreme. This helps reinforce this understanding of potential sympathy increasing as perceived controllability of the situation decreases (Corrigan et al., 2000; Termeer & Szeto, 2021). Although not considered 'severely mentally ill', depression is generally deemed more controllable than schizophrenia. Thus, there is a chance that participants were more understanding of the victim's circumstances and subsequent potential methamphetamine use, than in conditions where the victim was not reported to struggle with depression. We can see this in Table 2, of which although desired social distance increased for depression in conditions where methamphetamine presence was stated, average scores were still lower than those in control conditions. As such, salience of methamphetamine use is still prevalent in depression conditions, but more sympathy is expressed when compared to conditions where mental illness is not stated.

These findings were similar to alternate studies that have examined perceptions of mental illness and **offence**, of which participants in mock juror scenarios were more sympathetic of offenders with a severe mental illness than those without (Termeer & Szeto, 2021; Mossière & Maeder, 2016). Similarly, this responding was attributed to notions of controllability, with offenders with schizophrenia granted the most forgiveness when passing jury verdicts. This helps reinforce the importance of controllability when attempting to understand our responses, as participants largely seem to be operating via this notion when compared to control groups.

Strengths and Limitations

Strengths

The study highlights the perception of mental illness and victimisation, deviating from previous research that has primarily focused on offence. As such, we can gain further insight into aspects of violent crime victimisation and stigma driven perception that have not otherwise been explored to the extent that violence and mental illness has. As such, we are not only better able to understand perceptions of crime and mental illness, but also the social forces that influence and dominate these perceptions. Although this can provide insight into what stigmas are operating when participants make judgements, research has seldom explored the stigmas that operate in alternate scenarios. As such, not only does the current study work to analyse stigma and perceptions, but it does so in a way that is more akin to real world representations of mental illness in an area of research that is only recently developing.

We chose to draw from multiple news articles touching on themes of violent crime and mental illness. As such, the vignettes are an amalgamation of various stigma portrayed through carefully selected terminology and storytelling in a way that best represents articles accessible to the general public. This allowed us to explore the general public's perception to mental illness and violent crime victimisation in a naturalistic format. From this, we were able to further understand the way in which punitive and discriminatory language has the potential to influence or reinforce stigmas associated with mental illness and substance use, specifically when the subject is not the offender.

Our study utilised covariates to test for any confounding effects on participants reported social distance due to convenience sampling. These covariates were the Stigma Scale, Perceived Dangerousness of Mental Health Patients, Level of Contact, and Substance Use Stigma Scales covariates. Interestingly, despite correlations between desired social distance and our covariates (See Table. 2) our final results were not confounded by these measures. Therefore, our final results were largely unaffected by these covariates, irrespective of any underlying attitudes or stigma. This allows us to be confident that participants perceptions of the vignettes, when responding to the Social Distance Scale, were not influenced after controlling for stigma, perceived dangerousness, or overall experience with mental illness. Thus, we were able to better explore and understand how perceptions of crime change based on the vignettes representation of the subject as a victim, without the fear of results being heavily swayed by personal stigmas brought into the study. By including these additional scales, we were not only able to determine that general mental health stigma was correlated with desired social distance from the mentally ill. We were also able to confirm the importance of reported level of contact and education in determining overall stigma. This allowed the study to explore a wider range of stigmatised influence in a way that allowed us to better control for and understand why participants did/did not report varying levels of social distance.

Limitations

One limitation is the type of crime reported, specifically the type of violence. Although violent assaults are most commonly associated with the severely mentally ill (Parrott & Parrott, 2015), future research could explore the interaction between perceptions of mental illness against varying kinds of crime, namely crime involving firearms. This is partly

why the omission of the "gun/hunting license" item from the Perceived Dangerousness Scale was so unfortunate, as although minor, the item provided partial insight into perceptions regarding mental illness and perceived firearm victimisation. Furthermore, to what extent is the mere inclusion of violence in the vignettes potentially influencing participants perceptions of events?

Our study does not maintain a focus on comorbidity of mental illness, despite this is being a crucial aspect of the lived experience for many with severe mental illness. Although we explore substance use comorbidity, the majority of schizophrenics are also at greater risk of mental illnesses such as depression and PTSD. This is generally not considered in depictions of severe mental illness. As such, further research could work to explain how perceptions may change if the participant was aware of any potential comorbidity. It cannot just be assumed that the participant expected comorbid mental illness if they were in either of the mental health conditions. However, seeing the decrease in reported social stigma across depression and schizophrenia conditions, is it possible that if comorbid mental illness was reported, desired social distance and stigmatised responding would decrease even further?

Another limitation of our study is in that the sample may not reflect the general population. Despite the surveys promotion being accessible to everyone, with the only restriction being that of age, there are multiple aspects to the sample that could be improved in future research. Firstly, the overall sample size of 106 is much smaller than the planned 300 in order to reach a minimum of 50 participants within each sample group. As such, all claims of effect must be in respect to this, as extrapolating the data to all of society as a flawless representation of their behaviour would be problematic. Furthermore, the sample generally consists of younger, European/NZ, female participants, most of them either

graduate or undergraduate students. This becomes especially problematic when considering that young, educated, Caucasian females exhibit less stigmatising attitudes (Termeer & Szeto, 2021). Additionally, although reminded before every item in the study that participant responses were entirely anonymous, it is still likely that participants were operating under social desirability and general response bias.

Furthermore, given the common association of the mentally ill with offenders of crime, it would have been wise to implement an attention check after the vignette to help gauge how effectively participants read the vignette. Although participants are reminded that 'Campbell' was the victim in the vignette before completing the Social Distance Scale, it is possible that other details may had been lost to the reader, had they not been paying attention. Potential checks to make sure participants were aware of details such as who had the mental illness and who was found with methamphetamine would have allowed us to ensure participant responding was not influenced by mistaken understandings of the vignette.

Implications and Future Research

Impact of Specific Crime

One key aspect that needs to be explored within this domain of research is how these perceptions change in different settings and under different circumstances. For instance, what if the crime was non-violent and instead exploitative of the mentally ill, such as theft? Future research could seek to explore how perceptions of mental illness change as the crime changes. If participants are feeling sympathy for the victim when they are violently victimised, do they extend the same sympathy in scenarios where the victim is no longer

violently assaulted but instead exploited illegally? Another non-violent crime scenario could be a drug deal, of which there is illegal activity that both parties are knowingly partaking in, regardless of if the person with mental illness is buying or selling. In doing so, further insight into this sympathy bias could be explored i.e., are people more forgiving of someone caught buying/selling drugs if they have a severe mental illness compared to depression or no reported mental illness? How do perceptions change in this instance when focusing on the dealer in comparison to the buyer? This could provide further insight into notions of controllability as well how the presence of drugs impacts the salience of varying mental health stigma.

Perception of The Offender

Another key aspect to be explored is how people view the offender in this instance, and how perceptions of criminal culpability change when assessing the violent assault of the mentally ill. One explanation for the results of our study is that of increased sympathy alongside decreased controllability of the victim's mental illness, in line with Weiner's (1985) Attribution theory. Therefore, how would that same sympathy impact the way participants perceive the offender's behaviour in comparison to conditions where the victim did not have a mental illness? This allows research to follow more mainstream examples of perceptions of crime, whilst maintaining the delegation of victim to the mentally ill. Furthermore, similar research has explored jury verdicts and perceptions of the offender where the offender has a mental illness (Termeer & Szeto, 2021; Mossière & Maeder, 2016), but research has seldom explored how perceptions of offenders change when the victim has a severe mental illness within courthouse settings. Our findings suggest an increased sympathy and decreased stigma for the victim in cases where they have a reported mental illness,

particularly for severe mental illnesses like schizophrenia. Thus, future research could seek to explore whether juries pass more punitive judgements in cases where the victim is severely mentally ill.

Media Influence

Our study reinforced the notion of there being real potential for media influence to occur both positively and negatively. Our vignettes, although not directly responsible for variations in participant responding, were able to provide insight into how people exhibit sympathy in a way that makes them report less desired social distance. This is despite using the same narratives and ideas as publicly accessibly newspaper articles in the same domain, with the only change being who the victim was. It is important to note that our study is not designed to measure the medias influence on perception, the vignettes are only a means of exploring this perception. Thus, we cannot make causal claims regarding our vignettes and changes in participants desired social distance. We can however see an increase in participant sympathy towards people with severe mental illness. This extension of sympathy has also been seen in studies where the offender had a mental illness (Mossière & Maeder, 2015; Termeer & Szeto, 2021). As such an argument could be made that the public is generally sympathetic of those with mental illness. However, the negative social impact of availability bias in regard to news media's overreporting of the mentally ill as violent contributes to overall desired social distance (Angermeyer & Schulze, 2001). Although positive representation within news media would be incredible, it is the overall narrative of the mentally ill as violent and unpredictable offenders that is ultimately damaging to the way society perpetuates stigma (Corrigan et al., 2013). As the main source of information for many, including the mentally ill (Schulze & Angermeyer, 2003), taking strides in the

direction of positive or even neutral depictions of mental illness has the potential to help remedy both social and self-stigma (Corrigan et al., 2013; Henson et al., 2009). Future research could explore the direct influence of variations in news reporting on stigma throughout society and how positive depictions of mental illness may work to counter common stigma.

Cross Cultural Analysis

Because our study is based in New Zealand our results are subject to prevailing norms and stigmas within a New Zealand population. Although New Zealand is generally regarded as having large cultural variation (Johnston et al., 2010), direct cross cultural analysis of how these perceptions change globally could help provide greater insight into how different cultures manifest and perpetuate different stigmas. Examples such as Jorm & Reavley (2014), found greater stigmatising beliefs in how Americans perceive the dangerousness of mental illness than global averages, being more similar to those seen in developing countries with worse off mental health services. Research in this domain could further explore the impact of socio-economic variables, Thus, wider cross-cultural analysis in this domain could help better understand not only how stigma varies globally, but also the extent to which stigma influences perceptions across different societies. It may also help provide insight into how increasing mental health services can benefit perceptions of mental illness, potentially bolstering demand for wider institutional change alongside the prioritisation and subsequent normalisation of mental health services.

Conclusion

The objective of this study was to examine the variation of participants perceptions regarding violent crime and mental illness, particularly in instances where the victim has a severe mental illness and/or the presence of methamphetamine has been stated. We measured this by recording participants desired social distance in response to newspaper vignettes inspired by real world examples of media depictions of mental illness and crime. We also measured for a range of other covariates that helped bolster our overall understanding of how varying facets of stigma correlate. Our findings, although unexpected, reinforce notions of 'controllability' under Weiner's (1985) Attribution theory. We found that desired social distance remained somewhat consistent in mental health conditions irrespective of methamphetamine presence. However, we had a significant interaction effect of which given the presence of methamphetamine, participants on average expressed a significant decrease in desire for distance from the subject when they were also reported to have schizophrenia in comparison to control groups. As such, participants expressed greater sympathy for those in positions deemed less 'controllable' than those in control conditions, of which the highest average scores for desired social distance were in control conditions that did state the presence of methamphetamine. This has vast implications for the betterment of research within the domain of mental health stigma. By shifting focus away from those with mental illness as attackers, we can seek to better understand and remedy prevailing stigmas that disenfranchise those with severe mental illness. In doing so, we are able to work towards making the lives of those with mental illnesses more accessible, working towards demystifying the stigmas that have disenfranchised and diminished the lives of many for centuries.

References

Allen, S. (2008). Mental health treatment and the criminal justice system. *J. Health & Biomedical L.*, *4*, 153. http://www.antoniocasella.eu/archipsy/Allen_2008.pdf

Angermeyer, M. C., & Matschinger, H. (2004). The stereotype of schizophrenia and its impact on discrimination against people with schizophrenia: results from a representative survey in Germany. *Schizophrenia bulletin*, *30*(4), 1049-1061. https://doi.org/10.1093/oxfordjournals.schbul.a007120

Angermeyer, M. C., & Schulze, B. (2001). Reinforcing stereotypes: How the focus on forensic cases in news reporting may influence public attitudes towards the mentally ill. *International Journal of Law and Psychiatry*, *24*(4-5), 469-486. https://doi.org/10.1016/S0160-2527(01)00079-6

Ayu, A., De Jong, C., Pinxten, W., & Schellekens, A. (2016). Illness perceptions of addiction and substance use patterns among psychology students. https://repository.ubn.ru.nl/bitstream/handle/2066/174125/174125.pdf

Baron, D. P. (2005). Competing for the public through the news media. *Journal of Economics & Management Strategy*, *14*(2), 339-376. https://doi.org/10.1111/j.1530-9134.2005.00044.x

Boysen, G. A., & Vogel, D. L. (2008). The relationship between level of training, implicit bias, and multicultural competency among counselor trainees. *Training and Education in Professional Psychology*, *2*(2), 103. https://psycnet.apa.org/doi/10.1037/1931-3918.2.2.103

Brecht, M.-L., & Herbeck, D. M. (2013). Methamphetamine use and violent behavior: user perceptions and predictors. *Journal of Drug Issues*, *43*(4), 468-482.

Brekke, J. S., Prindle, C., Bae, S. W., & Long, J. D. (2001). Risks for individuals with schizophrenia who are living in the community. *Psychiatric Services*, *52*(10), 1358-1366. https://doi.org/10.1177/0022042613491098

Buchanan, A., Stefanovics, E., & Rosenheck, R. (2023). Victimization in schizophrenia and its relation to violence. *Schizophrenia Research*, *255*, 52-58. https://doi.org/10.1016/j.schres.2023.03.018

Cheetham, A., Picco, L., Barnett, A., Lubman, D. I., & Nielsen, S. (2022). The impact of stigma on people with opioid use disorder, opioid treatment, and policy. *Substance abuse and rehabilitation*, 1-12. https://www.tandfonline.com/doi/citedby/10.2147/SAR.S304566?scroll=top&needAccess=true

Cho, W., Shin, W.-S., An, I., Bang, M., Cho, D.-Y., & Lee, S.-H. (2019). Biological aspects of aggression and violence in schizophrenia. *Clinical psychopharmacology and neuroscience*, *17*(4), 475. https://doi.org/10.9758%2Fcpn.2019.17.4.475

Cohen, G., & Bagwell, M. (2023). The state of mental health training in basic police curricula: A national level examination. *Journal of Public Affairs Education*, 1-23. https://doi.org/10.1080/15236803.2023.2179235

Cohen, S. (2011). *Folk devils and moral panics*. Routledge. https://doi.org/10.4324/9780203828250

Corker, E. A., Beldie, A., Brain, C., Jakovljevic, M., Jarema, M., Karamustafalioglu, O., Marksteiner, J., Mohr, P., Prelipceanu, D., & Vasilache, A. (2015). Experience of stigma and discrimination reported by people experiencing the first episode of schizophrenia and those with a first episode of depression: the FEDORA project. *International Journal of Social Psychiatry*, *61*(5), 438-445. Corker, E. A., Beldie, A., Brain, C., Jakovljevic, M., Jarema, M., Karamustafalioglu, O., Marksteiner, J., Mohr,

P., Prelipceanu, D., & Vasilache, A. (2015). Experience of stigma and discrimination reported by people experiencing the first episode of schizophrenia and those with a first episode of depression: the FEDORA project. *International Journal of Social Psychiatry*, *61*(5), 438-445.

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

Corrigan, P. W., Powell, K. J., & Michaels, P. J. (2013). The effects of news stories on the stigma of mental illness. *The Journal of nervous and mental disease*, *201*(3), 179-182. https://doi.org/10.1097/NMD.0b013e3182848c24

Corrigan, P. W., River, L. P., Lundin, R. K., Wasowski, K. U., Campion, J., Mathisen, J., Goldstein, H., Bergman, M., Gagnon, C., & Kubiak, M. A. (2000). Stigmatizing attributions about mental illness. *Journal of Community Psychology*, *28*(1), 91-102. https://doi.org/10.1002/(SICI)1520-6629(200001)28:1%3C91::AID-JCOP9%3E3.0.CO;2-M

Crisp, A. H., Gelder, M. G., Rix, S., Meltzer, H. I., & Rowlands, O. J. (2000). Stigmatisation of people with mental illnesses. *The British Journal of Psychiatry*, *177*(1), 4-7. https://doi.org/10.1192/bjp.177.1.4

de Mooij, L. D., Kikkert, M., Lommerse, N. M., Peen, J., Meijwaard, S. C., Theunissen, J., Duurkoop, P. W., Goudriaan, A. E., Van, H. L., & Beekman, A. T. (2015). Victimisation in adults with severe mental illness: prevalence and risk factors. *The British Journal of Psychiatry*, *207*(6), 515-522. https://doi.org/10.1192/bjp.bp.113.143370

Diamond, P. M., Wang, E. W., Holzer, C. E., Thomas, C., & Cruser, d. A. (2001). The prevalence of mental illness in prison. *Administration and Policy in Mental Health*

and Mental Health Services Research, *29*, 21-40. https://doi.org/10.1023/a:1013164814732

Durand-Zaleski, I., Scott, J., Rouillon, F., & Leboyer, M. (2012). A first national survey of knowledge, attitudes and behaviours towards schizophrenia, bipolar disorders and autism in France. *BMC psychiatry*, *12*, 1-8. https://doi.org/10.1186/1471-244X-12-128

Earnshaw, V. A. (2020). Stigma and substance use disorders: A clinical, research, and advocacy agenda. *American Psychologist*, *75*(9), 1300. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8168446/pdf/nihms-1702616.pdf

Fazel, S., Gulati, G., Linsell, L., Geddes, J. R., & Grann, M. (2009). Schizophrenia and violence: systematic review and meta-analysis. *PLoS medicine*, *6*(8), e1000120. https://doi.org/10.1371/journal.pmed.1000120

Fellner, J. (2006). A corrections quandary: Mental illness and prison rules. *Harv. CR-CLL Rev.*, *41*, 391. http://www.antoniocasella.eu/archipsy/Fellner_2006.pdf

Gibb, S., Brewer, N., & Bowden, N. (2021). Social impacts and costs of schizophrenia: a national cohort study using New Zealand linked administrative data. *The New Zealand Medical Journal (Online)*, *134*(1537), 66-83. https://pubmed.ncbi.nlm.nih.gov/34239163/

Glasner-Edwards, S., & Mooney, L. J. (2014). Methamphetamine psychosis: epidemiology and management. *CNS drugs*, *28*, 1115-1126. https://doi.org/10.1007%2Fs40263-014-0209-8

Godfredson, J. W., Ogloff, J. R., Thomas, S. D., & Luebbers, S. (2010). Police discretion and encounters with people experiencing mental illness: The significant factors. *Criminal Justice and Behavior*, *37*(12), 1392-1405. https://doi.org/10.1177/0093854810383662

Goffman, E. (1963). Embarrassment and social organization. https://psycnet.apa.org/doi/10.1037/11302-050

Griffiths, K. M., Christensen, H., Jorm, A. F., Evans, K., & Groves, C. (2004). Effect of web-based depression literacy and cognitive–behavioural therapy interventions on stigmatising attitudes to depression: Randomised controlled trial. *The British Journal of Psychiatry*, *185*(4), 342-349. https://doi.org/10.1192/bjp.185.4.342

Grinspoon, P. (2021). MD."Poverty, Homelessness, and Social Stigma Make Addiction More Deadly.". *Harvard Health*, *28*. https://www.health.harvard.edu/blog/poverty-homelessness-and-social-stigma-make-addiction-more-deadly-202109282602

Gustafsson, M., & Borglin, G. (2013). Can a theory-based educational intervention change nurses' knowledge and attitudes concerning cancer pain management? A quasi-experimental design. *BMC health services research*, *13*(1), 1-11. https://doi.org/10.1186/1472-6963-13-328

Harangozo, J., Reneses, B., Brohan, E., Sebes, J., Csukly, G., López-Ibor, J., Sartorius, N., Rose, D., & Thornicroft, G. (2014). Stigma and discrimination against people with schizophrenia related to medical services. *International Journal of Social Psychiatry*, *60*(4), 359-366. https://doi.org/10.1177/0020764013490263

Harris, M. N., Baumann, M. L., Teasdale, B., & Link, B. G. (2022). Estimating the relationship between perceived stigma and victimization of people with mental illness. *Journal of interpersonal violence*, *37*(3-4), NP1226-NP1252. https://doi.org/10.1177/0886260520926326

Henson, C., Chapman, S., McLeod, L., Johnson, N., McGeechan, K., & Hickie, I. (2009). More us than them: positive depictions of mental illness on Australian television news. *Australian & New Zealand Journal of Psychiatry*, *43*(6), 554-560. https://doi.org/10.1080/00048670902873623

Hodgins, S., Lincoln, T., & Mak, T. (2009). Experiences of victimisation and depression are associated with community functioning among men with schizophrenia. *Social psychiatry and psychiatric epidemiology*, *44*, 448-457. https://doi.org/10.1007/s00127-008-0460-8

Högberg, T., Magnusson, A., Lützén, K., & Ewalds-Kvist, B. (2012). Swedish attitudes towards persons with mental illness. *Nordic Journal of Psychiatry*, *66*(2), 86-96. https://psycnet.apa.org/doi/10.3109/08039488.2011.596947

Holmes, E. P., Corrigan, P. W., Williams, P., Canar, J., & Kubiak, M. A. (1999). Changing attitudes about schizophrenia. *Schizophrenia bulletin*, *25*(3), 447-456. https://doi.org/10.1093/oxfordjournals.schbul.a033392

Igoumenou, A., Kallis, C., & Coid, J. (2015). Treatment of psychosis in prisons and violent recidivism. *BJPsych open*, *1*(2), 149-157. https://doi.org/10.1192%2Fbjpo.bp.115.000257

Jablensky, A. (2010). The diagnostic concept of schizophrenia: its history, evolution, and future prospects. *Dialogues in clinical neuroscience*, *12*(3), 271-287. https://doi.org/10.31887%2FDCNS.2010.12.3%2Fajablensky

James, D. J., & Glaze, L. E. (2006). Mental health problems of prison and jail inmates. https://bjs.ojp.gov/content/pub/pdf/mhppji.pdf

Johnston, R., Gendall, P., Trlin, A., & Spoonley, P. (2010). Immigration, multiculturalism and geography: Inter-group contact and attitudes to immigrants and cultural diversity in New Zealand. *Asian and Pacific Migration Journal*, *19*(3), 343-369. https://doi.org/10.1177/011719681001900303

Jones, E. E. (1984). Social stigma: The psychology of marked relationships. *(The Journal of Nervous and Mental Disease)*. https://doi.org/10.1097/00005053-198605000-00017

Jorm, A. F., & Reavley, N. J. (2014). Public belief that mentally ill people are violent: Is the USA exporting stigma to the rest of the world? *Australian & New Zealand Journal of Psychiatry*, *48*(3), 213-215. https://doi.org/10.1177/0004867413509697

Khalifeh, H., Johnson, S., Howard, L. M., Borschmann, R., Osborn, D., Dean, K., Hart, C., Hogg, J., & Moran, P. (2015). Violent and non-violent crime against adults with severe mental illness. *The British Journal of Psychiatry*, *206*(4), 275-282. https://doi.org/10.1192/bjp.bp.114.147843

Knight, M. T., Wykes, T., & Hayward, P. (2003). 'People don't understand': An investigation of stigma in schizophrenia using Interpretative Phenomenological Analysis (IPA). *Journal of Mental Health*, *12*(3), 209-222. http://dx.doi.org/10.1080/0963823031000118203

Krendl, A. C., & Perry, B. L. (2023). Stigma toward substance dependence: Causes, consequences, and potential interventions. *Psychological Science in the Public Interest*, *24*(2), 90-126. https://psycnet.apa.org/doi/10.1177/15291006231198193

Lam, C. S., Tsang, H. W., Corrigan, P. W., Lee, Y.-T., Angell, B., Shi, K., Jin, S., & Larson, J. E. (2010). Chinese Lay Theory and Mental Illness Stigma: Implications for Research and Practices. *Journal of Rehabilitation*, *76*(1). https://research.polyu.edu.hk/en/publications/chinese-lay-theory-and-mental-illness-stigma-implications-for-res

Link, B. G., Cullen, F. T., Frank, J., & Wozniak, J. F. (1987). The social rejection of former mental patients: Understanding why labels matter. *American journal of Sociology*, *92*(6), 1461-1500. https://psycnet.apa.org/doi/10.1086/228672

Link, B. G., & Phelan, J. C. (2001). Conceptualizing stigma. *Annual review of Sociology*, *27*(1), 363-385. https://doi.org/10.1146/annurev.soc.27.1.363

Lorey, K., & Fegert, J. M. (2021). Increasing mental health literacy in law enforcement to improve best practices in policing—introduction of an empirically derived, modular, differentiated, and end-user driven training design. *Frontiers in psychiatry*, *12*, 706587. https://doi.org/10.3389/fpsyt.2021.706587

Louden, J. E., & Skeem, J. L. (2007). Constructing insanity: jurors' prototypes, attitudes, and legal decision-making. *Behavioral Sciences & the Law*, *25*(4), 449-470. https://doi.org/10.1002/bsl.760

Luoma, J. B., O'Hair, A. K., Kohlenberg, B. S., Hayes, S. C., & Fletcher, L. (2010). The development and psychometric properties of a new measure of perceived stigma toward substance users. *Substance use & misuse*, *45*(1-2), 47-57. https://doi.org/10.3109/10826080902864712

Maniglio, R. (2009). Severe mental illness and criminal victimization: a systematic review. *Acta Psychiatrica Scandinavica*, *119*(3), 180-191. https://doi.org/10.1111/j.1600-0447.2008.01300.x

Markowitz, F. E., Angell, B., & Greenberg, J. S. (2011). Stigma, reflected appraisals, and recovery outcomes in mental illness. *Social Psychology Quarterly*, *74*(2), 144-165. https://doi.org/10.1177/0190272511407620

Mossière, A., & Maeder, E. M. (2015). Defendant mental illness and juror decision-making: A comparison of sample types. *International journal of law and psychiatry*, *42*, 58-66. https://doi.org/10.1016/j.ijlp.2015.08.008

Mossière, A., & Maeder, E. M. (2016). Juror decision making in not criminally responsible on account of mental disorder trials: Effects of defendant gender and mental illness type. *International journal of law and psychiatry*, *49*, 47-54. https://doi.org/10.1016/j.ijlp.2016.05.008

Newcombe, D. A., Taufa, S., Tanielu, H., & Nosa, V. (2019). Substance misuse stories among Pacific peoples in New Zealand. *Kōtuitui: New Zealand Journal of Social Sciences Online*, *14*(1), 68-79. https://doi.org/10.1080/1177083x.2018.1528991

Osher, F., & Han, Y. (2002). Jails as housing for persons with serious mental illnesses. *American Jails Magazine*, *16*(1), 36-41.

Pandya, A., Bresee, C., Duckworth, K., Gay, K., & Fitzpatrick, M. (2011). Perceived impact of the disclosure of a schizophrenia diagnosis. *Community mental health journal*, *47*, 613-621. https://doi.org/10.1007/s10597-010-9341-1

Parrott, S., & Parrott, C. T. (2015). Law & disorder: The portrayal of mental illness in US crime dramas. *Journal of Broadcasting & Electronic Media*, *59*(4), 640-657. https://doi.org/10.1080/08838151.2015.1093486

Peterson, J., & Heinz, K. (2016). Understanding offenders with serious mental illness in the criminal justice system. *Mitchell Hamline L. Rev.*, *42*, 537.

Platt, A. M. (1965). The origins and development of the wild beast concept of mental illness and its relation to theories of criminal responsibility. *Issues Criminology*, *1*, 1. https://open.mitchellhamline.edu/mhlr/vol42/iss2/3?utm_source=open.mitchellhamline.edu%2Fmhlr%2Fvol42%2Fiss2%2F3&utm_medium=PDF&utm_campaign=PDFCoverPages

Prins, S. J. (2014). Prevalence of mental illnesses in US state prisons: A systematic review. *Psychiatric Services*, *65*(7), 862-872. https://doi.org/10.1176/appi.ps.201300166

Quintero Johnson, J. M., & Miller, B. (2016). When women “snap”: The use of mental illness to contextualize women's acts of violence in contemporary popular media. *Women's Studies in Communication*, *39*(2), 211-227. https://doi.org/10.1080/07491409.2016.1172530

Rohrer, A. J. (2021). Law enforcement and persons with mental illness: responding responsibly. *Journal of police and criminal psychology*, *36*(2), 342-349. https://doi.org/10.1007/s11896-021-09441-2

Rüsch, N., Angermeyer, M. C., & Corrigan, P. W. (2005). Mental illness stigma: Concepts, consequences, and initiatives to reduce stigma. *European psychiatry*, *20*(8), 529-539. https://doi.org/10.1016/j.eurpsy.2005.04.004

Schulze, B., & Angermeyer, M. C. (2003). Subjective experiences of stigma. A focus group study of schizophrenic patients, their relatives and mental health professionals. *Social science & medicine*, *56*(2), 299-312. https://doi.org/10.1016/s0277-9536(02)00028-x

Seeman, M. V. (2009). Employment discrimination against schizophrenia. *Psychiatric Quarterly*, *80*, 9-16. https://doi.org/10.1007/s11126-008-9089-8

Shahid, A., & Asmat, A. (2023). Stigmatisation and perceived social support as predictor of treatment of substance use disorder (SUD): A systematic review. *JPMA. The Journal of the Pakistan Medical Association*, *73*(4), 848-852. https://doi.org/10.47391/jpma.6478

Shain, R. E., & Phillips, J. (1991). The stigma of mental illness: Labeling and stereotyping in the news. *Risky business: Communicating issues of science, risk, and public policy*, 61-74.

Simmons, L., Jones, T., & Bradley, E. (2017). Reducing mental health stigma: The relationship between knowledge and attitude change. *European Journal of Mental Health*, *1*(12), 25-40. https://doi.org/10.5708/ejmh.12.2017.1.2

Sommers, I., & Baskin, D. (2006). Methamphetamine use and violence. *Journal of Drug Issues*, *36*(1), 77-96. https://doi.org/10.1177/002204260603600104

Sörman, K., Cox, J., Rimsten, C. E., Stanziani, M., Lernestedt, C., Kristiansson, M., & Howner, K. (2020). Perceptions of mental health conditions in criminal cases: A

survey study involving Swedish lay judges. *Criminal Justice and Behavior*, *47*(6), 688-711. https://doi.org/10.1177/0093854820910774

Stafford, M. C., & Scott, R. R. (1986). Stigma, deviance, and social control: Some conceptual issues. In *The dilemma of difference: A multidisciplinary view of stigma* (pp. 77-91). Springer. https://doi.org/10.1007/978-1-4684-7568-5_5

Steadman, H. J., Monahan, J., Duffee, B., & Hartstone, E. (1984). The impact of state mental hospital deinstitutionalization on United States prison populations, 1968-1978. *J. Crim. L. & Criminology*, *75*, 474. https://doi.org/10.2307/1143164

Steadman, H. J., & Morrissette, D. (2016). Police responses to persons with mental illness: Going beyond CIT training. *Psychiatric Services*, *67*(10), 1054-1056. https://doi.org/10.1176/appi.ps.201600348

Steadman, H. J., Osher, F. C., Robbins, P. C., Case, B., & Samuels, S. (2009). Prevalence of serious mental illness among jail inmates. *Psychiatric Services*, *60*(6), 761-765. https://doi.org/10.1176/ps.2009.60.6.761

Sutter, D. (2004). News media incentives, coverage of government, and the growth of government. *The Independent Review*, *8*(4), 549-567. http://www.jstor.org/stable/24562196.

Teplin, L. A. (2000). Keeping the Peace: Police Discretion and Mentally Ill Persons. *National institute of justice journal*, *244*, 8-15. https://doi.org/10.1037/e528652006-002

Termeer, J., & Szeto, A. (2021). Mental Illness Stigma in Criminal Justice: An Examination of Stigma on Juror Decision-Making. *Inquiries Journal*, *13*(01). http://www.inquiriesjournal.com/a?id=1865

Thornicroft, G., Brohan, E., Rose, D., Sartorius, N., & Leese, M. (2009). Global pattern of experienced and anticipated discrimination against people with schizophrenia: a

cross-sectional survey. *The Lancet*, *373*(9661), 408-415. https://doi.org/10.1016/s0140-6736(08)61817-6

Torrey, E. F. (2011). Stigma and violence: isn't it time to connect the dots? *Schizophrenia bulletin*, *37*(5), 892-896. https://doi.org/10.1093/schbul/sbr057

Tyner, E. A., & Fremouw, W. J. (2008). The relation of methamphetamine use and violence: A critical review. *Aggression and violent behavior*, *13*(4), 285-297. https://doi.org/10.1016/j.avb.2008.04.005

Van Boekel, L. C., Brouwers, E. P., van Weeghel, J., & Garretsen, H. F. (2015). Comparing stigmatising attitudes towards people with substance use disorders between the general public, GPs, mental health and addiction specialists and clients. *International Journal of Social Psychiatry*, *61*(6), 539-549. https://doi.org/10.1177/0020764014562051

Vogel, M., Stephens, K. D., & Siebels, D. (2014). Mental illness and the criminal justice system. *Sociology Compass*, *8*(6), 627-638. https://doi.org/10.1111/soc4.12174

Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological review*, *92*(4), 548. https://doi.org/10.1037//0033-295x.92.4.548

Whitley, R., & Berry, S. (2013). Trends in newspaper coverage of mental illness in Canada: 2005–2010. *The Canadian Journal of Psychiatry*, *58*(2), 107-112. https://doi.org/10.1177/070674371305800208

Word Health Organisation (2023). Depresive disorder (depression). https://www.who.int/news-room/fact-sheets/detail/depression

Witte, T. H., Wright, A., & Stinson, E. A. (2019). Factors influencing stigma toward individuals who have substance use disorders. *Substance use & misuse*, *54*(7), 1115-1124. https://doi.org/10.1080/10826084.2018.1560469

Wolpert, L. (2001). Stigma of depression–a personal view. *British Medical Bulletin*, *57*(1), 221-224. https://doi.org/10.1093/bmb/57.1.221

Appendix A

Study Vignettes

This appendix consists of the individual vignettes as presented to participants in each condition. Slight changes have been made to each vignette based on their respective condition however, they all follow the same general narrative for test consistency. These vignette conditions are broken into mental illness type and whether there is a reported presence of methamphetamine.

Home / New Zealand / Crime

Schizophrenic man hospitalised after Auckland CBD assault.

By: Isaac Block and George Davidson
25 Sep, 2023 10:16 AM Quick Read

Police were called to the scene. Photo / Blair Gregson.

Will Johnson, a 22-year-old man from Auckland, was arrested after violently beating Ben Campbell, a man with a history of living with schizophrenia.

Witnesses to the assault reported that Campbell (aged 53) approached Johnson at around 1am, and asked Johnson for a lighter. They were surprised to see Johnson lash out, who repeatedly punched Campbell in the head. Campbell then dropped to the ground attempting to shield himself, but Johnson then began kicking him in the stomach and chest.

Nearby police were able to intervene, but not before Campbell was left seriously injured and unconscious.

Campbell was rushed to Auckland Hospital and is recovering with a broken nose, cheek, and several fractured ribs. As Campbell was brought into the hospital's Accident and Emergency clinic, police found a small quantity of methamphetamine on Campbell's person.

Following his arrest Johnson alleged that Campbell was talking to himself and acting strange. 'I was worried for my safety', Johnson said during his arrest, noting Campbell's unusual and erratic behaviour, and claims he was acting in self-defense.

A close family member of Mr Campbell's told the Herald that, because of his ongoing struggles with mental health, Campbell was having financial difficulties and that this was exacerbating Mr Campbell's mental health. Furthermore, he believed that it was highly likely Mr Campbell had stopped taking the medication that had been prescribed for his schizophrenia.

Mr Johnson is to appear in the Auckland District Court today on a charge of wounding with intent to cause grievous bodily harm.

Figure 1:

Schizophrenia + Methamphetamine Vignette

Home / New Zealand / Crime

Schizophrenic man hospitalised after Auckland CBD assault.

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A close family member of Mr Campbell's told the Herald that, because of his ongoing struggles with mental health, Campbell was having financial difficulties and that this was exacerbating Mr Campbell's mental health. Furthermore, he believed that it was highly likely Mr Campbell had stopped taking the medication that had been prescribed for his schizophrenia.

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Figure 3:

Schizophrenia + No Methamphetamine Vignette

Home / New Zealand / Crime

Man hospitalised after Auckland CBD assault.

By: Isaac Block and George Davidson
25 Sep, 2023 10:16 AM Quick Read

Police were called to the scene. Photo / Blair Gregson.

Will Johnson, a 22-year-old man from Auckland, was arrested after violently beating Ben Campbell.

Witnesses to the assault reported that Campbell (aged 53) approached Johnson at around 1am, and asked Johnson for a lighter. They were surprised to see Johnson lash out, who repeatedly punched Campbell in the head. Campbell then dropped to the ground attempting to shield himself, but Johnson then began kicking him in the stomach and chest.

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Following his arrest Johnson alleged that Campbell was talking to himself and acting strange. 'I was worried for my safety', Johnson said during his arrest, noting Campbell's unusual and erratic behaviour, and claims he was acting in self-defense.

A close family member of Mr Campbell's told the Herald that, because of his ongoing struggles with mental health, Campbell was having financial difficulties and that this was exacerbating Mr Campbell's mental health. Furthermore, he believed that it was highly likely Mr Campbell had stopped taking the medication that had been prescribed for his depression.

Mr Johnson is to appear in the Auckland District Court today on a charge of wounding with intent to cause grievous bodily harm.

Figure 4:

Depression + Methamphetamine Vignette

Home / New Zealand / Crime

Man hospitalised after Auckland CBD assault.

By: Isaac Block and George Davidson
25 Sep, 2023 10:16 AM Quick Read

Police were called to the scene. Photo / Blair Gregson.

Will Johnson, a 22-year-old man from Auckland, was arrested after violently beating Ben Campbell.

Witnesses to the assault reported that Campbell (aged 53) approached Johnson at around 1am, and asked Johnson for a lighter. They were surprised to see Johnson lash out, who repeatedly punched Campbell in the head. Campbell then dropped to the ground attempting to shield himself, but Johnson then began kicking him in the stomach and chest.

Nearby police were able to intervene, but not before Campbell was left seriously injured and unconscious.

Campbell was rushed to Auckland Hospital and is recovering with a broken nose, cheek, and several fractured ribs.

Following his arrest Johnson alleged that Campbell was talking to himself and acting strange. 'I was worried for my safety', Johnson said during his arrest, noting Campbell's unusual and erratic behaviour, and claims he was acting in self-defense.

A close family member of Mr Campbell's told the Herald that, because of his ongoing struggles with mental health, Campbell was having financial difficulties and that this was exacerbating Mr Campbell's mental health. Furthermore, he believed that it was highly likely Mr Campbell had stopped taking the medication that had been prescribed for his depression.

Mr Johnson is to appear in the Auckland District Court today on a charge of wounding with intent to cause grievous bodily harm

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Figure 5:

Depression + No Methamphetamine Vignette

Home / New Zealand / Crime

Man hospitalised after Auckland CBD assault.

By: Isaac Block and George Davidson
25 Sep, 2023 10:16 AM Quick Read

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Following his arrest Johnson alleged that Campbell was talking to himself and acting strange. 'I was worried for my safety', Johnson said during his arrest, noting Campbell's unusual and erratic behaviour, and claims he was acting in self-defense.

A close family member of Mr Campbell's told the Herald that Campbell was having financial difficulties and that this was exacerbating Mr Campbell's behaviour.

Mr Johnson is to appear in the Auckland District Court today on a charge of wounding with intent to cause grievous bodily harm.

Figure 6:

Control + Methamphetamine Vignette

Home / New Zealand / Crime

Man hospitalised after Auckland CBD assault.

By: Isaac Block and George Davidson
25 Sep, 2023 10:16 AM Quick Read

Police were called to the scene. Photo / Blair Gregson.

Will Johnson, a 22-year-old man from Auckland, was arrested after violently beating Ben Campbell.

Witnesses to the assault reported that Campbell (aged 53) approached Johnson at around 1am, and asked Johnson for a lighter. They were surprised to see Johnson lash out, who repeatedly punched Campbell in the head. Campbell then dropped to the ground attempting to shield himself, but Johnson then began kicking him in the stomach and chest.

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A close family member of Mr Campbell's told the Herald that Campbell was having financial difficulties and that this was exacerbating Mr Campbell's behaviour.

Mr Johnson is to appear in the Auckland District Court today on a charge of wounding with intent to cause grievous bodily harm.

Figure 7:

Control + No Methamphetamine Vignette

Appendix B

This appendix shows the compiled ANOVA results from mental illness and meth use conditions against our covariate measures. These measures were the Stigma Scale (Griffiths et al., 2004), Perceived Dangerousness of Mental Health Patients Scale (Link et al., 1987), Perceived Stigma of Substance Abuse Stigma Scale (Luoma et al., 2010), and Level of Contact Scale (Holmes et al., 1999).

Table 4:

ANOVA Results For Mental Illness and Methamphetamine Conditions Against Covariate Scales

	F	p	ηp2
Stigma Scale			
Mental Illness Condition	0.23	.792	.005
Meth Use Condition	0.01	.911	<.001
Mental Health by Meth Use Interaction	1.14	.325	.002
Perceived Dangerousness			
Mental Illness Condition	0.04	.958	.001
Meth Use Condition	0.31	.580	.003
Mental Health by Meth Use Interaction	0.45	.638	.009
Level of Contact			
Mental Illness Condition	0.18	.836	.004
Meth Use Condition	0.16	.690	.002
Mental Illness by Meth Use Interaction	0.02	.979	<.001
Substance Use Stigma			
Mental Illness Condition	0.64	.548	.012
Meth Use Condition	1.92	.169	.019
Mental Health by Meth Use Interaction	0.07	.935	.001