Do the Stigma of Mental Illness and the Stigma of Non-Suicidal Self-Injury Intersect?

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Abstract

Background: It is well-known that individuals with a mental illness (MI) are highly stigmatized. Oftentimes, the public views these individuals as blameworthy, and this often leads to discrimination, segregation, and avoidance of those with a MI. Due to high rates of stigmatization, individuals with MI often do not seek help for their issues. Stigmatization can also occur within the scope of non-suicidal self-injury (NSSI), which refers to the deliberate damage of one's tissue, without suicidal intent (e.g., cutting one's skin). Often, MI and NSSI co-occur, however currently no research exists as to how the stigma of these two entities intersects.
Purpose: To investigate whether the stigmatization of MI and NSSI intersect. In other words, is a person with a MI who engages in NSSI more stigmatized than one who does not self-harm? It was hypothesized that a person who has a MI and self-harms will be more stigmatized than an individual who has a MI, but does not engage in NSSI. Secondarily, is also hypothesized that stigma will manifest in different ways, depending on the disorder described. Based on the previous literature, it is likely that borderline personality disorder (BPD) will be more stigmatized than both post-traumatic stress disorder (PTSD) and depression (DEP), and that PTSD will be more stigmatized than DEP.
Method: Participants ($N = 230$) completed a demographic questionnaire, and two level of contact reports (asking participants about their degree of closeness to MI and NSSI). Participants randomly received one vignette describing someone who is battling one of three MIs (BPD, PTSD, or DEP), and is either currently engaging in NSSI, or is not. Following, participants' perceptions of the individuals depicted in the vignette were assessed using validated stigma measures. To test the hypotheses, multiple 3 (disorder) x 2 (NSSI presence) analyses of variances (ANOVAs) were conducted.
Results: Our primary hypothesis was not supported: those in the MI/NSSI condition did not endorse greater stigma to the individual depicted in the vignette. In fact, participants were *less* angry toward the individual when NSSI was present, than when NSSI was absent, across all disorders. Our second hypothesis was partially supported, where some types of stigma (dangerousness, anger, fear, and segregation) differed among disorders, in the expected ways.
Discussion: The current results suggest that MI and NSSI are not doubly stigmatized, and that the presence of NSSI may decrease feelings of anger towards the individual with a mental illness. Moreover, this data contributes to the literature base supporting that different MIs are stigmatized in different ways. In the current study, these differences may be due to differences in disorder-specific mental health literacy. Future research is needed to replicate the findings of this study, and to confirm hypotheses regarding stigma and mental health literacy.

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Do the Stigma of Mental Illness and the Stigma of Non-Suicidal Self-Injury Intersect?

What is Mental Illness?

About a third of all Canadians (~9.1 million individuals) will experience a mental illness (MI) in their lifetime (Government of Canada, 2012). Most often, individuals with MIs will experience unique debilitations and distress in interpersonal, occupational, and additional domains of life, making daily functioning very difficult (American Psychiatric Association, 2013). Usually, these debilitations will be paralleled with a unique set of functional impairments within cognitive, affective, behavioural, and developmental domains (APA, 2013). Along with these functional impairments, diagnostic criteria for some disorders include engagement in non-suicidal self-injury (NSSI; APA, 2013). NSSI can be defined as the deliberate damage of one's tissue, without the absence of suicidal intent, such as cutting or burning one's skin (Nock & Favazza, 2009). NSSI can be a symptom of MI, but NSSI engagement also does independently exist outside the context of a MI diagnosis. For example, in the *DSM-5,* a disorder for future study is the non-suicidal self-injury disorder (Zetterqvist, 2015). Nevertheless, some extant disorders are still at a greater risk of NSSI engagement (APA, 2013; Ford & Gómez, 2015; Singhal et al., 2014); the three that will be considered in this current study are borderline personality disorder (BPD), posttraumatic stress disorder (PTSD), and major depressive disorder (MDD; "depression").

BPD is a disorder marked by instability in interpersonal and intrapersonal relationships and has a general population median prevalence of 1.6% (although may be as high as 20% in certain populations, like psychiatric in-patients; APA, 2013). For one to meet diagnostic criteria, an individual must meet at least 5 out of 9 of the following criteria: persistent efforts to avoid real or imagined abandonment, a pattern of unstable interpersonal relationships, identity disturbance (i.e., extremely unstable self-image/sense of self), self-damaging impulsivity, recurrent suicidal behaviour (including NSSI), mood instability, chronic feelings of emptiness, inappropriate or intense anger, and/or paranoid ideation or severe dissociation. Recurrent job loss, interrupted education, and relationship separation are common

(APA, 2013). The first evidence-based line of treatment is dialectical behavioural therapy (DBT), which has aims to help clients change negative thinking patterns and abolish maladaptive behaviours and coping strategies (Linehan, 1987); this treatment, if completed, is quite effective (Kroger et al., 2013).

PTSD is a disorder that stems from an exposure to one or more traumatic events (e.g., war, sexual assault, car accident; APA, 2013). The prevalence is about 3.5% for American adults, but is projected to be lower (~0.5% - 1%) in other European, Asian, African, and Latin American countries (APA, 2013). The clinical presentation of PTSD varies significantly, with some individuals presenting with dominant symptoms of fear-based re-experiencing (e.g., unprovoked panic attacks). Others may present with dominant symptoms of anhedonia, while a final group may present with equal combinations of these symptoms. For individuals older than 6 years, one of the following intrusive symptoms, associated with the traumatic event, must be present: recurrent and distressing memories, recurrent and distressing dreams, dissociative reactions, intense psychological distress, and/or marked physiological cues to trauma-related stimuli. Persistent avoidance of stimuli associated with the traumatic event must also be present. In addition, negative cognitions and mood associated with the traumatic event must be present, manifested in two or more of the following ways: an inability to remember important features of the traumatic event, persistent and exaggerated negative beliefs, persistent and distorted cognitions which lead the individual to self-blame in regard to the event, dysphoria, diminished interest, feelings of detachment from others, and/or an inability experience positive emotion. Finally, alterations in arousal or reactivity (e.g., irritable behaviour, self-destructive behaviour, hypervigilance, exaggerated startle response, concentration problems, and/or sleep disturbances) must be present. All of the aforementioned criteria must be present for at least 1 month, and must be causing clinically significant impairments in daily functioning (APA, 2013). Various treatments exist for PTSD, and choice of treatment is largely dependent on symptom presentation, degree of PTSD severity, and additional comorbidities (Reisman, 2016). Some treatments that have shown promising effectiveness in treating PTSD are cognitive

processing therapy (CPT) and prolonged exposure therapy (Reisman, 2016). CPT showed a large to very large effect in treating PTSD, when compared to waitlist controls (Lenz et al., 2014).

MDD is a common psychological disorder, which has a one-year prevalence of about 7% (APA, 2013). MDD is generally marked by a depressive mood most of the day, nearly every day, or a loss of interest/pleasure in most daily activities (APA, 2013). To meet criteria for MDD, one of the previous two symptoms must be met, along with 4 or more of the following: significant weight loss/gain or a marked change in appetite, insomnia or hypersomnia, psychomotor agitation or retardation, fatigue or loss of energy, feelings of worthlessness or excessive guilt, diminished concentration/thinking or increased indecisiveness, and/or recurrent thoughts about death, or suicidal ideation. These symptoms must all co-occur within the same two-week period (APA, 2013). Many individuals recover without treatment (APA, 2013), however, first-line evidence-based treatments include anti-depressants (e.g., selective-serotonin uptake inhibitors), and therapies (e.g., cognitive behavioural therapy (CBT); Cujipers et al., 2016; Weilburg, 2004).

Within all of these disorders, a criterion regarding suicidal ideation exists (APA, 2013), which may often co-occur with NSSI/self-harm. It is important to note that there is a lack of consensus within the public, and the resultant literature, about what constitutes as self-harm. For example, some believe that eating disorders and intentional body modification are types of self-harm (Newton & Bale, 2012). A qualitative analysis of public perceptions on this topic revealed that the public views eating disorders as types of self-harm, while body modification is not (Newton & Bale, 2012). Nevertheless, for the purposes of the present study, NSSI will be defined using Nock and Favazza (2009)'s definition described above.

Stigma: What is it?

Although it is clear from the previous section that individuals with MIs have significant life distress caused by the MI itself, these individuals also often experience secondary unfavourable

experiences, such as stigmatization (Corrigan et al., 2004a). The concept of stigma dates to the Greeks, who would mark or burn individuals who had adversely affected society (e.g., criminals); these marks helped others recognize individuals who should be avoided (Goffman, 1963). In the present day, stigma is seen as a societally constructed and universal concept that is reflective of our personal, societal, and cultural beliefs (Becker & Arnold, 1986; Coleman, 2006). Innately, humans tend to distinguish among individuals and groups based on perceived differences (Smith, 2002). As such, stigma can occur in any context where an individual or group feels that another is displaying some quality of "otherness" (Major & O'Brien, 2005), whether this be a matter of race, ethnicity, age, disability, sexuality, or other construct (Link & Phelan, 2001). Stigma will vary greatly depending on the environment and the cultural context: what is stigmatized in one event/context may not be stigmatized in another. This means that not all objectively "undesirable" attributes will be stigmatized; the process of stigma will only occur when the trait that one holds is perceived as undesirable by the stigmatizer(s) (Goffman, 1963).

Most scholars attribute the initial definition of stigma to Erving Goffman. Since the publication of his 1963 book, *Stigma: Notes on the Management of a Spoiled Identity,* the concept of stigma has attracted the attention from scholars of various disciplines (Major & O'Brien, 2005). Goffman (1963) defined stigma as the process of reducing an individual from "whole and usual" to "discounted and tainted", leading to an overall process of discreditation. Goffman described three distinct types of stigma: i) abominations of the body (e.g., a physical deformity), ii) blemishes of individual character (e.g., a MI), and iii) tribal stigma (e.g., race). Although these three groups of attributes are disparate, Goffman and other researchers agree that stigmatization can occur once an individual or group has/have *any* visible or invisible attribute that mark them as different (Major & O'Brien, 2005).

Theories of Stigma

There is no overarching theory of stigma, since it is a multidisciplinary concept (Bos et al., 2013; Link & Phelan, 2001; Smith, 2002). The aforementioned definitions are mostly rooted in a

sociological/social psychology perspective; however, an evolutionary lens has also been applied to this topic. Evolutionary psychologists suggest that stigma is adaptive and is used to warn others about the potential risks of associating, or mating and procreating with an individual, based on the ideas of natural selection (Kurzban & Leary, 2001). Specifically, such theories propose that humans are naturally programmed with negative cognitions about others who display specific maladaptive traits. From this perspective, stigma can be seen as useful in helping an individual or group avoid those that may impact their overall biological fitness (Kurzban & Leary, 2001). As such, stigmatization that is based on personal opinions (i.e., no evolutionary reason for stigmatization) would not be classified as stigmatization. Although this theory of stigmatization is different than one proposed by sociologists and social psychologists, similarities still exist. For example, there are still three categories of attributes that are theorized as being impactful to one's fitness; these categories are starkly similar to Goffman's tri-faceted conceptualization (i.e., bodily abominations, blemishes of individual character, and tribal stigma). Specifically, it is theorized that one may be evolutionary inclined to stigmatize another if they display indications that they possess i) communicable diseases (e.g., HIV/AIDS), ii) a marred character or personality (e.g., a convict), or iii) membership of a vulnerable out-group (Kurzban & Leary, 2001). Overall, the evolutionary theory of stigma suggests that we are inherently programmed to avoid those who may possess these traits, as they can affect our own fitness (i.e., associating with them may decrease our survival fitness), or the fitness of any possible offspring, thus leading to stigmatization and avoidance of these individuals.

From a sociological perspective, labelling theory is utilized in explaining stigmatization. Labelling theory posits that once an individual is branded with a negative label (e.g., a criminal), others in society will begin to treat them by means of their label (Becker, 1986). For example, an individual who was in jail for a white-collar crime may still be seen as a dangerous, just because of the label that is now associated with their identity. The focus of stigmatization can vary from overt (e.g., colour of one's

skin) to covert (e.g., a hidden MI; Bos et al., 2013). This variance may make the applicability of labelling theory seemingly limited, as not all traits that are stigmatized are easily identified, and therefore labelled. However, as defined before, for stigmatization to occur, a perception of *difference* must be present (Goffman, 1963). As such, whether an individual is explicitly labelled (e.g., "a criminal"), or implicitly marked (e.g., seen exiting a jail), labels are still able to develop (Corrigan, 2000). Essentially, this sociological model suggests that stigma is a by-product of the label, and the more permanent and negative the label, the more likely stigma endorsement is to occur for that individual or group (Pescosolido et al., 2008).

Although evolutionary and sociological perspectives are important, the most relevant theory related to this current work stems from social psychology. One main theory used to explain why stigmatization occurs is attribution theory (Weiner, 1980). Broadly, attribution theory is rooted in social cognitive psychology, and posits that humans have a tendency to assign attributions to events, individuals (including themselves), entities, etc., in order to help make sense of their surroundings (Weiner, 1980). Assigning attributions will help humans understand their thoughts, while also influencing their affect and behaviour. This theory was originally used to explain motivation and emotion within the context of achievement, focusing on concepts of *stability* and *controllability* (Weiner, 1986).

Attribution theory has since been used to explain various phenomena, including stigma. For example, Weiner and colleagues (1988) tested the perceived controllability and stability of ten stigmatized traits, from two of three of Goffman's stigma categories – physical handicaps, and mental-behavioural problems. Overall, the researchers concluded that attributions of stigma parallel attributions in an achievement-related context: stability and controllability influenced the thoughts, affect, and behaviours of individuals. Specifically, traits that were perceived as uncontrollable and unstable were much less stigmatized and were accompanied with feelings of pity and a desire to help. Meanwhile, traits

perceived as controllable and stable were met with feelings of anger and willingness to withhold help (i.e., a greater endorsement of stigma). The researchers also found a disparity between physical and mental attributes: physically based stigmas were much less likely to be stigmatized than mentally or behaviourally based stigmas, due to the difference in perceived controllability (Weiner et al., 1988). Overall, attribution theory suggests that individuals generally follow a cognition - emotion – behaviour pathway (Corrigan, 2000), wherein one's attributions of a person or event will cause changes in affect and behaviour, leading to stigmatization (Hegarty & Golden, 2008).

It is important to note that thus far only one type of stigma has been discussed: public stigma, which can be defined as stigmatization of a group or an individual by others. In addition to public stigma, three additional broad categories exist: self-stigma (i.e., stigmatization of oneself), stigma by association (i.e., feelings of stigmatization from associating with a stigmatized individual/group), and structural stigma (i.e., perpetuation of stigma into institutional settings; Bos et al., 2013). This current research will focus solely on public stigma.

Attribution Theory of Public Stigma

From the attribution theorist's perspective, we see three general events that occur through stigmatization, which follow the cognition – affect – behaviour pathway described previously (Corrigan et al., 2000; Weiner et al., 1980). For stigmatization to occur, one must signal to others that they are displaying some characteristic that may be devalued; this process may occur through means of labels, appearance, or skills deficit (Corrigan, 2000). Once signals have been disseminated, a distinction process is likely to occur, wherein the stigmatized individual or group is considered an "out-group", and a stark "us versus them" mentality will ensue, leading to undesirable consequences (Smith, 2002). Through the attributions developed, stereotyping and discrimination are likely to occur, with prejudice mediating this relationship (Corrigan, 2000). Stereotyping can be seen as the cognitive schemas and generalizations individuals have about the stigmatized trait and the individual/group being stigmatized, while

discrimination is defined as the process of *acting* on one's stereotypical beliefs (Fox et al., 2018). These actions of discrimination can be done in a covert or overt manner (Bos et al., 2013). Generally, discriminatory behaviours will entail a differential treatment toward the stigmatized individual/group, leading to overall disadvantages (Fox et al., 2018). This differential treatment can occur at the personal or institutional level (Frost, 2011). Finally, the affective response, prejudice, refers to the emotions/feelings one has to a specific group or individual (Fox et al., 2018), and generally occurs if the individual believes the stereotype to be true (Frost, 2011).

Labelling Theory of Public Stigma

Other social scientists, such as Link and Phelan (2001), describe stigmatization in a broader context. In addition to stereotyping and discrimination, they believe that labelling, separation, and status loss, are important additional stigmatization mechanisms. As was previously described, labelling occurs when individuals distinguish and label one's differences (Becker, 1986). According to Link and Phelan (2001), stereotypes develop from these labels, and this leads to separation and the "us versus them" mentality. Finally, the stereotyping and separation lead to status loss and discrimination. To unify the different models of stigma, we can continue with the example of the white-collared criminal. Stigmatization will occur once a label is placed on the individual (i.e., "criminal"), and the stigmatizer recognizes that a stereotype about criminals exists (e.g., "*all* criminals are bad, and should not be welcomed into society"). If this stereotype is internalized, this would suggest that this individual is separating themselves from the criminal and would now be considered prejudiced against criminals. Now, the individual may hold affective reactions to this white-collar criminal (e.g., "he is a criminal, and he terrifies me"). Finally, once the individual acts on their prejudice, they are now discriminating against this individual (e.g., not employing them, not allowing them to rent out their property), possibly leading to status loss as well.

Moreover, other social psychologists believe that stigma is also a function of power (Bos et al., 2013; Phelan et al., 2008). Specifically, by separating oneself or one's group from others on some quality, a power differential will occur. Those with more power generally stigmatize others who possess less power, in order to exploit and dominate these individuals. Along with power exploitation, stigma can serve as a tool to keep those of an out-group away from them, while consequently making those in the in-group conform to their beliefs (Bos et al., 2013). Both the attribution theory and labelling theory posit that stigma exists on a continuum: not all traits will be stigmatized in the same way, or to the same degree (Pescodilo & Martin, 2015). This was exhibited in Weiner and colleagues' (1988) seminal study described previously.

Stigmatization of MI

Individuals with MIs are particularly vulnerable to experience stigmatization. As evidenced from the attribution theory, the degree of stigmatization of an individual with an illness is likely contingent on the perceived controllability and stability of the illness (Corrigan et al., 2000; Weiner et al., 1998). Weiner et al. (1998) uncovered that MIs seem to be perceived as more controllable than physical illnesses, thus making them more subjected to the effects of stigmatization. To confirm this claim, a study administered vignettes to 150 participants which described four psychiatric conditions (cocaine addiction, depression, psychosis, and an intellectual disability) and two health conditions (cancer and AIDS). Participants were instructed to assess the perceived controllability and stability of these six conditions based on six questions. Indeed, results revealed that the mental health-related conditions were viewed more negatively (i.e., generally attributed as being more controllable and stable) than the health-related conditions. Particularly, cocaine addiction was viewed as being the most controllable illness, and an intellectual disability was viewed as being the most stable (Corrigan et al., 2000). Overall, this study supports the notion that mental-behavioural disorders are viewed as more controllable than physical

disorders (Corrigan, 2000). The public also views MIs as more stable, when defining "stability" as more unlikely to benefit from treatment or to naturally recover (Corrigan, 2000).

Along with the attributional stereotypes that surround MI (i.e., perceived controllability and stability of MIs), there are various other stereotypes that the public endorse about those with MI (Scheff, 1966). The most common stereotypes about individuals with MIs are that they are weak (Fox et al., 2018), incompetent (Sheehan et al., 2016), hard to talk to (Crisp et al., 2000), dangerous, responsible for their illness, and are thus blameworthy (Corrigan et al., 2003). Oftentimes, the public is unaware that an individual has a MI (i.e., it is often a concealable illness); instead, their illness is more likely to be inferred by unknown others through social cues. The degree of stereotyping may vary depending on the specific social cues displayed. For example, when an individual displays positive symptoms (e.g., speaking incoherently and loudly), they are more likely to be perceived as dangerous, threatening, and worthy of avoidance, compared to individuals with negative symptoms (e.g., sitting and staring quietly; Schumacher et al., 2003). Females, in particular, are also more likely to base negative judgements on individuals who display an unkempt appearance (Schumacher et al., 2003).

Current literature suggests that there are three main affective responses towards individuals with MI: anger, fear, and pity (Corrigan et al., 2003). There is evidence that proposes that endorsing different stereotypes about MI may elicit different emotional reactions. For example, Angermeyer and Matschinger (2003) found that when individuals endorsed the stereotype of dangerousness of an individual with schizophrenia, emotional reactions of fear and anger were prevalent, while pity for the individual was scarce. Meanwhile, if the individual was stereotyped as needing help, affective reactions of pity were more likely to arise (Angermeyer & Matschinger, 2003).

If the aforementioned stereotypes and prejudices are endorsed, then discrimination of individuals with MIs can occur. These behaviours can be overt, such as partaking in hostile acts against others through means of violence or aggression (Bos et al., 2013). However, due to our innate tendency to

appease others, these discriminatory behaviours will most likely be covert (Corrigan et al., 2003). This covert discrimination can manifest in forms of coercion, segregation, avoidance, or withholding of help. There is some evidence to suggest that the type of discrimination that occurs will depend on the stereotype/prejudice that is endorsed. For example, those endorsing attributions of dangerousness and personal responsibility may be inclined to coerce individuals with a MI to receive treatment (e.g., by placing them in an institution against their will; Johnson-Kwochka et al., 2021); those who agree with this coercion may subsequently believe that doing so is morally acceptable (Corrigan et al., 2003). Feelings of anger and pity that accompany the dangerousness stereotype may also lead to behavioural reactions of punishment and avoidance of those with MIs (Corrigan, 2000). Meanwhile, affective reactions of pity often elicit desire to engage in more prosocial behaviours, such as helping the individual with a MI (Corrigan, 2000), but can also evoke one's desire to maintain distance from the individual with MI (Angermeyer & Matschinger, 2003). Additional factors that predict the degree of desire to social distance are illness severity, assumptions about dangerousness, affective expression disturbances (by the mentally ill individual), and having a MI label (Baumann, 2007).

Discriminatory behaviours in the form of microaggressions towards those with MIs are also common. Peters and colleagues (2017) conducted a thematic analysis of the discriminatory experiences of those with MIs. There were four themes identified, describing different types of microaggressions: i) conveying stereotypes against individuals with MIs, ii) invalidating the experience of having a MI, iii) defining an individual based on their disorder, and iv) misusing terminology. Consistent with the first theme, individuals with MIs reported that other individuals/groups often attribute commonly held stereotypes of MIs to them. Common stereotypes endorsed were assumptions of general inferiority (e.g., questioning their intelligence), incapability, weakness, attention-seeking, coldness, unpredictability, beliefs that the individuals are bringing the MI upon themselves (i.e., perceived controllability), and using the MI as an excuse. The second theme suggested that others also often invalidate the experiences

of those with a MI through means of doubting the existence and/or severity of the disorder, while also failing to acknowledge the presence of one's MI. On the other side of the spectrum, a majority of participants also reported experiences of being defined by their disorder, consistent with the third theme identified. For example, an individual with bipolar disorder cited that other people attribute his every like, goal, and movement to his disorder, thus invalidating himself as a person that exists apart from the disorder. Within the final theme, participants with MIs stated a general aversion to others' misuse of mental health terminology (e.g., "I have such bad OCD, I'm such a clean freak!"), suggesting low mental health literacy. Overall, the persons living with MIs described various insults, invalidations, and micro-assaults within each theme, and stated that these microaggressions were mostly perpetrated by those who were deemed to be "close" to the individual with a MI (i.e., family, friends, and professionals; Peters et al., 2017). Gonzales et al. (2015) uncovered very similar findings, with five thematic groups of microaggressions: invalidation, assuming inferiority, fearing MI, shaming MI, and treating individuals with MI as "second-class citizens". Unsurprisingly, family, close friends, and authority figures were also found to be the main perpetrators of the microaggressions (Gonzales et al., 2015).

Experiencing a diverse range of stereotyping, microaggressions, and discrimination has a significantly negative impact on individuals living with MIs. Socially, living with a MI may also take away opportunities to date, marry, and/or have children (Corrigan, 2000). Boysen (2017) found that those who have a MI are perceived as more romantically undesirable than those without a MI. Individuals with MIs also may not have equal access to opportunities – such as being unable to attain competitive employment or good housing (Corrigan, 2000). For those who are able to attain employment, there are additional unique experiences that one may face *within* the workplace. Co-workers often make high demands of those with MIs, while negating their requests for accommodations, and stating that they must prove their competency, just like everyone else (Russinova et al., 2011). Co-workers and supervisors may also ostracize, exclude, and intentionally stray away from collaborating

with persons with MI, leading to unfair and unpleasant work conditions. Additionally, co-workers may behave in patronizing manners, for example, by using insensitive language, making condescending remarks, or using one's illness against them. These general prejudicial and discriminatory practices may lead to denials in advancement (e.g., promotion), workplace harassment, or even firing (Russinova et al., 2011). Within additional facets of life, stigma can also influence self-esteem (Link et al., 2001; Major & O'Brein, 2005). Link and colleagues (2001) found that after controlling for baseline self-esteem, depressive symptoms, demographic characteristics, and diagnosis, perceived devaluation-discrimination, and stigma-withdrawal of those with MIs strongly predicted self-esteem levels. In other words, individuals who internalize stigma to a greater degree also often have lower levels of self-esteem (Link et al., 2001).

Another concerning impact of stigmatization for an individual is the barriers it produces for recovery. It is well-known that a majority of individuals living with a MI do not seek help (Clement et al., 2015; Henderson et al., 2013). Indeed, prevalence of MIs is underestimated, due to underdiagnosis and undertreatment (Baumann, 2007); one of the main influences for this incongruency and deterrence from help-seeking is stigmatization. In Clement et al.'s (2015) systematic review, stigma was the fourth most reported barrier to seeking help; specifically, it had a significantly negative effect on help-seeking (d = -0.27). There are a few hypothesized reasons as to why stigma impacts help-seeking. An individual's recognition of the public stigma of MI may lead them to avoid being labeled "mentally ill", which will subsequently lead them to avoid help-seeking (Corrigan et al., 2014). Opposingly, the individual may internalize the stigmatizing beliefs, leading to their own feelings of shame about their illness, and thoughts of "why try?"; again, leading them to avoid seeking help (Corrigan et al., 2014). Even the individuals who *do* seek help may be at risk of drop-out, as negative perceptions of MI may (re)-emerge, leading to a break-down of intervention (Corrigan et al., 2014). As well, individuals with MIs who have sought help for their problems have often reported that their healthcare providers had

negative attitudes towards MI (Thornicroft et al., 2007), thus further complicating the stigma-help-seeking relationship. Notably, the effect of stigma on help-seeking is additionally contingent on the culture of the individual (Corrigan et al., 2014) and /or levels of acculturation (e.g., Bismar et al., 2021). Regardless of culture, avoiding help can solidify and exacerbate one's MI. As a general rule, the longer one's symptoms are left untreated, the worse one's psychiatric outcome is (Kisely et al., 2006).

It is important to note that stigmatization of those with MIs will be contingent on one's previous experiences with MI. In a systematic review, it was found that contact with persons with MI in both a retrospective (e.g., self-reports of previous experiences) and prospective (e.g., in-lab exposure) manner had the ability to reduce stigmatization of MI (Couture & Penn, 2003). Individuals were also less likely to endorse common stigmatizing views about those with MIs, if they had close ties to valued others that disconfirmed these beliefs (Pullen et al., 2022). Similarly, Chung and colleagues (2020) suggested that familiarity with MI is associated with an increased acceptance (i.e., lower levels of stigma) for most (but not all) mental disorders. These findings seem to contradict the findings previously presented that suggest that the main perpetrators of microaggressions towards those with MIs are close others (Peters et al., 2017). These seemingly opposing findings are possibly due to the distinction between overt and covert discrimination. Close others may not act in overt discriminatory ways, but may still hold implicit stereotypes, leading them to commit covert microaggressions (Peters et al., 2017). Another note to consider when trying to reconcile these findings is that level-of-contact is likely to intersect with other factors that together may predict degree of stigmatization. For example, one study found that level-of-contact did not predict stigmatization of MI stigma in adolescent females (Greenblatt et al., 2016). Instead, the *nature* of contact predicted levels of stigmatization. Those who knew someone who received psychiatric treatment endorsed stigma less, than those who attributed the close-other's MI as being the reason for a relationship break-down (Greenblatt et al., 2016). This suggests that if the nature of contact is positive, stigma endorsement may be less prominent. We have yet to concretely understand *how* level-

of-contact influences stigma. We can conclude, however, that level-of-contact with persons with MIs does influences one's endorsement of MI stigma, in some way.

Thus far, the stigma of MI has been considered in a general manner. It is important to emphasize that stereotypes, prejudice, and discrimination are not alike across all MIs; indeed, all of the aforementioned stigma components differ, depending on the disorder in question. For example, Corrigan (2000) suggests that illnesses that are seen as unable to be treated (e.g., schizophrenia, personality disorders) are subject to more stigmatization, since they are seen as everlasting. Through the empirical evaluation described above, Corrigan and colleagues (2000) found differences in attributed controllability and stability for different MIs. Other studies suggested that the stereotype of "dangerousness" is also subject to change based on the disorder. Specifically, Crisp et al. (2000) found that the public perceived individuals with schizophrenia, alcoholism, and drug addiction as more dangerous than other disorders. Further, it was found that when stereotyping on two dimensions (competence and warmth), four clusters (across 13 disorders) of MIs were differentially stereotyped (Sadler et al., 2012). Individuals with a MI that contained a psychotic component (e.g., schizophrenia) were seen as incompetent and hostile; the mood and anxiety cluster (e.g., depression) was generally stereotyped as average on both competence and warmth dimensions. Individuals within the neuro-cognitive deficits (e.g., Alzheimer's disease) cluster were seen as warm but not competent. Finally, extreme hostility but average competence was seen for the fourth cluster: those with sociopathic tendencies (Sadler et al., 2012). Clearly, there is empirical support to suggest that not all mental disorders are stigmatized to the same extent, or in the same manner. Within this current study, focus will be placed on three specific disorders: BPD, PTSD, and depression. As such, further investigation of the respective stigma of each of these disorders will be evaluated.

Stigmatization of BPD

There is evidence to suggest that personality disorders, including BPD, may be subject to additional stigmatization, compared to other psychological diagnoses (Aviram et al., 2006; Sheehan et al., 2016). This may be due to the general lack of knowledge about personality disorders, which may consequently enable individuals to endorse inaccurate stereotypes about those with a personality disorder, compared to other, more well-known disorders. In one study, participants were given a vignette, which described an individual as having BPD, depression, or schizophrenia, and were asked to identify which MI was depicted. 72.5% of participants correctly identified the depression vignette, 65.6% of participants correctly identified the schizophrenia vignette, but only 2.3% of participants correctly identified the BPD vignette (Furnham et al., 2015). Instead, most participants cited that the vignette depicted another MI, or someone with broad "psychological symptoms". Overall, this suggests that our society has a lack of knowledge (i.e., low mental health literacy) surrounding personality disorders. This low mental health literacy leads to inaccurate perceptions of those with personality disorders – for example, many believe that individuals with personality disorders have control over their behaviours and are thus actually manipulating others around them (Sheehan et al., 2016).

Paralleling the low mental health literacy about BPD within the general population, a similar concern exists within the scientific community. Although researchers argue that BPD may be subject to additional stigmatization (compared to other MIs), relatively little empirical investigation has been carried out on this topic (Aviram et al., 2006). For example, according to Sheehan et al. (2016), there have been no studies that have investigated the respective stereotypes, prejudice, and discriminatory practices towards individuals with BPD. Nevertheless, the remainder of this section aims to review and synthesize the findings that do exist.

There are several indicators and social cues that an individual with BPD may display, which may lead to stigmatization by others. Oftentimes, individuals present with volatility and/or anger, while also oftentimes partaking in intense and risky behaviours (e.g., attempting suicide; Aviram et al., 2006;

Sheehan et al., 2016). Most frequently, interpersonal situations are what trigger individuals to react or behave in these ways (Aviram et al., 2006), thus leading to extreme difficulties within the social domain of life (Sheehan et al., 2016). For example, individuals with BPD are often seen as annoying, undeserving (Aviram et al., 2006), manipulative, more difficult, noncompliant, and hateful (Nehls, 1998). These stereotypes entice others to believe that individuals with BPD have generally low functioning, especially in social, interpersonal, and intrapersonal domains (Aviram et al., 2006). The stigma experienced by these individuals extends to their family members (e.g., "weakened family status"), representing a form of stigma by association (Meshkinyazd et al., 2021).

Although some research that has looked at society's views of individuals with BPD, a majority of the BPD stigma research surrounds the stigma endorsed by healthcare providers and other professionals. This complements research in which individuals with BPD report experiencing stigma most frequently within a healthcare setting (Bonnington & Rose, 2014). Clinicians and other healthcare providers frequently share the same perceptions as the public; describing individuals with BPD as difficult, manipulative (e.g., more in control of their disorder than they are), malignant, demanding, attention-seeking, powerful, dangerous, unrelenting, and treatment resistant (Aviram et al., 2006; Cone, 2020; Ring & Lawn, 2019). This can lead to clinicians having *a priori* and biased expectations as to how treatment will go, leading to possible iatrogenic treatment effects (Nehls, 1998). For example, individuals with BPD are very sensitive to rejection/perceived abandonment; if they perceive that their clinician is acting prejudiced and discriminatory, then the individual with BPD may react to this perceived abandonment through aggression, self-harm, or distance (e.g., dropping out of treatment; Aviram et al., 2006). The pattern that ensues is a direct projection of a self-fulfilling prophecy: the clinician has preconceived notions about the client (e.g., "this individual is volatile"), the clinician signals these beliefs to the client (e.g., through emotional reactivity), and finally, the client will begin acting in these preconceived ways (e.g., engaging in self-harm, dropping out of treatment), and then the

clinician's stereotyped beliefs are strengthened. Due to this maltreatment, patients with BPD often report feeling like their healthcare providers do not view BPD as a real illness, and when in inpatient units, they also feel like they are just taking up valuable space within the unit, since they are often not being taken seriously by others (Ring & Lawn, 2019). Lindell-Innes et al. (2023) identified that for psychiatrists, the negative perceptions of BPD may begin in training. Specifically, they identified that trainees close to the end of their training endorse significantly more stigma toward patients with BPD, compared to early and mid-level trainees (Lindell-Innes et al., 2023). This may indicate that exposure to clients with BPD may enhance stigma toward this population, which opposes the link between level of contact with mental illness and stigma theorized about in the current literature (Corrigan, 2000; Holmes et al., 1999).

Speculations exist as to why healthcare providers so severely stigmatize individuals with BPD. One possible explanation is that healthcare providers have a lack of empathy for these individuals. For example, one study evaluated nurses' empathy levels for their patients with BPD and schizophrenia, respectively (Nehls, 1998). They found that nurses displayed much less empathy towards those with BPD, compared to those with schizophrenia; this lack of empathy was related to a fear of being manipulated by their patients with BPD (Nehls, 1998). Similarly, Gallop et al. (1989) found that just being labelled as having BPD was enough to change healthcare providers' behaviours towards their clients. For example, providers may believe that it is okay to display emotional reactivity or countertransference to these patients, since they are so emotionally volatile (Aviram et al., 2006). Other scholars believe that healthcare providers' stigmatization of BPD is related to their beliefs that BPD is an *untreatable* disorder (Commons Treloar, 2009). Indeed, diagnosing an individual with BPD leads clinicians to make significantly more negative prognoses (Ring & Lawn, 2019). On the other hand, some believe that this stigmatization is due to poor BPD literacy. As stated above, there is poor literacy in the general population, but this also seems to hold true for healthcare providers, like nurses. For example, in one study, 89% of nurses stated that individuals with BPD are manipulative, but concurrently, 53% of

these nurses stated that they are unsure of how to care for someone with BPD (Deans & Meocevic, 2006).

Despite the adverse prejudices healthcare providers have towards those with BPD, there is some evidence that these views might be shifting. In a 15-year longitudinal study, it was found that in 2000, healthcare providers endorsed more negative descriptions of those with BPD (e.g., "attention seeking" and "manipulative"), compared to 2015, where there was a more positive shift in beliefs about clients with BPD (key words: "management plan" and "empathy"; Day et al., 2018). Nevertheless, due to the mistreatment of clients with BPD, there seems to be questions about whether to provide diagnostic labels to individuals who meet criteria for BPD. Some argue that due to the stigmatization of the illness, it may be better to treat the client without providing a diagnosis (Campbell et al., 2020), especially when thinking about diagnosing an adolescent (Courtney & Makinen, 2016). Patients with BPD seem cognizant about this issue: inpatients reported that having a label of BPD has led them to feel like they received more negative reactions by healthcare providers (Ring & Lawn, 2019).

Stigmatization of PTSD

Mittal and colleagues (2013) conducted a study investigating the perceptions of combat veterans regarding the stigmatization of PTSD. Specifically, 16 veterans with combat-related PTSD participated in focus groups assessing their perceptions of PTSD-related stigma. Overarchingly, the veterans believed that the public stereotyped veterans with PTSD, and some of the stereotypes that they perceived were weird, depressed, non-sociable, violent, cold-hearted, shell-shocked and robotic. Most commonly, however, stereotypes of violence, dangerousness, and craziness were endorsed by others. Most of the veterans did *not* agree with the stereotypes endorsed by others, although there was a small degree of agreement for the dangerousness and violent stereotypes. Interestingly, the veterans believed that PTSD was less stigmatized by others than other serious MIs, like schizophrenia. Finally, a majority of participants stated that they avoided seeking help, as a means of avoiding being labelled as "crazy"

(Mittal et al., 2013). Indeed, most literature suggests that PTSD within the military population is underreported, due to a fear of stigmatization by others (Johnson & Agius, 2018). For example, of those who were diagnosed with a mental disorder in a study conducted by Hoge and colleagues (2004), only 23-40% were found to have sought help for their mental health problems. In addition, veterans with probable PTSD were more likely to report experiences with stigmatization and concerns about accessing care, compared to veterans with other mental health disorders (Williamson et al., 2019). Researchers suggest that barriers to help-seeking exist for this population because of a fear of being perceived as weak by their peers and a fear of their job position being compromised (i.e., losing their position in the military due to mental health concerns; Hoge et al., 2004). Indeed, those who disclosed their mental health status to the UK Armed Forces were more likely to be discharged from duty early (Johnson & Agius, 2018), which may represent a covert form of discrimination. It was also found that individuals who disclosed their mental health status during their service were more likely to be unemployed three years later (Murphy & Busuttil, 2014), or face termination (Teitelbaum & Thomas, 2009); another enticing reason to avoid seeking help. To make matters worse, not seeking help for PTSD-related problems in this population is often related to a continuation of mental health issues, in addition to suicide attempts (Murphy & Busuttil, 2014).

Apart from the aforementioned studies, research on the stigmatization of PTSD is extremely scarce (Mittal et al., 2013). As evidenced above, the literature that does exist mainly pertains to military personnel and veterans. As such, the stereotypes and discriminatory events described above cannot be generalized to any cause of PTSD. A recent study by Thibodeau and Merges (2022), however, explored the relative stigma endorsement toward PTSD by the type of setting and trauma. Specifically, they employed a 2x3x2 design, where they looked whether the setting (military versus civilian), trauma (sexual versus physical versus not stated), and diagnosis (diagnosis given and symptoms of PTSD explained versus no description or diagnosis) affected respondents' perceptions of a woman depicted in a

vignette. Consistently, less stigma was endorsed when the diagnosis of PTSD was not mentioned. Other findings were inconsistent. For example, the participants reported a greater desire to distance from the woman in a civilian setting, and when the type of trauma was not disclosed. In terms of anger, however, an interaction between setting and trauma emerged, where when the woman was described as a veteran, no trauma disclosure yielded lower anger scores, than when a physical or sexual assault were described. Meanwhile, in the civilian setting, no trauma disclosed led to significantly higher anger than when the civilian disclosed a physical assault (Thibodeau & Merges, 2022). Additionally, Correll et al. (2021) found that participants reported more danger, fear, and desire to segregate an individual wearing a military uniform. These studies support the notion that PTSD stigma is not similar across all settings or trauma types. A final study examined the stigmatizing experiences of adolescents seeking help for their PTSD (van de Water et al., 2018). They found that many adolescents reported experiencing adverse stigmatizing experiences, such as being ignored by others or called “crazy”. Although the study does not clarify the type of trauma experienced by these adolescents, one can infer that the adolescents do not have military-related stigma. As such, this study supports that PTSD derived from other causes may also be stigmatized; it is notable that these are the only studies to our knowledge that have examined PTSD stigma in a non-military setting. These studies suggest that the stigmatization of an individual with PTSD is likely contingent on various intersectional traits, such as setting, military status, type of trauma, etc. One study also demonstrated that gender may intersect with combat-related PTSD (Caldwell & Lauderdale, 2021). Specifically, they found that participants rated a male veteran as more dangerous, fear-provoking, and anger-eliciting than the female veteran. These participants also had a greater desire to segregate and coerce the male veteran into treatment, compared to the female veteran (Caldwell & Lauderdale, 2021). This study shows how two traits can act in an intersectional manner to produce varying degrees of stigmatization. Future research should continue considering how additional traits

(including the cause of PTSD) act in an intersectional manner to yield differing public endorsements of stigma.

Stigmatization of Depression

Unlike the stigma literature for BPD and PTSD, a multitude of research exists on the stigmatization of depression. Patients who have been diagnosed with depression expect stigma to influence their accomplishments in several domains of life. Specifically, 67% of depressed primary care patients stated that they expect the depression related stigma to influence their employment, 59% believed that stigma would influence their health insurance, and 24% of patients believed that stigma would influence their friendships (Roeloffs et al., 2003). This suggests that individuals with depression have experienced stigmatization from the public and expect it to continue to affect their lives. As such, it is worthwhile to explore the specific stereotypes that the public endorses. Yokoya et al. (2018) investigated the public's knowledge and levels of stigmatization of depression by asking participants to state the extent they agree with four statements, one of which specifically assessed the stigma of depression, using the following statement: "a weak personality causes depression." About 30% of participants endorsed this inaccurate statement. The participants who did endorse this stereotype were more likely to be older, and have overall lower health literacy (Yokoya et al., 2019). In another study, participants received a vignette describing a man ("John") who met criteria for MDD and were asked their attitudes on help-seeking intentions, self-stigma, and perceived stigma. A minority of participants stated that they believed that healthcare professionals would judge John for coming to seek help, along with the notion that the healthcare practitioners would view John as unbalanced or neurotic. Almost half of the respondents stated that if they were in John's shoes, and if they sought help for their depression, that this would lead them to experience stigmatization from others (Barney et al., 2006). Similarly, de Toledo Piza Peluso and Blay (2008) found that 56% of participants in their study endorsed the stereotype of dangerousness, and 49% believed that the person with depression could arouse negative reactions.

Nevertheless, most participants had positive emotional reactions towards individuals with depression, reflecting low prejudicial beliefs of these individuals (de Toledo Piza Peluso & Blay, 2008). Overall, it seems that about half or less of participants in each respective study endorse stigmatizing views of individuals with depression. This may demonstrate that depression is stigmatized to a lesser extent than other disorders.

Several studies have assessed the stigmatization of depression compared to other mental health illnesses, or psychological constructs. For example, Wood et al. (2014) investigated the public's perceptions of stigma towards individuals with schizophrenia, anxiety, or depression. Some of the stereotypes investigated were dangerousness, unpredictability, difficulty to engage with, controllability, and stability. They found that schizophrenia was the most negatively stereotyped, but that depression was also viewed in a significantly worse manner than anxiety. Schizophrenia was the least blamed (low controllability) and viewed as the least likely to recover (high stability); there were no respective differences between anxiety and depression. Another study also investigated differences in stigmatization of depression and schizophrenia using a similar methodological approach (Norman et al., 2010). Participants generally desired greater distance from individuals with schizophrenia, as they saw them as more dangerous and socially inappropriate. Meanwhile, stereotypes for depression were viewed with a greater controllability attribution. Respondents also believed that the onset of the depressive disorder was more likely to be due to a weakness of character, compared to schizophrenia (Norman et al., 2010). Arbanas and colleagues (2019) studied healthcare professionals' and lay peoples' stigmatization of depression, schizophrenia and PTSD. PTSD was found to be less stigmatized than schizophrenia, but more than depression. Doctors endorsed stereotypes of schizophrenia and PTSD significantly less than the public; there was no difference for depression.

The stigmatization of eating disorders (anorexia (AN) and bulimia nervosa (BN)) has also been compared to depression. Vignettes were presented to participants describing an individual suffering from

AN, BN, or depression; participants answered questionnaires to assess levels of stigmatization. The researchers found that the respondents ascribed greater stigma to those with an eating disorder, compared to those with depression. Specifically, they viewed the individuals from the AN and BN vignettes as more responsible for their disorder, compared to depression. Participants also believed that those with eating disorders are using their disorder for attention and are more fragile, than those with depression (Roehrig & McLean, 2009). When comparing depression to burnout, it was found that the burnout label was significantly less stigmatized than the depression label; however, participants believed that they were equally worthy of being treated (Bianchi et al., 2016). Roeloffs et al. (2003) also found that depression is stigmatized to a greater extent than physical illnesses, such as hypertension and diabetes. Generally, this data supports the claim that depression is still stigmatized, but to a lesser extent than other MIs; this is an important implication for the present study.

Stigmatization of NSSI

Nielson and Townsend (2018) aimed to apply Corrigan's attribution model of stigmatization to self-harm, a topic they deemed as under-researched, despite the high prevalence of self-harm and corresponding stigmatization. There were 10 vignettes that described an episode of adolescent self-harm, all of which were manipulated on dimensions of controllability (controllable, uncontrollable, unknown), and self-harm motivation (intrapersonal, interpersonal, unknown). Participants had to answer questions regarding the perceived dangerousness of the individual, their beliefs of personal responsibility, as well as their prejudicial beliefs and discriminatory intentions. Overall, the vignettes that were manipulated as being more controllable were perceived as more responsible; this was accompanied with greater levels of fear and anger, and lower levels of pity, compared to the vignettes manipulated to infer low controllability. In addition, the vignettes high in controllability were also accompanied with endorsements of avoidance, segregation, and coercive responding to the individual described in the vignette, while vignettes low in controllability were met with an increased desire to help. Regardless of

condition, increased perceived dangerousness was associated with increased blame and fear, while increased personal familiarity with self-harm led to a reduction of blame and a smaller likelihood of discriminatory behaviour endorsement. It is important to note that regardless of these findings, emotional responding was generally more positive than negative across all vignettes. This was accompanied by a greater desire to help, than to avoid the teen who engaged in NSSI (Nielsen & Townsend, 2018). Similarly, Lloyd et al. (2018) found that when the public perceived greater personal responsibility, dangerousness, and manipulative intentions of those who partake in NSSI, levels of stigma and discrimination were higher. Within a student healthcare sample, beliefs of personal responsibility were also accompanied with higher feelings of anger and a belief that these individuals are manipulative; both stigmas resulted in a lower desire to help (Urquhart Law et al., 2009). Meanwhile, perceived risk (i.e., viewing the individual as risky) was associated with higher levels of anxiety and endorsement of coercion and segregation as helping strategies (Urquhart Law et al., 2009). These results suggest that the attribution model of public stigma is applicable to NSSI.

Aside from the attributions investigated by the aforementioned authors, there is other research investigating the stigmatization of self-harm. In one study, nurses, psychologists, and vocational rehabilitation providers were found to perceive individuals who engage in self-harm as “time-wasters”, who are less deserving of adequate care (Staniland et al., 2021). In addition, various people in a self-harmer’s life (e.g., parents and friends) viewed their loved-one’s self-harming behaviour as “attention seeking” (Staniland et al., 2021). Alternatively, close others may attribute these behaviours to a stereotypical sub-culture (e.g., “they self-harm because they are ‘Emo’ or goth”), and thus may downplay the seriousness of the behaviour (Long et al., 2018). Older individuals (e.g., parents, teachers) also have the tendency to perceive NSSI as a socially contagious behaviour – believing that the behaviour will transmit to peers, thus increasing the perceived dangerousness of the disorder (Berger et al., 2014). Burke and colleagues (2018) investigated the levels of implicit and explicit stigmatization of

NSSI scarring, compared to tattoos (culturally sanctioned form of marking) and nonintentional disfigurement. They found that participants had stronger implicit and explicit biases towards NSSI, compared with the other two conditions, suggesting that NSSI is more stigmatized than other forms of "marking" (Burke et al., 2018).

Staniland and colleagues (2021) applied Jones et al. (1984)'s six-pronged framework of stigma to NSSI – they suggest that there are six distinct constructs that underlie NSSI stigma. *Origin,* how a mark came to be, is tied closely to perceived controllability. As was previously seen, when an NSSI mark was perceived as uncontrollable, the individual is less likely to be stigmatized by others. However, due to the volitional nature of NSSI, it is suggested that NSSI is related to increased perceptions of responsibility. Perceptions of responsibility seem to directly relate to medical provisions – those who are seen as personally responsible for their injury are prioritized to a lesser extent (Brown & Kimball, 2013). *Concealability*, the degree to which a mark can be concealed, also has a direct impact on stigmatization (Staniland et al., 2021). A person is at greater risk of being stigmatized by others (e.g., being labelled as an attention seeker) if their marks from engaging in NSSI are unconcealable, and in highly visible areas (e.g., forearms). The *course* construct refers to the stability of the condition. Individuals who have engaged in multiple bouts of self-harm (which is usually the case) may be subject to additional stigmatization, due to the perception that these individuals are "doing this to themselves". However, stigmatization will depend on whether the individual is still engaging in NSSI, or not. *Peril* refers to the degree of dangerousness a person poses to others. As described above, the peril of NSSI is viewed dichotomously: some view NSSI behaviour as suicidal, thus deeming these individuals very dangerous, while others view self-harm as a form of attention seeking, thus downplaying the gravity of the behaviour. The latter belief may lead to discrimination in the form of poor treatment in multiple settings. The next notion is referred to as *aesthetics* and entails how displeasing a mark is. Marks that are visibly unpleasant (e.g., NSSI scarring) are subject to increased stigmatization by others and self-stigmatization.

The final construct, *disruptiveness*, refers to the influence a mark has on relationships, with the idea that marks that influence relationships to a greater degree are more stigmatized. It is unclear where NSSI lies on this spectrum, because of one's ability to conceal their marks. However, NSSI may still influence close relationships (e.g., sibling dynamics) or romantic relationships in a negative context. NSSI disruptions may also have an impact on one's tendency to socialize in public settings – for example, an individual with visible NSSI scarring may be enticed to avoid beaches or sports. Overall, this framework supports the idea that NSSI is stigmatized to a great extent on multiple dimensions (Staniland et al., 2021). When evaluating the experiences of individuals who have self-harmed, the results confirmed that public stigma occurs on all six dimensions (Staniland et al., 2022).

Additional studies have also examined the stigmatizing experiences of individuals who engage in self-harm. Generally, the incidents they face mirror the published literature. For example, individuals who partake in NSSI all identified experiencing stigmatization in relation to their self-harming, both from the physical marks, and from the inferred poor well-being (Long, 2018). This awareness often led them to avoid help-seeking, due to a fear of judgement from others (Simone & Hamza, 2020). Others cited being labelled as attention seekers, which led them to feel like their illness was not being taken seriously. Oftentimes, these individuals cited that within counselling settings, the focus was placed on stopping the self-harm, instead of dealing with the underlying emotional problems. Since solving the stem of the problem was negated, individuals reported that experiencing stigma could lead to further self-injury (Long, 2018).

The situation becomes more complex when considering the impact of disclosing one's NSSI to others. Supposedly, the public perceives individuals who engaged in NSSI as being more manipulative if they disclose their self-harm, but also perceived those who did not disclose their NSSI as having a greater risk of severity (Burke et al., 2018; Lloyd et al., 2018). This may suggest that with either choice, negative consequences are likely to occur. Despite this finding, it is unclear in the present literature

whether NSSI severity is related to disclosure. For example, in one study, a greater degree of scar concealment (i.e., lower disclosure) was related to greater severity of NSSI urges (Burke et al., 2020). However, another study found that greater levels of disclosure were associated with higher suicide risk (Ammerman et al., 2020). These findings depict the complex relationship between stigma, disclosure, and one's safety. Although it is clear that NSSI is a highly stigmatized behaviour, it is unclear what influence stigma plays on disclosure. This relationship needs further investigation to determine whether disclosure is related to NSSI severity, and how, in order to help identify which individuals may at risk of future self-injury (Burke et al., 2020).

Ambiguity of MI and NSSI Stigma

The majority of literature that has examined the intersectionality of stigma (i.e., stigma that occurs from two or more stigmatized traits) has focused on how experiences of stigma change with intersectionality (Jackson-Best & Edwards, 2018). When considering the stigma of MI, and NSSI, one can *hypothesize* that the stigma of these two features can act in an intersectional manner. However, this claim has yet to be proven – there is no research that has examined whether the stigmatization of MI and NSSI are additive or intersectional. The closest empirical evidence we have to answering this question comes from a paper by Sheehan and colleagues (2017). These researchers compared the public stigma of suicide and depression by administering one of four vignettes to participants: a past depression vignette, a past suicide attempt vignette, a death by suicide vignette, and a control vignette (no suicide or MI information). The results revealed that a suicide stigma scale was able to distinguish between depression stigma and suicide stigma, especially on the basis of differing prejudices and stereotypes. Participants also rated that recovery was more likely for the individual with past depression, than the individual with a previous suicide attempt. Overall, this suggests that individuals who attempted suicide are subject to differential stigma than individuals with a previous episode of depression (Sheehan et al., 2017). It is important to highlight that this study investigated suicide-related stigma, not NSSI related stigma, and

did not investigate whether these stigmas act in an additive fashion. Staniland et al. (2021), however, hypothesize that marks from self-harm are "likely *doubly* stigmatized, both for being indicative of a mental health difficulty and for being an onset-controllable behaviour"; unfortunately, there is no empirical investigation to support this claim. The present study aimed to investigate these questions.

Current Study

The present study aimed to address the ambiguities that exist in the within the MI and NSSI stigma literature. Specifically, this study aimed to primarily answer the question: are the stigma of MI and NSSI additive and/or separable? Secondarily, this work aims to further contribute to the literature by evaluating how stigma varies across different disorders. To achieve these purposes, participants were given one of six vignettes, describing an individual with BPD, PTSD, or depression ("DEP"), who has or has not engaged in NSSI. Following the vignette, participants answered questionnaires to assess their perceived levels of stigmatization (i.e., endorsement of various stereotypes, prejudices, and discriminatory behaviours), and their desire to distance from the individual from the vignette. The participants' perceptions of recovery was also evaluated. Primarily, it was hypothesized that the individuals in the vignettes where NSSI is depicted as occurring will be more stigmatized than those where NSSI presence is not explicitly stated, regardless of disorder. To address the secondary research question, based on previous literature, it was hypothesized that the more severe and less common MI (in this case BPD) will be more stigmatized than the more common MI (i.e., DEP). Specifically, we hypothesized that the BPD vignette would be stigmatized the most, followed by the PTSD vignette; the DEP vignette was hypothesized to receive the smallest amount of stigmatization. To test these hypotheses, we used several 2x3 factorial analyses variance (ANOVAs), with no *a priori* hypotheses about whether an interaction or two main effects will appear. Extrapolating from Sheehan et al.'s (2017) study, we also hypothesized that participants would rate recovery as less likely for those who engage in NSSI, than those who do not (collapsed across disorder conditions). This is the first study to investigate

the intersectionality of MI and NSSI stigma, and also the first study to investigate how BPD, PTSD, and depression are differentially stigmatized relative to one another.

Method

Participants

Undergraduate students ($N = 230$) at Lakehead University participated in this study. Recruitment occurred through Lakehead University's online psychology recruitment service (SONA). Students were granted 0.5 partial course credits for participating in the study. Participant ages ranged from 18 to 61 ($M = 22.85$; $SD = 6.72$). A majority of participants identified as female (80.0%), while 17.4% identified as male, and 2.6% identified as another gender. Participants were mainly White/European (71.7%), with a minority of participants identifying as Asian (9.6%), Black (7.4%), Indigenous (7.4%), bi-racial (2.2%), Hispanic (.4%), or other (1.3%). In terms of marital status, 49.6% of participants were single, 37.4% were in a relationship, 10.9% were married, 1.3% were separated, and .4% were divorced. About half of the sample were majoring in psychology (51.7%), with most of the sample being in the first (33.5%) or second (30.0%) year of their studies. All participants were randomized into one of the six conditions: BPD/No NSSI ($n = 31$), BPD/NSSI ($n = 35$), DEP/No NSSI ($n = 40$), DEP/NSSI ($n = 49$), PTSD/No NSSI ($n = 41$), or PTSD/NSSI ($n = 34$).

Baseline Measures

Demographic Questionnaire

This questionnaire assessed the demographics of participants, including: age, gender, ethnicity, marital status, year of study, and study major (Appendix A).

Level-of-Contact Report(s) (LCR; Holmes et al., 1999)

The LCR is a measure that is used to assess one's degree of exposure to serious MI over one's lifetime (see Appendix B). This measure was used, as it is well-known that when one's level of contact with MI is higher, stigma is generally lower (Corrigan et al., 2001). The LCR is a self-report measure and consists of 12 questions. Questions assess level of contact by asking participants about exposure to

MI through various experiences (e.g., exposure through media, their job, or close others). Participants are asked to check off a statement if it applies to them (e.g., "*My job includes providing services to persons with a severe mental illness"*). Each of the 12 statements has been ranked based on the level of intimacy (i.e., level of contact) of mental illness, corresponding to a score range of 1 (least intimate) to 12 (most intimate). The least intimate item is "*I have never observed a person that I was aware had a severe mental illness,"* while the most intimate item is "*I have a severe mental* illness". One's final score is the rank of the most intimate item the individual checked off as applying to them. For example, if an individual checked off rank item 3 ("*I have watched a movie or television show in which a character depicted a person with mental illness*") and rank item 9 ("*A friend of the family has a severe mental illness*"), their score would be 9. In other studies, interrater reliability was high (correlation = 0.83; Holmes et al., 1999), and reliability and validity are supported (Corrigan et al., 2001).

As a large portion of this study pertains to NSSI, it is important to evaluate participants' level of contact with NSSI as well. As such, we modified the LCR to evaluate participants' level of contact with self-harm (Appendix B). The LCR-SH was created by replacing the words "mental illness" with "self-harm". It was chosen to use the colloquial term "self-harm" in place of "non-suicidal self-injury" for the sake of simplicity. The rank of the items remained the same as the original LCR, and final scores were also obtained in the same way.

Post-Randomization Measures

Attribution Questionnaire (AQ-27; Corrigan et al., 2003)

The AQ-27 was developed by Corrigan and colleagues (2003) in order to assess public stigma of MIs, based on the attribution model. This questionnaire was administered after participants read the vignette, and assessed how strongly participants endorsed various stereotypes, prejudices, and discriminatory behaviours to the individual depicted in the vignette. The AQ-27 is a self-report scale that asks participants how strongly they agree with 27 statements, ranging from 1 (not at all) to 9 (very

much). There are nine different subscales that can be derived from the AQ-27, two of which measure stereotype endorsement (dangerousness and blame/personal responsibility), three which measure prejudices (anger, pity, and fear), and four that measure discriminatory behaviours (avoidance, segregation, coercion, and desire to help). Each subscale has three items that pertain to it. The original AQ-27 was used after participants read a vignette about a man suffering from schizophrenia; due to this, the original scale uses male-oriented language. Since in the current study, the gender of the individual from the vignettes is not specified, the AQ-27 was modified to account for this difference (Appendix C). Following reverse scoring of positively worded items, the nine subscales are computed by adding up the responses respective of the subscale. Higher scores indicate a greater degree of stigma.

The original study on the AQ-27 revealed that all subscales had moderate to high internal consistency (α's ranged from .70 (responsibility) to .96 (fear); Corrigan et al., 2003). Similar results were found by Brown (2008). Moreover, all subtests were found to have good test-retest reliability (ICC range = .74 to .90; Brown et al., 2008). Convergent validity of this questionnaire has also been supported through confirmatory factor analyses (Corrigan et al., 2004c; Johnson-Kwochka et al., 2021). In the current sample, internal consistency mostly ranged from questionable to excellent, however, the coercion subscale had a poor Cronbach's alpha (see Table 4). This suggests that some of the variables (pity, avoidance, and coercion) may not be highly reliable, and that results should be interpreted with caution.

Social Distance Questionnaire (SDS; Link et al., 1987)

The SDS is a seven-item self-report measure that measures the respondent's desire to maintain social distance from a target individual who is depicted as having a MI (in this case the individual depicted in the vignette). It asks respondents how likely they are to engage in various activities with the target individual (e.g., "*How would you feel having someone like Jim Johnson as a neighbor?"*). "Jim Johnson" was used as the target individual in the original development study but was changed accordingly to reflect the wording used in the current study's vignette. Respondents answered in a

Likert-response format, ranging from 0 (definitely willing) to 3 (definitely unwilling); higher scores indicated a greater desire to maintain social distance. The final score was obtained by adding up one's responses on each of the seven items, and then dividing by seven (see Appendix D). Internal consistency was excellent in the development study (α = .92; Link et al., 1987), and in the current study, it was good (see Table 4).

Recovery Scale (RS; Corrigan et al., 2004b)

The RS is a 3-item measure that was adapted from the more comprehensive Recovery Assessment Scale (RAS; Giffort et al., 1995). The RS specifically asks about one's *general* views about recovery of individuals who have a MI (e.g., "*People with mental illness are hopeful about their future*"). For the current study, the RS items were modified, such that the questions asked pertained specifically to the individual depicted in the vignette (see Appendix E). The RS is answered in a Likert-response format, ranging from 1 (strongly disagree) to 9 (strongly agree). Final scores are obtained by adding up answers on each item, and scores range from 3 to 27. Higher scores are representative of a better perceived recovery of the person with a MI. In this study, the RS had an unacceptable internal consistency (α = .43).

Materials

As previously stated, there were six vignettes that were used in the study. Each vignette depicted one of three MIs (BPD, PTSD, depression); for each disorder, vignettes either described someone who engages in NSSI, or does not engage in NSSI (not explicitly stated), resulting in six vignettes overall. Each vignette consisted of a short description (about 140 words per vignette) about an individual who meets *DSM-5* (APA, 2013) criteria for one of the three respective disorders. Each vignette depicted an individual struggling with a severe MI; we did this to try to control for MI severity across conditions. As these vignettes were made specifically for this study, and have not previously been validated, the vignettes were presented to the supervisor, second reader, and current graduate students in clinical

psychology to see whether they could accurately identify the mental disorder, and the severity of the disorder. A majority of the participants could identify the disorder correctly, and labelled the severity as being similar across conditions. Although Norman et al. (2010) concluded that there was no significant effect of stigmatization on gender of vignettes depicted of MI, we chose to keep the vignettes gender-neutral for simplicity. Please see Appendix F for the vignettes.

Procedure

Participants completed this study through an online response format. Following informed consent by the participant, they completed the demographic section, along with the two LCR's. Students were next randomized to one of the six conditions, representative of three MIs (BPD, PTSD, DEP), and the presence or absence of NSSI. After reading the vignette, participants subsequently answered the AQ-27, SDS, and RS, in relation to the individual depicted in the vignette. Following study completion, individuals were given a debriefing form, along with the contact information of the research team.

Statistical Analyses

Due to the novelty of the current research questions, all analyses conducted were exploratory in nature. Broadly, the research question we aimed to investigate is how the public stigma of MI and NSSI intersect. Since stigma is a multifaceted concept, there were ten variables corresponding to differing aspects of stigma, at cognitive, emotional, and behavioural levels (i.e., measured by the AQ-27 subscales and the SDS). One variable (RS) did not look at stigma specifically, but instead informed the perceived recovery of the individuals depicted in the vignette, in order to answer hypothesis three. Unfortunately, the internal consistency of the RS was unacceptable. As such, no analyses were done with the RS. We conducted ten exploratory 2x3 factorial analyses of variance (ANOVAs). We assessed any baseline differences on all demographic variables and both LCR's among conditions; if any significant differences existed, we intended to account for them as covariates. Due to the large number of outcome variables, we decided to use the false discover rate (FDR) to account for the greater chance of a having a

type I error. Any main effects of disorder were explored via post-hoc tests. All data were screened, cleaned, and analyzed using SPSS 28.0.

False Discovery Rate

Although a majority of psychological research uses Bonferroni-type adjustments, there are several criticisms of this approach. The Bonferroni correction is often criticized as being too conservative, while focusing on the *wrong* hypothesis (i.e., the universal null hypothesis; Glickman et al., 2014; Pereneger, 1998), and severely reducing power of the analysis (Benjamini & Hochberg, 1995; Nakagawa, 2004; Perneger, 1998). Since the Bonferroni correction is conservative, it is appropriate to use when the consequence of making a Type I error is serious (Benjamini & Hochberg, 1995). It may also be appropriate to use when the conclusions made based on multiple comparisons will affect one another (i.e., if making a Type I error for one variable would affect the relative relationship between the other variables; Benjamini & Hochberg, 1995). Given the exploratory nature of this study, we chose to use a less conservative multiple comparison correction. Moreover, the variables included in this study are theoretically distinct from one another, meaning that if a null hypothesis is falsely rejected, the conclusions made regarding other dependant variables would not be erroneous. For these reasons, the FDR approach was used to correct for multiple comparisons in the present study.

While common statistical approaches, like the Bonferroni correction, assess the probability of rejecting a null hypothesis when the null hypothesis is true, the FDR assesses the probability that a null hypothesis is true given that it has been rejected (Glickman et al., 2014). As opposed to obtaining a new adjusted critical p-value for all variables, the FDR calculates a unique novel critical p-value for each variable (both individual main effects and interaction effects), which depends on the outcomes from the original uncorrected analysis. A new p-value is given to each main effect and interaction; therefore, in the present study, since there were 10 variables of interest, there were 30 new critical p-values calculated (i.e., 2 main effects and 1 interaction effect per variable). The formula used to calculate these critical

values is (i / m)*Q, where i is the rank (in this case, a number between 1 and 30), m is the number of overall analyses (in this case, m = 10), and Q is the acceptable type I error (in this case, Q = .05). To obtain the correct value of i, all effects in the analyses must be arranged in ascending order based on the p-value, so that the more significant the effect, the smaller the value of i is (McDonald, 2014). For example, the main effect of disorder for the anger variable had the lowest unadjusted p-value (p < .001). The calculation for the FDR critical value for this effect would be (1/30)*.05; *critical p value* = .00167. Since the original p-value (p <.001) is lower than the FDR critical value (p = .00167), then the effect remains significant. If the p-value for an effect is above the critical FDR value, despite having an original significant result (i.e., p <.05), this effect is no longer classified as being significant.

Results

Data Screening and Cleaning

Two hundred and fifty participants were recruited for the study, but 20 individuals were excluded for the reasons described below, leading to a final sample size of 230. Three participants did not reach randomization (i.e., did not go far enough in the survey to be given a vignette), and were deleted from the dataset. Participants (n = 3) were additionally removed, since they did not complete all baseline and post-randomization questionnaires. Next, the quality of respondent's responses was assessed. Specifically, we looked at whether participants selected the same Likert-response option for the AQ-27 and the SDS, respectively (a term called "straightlining"). To do this, the standard deviation was calculated among individual items for each questionnaire; if the standard deviation was 0, this indicated that there was no variability among the participant's response choices, meaning that they straightlined. Straightlining suggests that participants were not reading the individual items, but just choosing the same response, most likely to finish the study as quickly as possible. Thus, this indicated a low-quality response, especially on questionnaires where there were reverse-scored items. There were two

individuals who straightlined on the AQ-27, and six individuals who straightlined on the SDS. These participants were removed from the dataset, resulting in a new sample size of 236.

Missing Data

A general rule of thumb is that if less than 5% of data is missing, mean substitution can be used, and if over 5% of data is missing, mean imputation should be used (Meyers, 2005). About 0.1% of cases were missing, therefore, mean substitution for the corresponding items was used.

Statistical Assumptions

Normality. Statistical normality tests, such as the Shapiro-Wilk test are sensitive to large sample sizes, as they quickly become over-powered; meaning the result of these tests is likely to be significant (i.e., suggesting the data are not normally distributed), even with minor normality deviations (Meyers, 2005). As such, the normality of the residuals was assessed through a visual inspection of histograms, and Q-Q plots. Some variables appeared to have normally distributed residuals, but a majority showed some indications of non-normality (i.e., skewness on the histogram, point deviation from QQ plot line of best fit).

Homogeneity of Variance. Homogeneity of variance was visually examined using residual plots (i.e., x = predicted value, y = residual). Since this study used a between-groups model, the variability of residuals was examined for each group. Similar to normality – there was some heterogeneity among groups for the respective outcome variables, but overall, the variances for most variables were similar across conditions.

Outliers and Influence. Univariate outliers were noted by analyzing the box plots – data points above or below the upper/lower limit were considered univariate outliers. The upper and lower limits were identified as any points that had a *z* score above or below ±1.96 (i.e., two standard deviations above or below the mean). Seven variables had univariate outliers, all of which were upper limit outliers. To assess for multivariate outliers, Malahanobis distance was calculated. Five cases were identified as being

significant ($p < .001$) multivariate outliers. Participants who were identified as being significant outliers ($n = 6$) were removed. The resulting sample consisted of 230 participants.

Univariate outliers were not changed or transformed in any way. Instead, the influence (i.e., the combination of outliers in the outcome variable and presence of odd values in the predictor variable) was assessed using Cook's distance. This statistic measures how much the outcome will change if the i^{th} person is removed. Cook's distance is plotted against the identification number, in order to help identify any point that have unusually high influence. Common guidelines recommend that cases with a Cook's distance greater than 1 are considered as a highly influential data point (Cook & Weisberg, 1982). There were no participants on any outcome variables that had a Cook's distance greater than 1, thus further investigation was not warranted.

Choosing the Mean Over the Median

Overall, testing the assumptions revealed that the data did not perfectly meet the assumptions of ANOVAs. One option was to transform the data (e.g., using a log transformation), however, some statisticians suggest that transforming your variables to make them normally distributed is unnecessary (Babyak, 2004). Instead, it may be more beneficial to use statistical analyses that work with the raw data, for example, using analyses that use the median, as opposed to the mean, since medians are more robust to non-normally distributed data and extreme scores. However, after compiling all the information together (i.e., no extreme normality or homogeneity of variance concerns, multivariate outliers deleted, no cases of extreme influence, mean and median are similar– see Table 1), there is a strong argument to continue using the mean for all subsequent analyses, as planned.

Descriptive Statistics

Please refer to Table 2 for a list of sample demographics by condition, and table 3 for the means and standard deviations on the LCRs by condition. For each demographic variable (i.e., gender, age, ethnicity, marital status, year of study, major) and baseline measure (i.e., the two LCRs), one-way

ANOVAs determined that there were no significant differences of any baseline demographic variables across conditions ($p > .05$). There were also no significant baseline differences on the LCR or the LCR-SH across conditions ($p > .05$). Therefore, these variables were not used as covariates in subsequent analyses.

Table 4 provides the Cronbach's alpha, means, and standard deviations for the post-randomization variables (except for the RS, which was excluded from analyses due to poor reliability in the current sample), by condition.

A Priori Exploratory Analyses: Differences in Stigma Between Conditions

To assess our primary and secondary hypotheses, ten 2 (NSSI present/absent) × 3 (disorder – BPD, PTSD, DEP) factorial ANOVAs were conducted to assess the differences in stigma components between conditions. Stigma was the response/outcome of interest, and each factorial ANOVA assessed a specific stigma response as measured by the AQ-27 subscales: namely, beliefs of blame and danger, feelings of anger, fear, and pity, desires to help, avoid, segregate, and coerce the individual, and desires to maintain social distance from the individual depicted in the vignette. The FDR correction was used to correct for the number of analyses conducted.

Main Effects of Disorder

There were no differences in blame, pity, desire to help, desire to avoid, desire to coerce, and desire to social distance across disorder conditions. However, there were four significant main effects of disorder for anger: $F(2, 224) = 28.47$, $p < .001$, dangerousness: $F(2, 224) = 37.20$, $p < .001$, fear: $F(2, 224) = 23.00$, $p < .001$, and segregation: $F(2, 224) = 5{,}84$, $p = .003$. For anger, dangerousness, and fear, all disorder conditions significantly differed from each other, $p < .001$ (Figure 1). Specifically, respondents felt significantly more anger towards the individual depicted as having BPD than PTSD (*M difference* = 3.01, *SE* = 0.77, $p < .001$) and depression (*M difference* = 5.60, *SE* = 0.74, $p < .001$).

Respondents also felt significantly more anger towards the individual in the PTSD vignette compared to the depression vignette: *M difference* = 2.59, *SE* = 0.71, $p < .001$. Similarly, respondents viewed the individual with BPD as more dangerous than the individual with PTSD (*M difference* = 3.01, *SE* = 0.79, $p < .001$) and the individual with depression (*M difference* = 6.49, *SE* = 0.76, $p < .001$). Respondents also believed that the individual with PTSD was significantly more dangerous than the individual with depression: *M difference* = 3.49, *SE* = 0.73, $p < .001$. The same between-group differences were found for the fear variable. Specifically, those who received the BPD vignette reported more fear towards this individual than those who received the PTSD vignette (*M difference* = 2.70, *SE* = 0.81, $p < .001$) and those who received the depression vignette (*M difference* = 5.26, *SE* = 0.78, $p < .001$). Individuals also reported significantly more fear in the PTSD condition than the depression condition (*M difference* = 2.56, *SE* = 0.75, $p < .001$. For the segregation variable, only the BPD condition significantly differed from the DEP condition: *M Difference* = 2.43 (*SE* = .69), $p < .001$.

Overall, the results suggest that participants endorsed the most stigma towards the BPD vignette, followed by the PSTD vignette, and finally the DEP vignette. This is mostly in line with our hypothesis that the BPD vignette would receive the most stigmatization, followed by the PTSD vignette, and then the depression vignette.

Main Effects of NSSI

There was one significant main effect of NSSI presence for the anger variable: $F(1, 224) = 10.89$, $p = .001$. Respondents felt more anger toward all disorders when NSSI was absent (*M* = 9.55, *SD* = 5.27), compared to when NSSI was present (*M* = 7.51, *SD* = 4.88). All other stigma components (blame, pity, help, dangerousness, fear, avoidance, segregation, coercion, desire to social distance) did not differ between NSSI presence conditions. These findings are not in line with our hypothesis that the NSSI condition would be more highly stigmatized, compared to the non-NSSI condition.

Interaction Effects

There were no significant interaction effects. For the response variable blame, we did note that the interaction effect was very close to the FDR cut-off for significance (cut-off value: $p = .010$): $F(2,224) = 4.41$, $p = .013$.

Post-Hoc Secondary Analyses

NSSI Familiarity Predicting Differences in Anger Based on NSSI Presence

As described above, only one stigma variable (anger) differed according to NSSI condition. Contrary to our hypothesis, participants reported *less* anger in the NSSI presence condition, compared to when NSSI was absent. It is unclear why the presence of NSSI decreased levels of anger; one reason may relate to participants' familiarity with NSSI. Familiarity with mental illness has been found to decrease levels of stigmatization (e.g., Chung et al., 2020; Couture & Penn, 2003; Pullen et al., 2022), and it is therefore plausible that the same relationship exists within the scope of NSSI.

To examine this possibility further, we conducted a regression analysis, where the NSSI condition (present/absent), LCR-SH total score, and the interaction between these two variables was used to predict anger. Refer to Table 6 for the results of the regression. Overall, only the NSSI condition significantly predicted anger scores. The interaction between NSSI familiarity and NSSI condition yielded a marginally significant interaction (Table 7). This suggests that LCR-SH may predict anger scores differently depending on the NSSI condition received. The overall model significantly predicted anger scores: $F(3, 226) = 8.22$, $p < .001$, with the criterion variables overall accounting for 9.8% of variance in anger scores.

Since there was a marginally significant interaction, we decided to conduct a sub-group regression analysis, where the total LCR-SH score was used to predict anger using data from the condition where NSSI was present. In this subgroup, NSSI familiarity, as measured by the LCR-SH, significantly predict anger scores: $F(1, 116) = 16.17$, $p < .001$ (Table 7). Familiarity with NSSI

accounted for 12.2% of the variance in anger scores for this group, and suggests that as NSSI familiarity increases, anger decreases. This may suggest a link between NSSI familiarity and stigma response.

Predicting The Cognitive-Emotional-Behaviour Pathway

The attribution theory of stigma (Corrigan, 2000) suggests that stigma follows a cognition-emotion-behaviour pathway. This means that the cognitive components (i.e., stereotypes – e.g., dangerousness) predict the emotional experiences (i.e., prejudices – e.g., anger), and then the emotions predict the behaviours acted upon (i.e., discriminatory – e.g., segregation). Through post-hoc analysis, we were interested to determine whether the variables that significantly differed among disorder conditions (i.e., dangerousness, anger, fear, and segregation - Figure 1) could predict each other, as expected based on the attribution theory (Corrigan, 2000). Specifically, we looked at whether the stereotype (dangerousness) could predict the affective responses (anger or fear), and whether either of the affective responses could predict the discriminatory behaviour (segregation). To do this, four stepwise linear regressions were calculated.

In the first two regressions, dangerousness served as the predictor variable, and anger and fear served respectively as the criterion variables. These analyses were conducted to parallel the first portion of the attribution theory pathway (i.e., a stereotype predicting an affective response). In the third and fourth regressions, anger and fear served respectively as the predictor variables, with segregation being the criterion variable. These analyses were inspired by the second portion of the attribution theory pathway: an emotion predicting a discriminatory behaviour.

To conduct each regression, the LCR variable was entered in the first step, followed by the predictor variable (as above) in the second step, and then an interaction term in the third step. We created an interaction term comprised of disorder × respective predictor variable; as the disorder variable on its own was not of interest as a predictor, we chose to run analyses with one main effect (the respective

predictor – dangerousness, anger, or fear) and one interaction effect. If the interaction term was significant, the regression model for each respective disorder condition was explored.

Dangerousness Predicting Anger. Table 5 summarizes the final model. In step 1 only the LCR was included as a predictor variable, and it did not significantly predict anger. In step 2, dangerousness significantly predicted anger: $F(2, 227) = 128.01$, $p < .001$. The difference in R^2 between step 1 and 2 was significant: F *change*$(1, 227) = 248.35$, $p < .001$ (R^2 *change* = .51). In step 3, the interaction term (between disorder and dangerousness) was added as a predictor variable. This model still significantly predicted levels of anger: $F(3, 226) = 85.78$, $p < .001$, but did not produce a significant change in variance explained, $p = .283$, R^2 *change* = .002. The final model accounted for 53.2% of the variance in anger scores. These data suggest that as perceptions of dangerousness increase, feelings of anger also increase, irrespective of disorder.

Dangerousness Predicting Fear. Table 5 summarizes the final model. In step 1 (LCR as the only predictor), the LCR did significantly predict fear: $F(1, 228) = 5.09$, $p = .025$, but only accounted for 0.05% of the variance in fear scores. Similar to the previous regression, adding dangerousness as a predictor in step 2 improved the predictive model significantly: $F(1, 227) = 1242.08$, $p < .001$, R^2 *change* = .83. The second model (LCR and dangerousness as predictors) significantly predicted fear: $F(2, 227) = 647.44$, $p < .001$. In the third step, the interaction between dangerousness and disorder was added to the model. The regression was still significant: $F(3, 226) = 428.57$, $p < .001$, but did not produce a significant *F change* from step 2, $p = .116$, R^2 *change* = .002. The final model accounted for 85.1% of the variance in fear scores, such that increases in dangerousness predicted increases in fear toward the individual depicted in the vignette.

Anger Predicting Segregation. Please refer to table 5 for a summary of the final regression model. The LCR did not significantly predict segregation scores in step 1. In step 2 anger significantly predicted segregation desires: F *change*$(1, 227) = 97.78$, $p < .001$, R^2 *change* = .296. Overall, the second

model significantly predicted segregation scores: $F(2, 227) = 51.51$, $p < .001$. Similar to the two multiple regressions above, the addition of the interaction variable (anger x disorder) in step 3 did not significantly improve the predictive ability of the model, $p = .784$, R^2 *change* = .000. Nonetheless, the final model still significantly predicted segregation scores $F(3, 226) = 34.23$, $p < .001$, and accounted for 31.2% of the variance in outcome scores. Again, this suggests that as anger, participants' desire to segregate the individual depicted in the vignette increases regardless of disorder (Table 5).

Fear Predicting Segregation. The LCR did not significantly predict segregation scores in step 1. Again, in step 2, adding fear made the overall model significantly predictive of segregation desires: $F(2, 227) = 127.62$, $p < .001$. Indeed, there was a significant improvement in the model from step 1 to step 2: *F change*$(1, 227) = 247.59$, $p < .001$, R^2 *change* = .513. Adding the interaction variable between disorder and fear in step 3 did not significantly change the model, $p = .062$, R^2 *change* = .007. The overall model, however, was still significantly predictive of segregation desires: $F(3, 226) = 87.20$, $p < .001$. This model accounted for 53% of the variance in segregation scores. The results in Table 5 suggest that as feelings of fear increase toward the individual depicted in the vignette, desires to segregate this individual increase as well; this is not dependant on disorder presented.

Discussion

The primary purpose of the present study was to investigate the intersectional stigma of MI and NSSI. Specifically, we wanted to investigate whether NSSI presence would enhance the endorsement of MI public stigma. The secondary aim of this research was to contribute to the MI stigmatization literature by directly comparing the stigma of different disorders to each other (BPD, PTSD, depression). Using an exploratory 2 (NSSI presence) x 3 (disorder) ANOVA model, we hypothesized i) vignettes depicting NSSI would have higher levels of stigma endorsement (regardless of disorder), and ii) stigma endorsement would depend on the disorder presented (highest to least stigma endorsement: BPD, PTSD,

DEP). The third hypothesis aimed to investigate the differences in perceived recovery between NSSI conditions, however, this hypothesis could not be addressed due to scale reliability issues.

The primary hypothesis was not supported by the results. For most variables (i.e., blame, pity, desire to help, beliefs of dangerousness, fear, desire to avoid, segregate, coerce and desire to socially distance), there were no differences in stigmatization between the conditions where NSSI was or was not depicted. This means that for the aforementioned indicators of stigma, stigma did not differ when NSSI was present or absent. The affective response of anger, however, did differ by NSSI presence. Namely, respondents reported *less* anger toward those who were depicted as self-harming, than those who were not described to be engaging in self-harm. There were also differences in stigma between disorders for the anger, dangerousness, fear, and segregation stigma variables, with the data supporting the direction of the hypotheses (i.e., BPD stigmatized the most, then PTSD, then depression). For example, respondents rated those with BPD as the most dangerous, PTSD as being moderately dangerousness, and depression as least dangerous.

The Stigma of NSSI

In the present study, NSSI presence had no impact on most stigma indicators (i.e., blame, pity, desire to help, beliefs of dangerousness, fear, desire to avoid, segregate, coerce and desire to socially distance). There was one exception: the affective response of anger. Namely, respondents reported *less* anger toward those who were depicted as self-harming, than those who were not described to be engaging in self-harm. Thus, our primary hypothesis was not supported. These findings are unexpected, as based on previous literature (e.g., Burke et al., 2018; Hamza et al., 2021; Long, 2018; Veysey, 2014), we hypothesized that those with an MI depicted as self-harming would be subjected to additional stigma, above and beyond what one would experience just from MI stigmatization. However, of the ten stigma variables, only anger differed significantly between NSSI presence conditions, but in the opposite direction than expected.

It is unclear why the presence of NSSI did not enhance MI stigma. One possibility is that our society does not see NSSI as a separate entity, but rather as a part of MI. Specifically, the label of "mental illness" may already encompass NSSI behaviours, so that when NSSI is present, the stigma endorsed toward the NSSI is already accounted for by the stigma endorsed for the MI generally. Indeed, in the *DSM-5* (APA, 2013), NSSI is only mentioned as a symptom of other MI's (e.g., a symptom of BPD). Nonsuicidal self-injury disorder (NSSID) is also classified as a disorder for future investigation, but not yet widely accepted. In the DSM-5-TR (APA, 2022), the views remain the same. Suicidal behaviour and NSSI have been added as codes in the category of "other conditions that may be a focus of clinical attention" (i.e., behaviours of interest that may affect an individual's MI progression), but NSSID still remains a disorder for future evaluation (APA, 2022). As such, for now, our diagnostic manual supports the idea that NSSI is not its own entity, but instead a symptom of MI. Therefore, when NSSI is thought about within the context of MI (i.e., as a symptom of an existing MI), the overall stigma endorsed may be attributed to the overall MI, not the NSSI, since the NSSI is seen as a symptom of the disorder. In other words, perhaps when NSSI is mentioned in the context of MI, it is not viewed as a whole "trait" that may be stigmatized (i.e., as suggested by Goffman (1963)), but instead, as a part of the MI "trait". Another consideration for the present study is that in the "NSSI absent condition", it was not explicitly stated that NSSI did not occur. Therefore, it is also possible that participants assumed that NSSI was occurring, even though it was not mentioned.

Research on the sole stigma of NSSI/self-harm is also relatively scarce. Therefore, it is hard to employ other literature to help us understand why differences were seen in anger between NSSI conditions. For example, only one study has used a similar methodology (i.e., comparing NSSI to a "non-NSSI" condition) to the present study. Burke et al. (2018) compared the stigma of NSSI scarring to tattoos (intentional disfigurement) and scarring from non-intentional disfigurement. They found that respondents had a higher desire to social distance and had more negative attributions towards NSSI,

compared to the other two conditions. This study did not explicitly assess anger, but generally, the results of our study do not parallel the ones by Burke et al. (2018). Our different findings may be due to the use of different questionnaires (e.g., Burke and colleagues used the Behavioural Intentions Questionnaire; Triandis, 1977), the use of different research designs (i.e., a repeated measures model versus a between groups model), and differing uses of a control condition (i.e., another form of scarring versus NSSI not explicitly stated).

To our knowledge, no other studies have used a similar methodology to the current one when looking at anger related to NSSI. The studies that have examined NSSI stigma have instead often manipulated a variable (e.g., responsibility, gender, controllability) and compared the stigma of NSSI between these conditions. Therefore, direct comparisons between the extant literature and the current study are difficult to make. In the studies that have used these methods (e.g., Lloyd et al., 2018; Urquhart Law et al., 2009), feelings of anger toward the individual depicted as engaging in NSSI were higher than in the current study (i.e., *M range:* 7.51-13.2 in other studies versus *M range* for NSSI condition: 5.55 – 10.86). Although direct statistical comparisons cannot be made, one can hypothesize that the reason these two studies were not consistent is because blame/responsibility for those who self-harmed was much lower in the present study. Indeed, according to the attribution theory of stigma (Corrigan, 2003), a belief that one is responsible/to be blamed for their stigmatized trait will lead to greater feelings of anger towards the stigmatized trait. When comparing other literature, we see that other studies have higher levels of blame than the present study (i.e., *Median range* = 8-11 (Urquhart Law et al., 2009) or *M* = 12.15 (Lloyd et al., 2018) versus *M range* for NSSI condition = 6.47 - 9.00). Therefore, it is plausible that blame/perceptions of responsibility were not high enough in the current sample to elicit angry feelings towards the individual described in the vignette. Other studies (e.g., Nielsen & Townsend, 2018) supported the link between blame and anger, but could not be directly compared to the current study due to the lack of information reported.

Based on the attribution model (Corrigan et al., 2003) and the aforementioned studies, it would make sense to speculate that since the non-NSSI condition had higher levels of anger, this condition too should have higher levels of blame. Collapsing across disorder conditions, however, the opposite is true: blame was higher in the NSSI condition ($M = 8.14$ versus $M = 7.73$). In fact, there was a marginally significant interaction of blame, where for the BPD and DEP conditions, blame was higher when NSSI was present, but for the PTSD condition, blame was lower when NSSI was present. Therefore, only in the PTSD condition do we see higher blame and anger in the postulated direction. Overall, however, it is unclear *why* these data did not support the causal attribution pathway (Corrigan, 2000), such that high blame in the NSSI condition did not lead to higher anger, relative to the non-NSSI condition. To our knowledge, no other research has been published that can help us answer this question.

Familiarity with NSSI

Some literature has found that the public's perceptions of NSSI are not always negative. In some samples, positive responding (e.g., sympathy, desire to help) have been more prevalent than negative attitudes (Newton & Bale, 2012; Nielsen & Townsend, 2018). This bears the question whether some other, non-measured, characteristics of the sample could explain the lack of additive stigma in the MI and NSSI conditions. For example, comfort with NSSI (Hamza et al., 2021), and empathy/sympathy toward NSSI (Radovic & Hasking, 2013) may act to decrease levels of stigmatization. Moreover, knowledge about NSSI is another factor which may decrease the stigmatization of NSSI. Indeed, research has found that more knowledge about NSSI is associated with positive attitudes about NSSI in healthcare providers, such as psychologists, social workers, psychiatric, medical, mental health, and emergency nurses (Muehlenkamp et al., 2013; Ngune et al., 2021), and educational stakeholders (particularly for student-staff; Hamza et al., 2021). Unsurprisingly, interventions aimed at enhancing NSSI knowledge have led to improved perceptions of NSSI (Gibson et al., 2019; Muehlenkamp et al., 2009). Based on this literature, we wondered whether overall familiarity with self-harm could predict

one's degree of anger toward the individual depicted in the vignette. A post-hoc regression analysis was conducted to see whether familiarity with NSSI (via the LCR-SH), NSSI condition, and their interaction could predict anger scores in the total sample. Only the NSSI condition could significantly predict anger scores. However, the interaction between NSSI condition and LCR-SH was marginally significant. This may suggest that familiarity with NSSI may predict anger scores differently, depending on group status (i.e., whether NSSI was depicted as occurring or not). Due to the marginally significant interaction, a sub-group analysis was conducted to see whether LCR-SH could significantly predict anger scores only in the NSSI group. As expected, NSSI familiarity predicted anger scores in this subgroup, such that as familiarity increased, anger decreased. This may support the idea that familiarity with self-harm may attenuate stigma toward NSSI.

To conclude, the results of this current study suggest that MI and NSSI stigma do not act in an intersectional fashion. Indeed, for most types of cognitive, affective, and behavioural stigma, there is no evidence that suggests that the presence of NSSI increases MI stigma. In fact, the presence of NSSI when one has a MI may decrease certain types of stigma (i.e., anger). If these findings are replicated in future research, they will have important implications in terms of seeking help. Oftentimes, those who have engaged in NSSI practices express a fear of disclosing their self-harm (practices and other indicators, such as scars), due to a fear of being stigmatized (Ammerman et al., 2020; Fox et al., 2021; Klineberg et al., 2013; Simone & Hamza, 2020; Staniland et al., 2021; Staniland et al. 2022). If these results continue to hold true, this may suggest that NSSI itself is not additionally stigmatized, when disclosing a MI. Perhaps those wanting to disclose their diagnosis (particularly BPD, PTSD, or depression) and NSSI may feel slightly more comfortable disclosing their MI/NSSI with others, if they understand that they will not be doubly stigmatized. Much more research is needed to replicate these findings, while also exploring the possible intersectionality with MI and NSSI in other disorders.

Disorder-Dependent Stigmatization

The secondary hypothesis about differences in stigmatization among BPD, PTSD, and DEP, was partially supported. Although most stigma measures did not significantly differ between these three conditions, one cognitive (dangerousness), two affective (fear, anger), and one behavioural (segregation) measures of stigma differed between the three disorders. Specifically, individuals perceived the individual depicted in the BPD vignette as more dangerous, while also feeling more anger and fear toward this individual, compared to the other two conditions. Those receiving the PTSD vignette also endorsed greater stigma on all three aforementioned variables, compared to those who read the depression vignette. Finally, individuals who received the BPD vignette also had a greater desire to segregate this individual, compared to the depression condition.

These findings evidence the idea that stigma is a multifaceted concept. Frequently, researchers and laypeople, alike, use the term "stigma" broadly (including in the current paper) to mean different things. As we see from the current study, if we say that BPD is stigmatized more than PTSD and depression, and PTSD is stigmatized more than depression, we draw conclusions (based on our own definitions of stigma), which may not be supported. Instead, individuals should be more wary and specific with the terms that they use; for example, in the current study, it is more precise to say that the respondents in this study perceived an individual with BPD as more dangerous than an individual with PTSD or depression, and that the sample also viewed the individual with PTSD as being more dangerous than the person with depression. Therefore, this research suggests that talking about "stigma" broadly may lead to inaccurate conclusions by the reader that are not supported.

This study contributes directly to the extant literature that investigates the stigma of specific MIs. To our knowledge, this is the first study to directly compare the stigma of BPD, PTSD, and depression. Therefore, no direct comparisons can be made to the literature about the differential severity of stigma seen across these disorders. One study, however, compared respondents' feelings toward obtaining a

diagnosis of six different disorders: BPD, MDD, PTSD, paranoid PD, anxiety disorder, and antisocial PD (Celaire & McDermott, 2015). Focusing on the disorders of interest, respondents reported that they would feel significantly more upset, misunderstood, and afraid of receiving a BPD label, compared to MDD or PTSD. Surprisingly, they also reported feeling this way more with a MDD diagnosis, than a PTSD diagnosis. Additionally, they stated that they would be more confused when receiving a diagnosis of BPD than either disorder (but MDD and PTSD did not significantly differ from one another). Finally, the sample reported that they would feel more misunderstood and angrier if they received a BPD diagnosis, compared to MDD, and that they would feel more uncomfortable, burdened, anxious, and vulnerable with a BPD diagnosis, compared to a PTSD diagnosis (Celaire & McDermott, 2015). In terms of BPD comparisons, these findings align with the findings of the current study, suggesting that BPD is more stigmatized than the other two disorders. In fact, these researchers have suggested that the label of BPD may have possible iatrogenic effects. In terms of the relationship between depression and PTSD, however, the opposite relationship than the one in this study was seen, wherein the label of MDD was viewed as significantly more negative on certain indicators, than PTSD (Celaire & McDermott, 2015). Note that Celaire and McDermott looked at the function of the diagnostic label, not the diagnostic criteria, so this may explain the why results are not fully parallel. Since Celaire and McDermott's study is the only one that has directly compared the stigma of all three disorders, the focus will now be turned to explore the literature which has directly compared two out of three of the disorders in question. These findings may be extrapolated to help us build conclusions about how the current project fits within the scope of the wider literature.

Comparing BPD and Depression

Salpietro (2017) directly compared the stigma of BPD, MDD, and generalized anxiety disorder to one another, and found no differences in stigma between BPD and MDD. Our results do not align with the findings of this study, but Salpietro only calculated one total stigma score from the AQ-27, instead of

using the nine recommended subscales, as was done in the present study. It is plausible that if Salpietro (2017) conducted her analyses by using the subscales of the AQ-27, significant differences in stigma may have been found. Opposingly, McKenzie et al. (2022) conducted a systematic review comparing healthcare providers' stigma endorsement toward BPD compared to other MIs, most commonly, MDD or depression. Our results were consistent with the findings of the review, which found that healthcare providers reported more anger towards those with BPD, along with a greater belief that these individuals are dangerous. Moreover, other studies also demonstrated that BPD is stigmatized more than depression, when stigma is measured in terms of rejection, negative attitudes, recovery expectations, hostility, dominance, and detachment. (McKenzie et al., 2022). Our findings bear support to these claims.

Comparing BPD and PTSD

As trauma usually underlines both BPD and PTSD, some suggest that complex PTSD (cPTSD) may be a better label for BPD, due to the lesser degree of stigmatizing connotations (Kulkarni, 2017). Various studies have examined the differences in stigma endorsement towards BPD and PTSD/cPTSD, where the vignettes are described in the same way, but only the diagnostic label is different, in both samples of clinicians and students. Clinicians endorsed greater beliefs of blame (Miller, 2014), a worse perceived working alliance (Calvert, 1997; Miller, 2014), and beliefs that there will be greater levels of negative countertransference with a BPD client than a PTSD client. Moreover, laypeople agreed that the diagnostic label of BPD is viewed in a more pejorative manner than PTSD/cPTSD, despite similarities across symptom profiles (Giacalone, 1997; Walthall, 2013). In the current study, however, we did not provide any diagnoses, and still found that the symptoms of BPD were more stigmatized than the ones of PTSD. Although the research base is small, the current research provides a good starting point to evidence the claim that the diagnostic label and the symptoms of BPD are indeed more stigmatized than PTSD.

Comparing PTSD and Depression

The literature comparing the stigma of PTSD to the stigma of depression is equivocal. For example, one study found that compared to depression, respondents rated PTSD as being less likely to be discriminated against (Reavley & Jorm, 2011). Moreover, in a multi-sample study, Arbanas (2008) found that attitudes toward PTSD and depression were similar for most groups, except for two, which had greater stigmatizing attitudes toward PTSD than for depression. Note, however, that stigma was measured univariately, and that more group differences may have existed if the components of stigma were teased apart. Another study found that medical doctors and lay people did not stigmatize the diagnostic label of PTSD and depression differently, but that nurses endorsed greater stigma toward the diagnosis PTSD than depression (Arbanas et al., 2019). These studies show that there is ambiguity in the literature that does exist. Namely, it is unclear whether PTSD is more stigmatized than depression, or not. In the current study, PTSD was only stigmatized more than depression on *some* indicators of stigma (i.e., danger, anger, and fear). Contextualizing the findings from the current study into the published literature, it may be the case that PTSD is more stigmatized than depression only on some facets of stigma, but not all. The relationship between the stigma of these two disorders is unclear, however, researchers may note that measuring stigma univariately may conceal the fact that differences between the two disorders may exist. As such, it is perhaps more appropriate to measure stigma using multiple variables when comparing these two groups. Overall, the findings of this current study may fit in with the broader literature, but more research is needed to confirm which differences in stigma endorsement exist, if any.

Mental Health Literacy and Disorder-Specific Stigmatization

One may speculate that the differences we see in stigma among disorders may be a function of the commonality of the disorder – the prevalence and public awareness of depression and PTSD are higher than for BPD. Moreover, our society tends to greatly discuss common disorders, like anxiety and

depression, leading to a normalization of these disorders. Greater knowledge and normalization of common disorders, such as depression, may enhance one's mental health literacy (MHL) toward these disorders, which then may be used to explain the lower levels of stigmatization to these disorders.

Broadly, MHL is defined as "the knowledge and beliefs about mental disorders which aid their recognition, management or prevention," (Jorm et al., 1997). MHL generally encompasses a breadth of knowledge about various MIs. However, in our society, a depth of knowledge for certain disorders seems to be lacking. For example, Furnham et al. (2015) employed a vignette identification task where participants were given vignettes either describing schizophrenia, depression, BPD, and comorbid BPD. Accurate identification in the BPD vignettes varied from 0.5% to 4.1%, while proper identification for depression (72.5%) and schizophrenia (65.8%) was much higher; identification of BPD was significantly lower than the other two disorders (Furnham et al., 2015). Aligning with these results, Furnham and Winceslaus (2012) found that only 6.3% of participants could accurately identify BPD, and that most participants attributed all cluster B PD descriptions as "low self-esteem". Additionally, of ten personality disorders (PDs), seven had an accurate identification rate of less than 7% (Furnham & Winceslaus, 2012). Swami and colleagues (2014) found similar results, wherein 69.2% of participants could accurately identify that an individual with a video-based vignette was struggling with depression. In a Canadian sample, 86% of individuals accurately identified a MDD vignette, and 92% of individuals identified a schizophrenia vignette accurately (Gallagher & Watt, 2019) These findings suggest that one component of MHL, recognition, is moderate-high for common disorders, like depression, but remarkably low for uncommon disorders, like BPD, or PDs in general. Therefore, it is plausible that disorder-specific MHL may influence one's attitudes toward that respective disorder (Ring & Lawn, 2019). For example, Krzmieniecki and Gabriel (2021) found that as PTSD knowledge increased, the stigma towards PTSD decreased, while the willingness to socialize with these individuals increased. Additionally, in a sample of veterans, higher PTSD-related MHL was associated with less negative

beliefs about mental health problems and treatments (Williston & Vogt, 2022). To our knowledge, no other studies have investigated the influence of disorder-specific MHL on disorder-specific stigma. Broadly, Salpietro (2017) found that when general knowledge about mental illness recovery was high, negative attitudes towards BPD was lower. Moreover, Slewa-Younan and colleagues (2020) administered a MHL course for Arabic speakers and found that this course helped participants minimize their negative attitudes towards individuals with PTSD (e.g., a decreased desire to social distance). These studies suggest that general MHL may be sufficient to influence negative attitudes of *any* disorders. Opposingly, however, Svensson and Hansson (2015) found that a greater MHL was associated with decreased stigmatizing attitudes towards depression, but not psychosis. Therefore, it is unclear whether broad, but not specialized MHL is sufficient to influence stigma towards specific MIs. A working hypothesis is that there is a cyclical relationship between MHL content and the commonality of disorders. Specifically, the focus of MHL may be on the more common/commonly discussed disorders (e.g., depression, schizophrenia). In turn, the MHL raises our awareness to this set of disorders, but does not address knowledge and misconceptions about uncommon MIs. This raises the question as to whether the MHL content being focused on is expansive enough. Overall, the robustness of the relationship between MHL/disorder-specific MHL and disorder-specific stigma needs to continue to be explored.

Although a paucity of literature exists comparing stigma toward BPD, PTSD, and depression, the literature we can extrapolate from generally aligns with the findings of the present study. Overall, results from most studies support the finding that BPD is significantly more stigmatized than depression. Although the diagnostic label of BPD is evidently more stigmatized than one of PTSD or cPTSD, there is not any literature that has investigated whether the same relationship exists for the diagnostic symptoms. Nevertheless, these findings lend support to our findings that stigma on some indicators is more severe for BPD than PTSD. The relationship between the stigma of depression and PTSD in the current literature is more ambiguous. Some findings parallel the ones from this study, while others do

not. These differences may be due to the type of stigma studied (i.e., the specific indicators), how "stigma" is defined/measured, what trait of the MI is studied (i.e., just the name vs the symptoms), differing samples, and differing methodologies (e.g., vignette descriptions). From the current literature, it is unclear *why* we found that BPD is more stigmatized than PTSD and depression. One possible explanation for the differences of stigma among disorders may be due to MHL. A nascent link between MHL and stigma exists, however, this relationship needs to be evaluated explicitly, both in context of general MHL and disorder-specific MHL. Conceivably, in the future, our society's MHL/disorder-specific MHL will be enhanced, which will hopefully decrease the substantial stigma seen toward less-recognized/common disorders, such as BPD.

Attribution Theory: The Cognition-Emotion-Behaviour Pathway

As a post-hoc analysis, we investigated whether the variables that significantly differed across disorders (i.e., dangerousness, fear, anger, and segregation) could predict each other based on the attribution theory of stigma (Corrigan, 2003). Specifically, we investigated whether dangerousness could predict anger or fear (as per Angermeyer & Matschinger, 2003), and weather either affective response could predict segregation. Corrigan (2000) postulated two pathways relevant to the current study. First, he theorized that perceptions of dangerousness would lead to perceptions that the MI is more controllable, in turn leading to feelings of anger, which then leads to punishment behaviours (Corrigan, 2000). Oftentimes, blame and controllability are used interchangeably in the stigma attribution literature. In the present study, we measured "blame," which was found to have a non-significant effect of disorder (although there was a marginally significant interaction effect). And so was not used to evaluate the pathway between stereotypes and affective responses. Dangerousness did significantly predict levels of anger in the theorized direction. This relationship did not significantly differ across disorders.

The discriminatory behaviours in Corrigan (2000)'s pathways are less well-defined (Johnson-Kwocha, 2021); for example, it is unclear what "punishment behaviours" entail. It is plausible that

segregation measured by the AQ-27 may act as both a punishment behaviour, and an avoidance mechanism (similar to social distance). Corrigan (2003) did specifically state, however, that higher danger leads to higher levels of segregation. In the present study we decided to evaluate the affective response on the behaviour, and found that higher levels of anger predicted higher segregation. These findings support the pathway between danger, anger, and segregation. Notably, there were no differences in these relationships among the three disorders, meaning that although differences existed in the degree of danger, anger, and segregation endorsed for the respective disorders, the predictive relationship among these variables remained the same.

There is also support for a predictive pathway wherein danger predicts fear, in turn predicting avoidance (Corrigan, 2000; Corrigan, 2003). In our study, danger significantly predicted fear similarly across all disorders, thus supporting the first step of this pathway. Of note, however, is that some have questioned whether dangerousness and fear are disparate constructs (Johnson-Kwocha et al., 2021). Indeed, some have chosen to group these two components together in empirical evaluations (Brown, 2008; Johnson-Kwocha et al., 2021). The current findings may support this concept. Dangerousness alone predicted 82.7% of the variance in fear scores (compared to other variables predicting only between 29% - 51% of the variance in the respective outcome variables), and the two variables had a close-to-perfect correlation ($r = 0.92$). This may highlight the need to re-investigate these two constructs, to see whether it may be more psychometrically correct to group these constructs together. For the second part of this pathway, we investigated whether fear predicted segregation. Again, fear significantly predicted segregation, which can be seen as a form of avoidance. For both regression analyses, the results were similar across all disorders. Therefore, these results may suggest that segregation is also seen as a form of avoidance.

Overall, these findings lend support that the cognition-emotion-behaviour pathways theorized by the Attribution Theory. Specifically, that a stereotype can significantly predict an affective response,

which can then significantly predict a discriminatory desire. Interestingly, this relationship holds true across different MIs, even when MIs are rated differently on the individual stigma indicators. Therefore, the dangerousness-anger-segregation and dangerousness-fear-segregation pathways are supported by the findings of this study.

Strengths, Limitations and Future Directions

The primary strength of this study is its' novelty. Specifically, this study was the first study to empirically examine using an experimental method the intersectional stigma of three mental illnesses and NSSI. This study was also the first study to relatively compare the differences of stigma among BPD, PTSD, and depression. Finally, to our knowledge, this study was the first to evaluate the stigma of PTSD caused by a car crash.

Unfortunately, novelty also brings about limitations. A major limitation of this study is that all analyses were exploratory in nature given the relative lack of prior research on which to establish hypotheses and interpretations. Predominantly, readers must be aware that the findings of this study are not conclusive and require replication. Relatedly, the present study looked at the stigma intersection of NSSI and three disorders; the tentative claim that the stigma of NSSI and BPD, PTSD, and depression do not intersect cannot be generalized to other MIs. Another limitation is our use of a student sample; the relationship of stigma among the three disorders also cannot be concluded for the general population. Another limitation of our sample was the high proportion of females (80.0%). Since BPD is a "gendered" disorder (i.e., diagnosis occurs more frequently in women; APA, 2013), it is plausible that the high proportion females influenced the results we saw. Future research should focus on replicating this study using similar and differing, and more representative samples, and different MIs. In this exploratory study the number of outcome variables was high (and therefore needed the be adjusted for), and future studies should also ensure that they only choose a few primary variables of interest (perhaps starting with the ones which were significantly different in the present study).

There are also a few limitations of the current methodology used. One hypothesized reason as to why we did not see the results we were expecting to see (i.e., that NSSI and MI stigma intersects) is because of the "dose" of NSSI given. The descriptions for each vignette used about ten sentences to describe the MI symptoms experienced. Meanwhile, if NSSI was present in the vignette, there was only one sentence added to the end of the vignette. It is plausible that this one sentence was not prominent enough to elicit additional negative attitudes. As this was the last sentence in the vignette, it may also be possible that respondents did not properly attend to this sentence, and thus did not label the individual in the vignette as one who engages in NSSI. Alternatively, in the conditions where NSSI was not present, it was not explicitly stated that the individual does not self-harm. Participants may have assumed that the participant engaged in these behaviours, based on the other descriptors provided. In the current study, we failed to provide any attention checks at the end of the questionnaire, asking the person to i) identify the vignette they just read, and ii) identify whether the vignette described an individual who engages in NSSI. Therefore, future research should aim to increase the dose of NSSI given (e.g., by modelling the vignette based on Lloyd et al., 2018), explicitly state that those in the non-NSSI condition do not self-harm, and implement relevant attention checks at the end of the study.

There were other minor methodological issues that can be easily addressed in future research. For example, in the pre- and post-randomization questionnaires, no attention checks were implemented (e.g., "press 1 if you are paying attention"). This may have decreased the quality of the responses acquired. Additionally, for the LCR-SH, a definition of SH was not provided. As described, there are varying definitions of SH/NSSI, including what SH entails (Newton & Bale, 2012). As such, in future studies, a definition of NSSI should be provided, so that there is no over/under endorsement of familiarity with SH. Alternatively, scales such as the Lund Tolerance Toward Self-Harm Scale (Nilsson et al., 2020) may be administered. Another limitation regarding the scales used in this study is the low internal consistency for some of the (sub)scales (see Table 4). Low internal consistency suggests that these scales may lack

reliability, making it difficult to confidently interpret the findings of this study. Future research should aim to use stigma measures that have higher psychometric properties.

As the primary purpose of this study is to investigate intersectional stigma, it is important to use a model that compliments the research question. Turan et al. (2019) suggest that between-groups self-report comparison models, like the one employed in the current study, may underestimate the stigma endorsed, or may be influenced by social desirability. Although there is currently no recommended best practice for investigating the intersectionality of stigma, Turan and colleagues (2019) propose several methods that may better capture the complexity of this topic, such as the use of moderation models, multilevel models, and latent profile analyses. Once the intersectional stigma of NSSI and MI is further explored (using similar methods to the present study), we recommend the use of these more complex statistical methods. This may be especially crucial, when adding explanatory variables to the model, such as MHL.

Implications

Despite the high co-occurrence of NSSI and MI in the external world, no research has been investigated how these two traits are stigmatized together. As such, this current research contributes new knowledge about NSSI stigma and its intersection with three mental illnesses. Although this study found that the presence of NSSI did not enhance stigma endorsement of BPD, PTSD, or depression, the aforementioned limitations must be addressed in replication studies before coming to any conclusions. Our findings tentatively indicate that on some domains of stigma, the presence of NSSI may slightly attenuate the negative feelings towards the individual. As individuals who engage in NSSI are fearful of seeking help (Ammerman et al., 2020; Fox et al., 2021; Klineberg et al., 2013; Simone & Hamza, 2020; Staniland et al., 2021; Staniland et al. 2022), this research may help inform individuals about the reality of the stigma they may experience.

This research also contributed to the stigma literature of specific disorders, and confirmed that BPD is heavily stigmatized (on some indicators), compared to PTSD, and especially depression. Based on additional literature, it is evident that most healthcare providers have very negative attitudes towards individuals with BPD. This research may therefore have important implications for anti-stigma campaigns or teachings. For example, it may be better for campaigns or school curriculums to focus on specific disorders, as opposed to mental illness overall. Relatedly, if a link between MHL and disorder-specific stigma does exist, these findings must be imbued in any knowledge dissemination projects. Hopefully, these targeted teachings can reduce the stigmatization seen for *all* MIs, not just the more common ones. As a final consideration, our research emphasizes the multidimensionality of the concept of "stigma". In creating these means of knowledge proliferation, individuals should consider that the specific facets of stigma should be addressed and targeted (as opposed to "stigma" as a whole). Overall, this research contributes to the current field, where we are trying to decrease stigma and enhance the quality of life with those who struggle with MI or NSSI.

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Tables

Table 1

Comparing the Mean and Median of All Outcome Variables

Variable	Mean	Median	Difference [a]
AQ-27 Blame	7.93	7.00	0.93
AQ-27 Anger	8.50	7.00	1.50
AQ-27 Pity	16.23	16.00	0.23
AQ-27 Help	8.39	7.00	1.39
AQ-27 Dangerousness	8.58	7.00	1.58
AQ-27 Fear	7.61	6.00	1.61
AQ-27 Avoidance	14.03	14.00	0.03
AQ-27 Segregation	6.52	5.00	1.52
AQ-27 Coercion	11.23	11.00	0.23
SDS	10.08	10.00	0.08

Note: [a]: Difference calculated by subtracting the median from the mean.

Table 2

Descriptive Statistics for Demographic Variables Among Disorder and NSSI Presence Conditions

Demographic	Borderline Personality Disorder				Depression				Post-Traumatic Stress Disorder			
	No NSSI (n = 31)		NSSI (n = 35)		No NSSI (n = 40)		NSSI (n = 49)		No NSSI (n = 41)		NSSI (n = 34)	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Age	24.47[a]	5.84	22.49	5.88	22.50[b]	6.84	21.79[c]	5.49	22.33[d]	6.03	24.29	9.78
	n	%	*n*	%	n	%	n	%	n	%	n	%
Sex												
Female	26	83.9	28	80.0	28	70.0	37	75.5	33	80.5	32	94.1
Male	4	12.9	4	11.4	12	30.0	10	20.4	8	19.5	2	5.9
Other	1	3.2	3	8.6	0	0.0	2	4.1	0	0.0	0	0.0
Prefer not to Answer	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Ethnicity												
White/European	21	67.7	24	68.6	29	72.5	36	73.5	30	73.2	25	73.5
Black	0	0.0	1	2.9	2	5.0	5	10.2	5	12.2	4	11.8
Asian	5	16.1	3	8.6	4	10.0	6	12.2	2	4.9	2	5.9
Hispanic/Latin American	0	0.0	0	0.0	0	0.0	0	0.0	1	2.4	0	0.0
Biracial/Multicultural	1	3.2	2	5.7	0	0.0	1	2.0	0	0.0	1	2.9
Indigenous	3	9.7	4	11.4	5	12.5	1	2.0	3	7.3	1	2.9
Other	1	3.2	1	2.9	0	0.0	0	0.0	0	0.0	1	2.9
Marital Status												
Married/domestic partnership	9	29.0	3	8.6	3	7.5	4	8.2	0	0.0	6	17.6
In a relationship	8	25.8	13	37.1	14	35.0	20	40.8	20	48.8	11	32.4
Single	14	45.2	17	48.6	22	55.0	24	49.0	20	48.8	17	50.0
Divorced	0	0.0	1	2.9	0	0.0	0	0.0	0	0.0	0	0.0
Separated	0	0.0	1	2.9	1	2.5	0	0.0	1	2.4	0	0.0
Widowed	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Other	0	0.0	0	0.0	0	0.0	1	2.0	0	0.0	0	0.0
Year of Study [e]												
1	10	32.3	12	34.3	11	27.5	18	36.7	11	26.8	15	44.1
2	9	29.0	10	28.6	17	42.5	16	32.7	10	24.4	7	20.6
3	6	19.4	10	28.6	8	20.0	6	12.2	12	29.3	4	11.8
4	6	19.4	3	8.6	3	7.5	7	14.3	7	17.1	7	20.6
5+	0	0.0	0	0.0	0	0.0	1	2.0	1	2.4	0	0.00
Major [f]												
Psychology	16	51.6	21	60.0	25	62.5	18	36.7	22	53.7	17	50.0
Non-psychology	15	48.4	14	40.0	15	37.5	31	63.3	19	46.3	16	47.1

Note: a: n = 30, b: n = 38, c: n = 47, d: n = 40, e: Depression/NSSI condition n = 39; Depression/NSSI condition n = 48 & PTSD/NSSI condition n = 33, f: PTSD/NSSI condition n = 33.

Table 3

Descriptive Statistics of the Level-of-Contact Reports and Results of the One-Way ANOVA Across Conditions

Level-of-Contact Report	Borderline Personality Disorder				Depression				Post-Traumatic Stress Disorder			
	No NSSI (n = 31)		NSSI (n = 35)		No NSSI (n = 40)		NSSI (n = 49)		No NSSI (n = 41)		NSSI (n = 34)	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Mental Illness	9.26	2.17	9.51	2.38	8.30	3.14	9.18	2.91	9.56	2.87	9.23	2.74
Self-Harm	8.68	3.41	*8.63*	3.69	8.65	3.02	8.84	3.39	9.49	3.26	8.94	3.05

Table 4

Cronbach's Alpha, Means, and Standard Deviations of Outcome Variables by Disorder and NSSI Presence

Demographic		Borderline Personality Disorder				Depression				Post-Traumatic Stress Disorder			
		No NSSI (n = 31)		NSSI (n = 35)		No NSSI (n = 40)		NSSI (n = 49)		No NSSI (n = 41)		NSSI (n = 34)	
	α	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
AQ-27													
Blame	.69	7.52	3.31	9.00	4.44	7.43	2.81	8.67	4.22	8.20	3.90	6.47	2.78
Anger	.91	12.55	4.55	10.86	5.95	6.66	3.88	5.55	3.01	10.10	5.59	6.88	4.07
Pity	.67	15.10	3.56	16.11	3.67	16.15	3.35	17.10	3.67	16.68	3.30	15.68	3.33
Help	.86	8.90	4.66	9.03	4.44	7.73	3.84	8.04	4.88	9.07	5.03	7.71	4.54
Dangerousness	.89	12.77	5.00	11.46	5. 90	5.50	3.19	5.64	3.48	9.46	5.83	8.59	4.42
Fear	.92	10.81	5.78	10.29	6.14	5.13	3.11	5.39	3.59	8.37	5.35	7.18	4.68
Avoidance	.67	13.19	5.60	14.97	5.37	13.43	5.48	14.33	4.86	14.17	5.64	14.00	4.62
Segregation	.85	6.71	3.84	8.94	5.23	5.63	3.53	5.33	3.38	6.96	5.15	6.09	3.97
Coercion	.60	10.68	3.87	13.43	4.33	10.35	4.81	11.20	4.45	10.99	5.03	10.82	4.71
SDS	.88	10.35	4.18	10.86	4.80	9.33	3.55	9.57	4.25	10.80	4.37	9.79	4.31

Table 5

Results of Final Regression Models Predicting Fear, Anger, or Segregation

Model 3	*B*	*SE*	*t*	*p*	*[95% CI]*
Dangerousness Predicting Anger					
Constant	3.33	0.95	3.50	<.001	[1.45, 5.21]
LCR	-0.08	0.09	-0.96	.337	[-0.25, 0.09]
Dangerousness	0.69	0.05	15.31	<.001	[0.60, 0.78]
Disorder x Dangerousness	-0.24	0.22	-1.08	.283	[-0.67, 0.20]
Dangerousness Predicting Fear					
Constant	0.75	0.54	1.38	.169	[-0.32, 1.82]
LCR	-0.08	0.05	-1.67	.097	[-0.18, 0.02]
Dangerousness	0.88	0.03	34.50	<.001	[0.83, 0.93]
Disorder x Dangerousness	-0.20	0.13	-1.58	.116	[-0.45, 0.05]
Anger Predicting Segregation					
Constant	3.44	0.98	3.51	<.001	[1.51, 5.37]
LCR	-0.09	0.09	-1.03	.304	[-0.27, 0.08]
Anger	0.46	0.05	9.71	<.001	[0.37, 0.55]
Disorder x Anger	-0.06	0.22	-0.27	.784	[-0.50, 0.38]
Fear Predicting Segregation					
Constant	2.14	0.79	2.70	.007	[0.58, 3.71]
LCR	-0.03	0.07	-0.41	.686	[-0.17, 0.11]
Anger	0.62	0.04	15.85	<.001	[0.54, 0.70]
Disorder x Fear	0.34	0.18	1.88	.062	[-0.02, 0.70]

Table 6

NSSI Condition (Present vs Absent), LCR-SH, and Their Interaction Predicting Anger

NSSI	*B*	*SE*	*t*	*p*	*[95% CI]*
Constant	10.77	1.39	7.77	<.001	[8.04, 13.51]
NSSI Presence	-2.09	0.65	-3.21	.002	[-3.37, -0.81]
LCR-SH	-0.14	0.15	-0.94	.348	[-0.42, 0.15]
Interaction	-1.22	0.65	-1.86	.064	[-2.51, 0.07]

Table 7

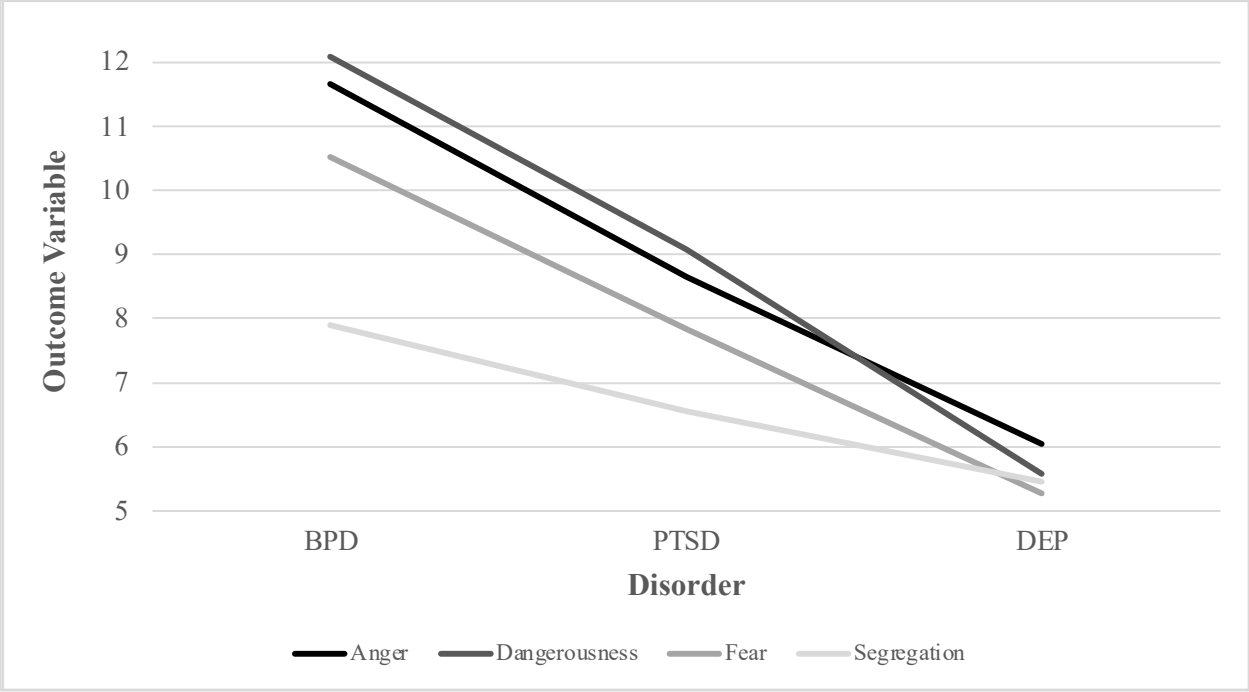
NSSI Familiarity Predicting Anger in Those Who Received the NSSI Present Vignette

NSSI	*B*	*SE*	*t*	*p*	*[95% CI]*
NSSI					
Constant	11.97	1.19	10.08	<.001	[9.62, 14.32]
LCR_SH	-0.51	0.13	-4.02	<.001	[-0.76, -0.26]

Figures

Figure 1

Group Differences by Disorder on Significant Outcome Variables



Note: All groups significantly differ from one another, except for the segregation variable, where only the BPD and DEP conditions differed.

Appendix A: Demographic Questionnaire

Please provide the following information about yourself:

1. What is your age? _____

2. Which gender do you most closely identify with?

☐ Male ☐ Female ☐ Other ☐ Prefer not to Answer

3. What is your ethnicity?

☐Indigenous (First Nations, M*é*tis, Inuit)

☐Asian (South Asian, East Asian, South East Asian)

☐Black/Afro-Caribbean/African

☐Bi-racial/Multicultural

☐White/European

☐Hispanic/Latin American

☐Other (please specify: _____)

4. What is your marital status?

Married, or in a domestic partnership □ Divorced □ Separated □

In a relationship □ Single □ Widowed □

5. What is your year of study? _____

6. What is the name of your major/program? _____

Appendix B: Level-of-Contact Report(s)

Severe Mental Illness:

Please read each of the following statements carefully. After you have read all the statements below, place a check by the statements that best depict your exposure to persons with a severe mental illness.

___ I have watched a movie or television show in which a character depicted a person with mental illness.

___ My job involves providing services/treatment for persons with a severe mental illness.

___ I have observed, in passing, a person I believe may have had a severe mental illness.

___ I have observed persons with a severe mental illness on a frequent basis.

___ I have a severe mental illness.

___ I have worked with a person who had a severe mental illness at my place of employment.

___ I have never observed a person that I was aware had a severe mental illness.

___ My job includes providing services to persons with a severe mental illness.

___ A friend of the family has a severe mental illness.

___ I have a relative who has a severe mental illness.

___ I have watched a documentary on the television about severe mental illness.

___ I live with a person who has a severe mental illness.

Self-Harm:

Please read each of the following statements carefully. After you have read all the statements below, place a check by the statements that best depict your exposure to persons who have self-harmed.

___ I have watched a movie or television show in which a character depicted a person self-harming.

___ My job involves providing services/treatment for persons who self-harm.

___ I have observed, in passing, a person I believe may have harmed themselves.

___ I have observed persons who have self-harmed on a frequent basis.

___ I have self-harmed.

___ I have worked with a person who had self-harmed at my place of employment.

___ I have never observed a person that I was aware had a harmed themselves.

___ My job includes providing services to persons who self-harm.

___ A friend of the family has harmed themselves.

___ I have a relative who has harmed themselves.

___ I have watched a documentary on the television about self-harm.

___ I live with a person who has harmed themselves.

Appendix C: Attribution Questionnaire (AQ-27; Corrigan et al., 2003)

Please read the following statement:

insert disorder vignette here

Now answer each of the following questions about the person described in the paragraph above. Choose the number of the best answer to each question.

1. I would feel aggravated by this person.

1 2 3 4 5 6 7 8 9

not at all very much

2. I would feel unsafe around this person.

1 2 3 4 5 6 7 8 9

no, not at all yes, very much

3. This person would terrify me.

1 2 3 4 5 6 7 8 9

not at all very much

4. How angry would you feel at this person?

1 2 3 4 5 6 7 8 9

not at all very much

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

1 2 3 4 5 6 7 8 9

not at all very much

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

1 2 3 4 5 6 7 8 9

none at all very much

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

1 2 3 4 5 6 7 8 9

not likely very likely

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

1 2 3 4 5 6 7 8 9

not at all very much

9. I would feel pity for this person.

1 2 3 4 5 6 7 8 9

none at all very much

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

1 2 3 4 5 6 7 8 9

no, not at all yes, absolutely so

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

1 2 3 4 5 6 7 8 9

not at all under personal control completely under personal control

12. How irritated would you feel by this person?

1 2 3 4 5 6 7 8 9

not at all very much

13. How dangerous would you feel this person is?

1 2 3 4 5 6 7 8 9

not at all very much

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

1 2 3 4 5 6 7 8 9

not at all very much

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

1 2 3 4 5 6 7 8 9

not at all very much

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

1 2 3 4 5 6 7 8 9

not likely very much likely

17. How much do you think an asylum, where this person can be kept away from their neighbors, is the best place for them?

1 2 3 4 5 6 7 8 9

not at all very much

18. I would feel threatened by this person.

1 2 3 4 5 6 7 8 9

no, not at all yes, very much

19. How scared of this person would you feel?

1 2 3 4 5 6 7 8 9

not at all very much

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

1 2 3 4 5 6 7 8 9

definitely definitely

would not help would help

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

1 2 3 4 5 6 7 8 9

not at all certain absolutely certain

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

1 2 3 4 5 6 7 8 9

none at all very much

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

1 2 3 4 5 6 7 8 9

not at all very much

responsible responsible

24. How frightened of this person would you feel?

1 2 3 4 5 6 7 8 9

not at all very much

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

1 2 3 4 5 6 7 8 9

not at all very much

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

1 2 3 4 5 6 7 8 9

not likely very likely

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

1 2 3 4 5 6 7 8 9

none at all very much

Appendix D: Social Distance Scale (Link et al., 1987)

Based on the description of the individual above, please rate the following statements on the following scale:

0	1	2	3
definitely willing	probably willing	probably unwilling	definitely unwilling

1. How would you feel about renting a room in your home to this person?
2. How about as a worker on the same job as this person?
3. How would you feel having this person as a neighbour?
4. How about as the caretaker of your children for a couple of hours?
5. How about having your children marry someone like this person?
6. How would you feel about introducing this person to a young woman you are friendly with?
7. How would you feel about recommending this person for a job working for a friend of yours?

Appendix E: Recovery Scale (Corrigan et al., 2004b)

Please answer how strongly you agree with the following items, from 1 (strongly disagree) to 9 (strongly agree), with respect to the individual presented in the vignette story.

1. This individual is hopeful about their future.

1 2 3 4 5 6 7 8 9

2. This individual has goals in life.

1 2 3 4 5 6 7 8 9

3. Coping with mental illness is not the main focus of this individual's life.

1 2 3 4 5 6 7 8 9

Appendix F: Vignettes

BPD & No NSSI
Imagine an individual who cannot tolerate being alone, so much so, that they have an intense fear of being abandoned by other people. To combat this feeling, this individual will do anything in their power to ensure that the abandonment from others does not occur (e.g., threatening the other individual). This often leads the individual to having very intense and volatile relationships with close others. Just as their feelings about close others are unstable, this individual also generally has instability with their feelings; they often describe themselves as being an "emotional rollercoaster". Their feelings can change from happiness to extreme sadness within a matter of hours. In addition, this individual often behaves in impulsive manners. Finally, this individual also feels empty, and struggles with their self-image – they are unsure of who they are, and they often will change their goals, values, and aspirations dramatically.

BDP & NSSI
Imagine an individual who cannot tolerate being alone, so much so, that they have an intense fear of being abandoned by other people. To combat this feeling, this individual will do anything in their power to ensure that the abandonment from others does not occur (e.g., threatening the other individual). This often leads the individual to having very intense and volatile relationships with close others. Just as their feelings about close others are unstable, this individual also generally has instability with their feelings; they often describe themselves as being an "emotional rollercoaster". Their feelings can change from happiness to extreme sadness within a matter of hours. In addition, this individual often behaves in impulsive manners. Finally, this individual also feels empty, and struggles with their self-image – they are unsure of who they are, and they often will change their goals, values, and aspirations dramatically.
This individual does not want to die, but often finds themselves engaging in acts of self-harm, like cutting their wrists, which leaves some visible scars.

DEP & No NSSI
Imagine an individual who has been having a depressed mood for most of the day, nearly every day. This individual no longer has interest in activities that used to bring them joy. As well, this individual states that they have been having difficulties with concentration and motivation – basic tasks like washing dishes, to more complex tasks, like their job, are difficult for them to complete. They often find themselves being unable to get tasks done, leading to a disorganized environment and feelings of guilt. As well, this individual feels constant fatigue, and a lack of energy, despite sleeping 14+ hours per day. Recently, close others have noticed that this individual is "sluggish" – they move and talk slowly, like they are in a slow-motion film. Finally, this individual has lost 15 pounds in the past month, because they no longer have an appetite.

DEP & NSSI
Imagine an individual who has been having a depressed mood for most of the day, nearly every day. This individual no longer has interest in activities that used to bring them joy. As well, this individual states that they have been having difficulties with concentration and motivation – basic tasks like washing dishes, to more complex tasks, like their job, are difficult for them to complete. They often find themselves being unable to get tasks done, leading to a disorganized

environment and feelings of guilt. As well, this individual feels constant fatigue, and a lack of energy, despite sleeping 14+ hours per day. Recently, close others have noticed that this individual is "sluggish" – they move and talk slowly, like they are in a slow-motion film. Moreover, this individual has lost 15 pounds in the past month, because they no longer have an appetite. This individual does not want to die, but often finds themselves engaging in acts of self-harm, like cutting their wrists.

PTSD & No NSSI

Imagine an individual who was t-boned by another car three months ago. Both parties were okay, but the individual has experienced a lot of distress following the accident. Specifically, they have repeating, intrusive and unwanted thoughts and dreams about the crash. Occasionally, the individual experiences dissociation (like an out of body experience), where they believe they are reliving the car crash. Since the accident, they have not been able to drive – whenever they have tried, they experience feelings of panic. And so, this individual does everything in their power to avoid having to drive, often asking parents and friends for rides. This individual is also extremely negative, irritable, and can have angry outbursts without being provoked. As well, they feel very detached from others, stating that no one understands what they are going through. Since the accident, this individual has trouble concentrating, feels extreme guilt, and has difficulty sleeping.

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