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Moral Injury, Self-Compassion, and Mental Health

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MORAL INJURY, SELF-COMPASSION, AND MENTAL

HEALTH

BY

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OF

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ABSTRACT

Military veterans are exposed to unique stressors (e.g., combat) that can precipitate the onset of various mental health problems. Morally compromising combat experiences have recently gained empirical and clinical attention, following the increased rates of mental health problems observed in Afghanistan and Iraq veterans. The current investigation aimed to assess the relationship between these morally compromising experiences and various mental health outcomes. Further, it examined the potential protective role of self-compassion in these relationships. Specifically, moderation analyses were conducted to evaluate the interaction between exposure to and intensity of morally compromising experiences and self-compassion on various mental health outcomes. Study findings indicate that self-compassion significantly moderated the relationship between morally compromising experiences and posttraumatic stress disorder (PTSD), depression severity, and deliberate self-harm severity, but not substance misuse. These results highlight the potential clinical utility of self-compassion in military mental health, particularly in the context of morally compromising experiences.

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CHAPTER 1

INTRODUCTION

Mental health is a primary concern among military populations, as an estimated 20-30% of Afghanistan and Iraq veterans have met criteria for posttraumatic stress disorder (PTSD) and/or depression at some point during or after their deployment (Hoge et al., 2004; Thomas et al., 2010). These conditions are further complicated by an increased risk of problematic behaviors, as an estimated 10% of veterans seeking Veteran Affairs (VA) healthcare are being treated for alcohol and/or drug related problems, and approximately 4-14% are engaging in deliberate and non-lethal bodily harm (e.g., cutting; Bryan & Bryan, 2014; Klonsky, Oltmanns, & Turkheimer, 2003). Notably, these mental and behavioral health concerns are associated with a wide array of negative outcomes among military populations, including impairment in functioning (e.g., disruptions in relationships; Monson, Taft, & Fredman, 2009), co-occurring physical health concerns (e.g., chronic pain; Asmundson, Coons, Taylor, & Katz, 2002), and active suicidal ideation, attempts (Bryan, Rudd, Wertenberger, Young-McCaughon, & Peterson, 2015), and completion (Cooper et al., 2005; Leardmann et al., 2013). Moreover, not surprising given the influx in recent military deployments, these mental and behavioral health concerns have been increasing over the course of the past two decades, resulting in dramatic increases in negative outcomes in military populations (e.g., suicide rates; Bachynski et al., 2012). Considering these severe mental health outcomes (i.e., PTSD, depression, self-harm and substance misuse), and their pervasiveness in military populations, it is necessary to understand the unique military stressors that contribute to these mental

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and behavioral health outcomes, as clarifying the nature of the precipitating stressor

can help in identifying important protective factors than can buffer against the

development of these outcomes.

CHAPTER 2

REVIEW OF LITERATURE

Service members are exposed to a wide of range of stressors that have been shown to contribute to the onset and exacerbation of various mental and behavioral health problems. Broadly, these can include life-threatening combat experiences, traumatic grief, operational fatigue, and moral and ethical conflict (Adler, GcGurk, Stetz, & Bliese, 2004). Moral challenges of combat have recently gained empirical attention, as service members are required to navigate moral and ethical ambiguities that occur in the context of these war zone deployments, especially in Iraq and Afghanistan, where alternative methods of warfare (e.g., improvised explosive devices, unmarked combatants) have led to a greater sense of uncertainty and unpredictability that can lead to costly errors (i.e., civilian casualties); coupled with longer and more frequent deployments that have been shown to increase the likelihood of unethical behaviors (Mental Health Assessment Team [MHAT]-V, 2008). The perceived failure to act in a manner consistent with moral standards of acceptable behavior (either accidentally or intentionally), or the exposure to acts that violate behavioral expectations of others, has been shown to lead to various mental health consequences (see Litz et al., 2009). Understanding the unique nature of the precipitating stressor (i.e., navigating moral challenges) can provide a framework for how the stressor contributes to these adverse mental and behavioral outcomes. This knowledge is essential for identifying risk and protective factors that can inform both prevention and treatment efforts.

Moral Injury Framework

The construct moral injury was developed to account for the manifestation of traumatic stressors that involve these moral and ethical conflicts, particularly those that challenge moral belief systems and personal standards of benevolence (Drescher et al., 2011; Litz et al., 2011). Moral injury can develop when there is an inconsistency between an internal standard and an outward behavior. The resulting dissonance can contribute to debilitating inner conflict that can manifest as excessive or inappropriate guilt, shame, self-condemning assumptions, existential or spiritual complications, and self-handicapping, punishing, or isolating behaviors (see Litz et al., 2009).

Experiences that have the capacity to lead to moral injury have been defined as morally injurious events (MIE; Litz et al., 2009; Nash et al., 2013), and broadly include: acts of perpetration (i.e., directly committing a real or perceived moral transgression), betrayal (i.e., perceived deception from leadership or peers), and inaction (i.e., witnessing or failing to prevent a real or perceived moral transgression). Drescher et al (2011) identified MIEs that can occur in a combat environment, which can range from committing, witnessing, or failing to prevent acts of violence that are inappropriate (e.g., harm to civilians), disproportionate (e.g., destruction of property), within-in rank (e.g., military sexual trauma), or accidental (e.g., errors, friendly-fire). Perceptions of betrayal, as defined by Shay (2011), typically involve the perceived failure of a legitimate authority figure to uphold moral expectations in a high stakes situation, resulting in a breach of trust and damage to previously held expectations of others. Other characterizations may include acts that are deemed appropriate by military standards, but may pose obstacles when trying to reconcile the act within a personally-defined internal standard, especially once removed from the combat

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environment. These acts can include military sanctioned violence, such as firing a weapon with intent to harm or causing actual harm or death to a combatant. The inclusion of these acts has been debated by some, as they are within the rules of engagement and Geneva Convention (Frankfurt & Frazier, 2016), and therefore should not be considered transgressive, but may have similar psychological consequences if individuals are unable to successfully integrate the event into their self-schemata.

Moral Injurious Events and Mental and Behavioral Health Outcomes

There is a clear consensus that a wide range of stressors can adversely affect mental health and elicit posttraumatic symptomatology, but less is known about the specific effects of these morally injurious experiences. Such knowledge is important because differences in the type of etiologic stressor may have important implications for treatment. Specifically, although diagnostic changes to PTSD criteria now incorporate a broader range of potentially traumatic experiences, and no longer include the specification of experiencing fear, horror, or helplessness (A2 criterion; American Psychiatric Association [APA], 2013), prominent conceptualizations of (e.g., Foa, Riggs, Massie, & Yarczower, 1995; Foa, Steketee, & Rothbaum, 1989) and treatments for (e.g., Prolonged Exposure; Foa, Hembree, & Rothbaum, 2007) PTSD are primarily fear-based, and, as such, may not adequately address experiences that transgress moral and ethical standards. For instance, traditional conceptualizations of PTSD emphasize fear-inducing threats that can compromise perceptions of safety (Johnson, McGuire, Lazarus, & Palmer, 2012), whereas MIEs are shame-inducing threats that compromise personal identity and trust in self and others. Further, MIEs versus other traumatic experiences may manifest differentially in posttraumatic

symptomology. PTSD is characterized by intrusive thoughts, avoidance of trauma-related stimuli, negative alterations in cognitions and mood, and changes in arousal and reactivity (APA, 2013). More traditional fear-based stressors (e.g., being ambushed in combat) may be more associated with changes in intrusion and arousal and reactivity symptom severity, whereas MIEs may be more related to these negative alterations in cognitions and mood. As a result, it is important to understand how these experiences relate to PTSD symptomology.

Depression is another relevant posttraumatic outcome, as MIEs are often associated with negative self-schematic shifts, especially if inaccurate interpretations of the event become overgeneralized (i.e., overaccomodation), which may lead to false assumptions of being immoral or dishonorable (Litz et al., 2009). These negative self views may manifest as persistent and intense feelings of hopelessness, excessive guilt, or thoughts of death. Depression is characterized by the presence of persistent sadness, hopelessness, and irritable mood; somatic and cognitive changes; and a significant impairment in an individual's capacity to function (APA, 2013). Therefore, it is necessary to consider the relationship between MIEs and depression, and to identify factors that have the potential to alter this relationship and protect against the negative psychological and physical effects of depression symptomology.

Behavioral manifestations of moral injury may develop in the form of self-destructive behaviors, most notably the use of drugs and alcohol. Substance use is pervasive in combat veterans, especially in individuals with PTSD and depression (Seal et al., 2011), and certain events that have the potential to lead to moral injury (e.g., killing) are more highly associated with post-deployment substance abuse

(Maguen et al., 2010). However, the temporal association between MIEs and substance use is not well understood. It has been suggested that problematic substance use may precede the involvement of a transgressive act, as lifestyle associated with drug and alcohol use may increase the likelihood of committing a transgression via greater engagement in high-risk behaviors (high risk hypothesis) or may increase PTSD-susceptibility effects (e.g., impaired judgment; susceptibility hypothesis). Alternatively, self-medication (Khantzian, 1997) and negative reinforcement (Baker et al., 2004) models suggest that substance use emerges following MIEs, such that drug and alcohol use functions to suppress aversive experiential states associated with MIEs. More research is needed to clarify this relationship.

Deliberate self-harm, or the deliberate bodily harm without lethal intent (Nock, 2010), is another potential outcome of MIEs. Deliberate self-harm may be used to escape from unwanted negative experiences (Chapman, Gratz, & Brown, 2006), but more research is needed to verify this relationship in the context of MIEs. Most empirical work has focused on the relationship between MIEs and suicidal ideation (Bryan et al, 2014); however, deliberate self-harm may be an important risk factor for suicidal thinking, as recent research has shown that combat veterans that engage in deliberate self-harm are five times more likely to experience active suicidal ideation (Kimbrel et al., 2015). Although, suicidal thinking involves lethal intent, and deliberate self-harm is without lethal intent, deliberate self-harming behaviors have been shown to be a risk factor for later suicidality. Therefore, deliberate self-harm may be a precursor to suicidal thinking and subsequent suicide attempts in individuals

exposed to MIEs, and thus an important marker of those at risk for suicidal thoughts and behaviors.

It is important to note that while the distress from MIEs is not a new concept, the operationalization of moral injury is still in its infancy, and has recently gained the attention of researchers as the majority of research on combat trauma has focused on traditional fear-based conceptions of combat. There is a significant need for research that examines the effects of trauma that can challenge moral belief systems, especially considering the unique, and often morally ambiguous, environment military members are required to navigate. Although it is well known that combat experiences are a risk factor for mental and behavioral health problems, there are important differences in the manifestation of certain combat stressors that are important to understand for the prevention and treatment of these health concerns. Specifically, moral injury is indicated by intense experiences of shame, guilt, self-condemnation, and social withdrawal, all which can have important implications for mental health. Additionally, the nature of the experiences may influence willingness to seek mental health treatment, as individuals that believe they have acted immorally (e.g., taken someone's life) may be less likely to disclose their trauma to a mental health professional out of fear of judgment and personal shame, and therefore may be more resistant to seeking necessary care, potentially contributing to greater long term difficulties.

Considering the mental and behavioral health impact of these stressors as well as their prevalence in combat contexts, it is necessary to identify potential protective factors that can inform prevention and treatment protocols. Therefore, in addition to exploring relations among MIEs and mental and behavioral health outcomes, this

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study also aims to examine the potential protective capacity of self-compassion in veterans exposed to morally injurious events. Self-compassion has shown clinical relevance in trauma-exposed populations (Thompson & Waltz, 2008) as both a protective factor (Thompson & Waltz, 2008) and through interventions aimed at increasing self-compassion (Beaumont, Jenkins, & Galpin, 2012). As a result, self-compassion may be particularly relevant for counteracting the mechanisms that drive moral injury (i.e., shame, self-condemnation), but also as an important consideration for interventions aimed at teaching individuals to be more self-compassionate.

Self-compassion

Self-compassion has been conceptualized by Neff (2003a) as an adaptive attitude that is comprised of three facets: self-kindness (vs. self-judgment), mindfulness (vs. overidentification), and common humanity (vs. isolation). Self-kindness involves acknowledging the inevitability of failure and hardship, and approaching it with sympathetic understanding instead of harsh critical self-judgment. Mindfulness involves being receptive to both negative and positive emotions, and being able to hold these emotional experiences in a balanced perspective without exaggeration or avoidance. Common humanity refers to the recognition that suffering, failure, and inadequacy are inevitable human experiences that are experienced by everyone. Self-compassion may be particularly relevant to military populations because of the moral ambiguity of combat, the harsh self-evaluations that can occur when navigating these moral situations, and the perceived failures to respond in a manner that is consistent with one's moral identity and personal expectations. Further, individuals who possess this self-compassionate attitude may be more protected

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against the mental and behavioral health repercussions of MIEs, as self-compassion is associated with greater life satisfaction, emotional intelligence and social connectedness, and lower levels of self-criticism, depression, anxiety, rumination, neurotic perfectionism, and thought suppression (Neff, 2003a)

Further, self-compassion is non-evaluative in nature, and involves recognition and acceptance of negative aspects of self (Leary et al., 2007), and therefore may mitigate the formation of overly negative self-evaluations that can precipitate the development of these mental and behavioral health problems. These negative evaluations may form through attributional processes about the causes and consequences of the events. Specifically, the perpetration of a transgression (or the failure to prevent a transgressive act) may challenge a person's self-perceptions, as it may be interpreted as an indication of self-worth (through shame-based self-attributions) or as a failure to act in a just manner (through guilt-based situational attributions). These appraisals are inherently self-critical, and will most likely lead to distorted thinking, and maladaptive coping mechanisms that can inhibit trauma processing. Self-compassionate individuals may be more likely to approach the act from a more understanding and less critical perspective, as self-compassion is incompatible with many of these self-directed hostilities (Gilbert, & Procter, 2006). Similarly, self-compassion involves this understanding that humans are flawed, and feelings of failure, inadequacy, and suffering are inevitable. In relation to combat experiences, this acknowledgement may help contextualize an individual's involvement in both direct (i.e., committing) or indirect (i.e., witnessing or failing to prevent) events. It may help integrate the experience into pre-existing standards of

behavior through an understanding that they are an imperfect human who had to make tough decisions in a challenging situation. As a result, this may buffer against strong feelings of shame associated with their involvement, as the behaviors may be evaluated as an indication of being a flawed but fundamentally good person, as opposed to having an inherent moral deficiency.

Additionally, self-compassionate individuals may be more capable of dealing with aversive emotional experiences that accompany MIEs, as self-compassion involves a mindful approach to emotional experiences, and a willingness to acknowledge negative emotions without trying to control, suppress, or exaggerate (Neff, 2003a). This willingness to engage distressing emotional experiences may prevent the formation of maladaptive coping strategies that inhibit trauma processing. Specifically, self-compassion is associated with reduced experiential avoidance (i.e., the avoidance of thought, feels, and sensations associated with the trauma) in trauma exposed populations (Thompson & Waltz, 2008), and this may be because being receptive to emotions perceived as aversive may facilitate experiencing (vs. avoiding) trauma-related emotions. This type of emotional awareness may help individuals with moral injury to process their transgression and other traumatic events, and facilitate adaptive coping strategies.

In summary, combat stressors that involve perpetration, betrayal, and inaction (i.e., witnessing or failing to intervene) are contributing to traumatization among military veterans, and the mental and behavioral health challenges associated with these stressors need to be further examined. As these events involve a critical evaluation of the self (via the appraisal of transgressing a moral and ethical standard),

I propose that self-compassion may be an important construct in the context of these experiences. A self-compassionate attitude may combat the development of mental and behavioral health problems through non-judgmental self-kindness, a mindful approach to negative emotional experiences, and an understanding that mistakes are an inevitable part of the human experience. I hypothesize that self-compassion will moderate the relationship between moral injury experiences and these mental (i.e., PTSD, depression) and behavioral (i.e., drug and alcohol misuse, deliberate self-harm) health outcomes. Specifically, I hypothesize that those with high moral injury, but high self-compassion, will have lower levels of PTSD, depression, substance misuse, and self-harming behaviors.

CHAPTER 3

METHODOLOGY

Procedures and Participants

Data was collected from 203 military veterans via Mechanical Turk (MTurk),

an internet marketplace that has the ability to reach our target audience outside of a

clinical setting. Through a premium qualification option, the study was only advertised

to individuals that have previously indicated prior military service. Inclusion criteria

included current or prior military service and deployment in support of Operation

Enduring Freedom (OEF), Operation Iraqi Freedom (OIF), or Operation New Dawn

(OND). See Table 1 for demographic data. Following an informed consent statement,

participants that agreed to participate were asked to respond to an online survey that

asked about their combat experiences and their moral, emotional, and psychological

well-being. Participants were compensated $2.00 for their participation. This study

was approved by the Institutional Review Board at University of Rhode Island.

Measures

Self-Compassion Scale. The Self-compassion Scale (SCS; Neff, 2003a) is a

self-report questionnaire with 26 items assessing individuals in six areas: self-kindness

(e.g., ''I try to be understanding and patient towards those aspects of my personality I

don't like''), self-judgment (e.g., ''I'm disapproving and judgmental about my own

flaws and inadequacies''), common humanity (e.g., ''I try to see my failings as part of

the human condition''), isolation (e.g., ''When I think about my inadequacies it tends

to make me feel more separate and cut off from the rest of the world''), mindfulness

(e.g., ''When something painful happens I try to take a balanced view of the

situation''), and over-identification (e.g., ''When I'm feeling down I tend to obsess and fixate on everything that's wrong.''). Responses are given on a 5-point Likert scale ranging from 1 (almost never) to 5 (almost always). A total sum score was computed, with higher scores indicating more self-compassion. The SCS has been shown to have good convergent and discriminant validity, and good internal consistency (reliability in current study: $\alpha = .90$).

Moral Injury. The Moral Injury Events Scale (MIES; Nash et al., 2013) is a 9-item self-report scale measuring distress associated with transgressions committed by self (e.g., "I am troubled by having acted in ways that violated my own morals or values"), others (e.g., "I am troubled by having witnessed others' immoral acts"), and betrayal (e.g., "I feel betrayed by fellow service members who I once trusted"). Responses are given on a 6-point Likert scale ranging from 1 (strongly disagree) to 6 (strongly agree). A composite score was obtained by summing all items, and higher scores reflect greater moral injury. The scale has previously shown good internal consistency and convergent validity (Bryan et al., 2013). Reliability in the current study for the full scale is ($\alpha = .93$).

PTSD Checklist for DSM-5. The PTSD checklist (PCL-5; Weathers et al., 2013) is a 20-item self-report assessment used to assess PTSD. The version being used includes the Life Events Checklist (LEC), an assessment of potentially traumatic experiences. The questions on the PCL-5 correspond to the DSM-5 criteria for PTSD. Participants are asked to indicate how often they have been bothered by each of the symptoms over the past month. Responses are given on a 5-point Likert scale ranging from 0 (not at all) to 4 (extremely). A total score was calculated by summing all the

items, and higher scores indicated greater PTSD symptom severity. The PCL-5 has shown good internal consistency and convergent and discriminant validity (Blevins, Weathers, Davis, Witte, & Domino, 2015). In the current study, the PCL-5 demonstrated excellent reliability for the overall scale ($\alpha = .97$).

Patient Health Questionnaire. The Patient Health Questionnaire (PHQ-9; Kroenke & Spitzer, 2002) is a 9-item self-report scale assessing how often the respondent is bothered by depressive symptoms over the last two weeks (e.g., "Little interest or pleasure in doing things"). Respondents are asked to respond to questions on a 3-point Likert scale ranging from 0 (not at all) to 3 (nearly every day). A composite score was obtained through summing the items, and higher scores were representative of greater depression severity. The PHQ-9 demonstrated excellent reliability in the current study ($\alpha=.93$).

Drug abuse screening test. The Drug Abuse Screening Test (DAST-10; Skinner, 1982) is a 10-item self-report assessment used to screen for potential abuse on a wide variety of substances other than alcohol. Respondents are asked to indicate (yes/no) whether they have experienced certain problems associated with drug use in the past 12 months (e.g., inability to stop using drugs). A composite score of drug misuse was obtained by summing all of the items. The DAST demonstrated decent reliability in the current study ($\alpha=.69$).

Alcohol Use Disorders Identification Test. The Alcohol Use Disorders Identification Test (AUDIT; Bush et al., 1998) is a 10-item self-report scale that assesses alcohol consumption, behaviors, and problems. (e.g., "How often do you have six or more drinks on one occasion?"). Responses are given a score between 0-4. A

total score was calculated by summing all the items. The AUDIT has demonstrated good test-retest reliability and internal consistency (Searle et al., 2015), and excellent reliability in the current study (α=.91).

Deliberate Self Harm Inventory. The deliberate self-harm inventory (DSH; Gratz, 2001) is a 17-item self-report scale assessing different forms, frequency, and duration of deliberate self-harming behaviors. Questions assess different self-harm behaviors (e.g., "Have you ever intentionally cut your wrist, arms, or other area(s) of your body [without intending to kill yourself]?"). If respondents indicate yes to any of the behaviors, they are then prompted to indicate when the behaviors began, how long they lasted, and when they lasted occurred. For the purpose of the current study, responses were dichotomized to indicate whether a person reported any history of engaging in deliberate self-harm (n = 86), compared to those that reported no history of deliberate self-harm (n = 116). Additionally, a total score of the different types of self-harm was calculated by summing the lifetime number of different types of self-harm behaviors indicated.

CHAPTER 4

RESULTS

Study variables were assessed for assumptions of normality using

recommendations set by Tabachnick and Fidell (2007). All variables met acceptable

standards for skewness and kurtosis. Pearson correlations were calculated to examine

correlations among the primary study variables (See Table 2). As expected, MIEs

were significantly negatively related to self-compassion ($r = -.21$, $p = .001$) and

positively associated with PTSD ($r = .64$, $p < .001$), depression ($r = .59$, $p < .001$),

alcohol misuse ($r = .42$, $p < .001$), drug misuse ($r = .39$, $p < .001$), and deliberate self-

harm ($r = .23$, $p = .001$).

The first moderation analysis was conducted to examine whether MIEs and

self-compassion predicted PTSD, and to assess the interaction effects of MIEs and

self-compassion on PTSD. The model accounted for 45% of the variance in PTSD, F

$(3, 197) = 53.61$, $p < .001$. The results indicated that MIEs ($b = 13.19$, $SE = 1.21$,

$t = 10.92$, $p < .001$), and self-compassion ($b = -4.16$, $SE = 1.23$, $t = -3.24$, $p = .001$),

were significant predictors of PTSD. Further, the interaction between moral injury and

self-compassion significantly predicted PTSD, ($b = -3.42$, $SE = 1.19$, $t = -2.87$,

$p = .005$) (See Table 3). Specifically, the relationship between MIEs and PTSD was

lower among people who were higher in self-compassion, compared to those who

were lower in self-compassion. Analysis of simple slopes revealed that that MIEs were

significantly positively associated with PTSD when participants were low in self-

compassion ($t = 10.07$, $p < .001$), and when participants were high in self-compassion

($t = 5.60$, $p < .001$), though the latter association was weaker (See Figure 1).

The second moderation analysis was conducted to examine whether MIEs and self-compassion predicted depression, and to assess the interaction effects of MIEs and self-compassion on depression. The model accounted for 44% of the variance in depression, $F(3, 196) = 53.98$, $p < .001$. The results indicated that MIEs ($b = 3.90$, $SE = .41$, $t = 9.44$, $p < .001$), and self-compassion ($b = -2.48$, $SE = .42$, $t = -5.88$, $p < .001$), were significant predictors of depression. The interaction between MIEs and self-compassion significantly predicted depression ($b = -1.31$, $SE = .41$, $t = -3.22$, $p = .002$) (See Table 4). Specifically, the relationship between MIEs and depression was lower among people who were higher in self-compassion, compared to those who were lower in self-compassion. Analysis of simple slopes revealed that that MIEs were significantly positively associated with depression when participants were low in self-compassion ($t = 9.18$, $p < .001$), and when participants were high in self-compassion ($t = 4.33$, $p < .001$), though again the latter association was weaker (See Figure 2).

The third moderation analysis examined whether MIEs and self-compassion predicted alcohol misuse, and the interaction effect of MIEs and self-compassion on alcohol misuse. The model accounted for 21% of the variance in alcohol misuse, $F(3, 197) = 17.31$, $p < .001$. Results indicated that MIEs ($b = 3.47$, $SE = .60$, $t = 5.83$, $p < .001$), and self-compassion ($b = -1.67$, $SE = .61$, $t = -2.75$, $p = .006$), were significant predictors of alcohol misuse. However, the interaction between moral injury and self-compassion did not significantly predicted alcohol misuse ($b = -.06$, $SE = .59$, $t = -.09$, $p = .922$) (See Table 5).

The fourth moderation analysis was conducted to examine whether MIEs and self-compassion predicted drug misuse, and the interaction effects of MIEs and self-

compassion on drug misuse. The model accounted for 17% of the variance in drug misuse, F (3, 196) = 13.31, $p < .001$. Results indicated that MIEs ($b = .68$, $SE = .13$, $t = 5.32$, $p < .001$) and self-compassion ($b = −.27$, $SE = .13$, $t = -2.04$, $p = .043$) were significant predictors of drug misuse. Further, the interaction between MIEs and self-compassion did not significantly predict drug misuse ($b = -.12$, $SE = .13$, $t = -.97$, $p = .331$) (See Table 6).

The last moderation analysis was conducted in two ways to examine whether self-compassion and MIEs predicted deliberate self-harm. The first analysis assessed whether self-compassion and MIEs predicted the likelihood of deliberate self-harm, and the interaction effects of MIEs and self-compassion on the likelihood of deliberate self-harm. The model accounted for 8.8% of the variance, $\chi^2(3) = 15.31$, $p = .002$. Results indicated that MIEs ($b = .41$, $SE = .16$, Wald = 7.06, $p = .008$) and self-compassion ($b = -.33$, $SE = .17$, Wald = 3.99, $p = .046$) were significant predictors of deliberate self-harm. The interaction between MIEs and self-compassion did not significantly predicted likelihood of deliberate self-harm ($b = -.16$, $SE = .17$, Wald = .92, $p = .338$) (See Table 7). Second, a moderation analysis was conducted to assess if self-compassion, MIEs, and their interaction predicted a greater number of deliberate self-harm behavior types, as an indication of deliberate self-harm severity. The model accounted for 14% of the variance in deliberate self-harm severity, F (3, 197) = 10.66, $p < .001$. Results indicated that MIEs ($b = .21$, $SE = .06$, $t = 3.41$, $p = .001$) and self-compassion ($b = -.20$, $SE = .06$, $t = -3.14$, $p = .002$) were significant predictors of deliberate self-harm severity. The interaction between MIEs and self-compassion significantly predicted deliberate self-harm ($b = -.16$, $SE = .06$, $t = -2.63$,

$p = .009$) (See Table 8). Specifically, the relationship between MIEs and deliberate self-harm severity was lower among people who were higher in self-compassion, compared to those who were lower in self-compassion. Analysis of simple slopes revealed that that MIEs were significantly positively associated with deliberate self-harm when participants were low in self-compassion ($t = 4.14$, $p < .001$), but not when participants were high in self-compassion ($t = .56$, $p = .577$) (See Figure 3).

CHAPTER 5

DISCUSSION

The goal of this study was to assess the relationship between morally compromising combat experiences and various mental and behavioral health outcomes in a veteran sample, as well as to evaluate the moderating role of self-compassion in these associations. The findings indicate that self-compassion moderates the relationship between MIEs and PTSD, depression, and deliberate self-harm severity, but not substance misuse. Although preliminary, our results emphasize the potential clinical utility of self-compassion, as it appears to be a relevant construct in the relation between morally compromising experiences and mental health outcomes.

The first hypothesis assessed the moderating role of self-compassion in the association between MIEs and both PTSD and depression symptom severity, as these are mental health conditions that commonly develop following traumatic exposure. First, I tested whether self-compassion would moderate the relationship between MIEs and PTSD. As expected, MIEs, self-compassion, and their interaction significantly predicted PTSD. Specifically, those higher in both moral injury and self-compassion experienced less severe PTSD, as compared to those high in moral injury and lower in self-compassion. Second, I examined the relationship between MIEs, self-compassion, and depression. Consistent with study hypotheses, MIEs and self-compassion significantly predicted depression, and the interaction between MIEs and self-compassion was significant.

These findings further support the protective role of self-compassion, and the relevance of self-compassion in combat veteran mental health. The results show that

those high in both MIEs and self-compassion experienced less severe PTSD and depression, as compared to those high in MIEs and low in self-compassion. Consistent with prior work, self-compassion appears to offer mental health benefits (Neff, 2003), and seems to have a buffering role against the negative mental health effects of experiencing morally compromising events. Self-compassion may be particularly relevant in the context of events that hold moral implications, as events that can be considered morally transgressive typically involve hostile self-assessments (i.e., self-criticism) and aversive experiential states (i.e., shame and guilt; Tangney, Stuewig, & Mashek, 2007) associated with the appraisal of one's own action or inactions, and a self-compassionate perspective may prevent these negative appraisals from becoming internalized. To further explore the relevance of self-compassion in the context of these morally compromising experiences, future work should examine the differences between morally injurious events and other combat stressors (i.e., fear-inducing) as they relate to self-compassion and mental health outcomes.

Self-compassion involves a more realistic appraisal of self (Leary et al., 2007), and is considered an emotional regulation strategy (Neff, 2003), and therefore may counteract mechanisms that typically contribute to the onset of PTSD and depression and help promote more adaptive coping mechanisms that can limit the duration or severity of trauma-related mental health symptoms. Prior research has shown that self-compassion is a promising construct in trauma-exposed individuals (Thompson & Waltz, 2008). Our findings provide further support for the utility of self-compassion in posttraumatic mental health outcomes, and extend these findings to include combat experiences that involve moral and ethical conflicts. These results provide support for

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the notion that self-compassion can counteract certain self-directed hostilities (Gilbert, & Procter, 2006), allowing for a more adaptive response to adverse life experiences. Further, the protective role of self-compassion in this context suggests that self-compassionate individuals are able to employ more adaptive coping strategies, and are potentially more capable of dealing with aversive and uncomfortable emotional and cognitive experiences. These findings highlight the benefits of self-compassion, and provide support for self-compassion in the context of these morally compromising experiences. As a result, treatments could be tailored to incorporate self-compassion interventions aimed at increasing levels of self-compassion.

Future work could extend these findings by employing prospective and longitudinal analyses to assess the protective effect of self-compassion over time, and examine whether self-compassionate individuals experience quicker recoveries and less long-term difficulties associated with PTSD and depression. Also, interventions focused on increasing levels of self-compassion should be tested. Further, these findings could be extended by implementing multiple methods of assessment (i.e., behavioral tasks and psychophysiological assessments) to measure these combat experiences, self-compassion, and relevant mental health outcomes.

The moderating role of self-compassion on problematic behaviors that are common in trauma-exposed individuals, specifically, drug and alcohol misuse and deliberate self-harm, was also assessed. First, the relation of self-compassion to substance misuse was tested. The findings indicate that the main effects of MIEs and self-compassion significantly predicted greater alcohol and drug misuse. However, self-compassion did not significantly moderate the relationship between MIEs and

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either alcohol or drug misuse. These findings indicate that self-compassion may not have the same protective role when it comes to these maladaptive behaviors. It is unclear why this was the case. One possibility is that substance use was assessed in general, rather than in relation to the morally injurious experience. Self-compassion may be more likely to moderate substance use that is tied directly to emotional distress related to moral injury. Although these findings were unexpected, they highlight the need for future research focused on elucidating the relationship between these MIEs and substance use, and identifying other factors that may influence the strength and direction of these associations.

Lastly, I examined the relationship of MIEs, self-compassion, and their interaction to the likelihood of deliberate self-harm and the severity of deliberate self-harm (number of types of self-harming behaviors indicated). The findings indicate that MIEs and self-compassion were significantly predictive of a greater likelihood of deliberate self-harm and greater self-harm severity. The interaction between MIEs and self-compassion was significant for self-harm severity only. Specifically, the relationship between moral injury and self-harm severity was lower for those higher in self-compassion compared to those lower in self-compassion. This suggests that self-compassion may be protective against more severe forms of deliberate self-harm. Self-compassionate individuals may be more equipped to handle emotionally distressing experiences associated with MIEs, and therefore less likely to engage in multiple different types of self-harm to cope with their experience. However, this assessment of deliberate self-harm covers lifetime endorsement of these behaviors, and as a result, some of the experiences captured may represent pre-combat instances of self-harm.

Future work should attempt to anchor the questions to correspond to specific experiences, or timeframes, to better understand how MIEs directly impact the frequency and severity of these behaviors. Also, future research should examine this relationship in a larger sample and account for the type, frequency, and recency of deliberate self-harm.

There are several important limitations that need to be considered when interpreting these study findings. First, the data is cross-sectional, and therefore the ability to draw causal inferences is limited by this design. Future studies should implement prospective and longitudinal analysis to build on the current findings, and to gain a better understand of the nature and direction of these relationships. Second, the use of self-report measures limits the findings, as certain factors may affect an individual's willingness or ability to respond accurately. Future work should attempt to incorporate multiple methods of assessment to increase the reliability of the findings. Finally, the sample was collected using MTurk, which limits generalizability and participation to those that have access to the internet. These findings need to be replicated in a larger and more diverse sample of community and clinical military samples.

Overall, our findings suggest that morally compromising experiences are associated with various mental and behavioral health outcomes, and that self-compassion moderates the relationship between MIEs and PTSD, depression and deliberate self-harm severity, but not substance misuse. These results highlight the potential clinical utility of self-compassion as a buffer against mental health problems

in military veterans. Further, they contribute to the broader literature on veteran

mental health and underscore the importance of self-compassion in this context.

APPENDICES

Table 1. *Descriptive Data*

Variables	*M* (*SD*)	*n* (%)
Age	35.08 (8.09)	
Gender		
Female		45 (22.20%)
Male		157 (77.30%)
Race		
White		143 (70.40%)
Black or African American		30 (14.80%)
Asian		14 (6.90%)
American Indian/Alaskan Native		11 (5.40%)
Ethnicity		
Hispanic or Latino		28 (13.80%)
Not Hispanic or Latino		168 (82.80%)
Military Service		
Army		106 (52.20%)
Marines		26 (12.80%)
Air force		39 (19.20%)
Navy		32 (15.80%)
Status		
Active		173 (85.20%)
Reserve		16 (7.90%)
Guard		14 (6.90%)
Primary Study Variables		
MIES	26.58 (12.66)	
SCS	80.23 (19.80)	
PCL-5	28.47 (22.27)	
PHQ-9	9.18 (7.61)	
AUDIT	10.39 (9.14)	
DAST	2.19 (1.90)	
DSH Severity	1.31 (2.41)	
DSH		
No		116 (57.10%)
Yes		87 (42.90%)

Note. MIES=Moral Injury Event Scale. SCS=Self-Compassion Scale. PCL-5=PTSD Checklist. PHQ-9=Patient Health Questionnaire-9. AUDIT= Alcohol Use Disorder Identification Test. DAST= Drug Abuse Screening Test. DSH= Deliberate self-harm.

Table 2. *Intercorrelations Among Moral Injury, Self-Compassion, and Mental Health*

	1	2	3	4	5	6
1. MIES	--	--	--	--	--	--
2. PCL-5	.64**	--	--	--	--	--
3. PHQ-9	.59**	.81**	--	--	--	--
4. AUDIT	.42**	.49**	.53**	--	--	--
5. DAST	.39**	.44**	.48**	.64**	--	--
6. DSH	.23**	.36**	.38**	.27**	.21*	--
7. SCS	-.22**	-.29**	-.41**	-.27**	-.21*	-.17

*Note. *p<.05. **p < .001. *Note.* MIES=Moral Injury Event Scale. PCL-5=PTSD Checklist. PHQ-9=Patient Health Questionnaire-9. AUDIT= Alcohol Use Disorder Identification Test. DAST= Drug Abuse Screening Test. DSH= Deliberate self-harm. SCS= Self-Compassion Scale.

Table 3.
Standardized Beta Weights, Significance, and 95%CI for the Main and Interactive Effects of Moral Injury and Self-Compassion on PTSD

Predictor	β	*p*	95% CI	
Moral Injury***	.59	<.001	-1.80,	2.98
Self-compassion***	-.19	.001	-2.62,	2.24
Moral Injury x Self-compassion**	-.16	.005	-2.51,	2.19

****p* ≤ .001. ***p* ≤ .01. **p* ≤ .01.

Table 4.
Standardized Beta Weights, Significance, and 95%CI for the Main and Interactive Effects of Moral Injury and Self-Compassion on Depression

Predictor	β	*p*	95% CI	
Moral Injury***	.51	<.001	-.30,	1.32
Self-compassion***	-.33	< .001	-1.16,	.50
Moral Injury x Self-compassion**	-.17	.002	-.98,	.64

****p* ≤ .001. ***p* ≤ .01. **p* ≤ .05.

Table 5.
Standardized Beta Weights, Significance, and 95%CI for the Main and Interactive Effects of Moral Injury and Self-Compassion on Alcohol Misuse

Predictor	β	*p*	95% CI	
Moral Injury***	.38	<.001	-.80,	1.56
Self-compassion*	-.18	.006	-1.38,	1.02
Moral Injury x Self-compassion	-.006	.922	-1.17,	1.16

****p* ≤ .001. **p ≤ .01. *p ≤ .05.

Table 6.
Standardized Beta Weights, Significance, and 95%CI for the Main and Interactive Effects of Moral Injury and Self-Compassion on Drug Misuse

Predictor	β	*p*	95% CI	
Moral Injury***	.36	<.001	.10,	.61
Self-compassion*	-.14	.043	-.40,	.12
Moral Injury x Self-compassion	-.07	.331	-.33,	.19

****p* ≤ .001. **p ≤ .01. *p ≤ .05.

Table 7.
Standardized Beta Weights, Significance, and 95%CI for the Main and Interactive Effects of Moral Injury and Self-Compassion on Deliberate Self-Harm

Predictor	Exp(B)	*p*	95% CI	
Moral Injury*	1.51	.008	1.11,	2.04
Self-compassion***	.72	.046	.52,	.99
Moral Injury x Self-compassion	.85	.338	.62,	1.18

****p* ≤ .001. **p ≤ .01. *p ≤ .05.

Table 8.

Standardized Beta Weights, Significance, and 95%CI for the Main and Interactive Effects of Moral Injury and Self-Compassion on Deliberate Self-Harm Severity

Predictor	β	*p*	95% CI	
Moral Injury***	.23	.001	-.34,	-.10
Self-compassion**	-.22	.002	.11,	.35
Moral Injury x Self-compassion**	-.18	.009	-.30,	-.06

***p ≤ .001. **p ≤ .01. *p ≤ .05.

Figure 1.

Moral Injurious Experiences by Self-Compassion for PTSD Symptom Severity
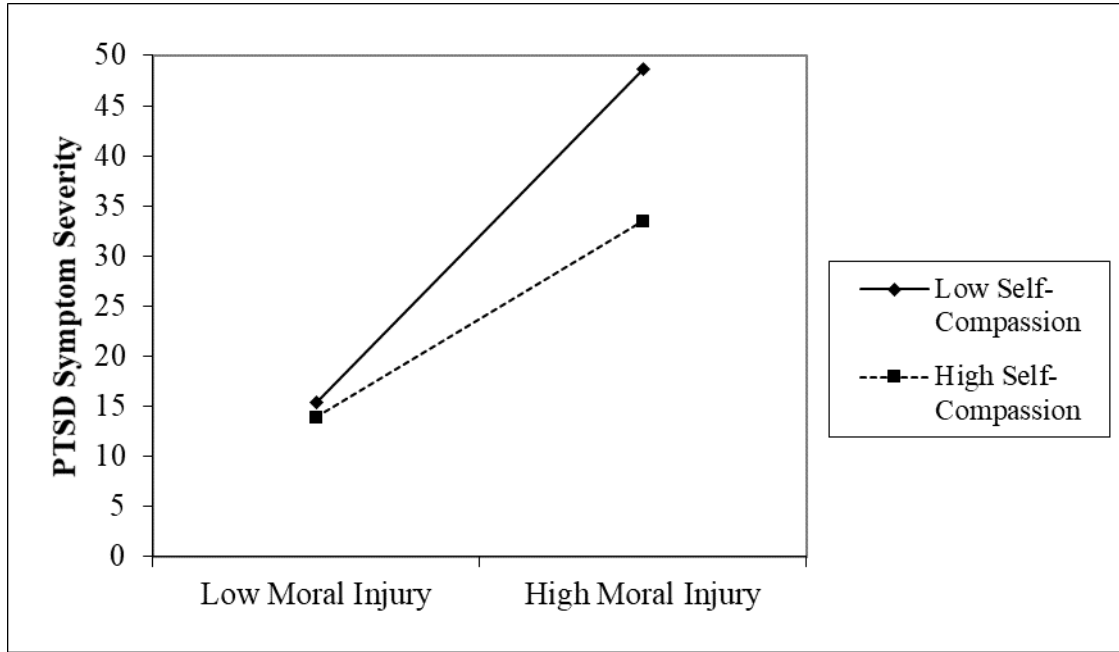

Figure 2.

Moral Injurious Experiences by Self-Compassion for Depression Symptom Severity
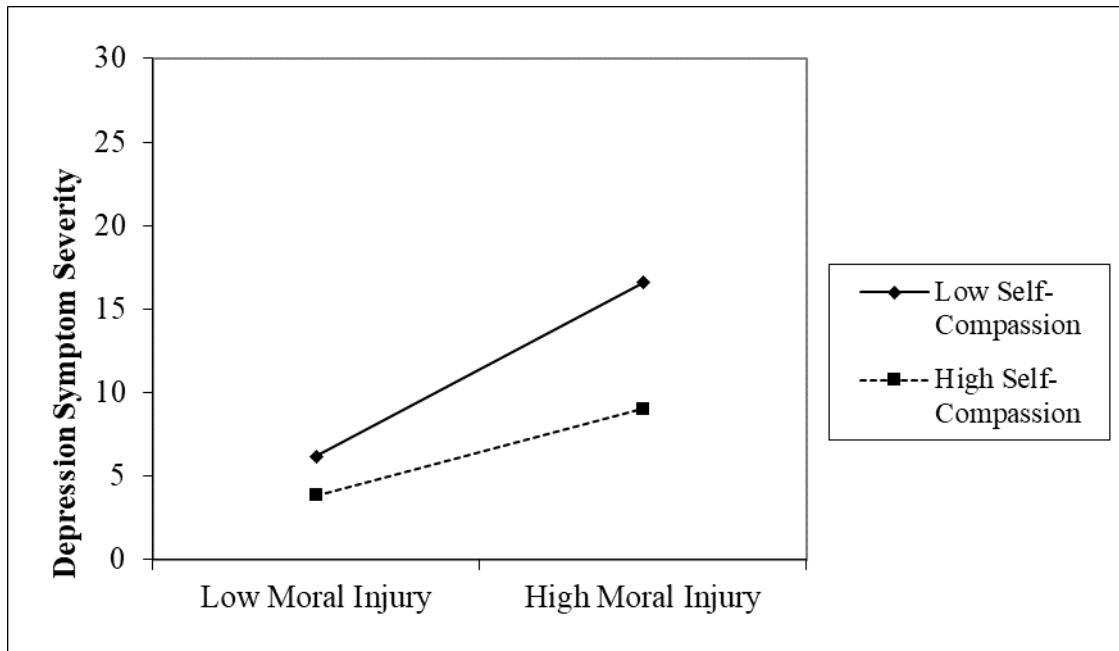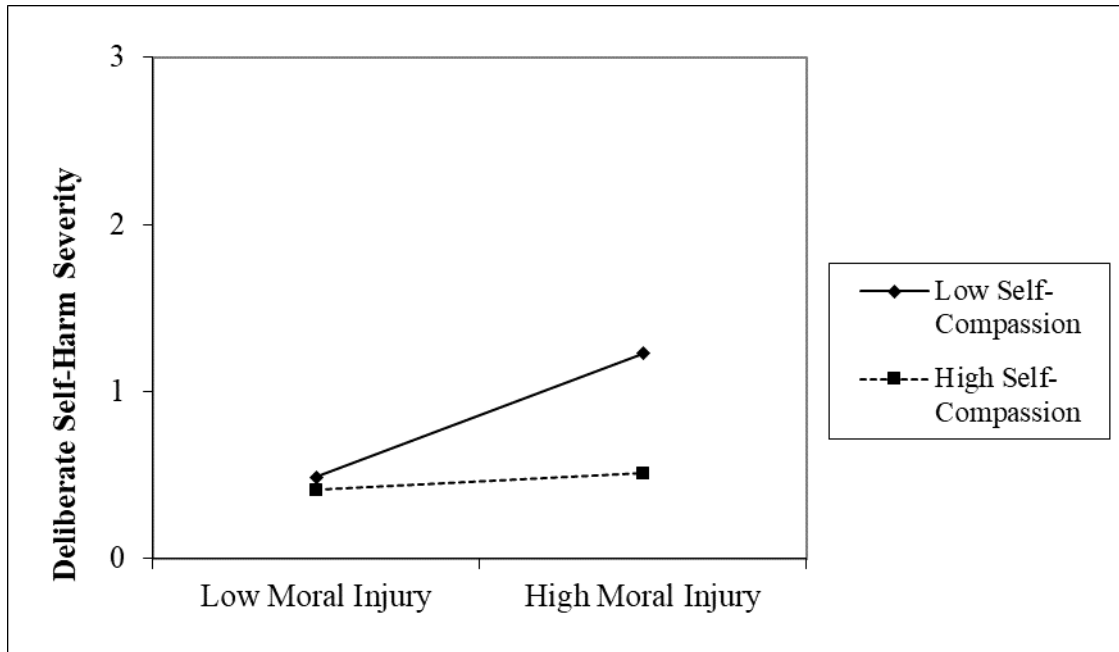
Figure 3.

Moral Injurious Experiences by Self-Compassion for Deliberate Self-Harm Severity

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