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THE ROLE OF SELF-COMPASSION IN THE RELATIONSHIP BETWEEN MORAL INJURY AND PSYCHOLOGICAL DISTRESS AMONG MILITARY VETERANS

Mernyll Manalo

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THE ROLE OF SELF-COMPASSION IN THE RELATIONSHIP BETWEEN
MORAL INJURY AND PSYCHOLOGICAL DISTRESS
AMONG MILITARY VETERANS

A Thesis
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
in
Psychological Science

by
Mernyll Manalo
June 2019

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ABSTRACT

While there is considerable research linking trauma to psychological distress, such as posttraumatic stress disorder (PTSD), among military populations, some service members may develop other variants of psychological difficulties following exposure to traumatic life events. For example, moral injury, a more recently studied outcome within the field of trauma, is conceptualized to occur when a person perceives their response to a morally challenging situation as a transgression that may lead to an incongruence with their morals producing moral emotions (i.e., shame, guilt, and anxiety; Litz et al., 2009). The current study investigated the role of self-compassion in the relationship between moral injury and psychological distress (i.e., PTSD and depression) among a sample of 216 military veterans recruited from TurkPrime online panels. Among these military veterans, a conditional process analysis of our moderated mediation model suggests an indirect effect of moral injury predicting depression symptoms through guilt, Index = 1.469, $SE = .460$, 95% CI [.602, 2.409] and shame, Index = -.803, $SE = .346$, 95% CI [-1.552, -.161] was conditioned on different levels of self-compassion. Findings are expected to have important implications for treatment conceptualization for military populations.

Keywords: depression, moral injury, military veterans, posttraumatic stress disorder, resilience, shame, guilt, self-compassion.

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CHAPTER ONE

LITERATURE REVIEW

Psychological Consequences of Trauma

Military service members deployed to combat zones are typically exposed to traumatic and morally challenging situations. Substantial research has focused on the former, that has links to psychological distress, such as posttraumatic stress disorder (PTSD; Foy, Carroll, & Donahoe, 1987) and depression (O'Donnell, Creamer, & Pattison, 2004). Psychological distress, however, has also been associated with non-life-threatening events such as moral injury (Dennis et al., 2017; Ferrajão & Oliveira, 2014). Litz et al. (2009) define moral injury as a transgression of morals or values followed by moral emotions (i.e., guilt and shame). They suggest that moral emotions may be attenuated by self-forgiveness, which may reduce psychological distress (e.g., PTSD and depression). However, another resilience factor for PTSD and depression is self-compassion, a construct that overlaps with self-forgiveness, but is robust and encompasses self-kindness, mindfulness, and common humanity (Dahm et al., 2015; Thompson & Waltz, 2008). Although the effects of self-forgiveness are evident in reducing psychological distress (Bryan, Theriault, & Bryan, 2015; Maguen et al., 2017), self-compassion (Hiraoka et al., 2015) works similarly. Thus, we aim to identify the extent to which self-compassion influences the relationships between potentially morally injurious experiences (PMIE), moral

emotions and psychological distress among veterans exposed to potentially morally injurious events.

After exposure to a life-threatening event or stressor (i.e., trauma), symptoms related to PTSD may develop. Clusters of PTSD symptoms consist of intrusive thoughts or feelings, avoidance, negative cognitions, and arousal (American Psychiatric Association, 2013). Subsequently, symptoms prompt a probable PTSD diagnosis on the condition that one experiences distress or functional impairment. For both veteran and general populations, trauma and probable PTSD prevalence rates are similar, but distinctions are present among veterans coming from recent wars. Kilpatrick et al.'s (2013) national estimate indicated that about 89.7% of the general population experience at least one traumatic event, and about 8.3% of those exposed to trauma, go on to develop probable PTSD at some point in their lifetime. Similarly, Wisco et al.'s (2014) analysis of the 2011 National Health and Resilience in Veterans Study (NHRVS) of 3,157 veterans indicate that 87.0% experience exposure to at least one traumatic event, with about 8.0% of them developing probable PTSD in their lifetime. Although aggregate PTSD prevalence rates for civilians and veterans are similar, differences occur with the most recent wars. For instance, Wisco et al.'s (2014) analysis of veterans indicate that the probable PTSD prevalence rates of younger veterans were higher compared to older age groups: veterans age 21 to 29 (23.78%), 30 to 44 (12.12%), 45 to 59 (13.26%), 60 and over (3.45%). The high prevalence of probable PTSD among younger veterans from

recent wars may suggest that the characteristics of recent conflicts like Operations Iraqi and Enduring Freedom, (OIF and OEF, respectively) may be a factor. For instance, Polusny et al.'s (2011) study of OIF veterans indicated that the frequency and intensity of trauma predicted probable PTSD, consistent with Brewin, Andrews, and Valentine's (2000) finding that trauma severity poses a risk factor for PTSD. The differences of probable PTSD prevalence rates between national estimates of veterans and veterans from recent wars is underscored by Fulton et al.'s (2015) meta-analysis of 33 studies that include over 4.9 million OIF and OEF veterans. Their results indicated an estimated average PTSD prevalence rate of $23.1 \pm 8\%$.

High survival rates may explain the high probable PTSD rate. Specifically, the high survival rate for OIF and OEF veterans compared to Vietnam war veterans may be due to the former's high rate of unconventional fighting, technological advances in protective gear and equipment, and medical practices; thus, higher rates of veterans are returning home with more exposure to trauma, and are more at risk for suicidal behaviors (Hoge et al., 2004; Pruit et al., 2016). For instance, Jakupcak et al.'s (2009) investigation of PTSD risk factors among OIF and OEF veterans found that veterans who met diagnostic criteria for PTSD reported four times greater suicidal ideation than those who did not. Moreover, veterans who screened positive for PTSD and two or more comorbid disorders (i.e., major depressive disorder, alcohol abuse, or drug abuse) were 5.7 times more at risk for suicidal ideation than those screening for just PTSD (Jakupcak et

al., 2009). Thus, the current study plans to recruit mostly veterans who served from 2001 and on. The focus on OIF and OEF veterans will improve our chances of capturing the relationship between moral injury and psychological distress.

Another variant of psychological difficulty that a trauma survivor may experience, aside from or in addition to PTSD, is depression: diagnosed when someone is experiencing persistent and long lasting sadness or a loss of interest in activities that cause impairments in functioning (e.g., social or occupational; American Psychiatric Association, 2013). Depression can be a sole consequence of trauma exposure but frequently co-occurs with PTSD (Breslau, Davis, Peterson, & Schultz, 2000). For instance, O'Donnell et al.'s (2004) comorbidity study of 363 civilians experiencing a physical injury requiring hospitalization for more than 24 hours indicated that PTSD and depression are comorbid. However, they also found that depression occurs independently for a small portion of trauma survivors. O'Donnell's findings are also consistent with studies with veteran samples. For example, in the NHVRS, a small portion of veterans with no probable PTSD, experience less lifetime major depressive disorder (MDD; 12.2%) or less current MDD (4.0%), compared to veterans, with probable PTSD, who experience more lifetime MDD (72.6%) or more current MDD (51.2%; Wisco et al., 2014). Although finding indicates that most veterans experience depression as a comorbidity of PTSD, veterans experiencing depression, with no probable PTSD, is less understood. Thus, the current study seeks to understand

how stressful military events predict psychological distress (i.e., PTSD and depression symptoms).

Moral Injury and Emotions

Compared to PTSD and depression, moral injury – a less studied construct – may lead to psychological distress, perhaps a consequence of either trauma exposure, morally challenging situations, or both. Theories that partially explain the development and maintenance of moral injury include social-cognitive theories of PTSD (Benight & Bandura, 2004), two-factor theory (Keane, Zimering, & Caddell, 1985; Mowrer, 1947), emotional-processing theory (Foa, Steketee, & Rothbaum, 1989), and cognitive model of PTSD (Ehlers & Clark, 2000). Each of these theories were integrated into Litz et al.'s (2009) theoretical model of moral injury, occurring when someone experiences an incongruence between their transgressions and morals, producing an inner conflict that results in moral emotions (e.g., emotions of guilt or shame; Litz et al., 2009).

Common antecedents to transgressive acts are morally challenging situations. For instance, morally challenging situations may include service members who report being responsible for the deaths of combatants and non-combatants, being unable to help ill or injured women or children, or witnessing a fellow soldier who is shot or injured (Hoge et al., 2004; Maguen et al., 2010). Among deployed service members, 27.9% encountered a morally challenging situation (Mental Health Advisory Team, 2008). Moreover, an examination by Wisco et al. (2017) using NHRVS data, found that 564 combat veterans

experienced a potentially morally injurious event (PMIE). Of these findings 10.8% of combat veterans acknowledged committing a transgression, 25.5% witnessed things that were morally wrong or that they felt disturbed by others' immoral act(s), and 25.5% felt betrayed by someone (e.g., from someone outside the military, a leader, or a fellow service member; Wisco et al., 2017). Findings also indicate that PMIE is associated with mental health disorders, suicidal ideation, and suicide attempts (Wisco et al., 2017). Thus, the focus of the current study is to investigate PMIE relative to psychological distress.

Moral injuries may also be associated with PTSD. For instance, studies on military veterans suggest an association between moral injury and PTSD symptoms (Bryan et al., 2017; Ferrajão & Oliveira, 2014). A study of OIF veterans involved in directly or indirectly killing people indicated that trauma exposure involving killing strongly predicted PTSD symptoms (Maguen et al., 2010). Henning and Frueh's (1997) investigation of combat guilt among 40 veterans who served in various conflicts (i.e., Vietnam war, World War II, Korean Conflict, and Persian Gulf War) suggested that the severity of guilt experienced (i.e., survivor guilt, guilt over acts of omission/commission, or guilty thoughts or feelings) predicted PTSD symptoms. Moreover, Beckham, Feldman, and Kirby (1998) found that Vietnam combat veterans who experienced atrocities (e.g., hurting, killing, or mutilating Vietnamese soldiers or civilians) was not only associated with PTSD but also with guilt (i.e., trauma-related guilt). In each of those studies, it is possible that guilt may have co-occurred with or have been the

result of a PMIE or a transgression of values or morals. Furthermore, 23 practitioners interviewed by Drescher et al. (2011) suggest moral injury and PTSD, though frequently co-occurring, should be viewed as separate constructs. Regardless, current evidence suggests that veterans who are exposed to a PMIE and traumatic event consequently experience varying forms of psychological distress (Bryan et al., 2018; Lancaster, 2018). Thus, this study aims to identify whether PTSD and depression emerge from a PMIE.

The comorbidity of moral injury and PTSD symptoms may suggest conceptual overlap, but research indicates notable distinctions. For instance, Bryan et al. (2017) examined the distinction between PTSD and moral injury characteristics of 930 National Guard service members through exploratory structural equation modeling. Their results suggest that PTSD characteristics (i.e., startle reflexes, memory loss, and self-reported flashbacks) were distinct from moral injury characteristics (i.e., guilt, shame, anhedonia, and social alienation; Bryan et al., 2018). Also, etiology of moral injury and PTSD may further suggest a distinction: moral injury occurs when there is the threat of transgressing values, morals, or both, whereas PTSD occurs when there is a mortal danger (i.e., the threat of physical harm; Nieuwsma et al., 2015). Given the prevalence rates of PMIE and high trauma exposure, it is possible for OIF and OEF veterans to have survived a trauma related PMIE. Extant literature suggests that trauma related PMIE leads to more severe psychological distress. For instance, moral injury and PTSD co-occurring was found to present more risk

of suicidal ideation and attempts compared to moral injury and PTSD occurring separately (Bryan et al., 2017). Although distinctions between moral injury and PTSD are evident, Bryan et al.'s (2018) findings also indicate that depression was a common characteristic of both moral injury and PTSD. Thus, the current study attempted to extend the literature by determining how the predictive relationship between PMIE and psychological distress (i.e., depression and PTSD) functions.

The association between depression and moral injury is consistent with Litz et al.'s (2009) model of moral injury: after one commits a transgression, emotions of guilt or shame may emerge and possibly lead to psychological distress. These transgression related emotions are consistent with the moral emotions of guilt and shame (i.e., moral affect; Tangney, 1991). Tangney et al. (1996) identify shame as negative emotions about oneself, whereas guilt refers to negative emotions about one's behaviors. They also found that participants who experience guilt tended to blame their actions, while those who experienced shame tended to blame themselves. Moreover, guilt was found to be associated with more constructive intentions and less anger, while shame was associated with more anger and intentions of malevolence (Tangney et al., 1996). Thus, within the moral injury model, understanding how guilt and shame function between PMIE and psychological distress may explain how differences in depression and PTSD outcomes occur and whether

Of importance are guilt and shame's ability to predict negative mental health outcome(s), such as MDD, PTSD, and suicidality. For instance, emotions of guilt and shame have been found to predict depressive symptoms (Bryan, Morrow, Etienne, & Ray-Sannerud, 2013) and suicidal behaviors (Bryan et al., 2013; Tangney, Stuewig, & Mashek, 2007). Regarding suicidal behaviors, there may be a notable difference between guilt and shame. In Bryan, Morrow, Etienne, and Ray-Sannerud (2013), guilt had a stronger relationship with suicidality compared to shame. However, a difference of guilt and shame relative to negative mental health outcomes may not occur due to those who use terms synonymously or the co-occurrence of guilt and shame (Blum, 2008). Regardless, being able to make distinctions between guilt and shame makes it possible for therapeutic interventions to be enhanced (Tangney et al., 1996). For instance, if guilt is more associated with moral injury, then it may be possible for researchers to design treatments that target guilt, or help practitioners become aware of what to look for when dealing with clients with PMIE. Thus, the current study aims to identify the role of moral emotions between PMIE and psychological distress as well as the extent to which guilt and shame contribute to psychological distress. As part of the current study, we aim to replicate findings of Lancaster's (2018) study by testing the extent to which PMIE predicts psychological distress indirectly through moral emotions (i.e., guilt and shame).

We will also attempt to extend the literature by identifying the extent to which guilt and shame contribute to the replicated mediation model.

Resilience Factors

Accordingly, it appears that some individuals may possess certain resilience characteristics that confer protection from harm. Associated with resilience are clusters consisting of personality traits (i.e., extraversion, high self-esteem, assertiveness, hardiness, internal locus of control, and cognitive feedback) and ego resilience (i.e., flexibility, energy, assertiveness, humor, transcendent detachment, and affect regulation; for a review, see Agaibi & Wilson, 2005). Low rates of PTSD among trauma-exposed samples are consistent with research indicating that veterans are psychologically resilient. For instance, Isaacs et al.'s (2017) examination of resilience in the NHRVS of veterans 60 years old or over found that 67.7% of them demonstrated little to no psychological distress. However, the mortality rate of veterans with PTSD could be explaining why there are low psychological distress rates among the elderly. That is, veterans with PTSD may be aging faster (Wolf et al., 2017) and possibly dying or that those with severe PTSD may be dying as a result of suicide (Bullman, Schneiderman, & Gradus, 2019). If PTSD mortality rates are not issues, then the low psychological distress rates may be due to resilience factors for both PTSD and moral injury. For instance, findings that implicate resilience may suggest that the majority of veterans can endure substantial traumas (Isaacs et al., 2017) and display resilient responses. According to Litz et al.'s

(2009) moral injury model, resilience may be demonstrated by internal global attributions (stable), self-esteem, forgiving supports, and self-forgiveness.

Of particular interest is the role of self-forgiveness which refers to an inward rather than outward forgiveness which may be associated with reduced levels of guilt (Wohl, DeShea, & Wahkinney, 2008). Similarly, Litz et al.'s (2009) model of moral injury suggests that self-forgiveness attenuates inner conflict. In other words, self-forgiveness occurs via reconciliation of one's guilt or shame about a transgression, which leads to a reduction in inner conflict (Hall & Fincham, 2005). Although self-forgiveness may conceptually work to reduce shame and guilt, evidence suggests that it may also have effects on psychological distress. For instance, Bryan et al. (2015) investigated the relationship between self-forgiveness and psychological distress among those with military experience. They recruited 474 military personnel and veterans enrolled in universities and administered an online questionnaire to assess suicide ideation, suicide attempts, depression, PTSD symptoms, self-forgiveness, and trauma exposure. Their results indicate that self-forgiveness is associated with psychological distress. Specifically, self-forgiveness is negatively associated with PTSD symptoms, depression, suicide ideation, and suicide attempts. In their regression analysis, self-forgiveness was also a predictor of PTSD symptoms after accounting for age, gender, military versus veteran status, and depression severity. These results support self-forgiveness as a resilience factor for psychological distress (Bryan et al., 2015). Although the role of self-

forgiveness is an evident resilience factor for psychological distress, other factors should be explored to provide treatment options to practitioners and clients. One such factor that is similar to self-forgiveness is self-compassion which may fit well into the Litz et al. (2009) moral injury model.

Like self-forgiveness, self-compassion is directed inward but is more complex. According to Neff (2003a), self-compassion refers to the interaction of self-kindness, mindfulness, and common humanity. Neff defines the following constructs of self-compassion as (a) self-kindness, acting benevolently towards oneself rather than harshly or judgmentally in times of suffering; (b) mindfulness, awareness of cognitions rather than over-identifying with them; and (c) common humanity, perceiving one's suffering as common to others rather than adopting an isolated perspective. Altogether there are six independent constructs of self-compassion, which consists of positive constructs (i.e., self-kindness, mindfulness, and common humanity) and negative constructs (i.e., self-judgment, over-identification and isolation (Neff, 2003b).

The idea of self-compassion is new, and few research studies explore self-compassion relative to veteran issues. As of this writing, there are no direct research associations between self-compassion and moral injury. However, some research is supporting self-compassion as a resilience factor for psychological distress. For example, a study of adolescents and young adults were found to have consistent levels of self-compassion, and that self-compassion was able to inversely predict psychological distress (i.e., depression

and anxiety; Neff & McGehee, 2010). Similarly, in a sample of college graduate students, self-compassion was found to be positively correlated with positive mental health outcomes and negatively correlated with psychopathology and negative affect (Trompetter, Kleine, & de Bohlmeijer, 2017). Regarding the six sub-constructs of self-compassion, Chang et al. (2016) investigated whether there was an indirect relationship between negative life events and psychological distress (i.e., depression symptoms and suicidal risk) through the sub-constructs of self-compassion among 331 college students. Their results indicate that common humanity, mindfulness, and over-identification mediated the relationship between negative life events and depression symptoms, and that common humanity mediated the relationship between negative life events and suicidal risk.

It is possible that self-compassion may confer protection against depression and anxiety, and it may also be an important resilience factor for PTSD too. For example, Thompson and Waltz (2008) investigated the association between self-compassion and PTSD symptoms among a college sample of 210 participants. They found a negative association between PTSD avoidance symptoms and self-compassion despite only 22 participants meeting PTSD diagnostic criteria. Dahm et al. (2015) investigated the association between self-compassion, mindfulness, and PTSD among 115 OIF and OEF veterans; 42% of which had PTSD symptoms related to their military service. The authors found that the self-kindness and common humanity subscales of self-

compassion were associated with PTSD symptoms after accounting for mindfulness. Thus, these components of self-compassion (i.e., self-kindness and common humanity) may play a role in reducing PTSD symptoms.

Self-compassion may affect PTSD symptoms; however, the role of guilt is unclear. Hiraoka et al. (2015) investigated whether self-compassion predicted PTSD symptoms using a longitudinal design. The researchers employed hierarchical regression analyses to identify whether 1) self-compassion predicted PTSD symptom severity at baseline and 12-month follow-up, and 2) whether self-compassion was negatively associated with trauma-related guilt at baseline and 12-month follow-up. Although they were able to confirm the former, self-compassion was not a strong predictor of combat-related guilt.

In a pilot study, Held and Owens (2015) investigated the effectiveness of a self-compassion treatment and a stress inoculation treatment on 27 homeless veterans experiencing trauma-related guilt. The participants were randomly assigned to complete a four-week treatment using a workbook for self-compassion or stress inoculation and were assessed on self-compassion at four weeks before the intervention, two weeks after starting the intervention, and upon completion of the intervention. The researchers used a multivariate analysis of variance to analyze whether participation in the self-compassion treatment or stress inoculation control would influence participants' level of self-compassion, trauma-related guilt cognitions, or PTSD severity. Their results indicate that self-compassion and inoculation training was effective for addressing trauma related-

guilt but did not appear to increase levels of self-compassion or decrease PTSD severity. The ambiguous relationship between self-compassion, guilt, and PTSD require clarification. Thus, the primary aim of the current study is to identify whether self-compassion is a resilience factor within the moral injury model.

CHAPTER TWO

CURRENT STUDY

Purpose

Taken together these studies suggest that the role of self-compassion within the moral injury model require further investigation. The purpose of this study is to test the moral emotions and resilience aspects of Litz et al.'s (2009) moral injury model and identify whether there are conceptual distinctions between shame and guilt. Finally, the main objective of the current study is to identify whether self-compassion acts as a resilience factor and, if so, to what extent.

- (1) We hypothesize that PMIE will be positively associated with moral emotions (i.e., guilt and shame), psychological distress (i.e., PTSD and depression). Moreover, PMIE will predict psychological distress indirectly through moral emotions.
- (2) Self-compassion will serve as a resilience factor that will moderate the relationship between moral emotions (i.e., guilt and shame) and psychological distress (i.e., PTSD and depression symptoms). Moreover, self-compassion will influence PMIE-related moral emotions.
- (3) The indirect relationship between moral injury and psychological distress through moral emotions will occur on the condition that self-compassion moderates moral emotions. In other words, the indirect relationship between moral injury and psychological distress through

moral emotion will be contingent upon the influence of self-compassion.

Methods

Participants

Our sample consisted of 216 participants recruited from online panels via TurkPrime. The sample consisted of mostly male participants ($n = 152$, 70.4%), age ranged from 18 to 80 years old ($M = 41.30$, $SD = 15.57$); ethnic and racial background was predominantly white ($n = 173$, 72.1%), followed by Black or African American ($n = 28$, 11.7%), and Spanish, Hispanic, or Latino ($n = 17$, 7.1%). Education levels were diverse and varied across nine categories with roughly a quarter of the sample ($n = 50$, 23.2%) as having one or more years of college credit, but no degree followed by those with some college credit, but less than a year of college credit ($n = 43$, 19.9%). All participants were self-identified veterans with the largest portion having served in the Army ($n = 107$, 49.5%) followed by Navy veterans ($n = 56$, 25.9%). Regarding the component of service, a large majority of participants have experience serving in active duty of their specified branch ($n = 189$, 87.5%) followed by reserve duty ($n = 31$, 14.4%). Most participants served from September 2001 or later ($n = 144$, 66.7%) followed by those who served from August 1990 to August 2001 ($n = 60$, 27.8%). The majority of participants have also deployed while serving ($n = 134$, 62.0%). Of those who served after September 2001 and deployed, portions of participants

have deployed in support of OEF ($n = 62$, 28.7%), OIF ($n = 53$, 24.5%), Operation New Dawn (OND; $n = 16$, 7.4%) and Operation Freedom's Sentinel (OFS; $n = 14$, 6.5%). All other relevant sample demographics are reported in Table 1.

Materials

Moral Injury Events Scale (MIES; Nash et al., 2013). The MIES is a nine-item scale used to identify whether participants experienced a PMIE. The MIES is based on two sub-scales that assess perceived transgressions and perceived betrayals. Participants indicated their level of agreement or disagreement for items on a six-point Likert scale ($1 = strongly agree$, $2 = moderately agree$, $3 = slightly agree$, $4 = slightly disagree$, $5 = moderately disagree$, and $6 = strongly disagree$) and were instructed to base their responses on their most stressful military experiences. An example of a perceived transgression item is, "I acted in ways that violated my own moral code or values." An example of a perceived betrayal item is, "I feel betrayed by leaders who I once trusted." Construct validity was confirmed by correlating to measures such as the Revised Beck Depression Inventory and Beck Anxiety Inventory among U.S. Marines who deployed to Iraq and Afghanistan (Nash et al., 2013). For the current study, scores ranged from one to six in which responses were reverse coded so that higher values indicate high levels of PMIE endorsement. The endorsement of PMIE was based on whether participants selected strongly agree, moderately agree, or slightly agree for any of the items. MIES demonstrated good reliability for the transgression

subscale ($\alpha = .90$) and adequate reliability for the betrayal subscale ($\alpha = .77$). Overall, the MIES demonstrated good reliability ($\alpha = .89$).

Posttraumatic Stress Disorder Checklist 5 (PCL-5; Blevins, Weathers, Davis, Witte, & Domino, 2015). The PCL-5 consists of 20 items that reflect the symptoms of PTSD in the DSM-V and is based on the amount of distress experienced within the past 30 days. Participants were instructed to base their responses on their most stressful military experience and how they have felt in the last month. Participants rated their level of agreement for each item on a five-point Likert scale ($1 = \text{Not at all}$, $2 = \text{A little bit}$, $3 = \text{Moderately}$, $4 = \text{Quite a bit}$, $5 = \text{Extremely}$). Examples of the PCL-5 include rating questions like, “Repeated, disturbing, and unwanted memories of the stressful experience?” and “Irritable behavior, angry outbursts, or acting aggressively?” Among a sample of college students, construct validity was demonstrated between the PCL-5 and the Posttraumatic Distress Scale, Detailed Assessment of Posttraumatic Symptoms-Posttraumatic Stress Scale (Blevins et al., 2015). For a veteran sample, the PCL-5 demonstrated convergent and discriminant validity with the PTSD Checklist for DSM-IV-Civilian Version, Patient Health Questionnaire, Generalized Anxiety Disorder, Inventory of Psychosocial Functioning, and the World Health Organization of Disability Assessment Schedule II (Bovin et al., 2016). As of this writing, a probable diagnosis for PTSD is based on a cut-point total score of 33 (National Center for PTSD, 2018). For the current study, the total scores of each

participant ranged from zero to 80 and demonstrated good reliability for all subscales ($\alpha = .89$ to $.95$) with good overall reliability ($\alpha = .94$).

State Shame and Guilt Scale (SSGS; Tilghman-Osborne, Cole, Felton, & Ciesla, 2008). The SSGS is a modified version of Marschall, Sanftner, and Tangney's (1994) scale. The SSGS was used to assess current states of moral emotions. Specifically, the current study used the guilt and shame subscales that consisted of five items for each subscale. Participants were instructed to base their responses on how they feel "right now." For each item, participants responded by indicating how they currently feel using a five-point Likert scale with three points labeled (*1 = I do not feel this way at all, 3 = I feel this way somewhat, 5 = I feel this way very strongly*). Example items include, "I feel bad about something I have done" and "I feel like I am a bad person" which refer to guilt and shame, respectively. Among a sample of adolescents, the guilt and shame subscales of the SSGS demonstrated good validity with medium to strong correlations with Test of Self-Conscious Affect-Adolescent measure, Why it Happened Questionnaire, Attributional Blame Questionnaire, Behavioral Self-blame, and Characterological Self-blame Questionnaire (Tilghman-Osborne et al., 2008). For each subscale, scores ranged from one to five in which higher average subscale scores indicate higher levels of either guilt or shame. Also, participants who did not select "I do not feel this way at all" were considered as endorsing emotions of either guilt or shame. For the current study, the SSGS

demonstrated good reliability for the guilt ($\alpha = .86$) and shame ($\alpha = .90$) subscales.

Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977). The CES-D is a 20-item scale used to assess depression. Participants were instructed to base their responses on how they felt during the past week. Participants also rated how frequent they felt each item on a four-point Likert scale ($0 =$ rarely or none of the time [less than one day], $1 =$ some or a little of the time [one to two days], $2 =$ occasionally or a moderate amount of time [three to four days], $3 =$ most or all of the time [five to seven days]). Examples of items include, "I felt sad," or "I did not feel like eating; my appetite was poor."

Concurrent construct validity of the CES-D was demonstrated with correlations with Beck Depression Inventory, Minnesota Multiphasic Personality Inventory-II among patients who experienced a traumatic brain injury (Bush, Novack, Schneider, & Madan, 2004). For the current study, the total scores of each participant ranged from zero to 60 with higher scores indicating higher levels of depression symptoms. Moreover, a probable diagnosis of depression was based on a total score of 16 or above (Radloff, 1977). The current study also demonstrated that the CES-D had good reliability ($\alpha = .95$).

Self-Compassion Scale (SCS; Neff, 2003b). The SCS is a 26-item scale used to assess self-compassion. The SCS has six subscales that consist of positive aspects (i.e., self-kindness, common humanity, mindfulness) and negative aspects (i.e., self-judgment, isolation, overidentification). Participants

were instructed to respond based on how often they have behaved in the manner stated in the item and to indicate their level of agreement on a five-point Likert scale with two anchor points at each end (*1 = almost never and 5 = almost always*). Examples for each sub-scale are as follows: for self-kindness, “I try to be understanding and patient towards those aspects of my personality I don't like,” for common humanity, “When things are going badly for me, I see the difficulties as part of life that everyone goes through,” for mindfulness, “When something upsets me I try to keep my emotions in balance,” for self-judgment, “I'm disapproving and judgmental about my own flaws and inadequacies,” for isolation, “When I'm feeling down, I tend to feel like most other people are probably happier than I am,” and for overidentification, “When something upsets me I get carried away with my feelings.” Among a college sample, the SCS demonstrated good construct validity with the Self-criticism subscale of the Depressive Experiences Questionnaire, Social Connectedness scale, and the Trait-Meta Mood Scale; moreover, predictive validity was found with the Beck Depression Inventory, Spielberger Trait Anxiety Inventory and Life Satisfaction Scale (Neff, 2003b). The SCS average score for each participant ranged from one to five. When averaging the scores for each participant, the negative subscales were reverse coded so that higher scores indicate higher levels of self-compassion. For the current study the SCS demonstrated good reliability for all subscales ($\alpha = .84$ to $.90$) with good overall reliability ($\alpha = .93$).

Demographics Questionnaire (DQ). The DQ assessed age, gender, education, ethnicity, race, income, military service information, and whether they have received therapy or helpful support from mental health professionals.

Procedure

When entering the online Qualtrics survey, participants were provided the opportunity to read the informed consent (see Appendix A). After the participants completed reading and agreeing to the terms of the informed consent, the survey commenced in the same order as the materials section above. As a quality check, a question about their branch of service was placed at the beginning and the end within the demographic questionnaire. After completing all measures, participants were provided with a debriefing statement that also had numbers to crises hotlines in the event of experiencing psychological distress (see Appendix H). Finally, participants were monetarily compensated according to the amount that they agreed to with TurkPrime, through which they entered this survey. Note, the Qualtrics survey had an additional survey not used for the current study.

Data Analysis

Before conducting the analysis, we prescreened participant data quality and parametric assumptions. These screening procedures were conducted using guidelines developed by Tabachnick and Fidell's (2013). Parametric assumptions (i.e., normality, univariate outliers, and multivariate outliers) were evaluated using a criterion of ± 3.3 standard deviations from the mean, $p < .001$. All other test statistics during the preliminary analysis were assessed using a criterion of ± 1.96

standard deviations from the mean, $p < .05$. Finally, multivariate outliers were assessed and dealt with before moving on to the main analysis.

For the main analysis, IBM SPSS version 25 was used to run the Hayes PROCESS macro, version 3.1. Specifically, model 15 in Hayes (2018) was used to construct a moderated mediation model. When testing this model, 5000 bootstrapped confidence intervals were created to estimate standard errors and, subsequently, 95% confidence intervals around beta coefficients were used to determine statistical significance, $p < .05$. Regarding our moderation analysis, variables were mean centered before creating the interaction terms. For indirect effects and index of moderated mediation effects, 95% confidence intervals around the effects were used. If the effect's values did not include zero in the confidence interval, then the effect was considered meaningful. Finally, the conditional indirect effect (i.e., moderated mediation) was assessed at one standard deviation below the mean, mean, and one standard deviation above the mean.

CHAPTER THREE

RESULTS

Preliminary Analysis

In order to ensure the quality and accuracy of the data, evidence of random responding, lack of carefully attending to items, military service inconsistencies, missing too many items, and survey duration discrepancies were considered for removal. Specifically, participants were asked twice about their branch of service at the beginning and end of the survey. From these items, participants who did not endorse serving ($n = 4$) or did not consistently endorse serving in any of the military branches (i.e., Air Force, Army, Coast Guard, Marine Corps, or Navy; $n = 10$) were removed from the analysis. Also removed from the analysis were, participants who had discrepancies between their age and the military era they claimed to have served ($n = 8$) – these were participants who would be too young to serve, under 17 years old, for the military era(s) they claimed.

Regarding survey duration, we accounted for the survey's total number of words, 1656, average reading comprehension rate of 147 words per minute (WPM; $SD = 37.09$; Slattery & Yates, 2018) and fast readers who can read over 800 WPM (Jackson & McClelland, 1975). Thus, participants who took less than six minutes to complete the survey or three seconds per item ($n = 23$) were removed from the study. Also, participants missing over 5% of their responses ($n = 11$) were also dropped from the study. Initially, 259 participants completed the

online survey, after quality checks 42 participants were removed from the study for either random responding, lack of carefully attending to items, military service inconsistencies, missing too many items, and survey duration discrepancies. For the remaining 217 participants, parametric assumptions were evaluated in accordance with screening guidelines by Tabachnick and Fidell (2013).

Univariate Outliers

Potential univariate outliers were assessed by testing the standardized scores of variables (z-test) and evaluating whether their z-scores exceeded ± 3.3 standardized deviations from the mean, $p < .001$. No univariate outliers were detected for either individual items or scale totals.

Distribution of Data

Normality was assessed by testing whether the standardized score (z) for skewness exceeded ± 3.3 standardized deviations from the mean, $p < .001$. For the guilt and shame subscales of the SSGS, there were significant positive skews with standardized scores of 3.308 and 5.067, respectively. Skewed variables were transformed via the square-root function to meet the parametric assumption of normality. When running the main analysis and looking at the statistical significance of our tests, we found no difference between using the square-root transformed and untransformed variables. Thus, guilt and shame subscales of the SSGS were left untransformed for the main analysis for ease of interpretation.

Linearity, Homoscedasticity, and Independence of Residuals

A visual inspection of the standardized residual scatterplot of the untransformed data ($n = 205$) indicates a nearly oval, linear, and homogenous pattern of data. With PTSD as an outcome, standardized residuals appear evenly disbursed between -2.605 and 2.897. Similarly, with depression as an outcome, residuals also appear evenly disbursed between -3.106 and 2.691. Regarding transformed data (i.e., square root transformations of the guilt and shame subscales of the SSGS), the linearity, shape, and residual distances were retained and had slight improvements.

Multicollinearity

The correlations among the predictor variables did not exceed a correlation coefficient of $r = .90$, in which the highest correlation found was between the square-root transformed guilt and shame subscales of the SSGS, $r = .686$ $p < .001$. For collinearity statistics, multicollinearity was not evident based on the variance inflation factor (VIF) values not exceeding a value of 10 (UCLA: Statistical Consulting Group, 2019). Moreover, collinearity diagnostics also indicated that evidence of multicollinearity is not present, which is based on no dimensions having more than one variance proportion above .50 (Belsley, 1980, p. 153).

Missing Data

During the quality check phase of the preliminary analysis, eleven participants missing six or more items (i.e., 5% of data) were removed from the

study. Out of the remaining 217 participants, a total of 39 participants had missing data for one item ($n = 30$), two items ($n = 8$), and four items ($n = 1$). Thus, our missing values analysis was conducted on the remaining 217 participants across the variables of interest. Specifically, Little's missing completely at random (MCAR) test, suggests that there is a nonsignificant pattern of missingness, $\chi^2(2322) = 2489.234$, $p < .05$. In other words, statistical evidence suggests that there are no patterns of missingness and that the missing values can be imputed using the expectation-maximization method. Note, when running the main analysis, we found no difference in the statistical significance of our tests between using the imputed and unimputed missing values.

Multivariate Outliers

After transforming data and imputing missing values, the Mahalanobis distance test was used to assess for multivariate outliers. A significant multivariate outlier was detected, $\chi^2(4) = 19.3455$, $p < .001$. This potential multivariate outlier presented a large gap with the preceding case, $\chi^2(4) = 14.2376$, $p = .007$, a chi-square difference of 5.1079, compared to the rest of the cases in the data set in which chi-square differences did not exceed 1.3711. Moreover, the same case emerged as a multivariate outlier when using untransformed data and unimputed missing values. Thus, one multivariate outlier was dropped, and 216 participants data were used for the analysis – a response rate of 83.40%.

Analysis

Descriptive Information

The majority of participants endorsed experiencing some degree of PMIE ($n = 178, 82.4\%$) related to their most stressful military experience. Specifically, most participants endorsed transgressing their morals or values ($n = 155, 71.8\%$) or experiencing some degree of feeling betrayed by others ($n = 144, 66.7\%$). Regarding moral emotions, the majority participants felt current states of guilt ($n = 174, 80.6\%$) or shame ($n = 167, 77.3\%$) during the survey. A large portion of participants also endorsed feeling both guilt and shame ($n = 154, 71.3\%$) simultaneously, while only some participants experienced only guilt ($n = 20, 9.3\%$) or only shame ($n = 13, 6.0\%$). Regarding self-compassion, the average participant score of the SCS was 2.86 ($SD = 0.85$) in which the self-kindness subscale had the lowest average score ($M = 2.67, SD = 1.04$), while the isolation subscale had the highest average score ($M = 3.13, SD = 1.21$).

Regarding our psychological distress outcomes, the majority of the sample met the probable diagnostic criteria for depression ($n = 132, 61.1\%$), while roughly a third of the sample met diagnostic criteria for PTSD ($n = 78, 36.1\%$). Moreover, a third of the sample met diagnostic criteria for both PTSD and depression ($n = 76, 35.2\%$) simultaneously. For more information on the measure descriptives, see Table 2.

Correlation Analysis

Associations between variables of interest were assessed with bivariate correlation coefficients, see the correlation matrix in Table 4. For the current study, specifically the first hypothesis, PMIE was significantly and positively associated with guilt ($r = .56, p < .05$), shame ($r = .45, p < .05$), depression ($r = .55, p < .05$), and PTSD symptoms ($r = .63, p < .05$). Relative to the second and third hypothesis, self-compassion was significantly and negatively associated with PMIE ($r = -.47, p < .05$), guilt ($r = -.50, p < .05$), shame ($r = -.65, p < .05$), depression ($r = -.73, p < .05$), and PTSD symptoms ($r = -.61, p < .05$). Thus, for all variables of interest, the direction of correlations was consistent with extant literature.

Depression Model

Model 15 in the PROCESS macro was used to setup a moderated mediation model with PMIE predicting depression symptoms, indirectly through moral emotions, on the condition that self-compassion moderates the mediator. A conceptual diagram of this model is illustrated in Figure 1 and all results pertaining to the depression model can be found in Table 4.

Unconditional Direct Effects. Our findings indicate that PMIE was a significant predictor of guilt, $b = .442, SE = .045, t(214) = 9.752, p < .001$, and shame, $b = .385, SE = .052, t(214) = 7.347, p < .05$. Findings also indicate that depression was significantly predicted by guilt, $b = 3.271, SE = .780, t(208) = 4.1962, p < .05$, shame, $b = 5.554, SE = .791, t(208) = 7.020, p < .05$, and self-

compassion, $b = -4.958$, $SE = .878$, $t(208) = -5.649$, $p < .05$. However, PMIE did not significantly predict depression, $b = .881$, $SE = .518$, $t(208) = 1.700$, $p > .05$.

Unconditional Interactions. Depression was also significantly predicted by Guilt X Self-compassion, $b = 3.326$, $SE = 1.073$, $t(208) = 3.099$, $p < .05$, and Shame X Self- Compassion, $b = -2.088$, $SE = .830$, $t(208) = -2.515$, $p < .05$. However, the interaction of PMIE X Self compassion, did not significantly predict depression $b = -.402$, $SE = .585$, $t(208) = -.687$, $p > .05$.

Conditional Direct Effect and Indirect Effects. The direct effect of PMIE predicting depression was not significant at the low, $Effect = 1.2233$, $SE = .6809$, 95% CI [-.1190, 2.5656], mean, $Effect = .8813$, $SE = .5183$, 95% CI [-.1405, 1.9031], or high levels of self-compassion, $Effect = .5393$, $SE = .7548$, 95% CI [-.9488, 2.0273].

In contrast to the conditional direct effect, the conditional indirect effect of PMIE predicting depression through moral emotions were meaningful. For instance, guilt was a significant mediator at the mean, $Effect = 1.4461$, $SE = .3755$, 95% CI [.7146, 2.2061], and high levels of self-compassion, $Effect = 2.6948$, $SE = .6269$, 95% CI [1.4916, 3.9928], but was not significant at low level of self-compassion, $Effect = .1944$, $SE = .4428$, 95% CI [-.6644, 1.0659]. Moreover, the index of moderated mediation suggests that the indirect effects at mean and high levels of self-compassion were significantly different from each other, $Index = 1.4690$, $SE = .4604$, 95% CI [-1.5515, -.1609]. In other words, the

indirect relationship between PMIE and depression via guilt was contingent upon the presence of self-compassion at the mean and high levels.

Similarly, shame significantly mediated the relationship between PMIE and depression at low, *Effect* = 2.8228, *SE* = .4812, 95% CI [1.9218, 3.8159], mean, *Effect* = 2.1387, *SE* = .4696, 95% CI [1.3163, 3.1524], and high levels of self-compassion, *Effect* = 1.4545, *SE* = .6189, 95% CI [.3598, 2.8174]. Moreover, the index of moderated mediation suggests that the indirect effects at low, mean, and high levels of self-compassion were significantly different from each other, *Index* = -.8039, *SE* .3462, 95% CI [-1.5515, -.1609]. In other words, the indirect relationship between PMIE and depression via shame was contingent upon the presence of self-compassion at various levels.

Posttraumatic Stress Disorder Model

For the moderated mediation posttraumatic stress disorder (PTSD) model, PMIE was entered as the primary predictor of PTSD symptoms, indirectly through moral emotions, on the condition that self-compassion moderates the mediator. A conceptual diagram of this model is illustrated in Figure 1 and all results pertaining to the PTSD model can be found in Table 5.

Unconditional Direct Effects. The unconditional direct effect between PMIE and moral emotions were the same as the depression model. Regarding our outcome variable, PTSD was significantly predicted by PMIE, $b = 4.797$, $SE = 1.397$, $t(208) = 5.166$, $p < .05$, guilt, $b = 7.052$, $SE = 1.397$, $t(208) = 5.050$, $p < .05$, and self-compassion, $b = -5.237$, $SE = 1.572$, $t(208) = -3.331$, $p < .05$, but

not significantly predicted by shame, $b = 2.334$, $SE = 1.417$, $t(208) = 1.647$, $p > .05$.

Unconditional Interactions. PTSD was not significantly predicted by PMIE X Self compassion, $b = -.930$, $SE = 1.048$, $t(208) = -.888$, $p > .05$, Guilt X Self-compassion, $b = 2.410$, $SE = 1.923$, $t(208) = 1.253$, $p > .05$, or Shame X Self-Compassion, $b = -2.620$, $SE = 1.487$, $t(208) = -1.762$, $p > .05$.

Conditional Direct Effect and Indirect Effects. The direct effect of PMIE predicting PTSD was significant at low, $Effect = 5.589$, $SE = 1.220$, 95% CI [3.185, 7.994], mean, $Effect = 4.797$, $SE = .929$, 95% CI [2.967, 6.628], and high levels of self-compassion, $Effect = 4.005$, $SE = 1.352$, 95% CI [1.339, 6.671].

Similar results were also found with the conditional indirect effect of PMIE predicting PTSD through moral emotions. For instance, guilt was a significant mediator at low, $Effect = 2.208$, $SE = .939$, 95% CI [.609, 4.274], mean, $Effect = 3.114$, $SE = .672$, 95% CI [1.915, 4.545], and high levels of self-compassion, $Effect = 4.020$, $SE = 1.053$, 95% CI [2.091, 6.193]. However, the index of moderated mediation suggests that the indirect effects at low, mean, and high levels of self-compassion were not significantly different from each other, $Index = 1.0646$, $SE = .8665$, 95% CI [-.7275, 2.6640]. Although the indirect relationship between PMIE and PTSD via guilt was significant, the relationship was not contingent upon the presence of self-compassion at low, mean, or high levels.

Our results also indicate that the indirect effect of PMIE predicted PTSD through shame was not a condition of self-compassion. Although shame

significantly mediated the relationship between PMIE and PTSD at low levels of self-compassion, $Effect = 1.758$, $SE = .704$, 95% CI [.395, 3.127], there were no significant indirect effects found at the mean level, $Effect = .899$, $SE = .659$, 95% CI [-.392, 2.242], or high levels of self-compassion, $Effect = .040$, $SE = .923$, 95% CI [-1.832, 1.886]. Subsequently, the index of moderated mediation suggests that the indirect effects at low, mean, high levels of self-compassion were not significantly different from each other, $Index = -1.009$, $SE = .576$, 95% CI [-2.171, .102]. In other words, the significant relationship between PMIE and PTSD via shame was not contingent upon the presence of self-compassion at low, mean, or high levels.

CHAPTER FOUR

DISCUSSION

The purpose of the current study was to test aspects of the moral injury model proposed by Litz et al. (2009) by conducting a conditional process analysis of our moderated mediation models. One of our aims was to replicate findings that identify guilt and shame as mediators between PMIE and psychological distress. Moreover, we hoped to add to the literature by investigating the role of current states of guilt and shame rather than guilt and shame proneness. Specifically, we wanted to determine whether there were any distinctions in how guilt or shame functioned between PMIE and psychological distress (i.e., depression and PTSD symptoms). Regarding resilience, another aim was to see whether self-compassion played a role in influencing the relationship between our variables of interest (i.e., PMIE, shame, and guilt) and psychological distress. Considering that self-compassion has been shown to moderate the relationship between PMIE and suicidality (Kelley et al., 2019), the current study, instead, attempted to test self-compassion as a resilience factor by seeing whether it moderates PMIE, guilt, or shame. Finally, our primary aim was to identify how and when the relationship between PMIE and psychological distress occur. We approached this by conducting a conditional process analysis on a moderated mediation model. Specifically, constructed with PMIE predicting psychological distress via moral emotions conditioned on self-compassion moderating the

indirect effect at different levels (i.e., low = one standard deviation below the mean, mean, and high = one standard deviation above the mean).

Role of Moral Emotions

Our depression model results indicate that the effect of PMIE was carried indirectly through guilt and shame. This further supports Litz et al. (2009) moral injury model. Moreover, findings are also similar to Bryan et al. (2013), who find that guilt and shame proneness independently explain the relationship between psychological distress and suicidal ideation. However, for our PTSD model, only guilt was able to mediate the relationship between PMIE and PTSD. Our findings also replicate Lancaster's (2018) study in which a path model analysis found that moral emotions mediated the relationship between morally injurious experiences and PTSD symptoms. Our findings help extend the literature by identifying the extent to which current state guilt and shame, uniquely, mediate between PMIE and depression.

Considering that depression and PTSD symptoms are often comorbid (Breslau et al., 2000) and conceptually have some overlap, the current study results suggest that moral emotions that emerge from PMIE contribute differently to psychological distress outcomes. Specifically, the predictive relationship between PMIE and depression is explained by current states of guilt or shame, whereas the relationship between PMIE and PTSD was found to be explained by current states of guilt. Moreover, our depression model results are consistent with extant literature linking moral emotions to depression. For instance, a meta-

analysis of 108 studies showing that shame and guilt predict depression symptoms (Kim, Thibodeau, & Jorgensen, 2011).

The difference in how moral emotions differ in predicting depression and PTSD symptoms may be due to attributional styles. Moreover, the current study findings indicate that shame is more associated with depression, whereas guilt is more associated with PTSD. This is consistent with findings from Tangney and Wagner (1992), who suggest that those experiencing shame tend to use more internal, stable, and global attributions than those experiencing guilt, which is linked to impaired empathic ability, difficulty externalizing blame, and experiencing more severe psychopathology. These attributional styles are consistent with Orth, Berking, and Burkhardt's (2006) finding that shows how shame is linked to depression through rumination, which is responsible for more severe depression symptoms. Regarding guilt, findings from Bannister et al. (2018) suggests that there are different types of guilt (i.e., global, cognitive, and distress related), in which internalized shame did not exist without guilt related distress (i.e., shame-free guilt). In other words, the relationship between PMIE and PTSD symptoms may be explained by looking at the combination of shame and different types of guilt. Thus, future research should investigate the intersection between current state guilt and shame, types of guilt, PMIE, and PTSD symptoms. Regardless of the differences in indirect effects, it is evident that current state guilt and shame play a role between PMIE and psychological distress.

Role of Self-compassion

Of particular interest is whether self-compassion can attenuate moral emotions (i.e., guilt and shame). We found that self-compassion had an unconditional direct effect on depression and PTSD symptoms, consistent with findings that link self-compassion to concurrent depression and depression vulnerability (Ehret, Joormann, & Berking, 2015), and PTSD (Hiraoka et al., 2015). When looking at unconditional moderators, self-compassion was found to influence the relationship of both guilt and shame as predictors of depression. Moreover, our conditional process analysis of our depression model, indicated that self-compassion played a role in PMIE's effect on depression via moral emotion.

Central to the current study is whether self-compassion has the ability to reduce psychological distress outcomes. Our conditional process analysis of our moderated mediation model suggests that PMIE predicted depression through moral emotion on the condition that different levels of self-compassion interact with moral emotions. Specifically, the relationship between PMIE and depression through moral emotion was found to be contingent upon self-compassion. For instance, on the condition of medium to high levels of self-compassion being present, guilt was found to mediate the relationship between PMIE and depression. In other words, findings suggest that those with medium to high levels of self-compassion are able to reduce depression symptoms by reducing guilty emotions. Likewise, it may also be possible to reduce guilty emotions by

bolstering self-compassion and, subsequently, reducing depression symptoms. In contrast, those with a low level of self-compassion may be less successful and have less depression symptom reduction when guilt is reduced. Thus, our findings further support self-compassion as a possible resilience factor for moral injury related guilt and shame, consistent with previous literature suggesting self-compassion's role in attenuating negative affect (Arimitsu & Hofmann, 2015).

Self-compassion's conditional effect on the relationship between PMIE and depression via moral emotion is consistent with extant literature that attributes self-compassion's influence on moral emotions to rumination and attribution styles, (Bannister et al., 2018; Orth et al., 2006). Our findings are also consistent with Kelley et al. (2019), who find that self-compassion acts as a moderator of moral injury. Their findings suggest that the components of self-compassion act as protective (i.e., self-kindness, common humanity, and mindfulness) and risk (i.e., self-judgment, isolation, and over-identification) factors. Thus, moral injury-related depression is likely to benefit from bolstering self-compassion, especially for depression that involves shame.

Although our findings suggest that self-compassion may buffer against depression, findings unexpectedly indicate that self-compassion may not be effective in addressing PTSD symptoms. While PMIE, guilt, and self-compassion uniquely predicted PTSD, self-compassion was not a condition of PMIE indirectly effecting PTSD through guilt. It is possible that aspects self-compassion was not influential enough on influencing specific symptom clusters of PTSD (i.e.,

intrusion symptoms arousal and reactivity). Yet, similar to our current study, Hiraoka et al. (2015) also found significant correlations between trauma-related guilt each of the DSM-IV PTSD symptom clusters. Thus, future research is needed to clarify the role of guilt and self-compassion for PTSD outcomes and the association with PTSD symptom clusters for DSM-V. It is possible that self-compassion influences PTSD, but maybe through other variables not measured in the current study.

Limitations and Future Research

Although the strengths of the current study are its use of current state shame and guilt relative to a specific event, sample size, education and income diversity, and use of conditional process analysis, there are some notable limitations. First off, our cross-sectional design combined with assuming temporal precedence greatly limits our ability to make any causal inferences. Future research should incorporate longitudinal or experimental designs which are needed to establish whether self-compassion has a causal relationship with moral emotions and psychological distress as well as to be able to tease apart moral emotions, PMIE, and psychological distress.

Online self-report measures were also used which may have excluded veterans with low socio-economic status. However, of concern, is the use of online panels through TurkPrime in which self-identified veterans were provided a monetary incentive for completing our survey. This may have encouraged non-veterans to pose as veterans so they may acquire the monetary benefits. Extant

literature finds that participants faking demographics is a destructively common occurrence and that researchers should take precautions against ingenuine participants (Wessling, Huber, & Netzer, 2017). Although the current study employed quality checks to screen out potentially ingenuine participants, future research should consider attempting to verify veteran affiliation or recruit from clinical samples to avoid poor data outcomes.

Other strengths of our study include sample demographics in which our sample was diverse in education, income, and age range. Although White males were overly represented in our sample, it was consistent with the race and ethnicity make-up of the military (DoD & ODMEIO, 2013). Future research should extend moral injury and psychological distress research to other populations (e.g., service member veterans from other countries, incarcerated populations, and first responders) to make findings more generalizable to other populations.

Conclusion

Overall, our findings suggest that the role of self-compassion has important implications for practice. With the current study's evidence supporting the role of moral emotions and self-compassion between PMIE and depression, practitioners may be aided in identifying treatments that are able to focus on aspects of PMIE that will lead to optimal outcomes. That said, one future direction to addressing moral injury may not involve eliminating guilt or psychological distress, especially when one is culpable for behaviors that may

have led to moral injury. Thus, other outcomes should be explored that will speak to the overall well-being of those with moral injuries.

Table 1. Sample Demographics

Variable	Mean (SD)	<i>n</i> (%)
Gender		
Male		152 (70.4%)
Female		63 (29.2%)
Prefer not to disclose		1 (0.5%)
Missing		1 (0.5%)
Age (range 18 – 80)		
Valid	41.30 (15.57)	201 (93.1%)
Missing		15 (6.9%)
Education level		
Less than high school degree		2 (0.9%)
High school graduate (high school diploma or equivalent including GED)		38 (17.6%)
Some college credit, but less than one year of college credit		43 (19.9%)
One or more years of college credit, no degree		50 (23.2%)
Associate degree in college (e.g., AA, AS)		28 (13.0%)
Bachelor's degree in college (e.g., BA, BS)		34 (15.7%)
Master's degree (e.g., MA, MS, MEng, MEd, MSW, MBA)		17 (7.9%)
Professional degree (e.g., JD, MD, DDS, DVN, LLB)		2 (0.9%)
Doctoral degree (e.g., PhD, EdD)		1 (0.5%)
Prefer not to disclose		1 (0.5%)
Ethnic and racial background		
Spanish, Hispanic, or Latino		17 (7.1%)
White		173 (72.1%)
Black or African American		28 (11.7%)
American Indian or Alaska Native		8 (3.3%)
Asian		7 (2.9%)
Native Hawaiian or Pacific Islander		1 (0.5%)
Other		3 (1.3%)
Prefer not to disclose		3 (1.3%)

Variable	Mean (<i>SD</i>)	<i>n</i> (%)	Range
Income level			
Less than \$10,000		13 (6.0%)	
\$10,000 to \$19,999		23 (10.6%)	
\$20,000 to \$29,999		32 (14.8%)	
\$30,000 to \$39,999		20 (9.3%)	
\$40,000 to \$49,999		30 (13.9%)	
\$50,000 to \$59,999		24 (11.1%)	
\$60,000 to \$69,999		18 (8.3%)	
\$70,000 to \$79,999		10 (4.6%)	
\$80,000 to \$89,999		7 (3.2%)	
\$90,000 to \$99,999		10 (4.6%)	
\$100,000 to \$149,999		19 (8.8%)	
\$150,000 or more		1 (0.5%)	
Prefer not to disclose		9 (4.2%)	
Branch of Service			
Air Force		31 (14.4%)	
Army		107 (49.5%)	
Coast Guard		5 (2.3%)	
Marine Corps		21 (9.7%)	
Navy		56 (25.9%)	
Military Component			
Active		189 (87.5%)	
National Guard		20 (9.3%)	
Reserve		31 (14.4%)	
Other		8 (3.7%)	
Prefer not to disclose		4 (1.9%)	

Variable	Mean (<i>SD</i>)	<i>n</i> (%)	Range
Military Service Era			
September 2001 or later		144 (66.7%)	
August 1990 to August 2001 (includes Persian Gulf War)		60 (27.8%)	
May 1975 to July 1990		42 (19.4%)	
Vietnam era (August 1964 to April 1975)		20 (9.26%)	
February 1955 to July 1964		3 (1.39%)	
Prefer not to disclose		4 (1.85%)	
Deployed while serving			
Yes		134 (62.0%)	
No		65 (20.1%)	
Prefer not to disclose		16 (7.4%)	
Served in combat or a warzone when deployed			
Yes		99 (45.8%)	
No		27 (12.5%)	
Prefer not to disclose		8 (3.7%)	
Helpful support from mental health professionals			
Yes		116 (53.7%)	
No		92 (42.6%)	
Prefer not to disclose		8 (3.7%)	

Table 2. Measure Descriptives

Scale Subscale	Mean (<i>SD</i>)	Range		Missing
		Minimum	Maximum	
MIES Total	26.69 (11.34)	9	54	0
MIES	2.97 (1.26)	1	6	0
Transgression	2.81 (1.37)	1	6	0
Betrayal	3.28 (1.54)	1	6	0
SSGS Total	21.64 (9.51)	10	50	1
SSGS	2.16 (.95)	1	5	1
Guilt	2.20 (1.00)	1	5	1
Shame	2.13 (1.17)	1	5	1
SCS Total	74.44 (22.10)	26	130	5
SCS	2.86 (0.85)	1	5	5
Self-kindness	2.67 (1.04)	1	5	1
Common humanity	2.79 (1.06)	1	5	0
Mindfulness	2.95 (1.03)	1	5	2
Self-judgment (R)	3.11 (1.14)	1	5	2
Isolation (R)	3.13 (1.21)	1	5	1
Over-identification (R)	2.89 (1.12)	1	5	0
CES-D Total	23.42 (14.91)	0	60	6
PCL-5 Total	27.26 (21.54)	0	80	6

Note: MIES = Moral Injury Events Scale, SSGS = State Shame and Guilt Scale, CES-D = Center for Epidemiologic Studies Depression Scale, and PCL-5 = Posttraumatic Stress Disorder Check List 5. Descriptives represent values after imputing missing values. (R) = reverse coded. *N* = 216.

Table 3. Bivariate Correlations

VARIABLE	1	2	3	4	5	6
1 MIES	-					
2 SSGS GUILT	.56	-				
3 SSGS SHAME	.45	.67	-			
4 SCS	-.47	-.50	-.65	-		
5 CES-D TOTAL	.55	.68	.79	-.73	-	
6 PCL-5 TOTAL	.63	.67	.62	-.61	.80	-

Note: All bivariate correlations were significant, $p < .05$. MIES = Moral Injury Events Scale, SSGS = State Shame and Guilt, SCS = Self-compassion Scale, CES-D = Center for Epidemiologic Studies Depression Scale, PCL-5 = Posttraumatic Stress Disorder Check List 5.

Table 4. Unconditional Direct Effects for Depression

Outcome variable <i>Model or Predictor</i>	<i>b</i>	<i>SE</i>	95% CI		<i>df</i>	<i>t</i>	<i>F</i>	<i>R</i> ²	<i>p</i>
			Lower	Upper					
Guilt									
<i>Model</i>					1, 214		95.098*	.308	< .001*
<i>Constant</i>	.000	.057	-.112	.112	214	0.00			1.000
PMIE	.442*	.045	.352	.531	214	9.7518*			< .001*
Shame									
<i>Model</i>					1, 214		53.980*	.201	< .001*
<i>Constant</i>	.000	.066	-.130	.130	214	0.00			1.000
PMIE	.385*	.052	.282	.488	214	7.347*			< .001*
Depression									
<i>Model</i>					7, 208		88.334*	.748	< .001*
<i>Constant</i>	23.133*	.623	21.909	24.366	208	37.127*			< .001*
PMIE	.881	.518	-.141	1.903	208	1.700			.091
<i>Guilt</i>	3.271*	.780	1.734	4.808	208	4.196*			< .001*
<i>Shame</i>	5.554*	.791	3.994	7.113	208	7.020*			< .001*
<i>Self-compassion</i>	-4.958*	.878	-6.688	-3.228	208	-5.649*			< .001*
PMIE X <i>Self-compassion</i>	-.402	.585	-1.556	.752	208	-0.687			.493
<i>Guilt</i> X <i>Self-compassion</i>	3.326*	1.073	1.210	5.442	208	3.099*			.002*
<i>Shame</i> X <i>Self-compassion</i>	-2.088*	.830	-3.724	-.451	208	-2.515*			.013*

Note: **p* < .05. *N* = 216. *b* = unstandardized beta, *SE* = standard error, *df* = degrees of freedom, CI = confidence interval. PMIE = Potential morally injurious experiences. Variables were mean centered before creating the interaction terms.

Table 5. Conditional Indirect Effects for Depression

Conditional Effects <i>Moderator (Level) or Index</i>	<i>Index</i>	<i>Effect</i>	<i>SE</i>	95% CI	
				Lower	Upper
PMIE → Depression					
<i>Self-compassion (-1 SD, -.8510)</i>		1.223	.681	-.119	2.566
<i>Self-compassion (Mean, .0000)</i>		.881	.518	-.141	1.903
<i>Self-compassion (+1 SD, .8510)</i>		.539	.755	-.949	2.027
PMIE → Guilt → Depression					
<i>Self-compassion (-1 SD, -.8510)</i>		.194	.443	-.664	1.066
<i>Self-compassion (Mean, .0000)</i>		1.445*	.376	.715	2.206
<i>Self-compassion (+1 SD, .8510)</i>		2.695*	.627	1.492	3.993
<i>Index of Moderated Mediation</i>	1.469*		.460	.602	2.409
PMIE → Shame → Depression					
<i>Self-compassion (-1 SD, -.8510)</i>		2.823*	.481	1.922	3.816
<i>Self-compassion (Mean, .0000)</i>		2.139*	.470	1.316	3.152
<i>Self-compassion (+1 SD, .8510)</i>		1.455*	.619	.360	2.817
<i>Index of Moderated Mediation</i>	-.804*		.346	-1.552	-.161

Note: *Effect or index value is different from zero. $N = 216$. $b = unstandardized\ beta$, $SE = standard\ error$, $df = degrees\ of\ freedom$, $CI = confidence\ interval$. PMIE = Potential morally injurious experiences. Variables were mean centered before creating the interaction terms.

Table 6. Unconditional Direct Effects for Posttraumatic Stress Disorder

Outcome variable <i>Model or Predictor</i>	<i>b</i>	<i>SE</i>	95% CI		<i>df</i>	<i>t</i>	<i>F</i>	<i>R</i> ²	<i>p</i>
			Lower	Upper					
Guilt									
<i>Model</i>					1, 214		95.098*	.308	< .001*
<i>Constant</i>	.000	.057	-.112	.112	214	0.000			1.000
PMIE	.442*	.045	.352	.531	214	9.7518*			< .001*
Shame									
<i>Model</i>					1, 214		53.980*	.201	< .001*
<i>Constant</i>	.000	.066	-.130	.130	214	0.000			1.000
PMIE	.385*	.052	.282	.488	214	7.347*			< .001*
PTSD									
<i>Model</i>					7, 208		48.911*	.622	< .001
<i>Constant</i>	26.561*	1.117	24.359	28.762	208	23.789*			< .001
PMIE	4.797*	.929	2.967	6.628	208	5.166*			< .001
<i>Guilt</i>	7.052*	1.397	4.299	9.805	208	5.050*			< .001
<i>Shame</i>	2.334	1.417	-.460	5.128	208	1.647			.101
<i>Self-compassion</i>	-5.237*	1.572	-8.337	-2.138	208	-3.331*			.001
PMIE X <i>Self-compassion</i>	-.931	1.048	-2.998	1.136	208	-.888			.376
<i>Guilt</i> X <i>Self-compassion</i>	2.410	1.923	-1.381	6.202	208	1.253			.212
<i>Shame</i> X <i>Self-compassion</i>	-2.620	1.487	-5.552	.312	208	-1.762			.080

Note: **p* < .05. *N* = 216. *b* = unstandardized beta, *SE* = standard error, *df* = degrees of freedom, CI = confidence interval. PMIE = Potential morally injurious experiences. Variables were mean centered before creating the interaction terms.

Table 7. Conditional Indirect Effects for Posttraumatic Stress Disorder

Conditional Effects <i>Moderator (Level) or Index</i>	<i>Index</i>	<i>Effect</i>	<i>SE</i>	95% CI	
				Lower	Upper
PMIE → PTSD					
<i>Self-compassion (-1 SD, -.8510)</i>		5.589 [†]	1.220	3.185	7.994
<i>Self-compassion (Mean, .0000)</i>		4.797 [†]	.929	2.967	6.628
<i>Self-compassion (+1 SD, .8510)</i>		4.005 [†]	1.352	1.339	6.671
PMIE → Guilt → PTSD					
<i>Self-compassion (-1 SD, -.8510)</i>		2.208 [†]	.939	.605	4.274
<i>Self-compassion (Mean, .0000)</i>		3.114 [†]	.672	1.915	4.545
<i>Self-compassion (+1 SD, .8510)</i>		4.020 [†]	1.053	2.091	6.193
<i>Index of Moderated Mediation</i>	1.065		.867	-.728	2.664
PMIE → Shame → PTSD					
<i>Self-compassion (-1 SD, -.8510)</i>		1.758 [†]	.704	.395	3.127
<i>Self-compassion (Mean, .0000)</i>		.899	.659	-.392	2.242
<i>Self-compassion (+1 SD, .8510)</i>		.040	.923	-1.832	1.886
<i>Index of Moderated Mediation</i>	-1.009		.576	-2.171	.102

Note: [†]Effect or index value is different from zero. *N* = 216. *b* = unstandardized beta, *SE* = standard error, *df* = degrees of freedom, CI = confidence interval. PMIE = Potential morally injurious experiences. Variables were mean centered before creating the interaction terms.

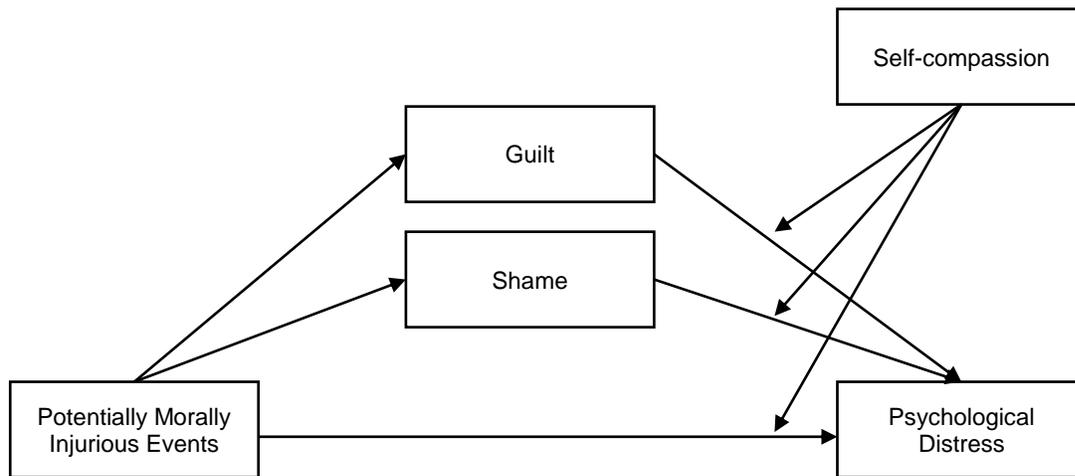


Figure 1. Conceptual Moderated Mediation Model

Note. Model 15 illustrating psychological distress predicted by potentially morally injurious events through moral emotions (i.e., guilt and shame) on the condition of self-compassion moderates the indirect effect. Two moderated mediation models were constructed using different outcome variables (i.e., depression and PTSD).

APPENDIX A
INFORMED CONSENT FORM

Informed Consent

APPROVAL STATEMENT: You are invited to participate in a study that is being conducted by Mernyll Manalo and Dr. Christina Hassija of the Psychology department at California State University, San Bernardino (CSUSB). The study has been approved by the Department of Psychology Institutional Review Board Sub-Committee at CSUSB. A copy of the stamp indicating their approval should be evident somewhere towards the bottom of the page.

DESCRIPTION: The purpose of this study is to investigate the relationship between military experiences and well-being. This survey will take approximately 20 minutes to complete in which we ask you to complete in a single sitting with no interruptions or distractions present.

COMPENSATION: [REDACTED] participants recruited from [REDACTED] will receive 1 unit of SONA research credit or participation. For Amazon Mechanical Turk and TurkPrime participants, monetary compensation will be granted for participation according to the amount that you have agreed to with the platform (i.e., Amazon Mechanical Turk and TurkPrime) through which you entered this survey.

CONFIDENTIALITY STATEMENT: All responses will be collected online in which all participants' information will be kept confidential, encrypted, and password protected. Also, internet protocol addresses will be removed when collected from the source, which reduces the risk of linking responses to participants. No one else besides the researchers will have access to the data. The results from this study will be submitted for professional research presentations and/or publication to a scientific journal. When the study results are presented or published, they will be in the form of group averages as opposed to individual responses, so again, your responses will not be identifiable.

VOLUNTARY PARTICIPATION & RIGHT TO WITHDRAW: Your participation in this study is entirely voluntary and you are free to refuse participation or withdraw at any time. Your decision to withdraw will not result in any penalty or loss of benefits to which you are entitled. You may withdraw your participation by simply clicking the appropriate button to exit the study.

RISK & BENEFITS: Participating in this study may result in a gratifying experience of assisting in research which might have implications for the treatment of emotional disorders and difficulties. Minimal risks are possible with your participation in this study and include the possibility of short-term emotional distress resulting from recalling and completing surveys about your emotional state or military experiences. It is very unlikely that any psychological harm will result from participation in this study. However, if you would like to discuss any distress you have experienced, do not hesitate to contact the Veterans Crisis Line at 1-800-273-8255, and press 1, or send a text message to 838255. Another service that may help is SAMHSA's National Helpline, 1-800-662-HELP (4357) where you may receive referrals to local treatment facilities, support groups, and community-based organizations.

QUESTIONS OR CONCERNS: If you have any questions or concerns regarding this study, please contact the Department of Psychology Institutional Review Board Sub-Committee at California State University, San Bernardino (psyc.irb@csusb.edu). Results from this study will be available from Dr. Hassija (909) 537-5481 after July 2019.

California State University Psychology Institutional Review Board-Committee			
Approved	4/17/18	Void After	4/17/19
IRB # H-18WI-15		Chair	

By choosing “agree” below you acknowledge that you have been informed and understand the nature and purpose of this study. You acknowledge that you are at least 18 years of age and freely consent to participate.

I consent to participate



APPENDIX B
MORAL INJURY EVENTS SCALE

Moral Injury Events Scale (MIES)

Instructions: Please select the appropriate response to indicate how much you agree or disagree with each of the following statements regarding YOUR MOST stressful military experience(s) at any time since joining the military.

- (1) Strongly agree
- (2) Moderately agree
- (3) Slightly agree
- (4) Slightly disagree
- (5) Moderately disagree
- (6) Strongly disagree

PERCEIVED TRANSGRESSION SUBSCALE

1. I saw things that were morally wrong
2. I am troubled by having witnessed others' immoral acts
3. I acted in ways that violated my own moral code or values
4. I am troubled by having acted in ways that violated my own morals or values
5. I violated my own morals by failing to do something that I felt I should have done
6. I am troubled because I violated my morals by failing to do something that I should have done

PERCEIVED BETRAYAL SUBSCALE

7. I feel betrayed by leaders who I once trusted
8. I feel betrayed by fellow service members who I once trusted
9. I feel betrayed by others outside the U.S. military who I once trusted

Nash, W. P., Carper, T. L. M., Mills, M. A., Au, T., Goldsmith, A., & Litz, B. T. (2013). Psychometric evaluation of the Moral Injury Events Scale. *Military Medicine*, 178(6), 646–652. <https://doi.org/10.7205/MILMED-D-13-00017>

APPENDIX C
POSTTRAUMATIC STRESS DISORDER CHECKLIST

Posttraumatic Stress Disorder Checklist (PCL-5)

Instructions: Below is a list of problems and complaints that people sometimes have in response to stressful life experiences. Based on your military experiences, think about the impact that YOUR MOST stressful life event has had on you and respond to the following items as they relate to that event. Please read each one carefully, then select how much you have been bothered by that problem in the past month.

- (0) Not at all
- (1) A little bit
- (2) Moderately
- (3) Quite a bit
- (4) Extremely

In the past month, how much were you bothered by:

1. Repeated, disturbing, and unwanted memories of the stressful experience?
2. Repeated, disturbing dreams of the stressful experience?
3. Suddenly acting or feeling as if the stressful experience were happening again (as if you were back there reliving it)?
4. Feeling very upset when something reminded you of the stressful experience?
5. Having strong physical reactions (e.g., heart pounding, trouble breathing, sweating) when something reminded you of the stressful experience?
6. Avoiding memories, thoughts, or feelings related to the stressful experience?
7. Avoiding external reminders of the stressful experiences (for example, people, places, conversations, activities, objects, or situations)?
8. Trouble remembering important parts of the stressful experience?
9. Having strong negative beliefs about yourself, other people, or the world (for example, having thoughts such as: I am bad, there is something seriously wrong with me, no one can be trusted, the world is completely dangerous)?
10. Blaming yourself or someone else for the stressful experience or what happened after it?

11. Having strong negative feelings such as fear, horror, anger, guilt, or shame?
12. Loss of interest in activities that you used to enjoy?
13. Feeling distant or cutoff from other people?
14. Trouble experiencing positive feelings (for example, being unable to feel happiness or have loving feelings for people close to you)?
15. Irritable behavior, angry outbursts, or acting aggressively?
16. Taking too many risks or doing things that could cause you harm?
17. Being “super alert” or watchful or on guard?
18. Feeling jumpy or easily startled?
19. Having difficulty concentrating?
20. Trouble falling or staying asleep?

Blevins, C. A., Weathers, F. W., Davis, M. T., Witte, T. K., & Domino, J. L. (2015). The posttraumatic stress disorder checklist for DSM-5 (PCL-5): Development and initial psychometric evaluation. *Journal of Traumatic Stress, 28*(6), 489–498. <https://doi.org/10.1002/jts.22059>

APPENDIX D
STATE SHAME AND GUILT SCALE

State Shame and Guilt Scale (SSGS)

Instructions: The following are some statements which may or may not describe how you are feeling **RIGHT NOW**. Please rate each statement using the 5-point scale below. Remember to rate each statement based on how you are feeling **right at this moment**.

- (1) I do not feel this way at all
- (2)
- (3) I feel this way somewhat
- (4)
- (5) I feel this way very strongly

1. I feel good about myself...
2. I want to sink into the floor and disappear... (*Shame*)
3. I feel remorse, regret... (*Guilt*)
4. I feel worthwhile, valuable...
5. I feel small... (*Shame*)
6. I feel tension about something I have done... (*Guilt*)
7. I feel capable, useful...
8. I feel like I am a bad person... (*Shame*)
9. I cannot stop thinking about something bad I have done... (*Guilt*)
10. I feel proud...
11. I feel humiliated, disgraced... (*Shame*)
12. I feel like apologizing, confessing... (*Guilt*)
13. I feel pleased about something I have done...
14. I feel worthless, powerless... (*Shame*)
15. I feel bad about something I have done... (*Guilt*)

Tilghman-Osborne, C., Cole, D. A., Felton, J. W., & Ciesla, J. A. (2008). Relation of guilt, shame, behavioral and characterological self-blame to depressive symptoms in adolescents over time. *Journal of Social and Clinical Psychology, 27*(8), 809–842. <https://doi.org/10.1521/jscp.2008.27.8.809>

APPENDIX E
CENTER FOR EPIDEMIOLOGIC STUDIES DEPRESSION SCALE

Center for Epidemiologic Studies Depression Scale (CES-D)

Instructions: Below is a list of the ways you might have felt or behaved. Please tell me how often you have felt this way during the past week.

Rarely or none of the time (less than 1 day)

Some or a little of the time (1-2 days)

Occasionally or a moderate amount of time (3-4 days)

Most or all of the time (5-7 days)

1. I was bothered by things that usually don't bother me.
2. I did not feel like eating; my appetite was poor.
3. I felt that I could not shake off the blues even with help from my family or friends.
4. I felt I was just as good as other people.*
5. I had trouble keeping my mind on what I was doing.
6. I felt depressed.
7. I felt that everything I did was an effort.
8. I felt hopeful about the future.*
9. I thought my life had been a failure.
10. I felt fearful.
11. My sleep was restless.
12. I was happy.*
13. I talked less than usual.
14. I felt lonely.
15. People were unfriendly.
16. I enjoyed life.*
17. I had crying spells.
18. I felt sad.
19. I felt that people dislike me.
20. I could not get "going."

* Reverse coded

Radloff, L. S. (1977). The CES-D Scale: A Self-Report Depression Scale for Research in the General Population. *Applied Psychological Measurement*, 1(3), 385–401. <https://doi.org/10.1177/014662167700100306>

APPENDIX F
SELF-COMPASSION SCALE

Self-compassion Scale (SCS)

Instructions: Please read each statement carefully before answering. Please indicate how often you behave in the stated manner by using the 5-point scale from 1 (Almost never) to 5 (Almost always).

- (1) Almost never
- (2)
- (3)
- (4)
- (5) Almost always

1. I'm disapproving and judgmental about my own flaws and inadequacies.
2. When I'm feeling down I tend to obsess and fixate on everything that's wrong.
3. When things are going badly for me, I see the difficulties as part of life that everyone goes through.
4. When I think about my inadequacies, it tends to make me feel more separate and cut off from the rest of the world.
5. I try to be loving towards myself when I'm feeling emotional pain.
6. When I fail at something important to me I become consumed by feelings of inadequacy.
7. When I'm down and out, I remind myself that there are lots of other people in the world feeling like I am.
8. When times are really difficult, I tend to be tough on myself.
9. When something upsets me I try to keep my emotions in balance.
10. When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.
11. I'm intolerant and impatient towards those aspects of my personality I don't like.
12. When I'm going through a very hard time, I give myself the caring and tenderness I need.
13. When I'm feeling down, I tend to feel like most other people are probably happier than I am.
14. When something painful happens I try to take a balanced view of the situation.
15. I try to see my failings as part of the human condition.
16. When I see aspects of myself that I don't like, I get down on myself.

17. When I fail at something important to me I try to keep things in perspective.
18. When I'm really struggling, I tend to feel like other people must be having an easier time of it.
19. I'm kind to myself when I'm experiencing suffering.
20. When something upsets me I get carried away with my feelings.
21. I can be a bit cold-hearted towards myself when I'm experiencing suffering.
22. When I'm feeling down I try to approach my feelings with curiosity and openness.
23. I'm tolerant of my own flaws and inadequacies.
24. When something painful happens I tend to blow the incident out of proportion.
25. When I fail at something that's important to me, I tend to feel alone in my failure.
26. I try to be understanding and patient towards those aspects of my personality I don't like.

Neff, K. D. (2003). The development and validation of a scale to measure self-compassion. *Self and Identity*, 2(3), 223–250.
<https://doi.org/10.1080/15298860309027>

APPENDIX G
DEMOGRAPHICS QUESTIONNAIRE

Demographics Questionnaire (DQ)

(1) Please indicate your age in the text box below:

a. _____

(2) What is your gender

a. Male

b. Female

c. Other (Please specify): _____

d. Prefer not to disclose

(3) What is the highest level of school you have completed or the highest degree you have received?

a. Less than high school degree

b. High school graduate (high school diploma or equivalent including GED)

c. Some college credit, but less than one year of college credit

d. One or more years of college credit, no degree

e. Associate degree in college (e.g., AA, AS)

f. Bachelor's degree in college (e.g., BA, BS)

g. Master's degree (e.g., MA, MS, MEng, MEd, MSW, MBA)

h. Professional degree (e.g., JD, MD, DDS, DVN, LLB)

i. Doctoral degree (e.g., PhD, EdD)

j. Prefer not to disclose

(4) Please indicate what you identify as (mark all that apply):

a. Spanish, Hispanic, or Latino (please specify): _____

b. White

c. Black or African American

d. American Indian or Alaska Native

e. Asian

f. Native Hawaiian or Pacific Islander

g. Other (please specify): _____

h. Prefer not to disclose

(5) Information about income is very important to understand. Would you please give your best estimate? Please indicate the answer that includes your entire household annual income before taxes.

- a. Less than \$10,000
- b. \$10,000 to \$19,999
- c. \$20,000 to \$29,999
- d. \$30,000 to \$39,999
- e. \$40,000 to \$49,999
- f. \$50,000 to \$59,999
- g. \$60,000 to \$69,999
- h. \$70,000 to \$79,999
- i. \$80,000 to \$89,999
- j. \$90,000 to \$99,999
- k. \$100,000 to \$149,999
- l. \$150,000 or more
- m. Prefer not to disclose

(6) In which branch or branches did you serve or are currently serving?
(Please select all that apply)

- a. Air Force
- b. Army
- c. Coast Guard
- d. Marine Corps
- e. Navy
- f. I did not serve in the military

(7) IF PARTICIPANT INDICATED A BRANCH, THEN THIS ITEM WILL BE DISPLAYED: In the *BRANCH SERVED*, what component(s) did you serve or are currently serving in? (Please mark all that apply)

- a. Active duty
- b. National Guard
- c. Reserve
- d. Other (please specify): _____
- e. Prefer not to disclose

- (8) Were you ever deployed while serving in the military?
- a. Yes
 - b. No
 - c. Prefer not to disclose
- (9) IF PARTICIPANT INDICATED THAT THEY DEPLOYED, THEN THIS ITEM WILL BE DISPLAYED: Did you deploy in support of any of the following operations (select all that apply):
- a. Operation Enduring Freedom (OEF)
 - b. Operation Iraqi Freedom (OIF)
 - c. Operation New Dawn (OND)
 - d. Operation Freedom's Sentinel (OFS)
 - e. Other (please specify): _____
 - f. Prefer not to disclose
- (10) IF PARTICIPANT INDICATED THAT THEY DEPLOYED, THEN THIS ITEM WILL BE DISPLAYED: Approximately, how much total time have you spent deployed in the military? Please use the text boxes below to indicate years and months.
- a. Years _____
 - b. Months _____
- (11) IF PARTICIPANT INDICATED THAT THEY DEPLOYED, THEN THIS ITEM WILL BE DISPLAYED: Did you ever serve in a combat or war zone?
- a. Yes
 - b. No
 - c. Prefer not to disclose
- (12) Have you ever received therapy or helpful support from a mental health professional?
- a. Yes
 - b. No
 - c. Prefer not to disclose

APPENDIX H
DEBRIEFING STATEMENT

DEBRIEFING STATEMENT

Thank you for participating in this study. There was no deception in this study, and we could not make this statement if there were any deception. As stated in the Consent Form, participating in this study may result in a gratifying experience of assisting in research which might have implications for the treatment of emotional disorders and difficulties.

If you have any questions or concerns regarding this study, please contact the Department of Psychology Institutional Review Board Sub-Committee at California State University, San Bernardino (psyc.irb@csusb.edu). Results from this study will be available from Dr. Hassija (909) 537-5481 until July 2019.

Minimal risks are possible with your participation in this study and include the possibility of short-term emotional distress resulting from recalling and completing surveys about your emotional state or military experiences. It is very unlikely that any psychological harm will result from participation in this study. However, if you would like to discuss any distress you have experienced, do not hesitate to contact the following:

The Veterans Crisis Line connects Veterans in crisis and their families and friends with qualified, caring Department of Veterans Affairs responders through a confidential toll-free hotline, online chat, or text. Veterans and their loved ones can call 1-800-273-8255 and Press 1 or send a text message to 838255 to receive confidential support 24 hours a day, 7 days a week, 365 days a year. Support for deaf and hard of hearing individuals is available.

SAMHSA's National Helpline, 1-800-662-HELP (4357), (also known as the Treatment Referral Routing Service) is a confidential, free, 24-hour-a-day, 365-day-a-year, information service, in English and Spanish, for individuals and family members facing mental and/or substance use disorders. This service provides referrals to local treatment facilities, support groups, and community-based organizations. Callers can also order free publications and other information.

To end the survey click the arrow at the bottom. Thank you for participating.

APPENDIX I
INTERNAL REVIEW BOARD APPROVAL FORM

**Human Subjects Review Board
Department of Psychology
California State University,
San Bernardino**

PI: Christina Hassija & Mernyll Manalo

From: Donna Garcia

Project Title: Well-Being Survey

Project ID: H-18WI-15

Date: 4/17/2018

Disposition: Administrative

Your IRB proposal (Well-being Survey, Hassija & Manalo, H-18WI-15) is approved. You are permitted to collect information from 172 participants from SONA and other sources including MTurk, TurkPrime, and [REDACTED] email listservs. This approval is valid from 4-17-18 to 4-17-19.

Good luck with your research!



Donna Garcia, Chair
Psychology IRB Sub-Committee

REFERENCES

- Agaibi, C. E., & Wilson, J. P. (2005). Trauma, PTSD, and resilience: A review of the literature. *Trauma, Violence, & Abuse, 6*(3), 195–216.
<https://doi.org/10.1177/1524838005277438>
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders: DSM-5*. (5th ed.). Washington, D.C.: Arlington, VA : American Psychiatric Association.
- Arimitsu, K., & Hofmann, S. G. (2015). Cognitions as mediators in the relationship between self-compassion and affect. *Personality and Individual Differences, 74*, 41–48. <https://doi.org/10.1016/j.paid.2014.10.008>
- Bannister, J. A., Colvonen, P. J., Angkaw, A. C., & Norman, S. B. (2018). Differential relationships of guilt and shame on posttraumatic stress disorder among veterans. *Psychological Trauma: Theory, Research, Practice, and Policy*.
<https://doi.org/10.1037/tra0000392>
- Beckham, J. C., Feldman, M. E., & Kirby, A. C. (1998). Atrocities exposure in Vietnam combat veterans with chronic posttraumatic stress disorder: Relationship to combat exposure, symptom severity, guilt and interpersonal violence. *Journal of Traumatic Stress, 11*(4), 777–785. <https://doi.org/10.1023/A:1024453618638>
- Belsley, D. A. (1980). *Regression diagnostics: identifying influential data and sources of collinearity*. New York: Wiley.

- Benight, C. C., & Bandura, A. (2004). Social cognitive theory of posttraumatic recovery: the role of perceived self-efficacy. *Behaviour Research and Therapy*, *42*(10), 1129–1148. <https://doi.org/10.1016/j.brat.2003.08.008>
- Blevins, C. A., Weathers, F. W., Davis, M. T., Witte, T. K., & Domino, J. L. (2015). The posttraumatic stress disorder checklist for DSM-5 (PCL-5): Development and initial psychometric evaluation. *Journal of Traumatic Stress*, *28*(6), 489–498. <https://doi.org/10.1002/jts.22059>
- Blum, A. (2008). Shame and guilt, misconceptions and controversies: A critical review of the literature. *Traumatology*, *14*(3), 91–102. <https://doi.org/10.1177/1534765608321070>
- Bovin, M. J., Marx, B. P., Weathers, F. W., Gallagher, M. W., Rodriguez, P., Schnurr, P. P., & Keane, T. M. (2016). Psychometric properties of the PTSD Checklist for Diagnostic and Statistical Manual of Mental Disorders–Fifth Edition (PCL-5) in veterans. *Psychological Assessment*, *28*(11), 1379–1391. <https://doi.org/10.1037/pas0000254>
- Breslau, N., Davis, G. C., Peterson, E. L., & Schultz, L. R. (2000). A second look at comorbidity in victims of trauma: The posttraumatic stress disorder–major depression connection. *Biological Psychiatry*, *48*(9), 902–909. [https://doi.org/10.1016/S0006-3223\(00\)00933-1](https://doi.org/10.1016/S0006-3223(00)00933-1)
- Brewin, C. R., Andrews, B., & Valentine, J. D. (2000). Meta-analysis of risk factors for posttraumatic stress disorder in trauma-exposed adults. *Journal of Consulting and Clinical Psychology*, *68*(5), 748–766. <https://doi.org/10.1037/0022-006X.68.5.748>

- Bryan, A. O., Theriault, J. L., & Bryan, C. J. (2015). Self-forgiveness, posttraumatic stress, and suicide attempts among military personnel and veterans. *Traumatology, 21*(1), 40–46. <https://doi.org/10.1037/trm0000017>
- Bryan, C. J., Bryan, A. O., Roberge, E., Leifker, F. R., & Rozek, D. C. (2018). Moral Injury, Posttraumatic Stress Disorder, and Suicidal Behavior Among National Guard Personnel. *Psychological Trauma: Theory, Research, Practice, and Policy*. <https://doi.org/10.1037/tra0000290>
- Bryan, C. J., Morrow, C. E., Etienne, N., & Ray-Sannerud, B. (2013). Guilt, shame, and suicidal ideation in a military outpatient clinical sample. *Depression and Anxiety, 30*(1), 55–60. <https://doi.org/10.1002/da.22002>
- Bullman, T., Schneiderman, A., & Gradus, J. L. (2019). Relative Importance of Posttraumatic Stress Disorder and Depression in Predicting Risk of Suicide among a Cohort of Vietnam Veterans. *Suicide and Life-Threatening Behavior, 0*(0). <https://doi.org/10.1111/sltb.12482>
- Bush, B. A., Novack, T. A., Schneider, J. J., & Madan, A. (2004). Depression Following Traumatic Brain Injury: The Validity of the CES-D as a Brief Screening Device. *Journal of Clinical Psychology in Medical Settings, 11*(3), 195–201. <https://doi.org/10.1023/B:JOCS.0000037613.69367.d4>
- Chang, E. C., Yu, T., Najarian, A. S.-M., Wright, K. M., Chen, W., Chang, O. D., ... Hirsch, J. K. (2016). Understanding the Association Between Negative Life Events and Suicidal Risk in College Students: Examining Self-Compassion as a

Potential Mediator: Self-Compassion as a Mediator. *Journal of Clinical Psychology*. <https://doi.org/10.1002/jclp.22374>

Dahm, K. A., Meyer, E. C., Neff, K. D., Kimbrel, N. A., Gulliver, S. B., & Morissette, S. B. (2015). Mindfulness, Self-Compassion, Posttraumatic Stress Disorder Symptoms, and Functional Disability in U.S. Iraq and Afghanistan War Veterans: Self-Compassion and Mindfulness in U.S. War Veterans. *Journal of Traumatic Stress*, 28(5), 460–464. <https://doi.org/10.1002/jts.22045>

Dennis, P. A., Dennis, N. M., Van Voorhees, E. E., Calhoun, P. S., Dennis, M. F., & Beckham, J. C. (2017). Moral transgression during the Vietnam War: A path analysis of the psychological impact of veterans' involvement in wartime atrocities. *Anxiety, Stress & Coping: An International Journal*, 30(2), 188–201. <https://doi.org/10.1080/10615806.2016.1230669>

Department of Defense (DoD), & Office of Diversity Management and Equal Opportunity (ODMEO). (2013). *DoD Diversity and Inclusion 2013 Summary Report* [Summary Report].

Drescher, K. D., Foy, D. W., Kelly, C., Leshner, A., Schutz, K., & Litz, B. (2011). An exploration of the viability and usefulness of the construct of moral injury in war veterans. *Traumatology*, 17(1), 8–13. <https://doi.org/10.1177/1534765610395615>

Ehlers, A., & Clark, D. M. (2000). A cognitive model of posttraumatic stress disorder. *Behaviour Research and Therapy*, 38(4), 319–345. [https://doi.org/10.1016/S0005-7967\(99\)00123-0](https://doi.org/10.1016/S0005-7967(99)00123-0)

- Ehret, A. M., Joormann, J., & Berking, M. (2015). Examining risk and resilience factors for depression: The role of self-criticism and self-compassion. *Cognition and Emotion, 29*(8), 1496–1504. <https://doi.org/10.1080/02699931.2014.992394>
- Ferrajão, P. C., & Oliveira, R. A. (2014). Self-awareness of mental states, self-integration of personal schemas, perceived social support, posttraumatic and depression levels, and moral injury: A mixed-method study among Portuguese war veterans. *Traumatology, 20*(4), 277–285. <https://doi.org/10.1037/trm0000016>
- Foa, E. B., Steketee, G., & Rothbaum, B. O. (1989). Behavioral/cognitive conceptualizations of post-traumatic stress disorder. *Behavior Therapy, 20*(2), 155–176. [https://doi.org/10.1016/S0005-7894\(89\)80067-X](https://doi.org/10.1016/S0005-7894(89)80067-X)
- Foy, D. W., Carroll, E. M., & Donahoe, C. P. (1987). Etiological factors in the development of PTSD in clinical samples of Vietnam combat veterans. *Journal of Clinical Psychology, 43*(1), 17–27. [https://doi.org/10.1002/1097-4679\(198701\)43:1<17::AID-JCLP2270430104>3.0.CO;2-Q](https://doi.org/10.1002/1097-4679(198701)43:1<17::AID-JCLP2270430104>3.0.CO;2-Q)
- Fulton, J. J., Calhoun, P. S., Wagner, H. R., Schry, A. R., Hair, L. P., Feeling, N., ... Beckham, J. C. (2015). The prevalence of posttraumatic stress disorder in Operation Enduring Freedom/Operation Iraqi Freedom (OEF/OIF) Veterans: A meta-analysis. *Journal of Anxiety Disorders, 31*, 98–107. <https://doi.org/10.1016/j.janxdis.2015.02.003>
- Hall, J. H., & Fincham, F. D. (2005). Self-forgiveness: The stepchild of forgiveness research. *Journal of Social and Clinical Psychology, 24*(5), 621–637. <https://doi.org/10.1521/jscp.2005.24.5.621>

- Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis: a regression-based approach* (Second edition.). New York: The Guilford Press.
- Held, P., & Owens, G. P. (2015). Effects of Self-Compassion Workbook Training on Trauma-Related Guilt in a Sample of Homeless Veterans: A Pilot Study: Self-Compassion and Trauma-Related Guilt. *Journal of Clinical Psychology, 71*(6), 513–526. <https://doi.org/10.1002/jclp.22170>
- Henning, K. R., & Frueh, B. C. (1997). Combat guilt and its relationship to PTSD symptoms. *Journal of Clinical Psychology, 53*(8), 801–808. [https://doi.org/10.1002/\(SICI\)1097-4679\(199712\)53:8<801::AID-JCLP3>3.0.CO;2-I](https://doi.org/10.1002/(SICI)1097-4679(199712)53:8<801::AID-JCLP3>3.0.CO;2-I)
- Hiraoka, R., Meyer, E. C., Kimbrel, N. A., DeBeer, B. B., Gulliver, S. B., & Morissette, S. B. (2015). Self-compassion as a prospective predictor of PTSD symptom severity among trauma-exposed U.S. Iraq and Afghanistan war veterans. *Journal of Traumatic Stress, 28*(2), 127–133. <https://doi.org/10.1002/jts.21995>
- Hoge, C. W., Castro, C. A., Messer, S. C., McGurk, D., Cotting, D. I., & Koffman, R. L. (2004). Combat Duty in Iraq and Afghanistan, Mental Health Problems, and Barriers to Care. *The New England Journal of Medicine, 351*(1), 13–22. <https://doi.org/10.1056/NEJMoa040603>
- Isaacs, K., Mota, N. P., Tsai, J., Harpaz-Rotem, I., Cook, J. M., Kirwin, P. D., ... Pietrzak, R. H. (2017). Psychological resilience in U.S. military veterans: A 2-

- year, nationally representative prospective cohort study. *Journal of Psychiatric Research*, 84, 301–309. <https://doi.org/10.1016/j.jpsychires.2016.10.017>
- Jackson, M. D., & McClelland, J. L. (1975). Sensory and cognitive determinants of reading speed. *Journal of Verbal Learning and Verbal Behavior*, 14(6), 565–574. [https://doi.org/10.1016/S0022-5371\(75\)80044-2](https://doi.org/10.1016/S0022-5371(75)80044-2)
- Jakupcak, M., Cook, J., Imel, Z., Fontana, A., Rosenheck, R., & McFall, M. (2009). Posttraumatic stress disorder as a risk factor for suicidal ideation in Iraq and Afghanistan War veterans. *Journal of Traumatic Stress*, 22(4), 303–306.
- Keane, T. M., Zimering, R. T., & Caddell, J. M. (1985). A behavioral formulation of posttraumatic stress disorder in Vietnam veterans. *The Behavior Therapist*, 8(1), 9–12. (1985-20292-001).
- Kelley, M. L., Bravo, A. J., Davies, R. L., Hamrick, H. C., Vinci, C., & Redman, J. C. (2019). Moral injury and suicidality among combat-wounded veterans: The moderating effects of social connectedness and self-compassion. *Psychological Trauma: Theory, Research, Practice, and Policy*. <https://doi.org/10.1037/tra0000447>
- Kilpatrick, D. G., Resnick, H. S., Milanak, M. E., Miller, M. W., Keyes, K. M., & Friedman, M. J. (2013). National estimates of exposure to traumatic events and PTSD prevalence using DSM-IV and DSM-5 criteria. *Journal of Traumatic Stress*, 26(5), 537–547. <https://doi.org/10.1002/jts.21848>

- Kim, S., Thibodeau, R., & Jorgensen, R. S. (2011). Shame, guilt, and depressive symptoms: A meta-analytic review. *Psychological Bulletin*, *137*(1), 68–96.
<https://doi.org/10.1037/a0021466>
- Lancaster, S. L. (2018). Negative outcomes after morally injurious experiences: A replication and extension. *Psychological Trauma: Theory, Research, Practice, and Policy*, *10*(4), 456–462. <https://doi.org/10.1037/tra0000341>
- Litz, B. T., Stein, N., Delaney, E., Lebowitz, L., Nash, W. P., Silva, C., & Maguen, S. (2009). Moral injury and moral repair in war veterans: A preliminary model and intervention strategy. *Clinical Psychology Review*, *29*(8), 695–706.
<https://doi.org/10.1016/j.cpr.2009.07.003>
- Maguen, S., Burkman, K., Madden, E., Dinh, J., Bosch, J., Keyser, J., ... Neylan, T. C. (2017). Impact of killing in war: A randomized, controlled pilot trial. *Journal of Clinical Psychology*, *73*(9), 997–1012. <https://doi.org/10.1002/jclp.22471>
- Maguen, S., Lucenko, B. A., Reger, M. A., Gahm, G. A., Litz, B. T., Seal, K. H., ... Marmar, C. R. (2010). The impact of reported direct and indirect killing on mental health symptoms in Iraq War veterans. *Journal of Traumatic Stress*, *23*(1), 86–90. (2010-04850-012).
- Marschall, D. E., Sanftner, J. L., & Tangney, J. P. (1994). The State Shame and Guilt Scale (SSGS). *Fairfax, VA: George Mason University*.
- Mental Health Advisory Team. (2008). *Mental Health Advisory Team (MHAT) VI*. Retrieved from <http://www.dtic.mil/docs/citations/ADA519676>

- Mowrer, O. H. (1947). On the dual nature of learning—a re-interpretation of “conditioning” and “problem-solving.” *Harvard Educational Review*, *17*, 102–148. (1950-03076-001).
- Nash, W. P., Carper, T. L. M., Mills, M. A., Au, T., Goldsmith, A., & Litz, B. T. (2013). Psychometric evaluation of the Moral Injury Events Scale. *Military Medicine*, *178*(6), 646–652. <https://doi.org/10.7205/MILMED-D-13-00017>
- National Center for PTSD. (2018, September 24). PTSD Checklist for DSM-5 (PCL-5) - PTSD: National Center for PTSD [General Information]. Retrieved April 23, 2019, from U.S. Department of Veteran Affairs website: <https://www.ptsd.va.gov/professional/assessment/adult-sr/ptsd-checklist.asp>
- Neff, K. D. (2003a). Self-Compassion: An Alternative Conceptualization of a Healthy Attitude Toward Oneself. *Self and Identity*, *2*(2), 85–101. <https://doi.org/10.1080/15298860309032>
- Neff, K. D. (2003b). The development and validation of a scale to measure self-compassion. *Self and Identity*, *2*(3), 223–250. <https://doi.org/10.1080/15298860309027>
- Neff, K. D., & McGehee, P. (2010). Self-compassion and Psychological Resilience Among Adolescents and Young Adults. *Self and Identity*, *9*(3), 225–240. <https://doi.org/10.1080/15298860902979307>
- Nieuwsma, J. A., Walser, R. D., Farnsworth, J. K., Drescher, K. D., Meador, K. G., & Nash, W. P. (2015). Possibilities within acceptance and commitment therapy for

approaching moral injury. *Current Psychiatry Reviews*, *11*(3), 193–206.

<https://doi.org/10.2174/1573400511666150629105234>

O'Donnell, M. L., Creamer, M., & Pattison, P. (2004). Posttraumatic stress disorder and depression following trauma: Understanding comorbidity. *The American Journal of Psychiatry*, *161*(8), 1390–1396. <https://doi.org/10.1176/appi.ajp.161.8.1390>

Orth, U., Berking, M., & Burkhardt, S. (2006). Self-Conscious Emotions and Depression: Rumination Explains Why Shame But Not Guilt is Maladaptive. *Personality and Social Psychology Bulletin*, *32*(12), 1608–1619.

<https://doi.org/10.1177/0146167206292958>

Polusny, M. A., Erbes, C. R., Murdoch, M., Arbisi, P. A., Thuras, P., & Rath, M. B. (2011). Prospective risk factors for new-onset post-traumatic stress disorder in National Guard soldiers deployed to Iraq. *Psychological Medicine*, *41*(4), 687–698. <https://doi.org/10.1017/S0033291710002047>

Pruit, L. D., Smolenski, D. J., Bush, N. E., Skopp, N. A., Hoyt, T. V., & Grady, B. J. (2016). *Department of Defense suicide event report (DoDSER): Calendar year 2015 annual report*. Retrieved from

http://t2health.dcoe.mil/sites/default/files/DoDSER_2015_Annual_Report.pdf

Radloff, L. S. (1977). The CES-D Scale: A Self-Report Depression Scale for Research in the General Population. *Applied Psychological Measurement*, *1*(3), 385–401.

<https://doi.org/10.1177/014662167700100306>

- Slattery, T. J., & Yates, M. (2018). Word skipping: Effects of word length, predictability, spelling and reading skill. *Quarterly Journal of Experimental Psychology*, *71*(1), 250–259. <https://doi.org/10.1080/17470218.2017.1310264>
- Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics* (6th ed.). Boston: Pearson Education.
- Tangney, June P. (1991). Moral affect: The good, the bad, and the ugly. *Journal of Personality and Social Psychology*, *61*(4), 598–607. <https://doi.org/10.1037/0022-3514.61.4.598>
- Tangney, June Price, Miller, R. S., Flicker, L., & Barlow, D. H. (1996). Are shame, guilt, and embarrassment distinct emotions? *Journal of Personality and Social Psychology*, *70*(6), 1256–1269. <https://doi.org/10.1037/0022-3514.70.6.1256>
- Thompson, B. L., & Waltz, J. (2008). Self-compassion and PTSD symptom severity. *Journal of Traumatic Stress*, *21*(6), 556–558. <https://doi.org/10.1002/jts.20374>
- Tilghman-Osborne, C., Cole, D. A., Felton, J. W., & Ciesla, J. A. (2008). Relation of guilt, shame, behavioral and characterological self-blame to depressive symptoms in adolescents over time. *Journal of Social and Clinical Psychology*, *27*(8), 809–842. <https://doi.org/10.1521/jscp.2008.27.8.809>
- Trompetter, H. R., Kleine, E., & de Bohlmeijer, E. T. (2017). Why does positive mental health buffer against psychopathology? An exploratory study on self-compassion as a resilience mechanism and adaptive emotion regulation strategy. *Cognitive Therapy and Research*, *41*(3), 459–468. <https://doi.org/10.1007/s10608-016-9774-0>

- UCLA: Statistical Consulting Group. (2019). UCLA: Statistical Consulting Group.
Retrieved April 18, 2019, from Introduction to Regression with SPSS Lesson 2:
SPSS Regression Diagnostics website:
<https://stats.idre.ucla.edu/spss/seminars/introduction-to-regression-with-spss/introreg-lesson2/>
- Wessling, K. S., Huber, J., & Netzer, O. (2017). MTurk character misrepresentation: Assessment and solutions. *Journal of Consumer Research*, *44*(1), 211–230.
<https://doi.org/10.1093/jcr/ucx053>
- Wisco, B. E., Marx, B. P., May, C. L., Martini, B., Krystal, J. H., Southwick, S. M., & Pietrzak, R. H. (2017). Moral injury in U.S. Combat veterans: Results from the national health and resilience in veterans study. *Depression and Anxiety*, *34*(4), 340–347. <https://doi.org/10.1002/da.22614>
- Wisco, B. E., Marx, B. P., Wolf, E. J., Miller, M. W., Southwick, S. M., & Pietrzak, R. H. (2014). Posttraumatic stress disorder in the US veteran population: Results from the National Health and Resilience in Veterans Study. *The Journal of Clinical Psychiatry*, *75*(12), 1338–1346. <https://doi.org/10.4088/JCP.14m09328>
- Wohl, M. J. A., DeShea, L., & Wahkinney, R. L. (2008). Looking within: Measuring state self-forgiveness and its relationship to psychological well-being. *Canadian Journal of Behavioural Science / Revue Canadienne Des Sciences Du Comportement*, *40*(1), 1–10. <https://doi.org/10.1037/0008-400x.40.1.1.1>
- Wolf, E. J., Logue, M. W., Stoop, T. B., Schichman, S. A., Stone, A., Sadeh, N., ... Miller, M. W. (2017). Accelerated DNA Methylation Age: Associations with

PTSD and Mortality. *Psychosomatic Medicine*.

<https://doi.org/10.1097/PSY.0000000000000506>