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Risk and Protective Factors for Psychological Distress Following a Morally Injurious Event in Combat Veterans

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A Clinical Research Project submitted to the faculty of The Illinois School of Professional Psychology at National Louis University in partial fulfillment of the requirements for the degree of Doctor of Psychology in Clinical Psychology.

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Illinois School of Professional Psychology
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CERTIFICATE OF APPROVAL

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for the Doctorate of Psychology degree
with a major in Clinical Psychology

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Abstract

Morally injurious events have been shown to increase the likelihood of experiencing anxiety, depressive, and posttraumatic stress symptoms of combat veterans. Research has found that guilt and shame are associated with higher levels of symptomology following morally injurious events. Similarly, individuals who are high in trait proneness to guilt and shame may be at higher risk for developing symptoms following a morally injurious event; however, no research to date has examined this possibility. In addition, acts that go against what one considers morally right bring about cognitive dissonance which then leads to anxiety. In order to reduce anxiety caused by this dissonance, one may disengage from one's moral beliefs. Thus, combat veterans who have experienced morally injurious events may engage in moral disengagement in order to reduce the anxiety and distress that follow this dissonance. The present study investigated the relationship between morally injurious events and psychological outcomes and the role of proneness to guilt and shame and moral disengagement as potential moderators of the relationship between these events and psychological outcomes in post-9/11 combat veterans. Exposure to morally injurious events was significantly correlated with PTSD, depression, and anxiety. Neither moral disengagement nor proneness to shame and guilt moderated the relationship between exposure to morally injurious events and psychological outcomes.

Keywords: moral injury, moral disengagement, trauma, military, veterans

Introduction

Research has indicated that many veterans of various armed conflicts, including the most recent wars, such as Operation Iraqi Freedom and Operation Enduring Freedom, experience mental health problems upon returning from combat, including posttraumatic stress disorder (PTSD), depression, and anxiety. About 44% of combat veterans reported that they experienced some problems adjusting after a deployment (Institute of Medicine [IOM], 2014b). Incidences of psychological diagnoses, especially PTSD, have increased substantially since the beginning of operations in the Middle East in 2001 (IOM, 2014b). Veterans have also been found to experience moral injury (Shay, 1994), a distressing biopsychosocial-spiritual reaction to experiences in combat that violate deeply held moral beliefs (Litz et al., 2009; Shay, 2014). Exposure to morally injurious events (MIEs) has been shown to be associated with anxiety (Nash et al., 2013), depression (Currier et al., 2015; Yan, 2016), and posttraumatic stress (Nash et al., 2013; Yan, 2016).

Litz et al. (2009) proposed that anxiety comes about after MIE exposure through the experience of shame and guilt. While shame and guilt could be conceptualized as normal and prosocial reactions, these feelings may be dangerous when connected to experiences in combat (Farnsworth et al., 2014), with the experience of shame and guilt in veterans being associated with higher risk for suicidal ideation (Bryan et al., 2013). While shame and guilt are outcome factors inherent in the moral injury model proposed by Litz et al. (2009), proneness to shame and guilt as a personality construct may increase risk of developing moral injury after exposure to MIEs, increasing the risk of developing other mental health problems. Conversely, moral disengagement, the reappraisal of a morally incongruous activity to avoid distressing affect and self-condemning cognitions,

may reduce distress in response to a violation of what one considers morally right. The present study examined the relationship between exposure to MIEs and anxiety, depressive, and PTSD symptoms. In addition, it examined the moderating effect of proneness to shame and guilt and moral disengagement in the relationship between MIEs and anxiety, depressive, and PTSD symptoms.

The Military Experience

Combat Experience

Following the terrorist attacks on the World Trade Center on September 11, 2001, President George Bush declared a Global War on Terrorism, eventually resulting in the United States (U.S.) occupation in Afghanistan, called Operation Enduring Freedom (OEF), in October 2001 (Torreon, 2017). Following this came increased tension with nation states that harbored terrorists and had the potential for nuclear warfare. This tension resulted in conflict with Iraq, which led to a U.S.-led occupation of Iraq, called Operation Iraqi Freedom (OIF), in March 2003 (Torreon, 2017). These two operations started a new era of combat by U.S. forces, and members of the U.S. military were divided between deploying to Afghanistan and Iraq. In December 2014, combat operations in Afghanistan stopped, marking the end of OEF and the beginning of Operation Freedom's Sentinel (OFS) to rebuild and stabilize the government of Afghanistan (Torreon, 2017). Likewise, the combat operations in Iraq came to a close in December 2011, ushering in Operation New Dawn (OND) to stabilize and support the government of Iraq (Torreon, 2017). With the start of new armed conflicts in two main theatres of operations, with other operations throughout the globe, came an increase in combat-related mental health issues.

Prevalence of PTSD has risen in the veteran population since the beginning of the post-9/11 wars. The IOM (2014a) reported that 9.2% of the entire living veteran population has sought treatment for PTSD through the Department of Veterans Affairs (DVA), with 24% of those veterans who sought treatment having served in Iraq or Afghanistan. The IOM estimated that about 8% of all veterans and active duty service members have been diagnosed with PTSD due to combat experience. PTSD is a stress reaction from exposure to death, the threat of death or serious injury, or sexual violence, resulting in intrusive thoughts, avoidance of stimuli, negative cognitions, and alterations in arousal and reactivity (American Psychiatric Association, 2013). PTSD has become the more notable pathology affecting combat veterans, as it is the most researched and most treated mental illness through the DVA (2017). The DVA also reported veterans' use of DVA services for depressive disorders, neurotic disorder, affective psychoses, drug and alcohol use disorders, sexual deviation disorders, and brain damage, with depressive and neurotic disorders being the second and third most diagnosed.

Along with facing fears of death and injury caused by enemy combatants, service members in combat must also face other challenges, including killing or injuring others. It is hard to estimate how many enemy combatants were killed by U.S. forces throughout the most recent wars, though some estimates exist. For example, Crawford (2015) estimated that approximately 35,000 enemy combatants were killed in Afghanistan by U.S. and allied forces from the beginning of the conflict until 2015. This estimate was updated to about 42,000 in 2016, though Crawford (2016) speculated that this estimate likely included civilian noncombatants also killed by U.S. and allied forces. Iraq Body Count (2017) estimated that about 17,054 people (combatants, noncombatants, and

civilians) were killed by U.S. forces in Iraq. Based on these numbers, it would be estimated that about 59,000 enemy combatants were killed by U.S. forces in Afghanistan and Iraq since the beginning of the two conflicts. Because this type of experience is not seen in regular activities of life, adjustment to these experiences could bring about its own mental health issues that would be rarely seen outside of the military experience.

Preparing for Combat

After World War II, and during the Korean War, S.L.A. Marshall (1947) conducted a landmark study that looked at the firing rates of servicemembers in combat. He found that they would choose to not fire at the enemy as a way of preserving what they thought to be fundamentally right: not killing another person. His study consisted of group interviews in which he would ask the servicemembers after a combat experience about their firing rates. In a study conducted during the Vietnam War, Glenn (1987) found similar results that some soldiers chose to not fire their weapons and most soldiers reported at least once observing another soldier failing to fire while being engaged by the enemy. Grossman (2009) explained that later studies found that some soldiers, pressured to fire during engagements with the enemy, would fire over the heads of their enemy to preserve their moral agency by not killing another person. These studies and anecdotal evidence from three different wars demonstrate that servicemembers in combat still struggle to go against what they see as morally right, even with training and justification.

When faced with a threat, the brain's first reactions are either to fight, flee, or freeze. Grossman (2009) explained that an additional option in a fight would be to posture or submit. In combat, posturing would consist of making oneself seem as though they are a threat and instill fear in the opposition. When choosing not to fire, one may be

in a state of freeze, and when firing over the heads of the enemy, one may be in a state of posture (Grossman, 2009). In an attempt change the results of the S.L.A. Marshall (1947) study, the military changed some of the ways that servicemembers are trained to engage the enemy (Grossman, 2009). During the time of S.L.A. Marshall, soldiers were trained to fire using circle targets. After his results, the military found that they needed to train their service members to engage people rather than circles, in hopes that they would be desensitized to firing at another person. To do this, the military changed from circle targets to targets shaped like people, which supposedly increased rates of fire and enemies killed in action during the Vietnam War (Grossman, 2009).

What does not appear to have been examined at that time, however, was the moral toll taken on the individual to be put into a position that goes against what they have learned to be morally right. S.L.A. Marshall (1947) identified the reason that servicemembers did not fire but did not examine the psychological consequences of killing in combat. Training evolved because they were able to identify the reason for nonaction during enemy engagement, introducing reflexive firing drills that rely on reflex rather than appraisal (Grossman, 2009). Shay (1994) discovered that veterans returning from Vietnam did not just suffer from PTSD from combat, but also had to make meaning of their actions and the actions of others that they perceived as going against what is morally right. While studies on World War II and the Korean War shed light on the reason why they would not fire at others, leading to a shift in training, the Vietnam War brought an increase in enemy engagement which allowed the use of this new training, shedding light on the consequences of violating the morals they were originally trying to protect by not firing.

Military Orders

A unique factor of the military is the obligation to follow orders of those of higher rank to the individual. When entering the military, individuals take an oath that includes the line, “I will obey the orders of the President of the United States and the orders of the officers appointed over me, according to regulations and the Uniform Code of Military Justice” (Title 10, 2020). The oath reads that one must follow orders that are in accordance with official regulation and legal guidelines according to the Uniformed Code of Military Justice (UCMJ). This would also establish that orders must be legal and only legal orders are to be followed, referred to as a Lawful Order (Joint Service Committee on Military Justice, 2019). This may also mean that one must appraise the orders that are given to ensure lawfulness while also appraising the morality involved in one’s actions. With this, the instilled discipline of following orders combined with the fast pace of combat may bring an individual to follow orders without appraisal of the legality or morality that the orders may violate. This can bring challenges for the individual who follows the order if the order is later appraised as being morally or legally wrong. Shay (1994) noted that servicemembers, based on the above, must trust that their leadership are providing orders that are legal and ethical and are following a moral code, as violations of this could bring about psychological distress.

Moral Injury

The definition of moral injury has changed over time from Shay’s (1994) original conceptualization of a psychological reaction to violations of “what is right” by the individual’s leadership. Shay later refined his definition stating moral injury is present (1) when “there has been a betrayal of what’s right (2) by someone who holds a legitimate

authority (3) in a high stakes situation" (p. 183). Litz et al. (2009) expanded the definition of moral injury as

> the lasting psychological, biological, spiritual, behavioral, and social impact of exposure to an act of transgression that severely and abruptly contradicts an individual's personal or shared expectation about the rules or the code of conduct, either during the event or at some point afterwards. (p. 700)

This definition also added to the types of events that can be considered transgressive to one's morality as "an act of wrongdoing, failing to prevent serious unethical behavior, or witnessing or learning about such an event" (p. 700), differing from Shay's (1994, 2014) definition that saw moral injury as only occurring when one's morality is violated by a person in power. Drescher et al. (2011), in a qualitative study with mental health providers, added to the definition proposed by Litz et al. (2009) regarding the actions that lead to a moral injury as those that are "inhumane, cruel, depraved, or violent, bringing about pain, suffering, or death of others" (p. 9). Drescher et al. concluded that there are problems with the definition, including problems of clarity and problems with the definition being able to cover all that is included in a moral injury, based on clinician reporting.

Stein et al. (2012), in a factor analysis of multiple types of military traumatic events including morally injurious events, delineated two types: transgressions by self and transgressions by others. Moral injury by self consists of transgressive acts of commission or omission by the individual, while moral injury by others consists of bearing witness or being the victim of a transgressive act committed by someone else. However, when studying the psychometric properties of the Moral Injury Event Scale

(MIES), Bryan et al. (2016) found that there are three factors involved in moral injury: moral injury by self, moral injury by others, and moral injury by betrayal. While Stein et al. (2012) included betrayal in moral injury by others, where the individual experiencing the moral injury is the victim of a transgressive act, Bryan et al. (2013) identified betrayal as a distinct category.

The definitions of moral injury historically failed to differentiate between the actions from the outcome and mostly researched moral injury as being the act itself. In past research, what was considered moral injury is actually the transgressive act or morally injurious event (Farnsworth et al., 2017; Frankfurt & Frazier, 2016). Lancaster and Erbes (2017) and Frankfurt and Frazier (2016), on the other hand, argued that the psychological experience of these events should be included in the conceptualization of moral injury and therefore proposed that the definition of a moral injury should include both the perceived transgressive act as well as the associated psychological distress. Lancaster and Erbes thus defined a moral injury as involving "the experience of one of these events and then moral dissonance/conflict, which leads to negative emotions, psychological symptoms, and maladaptive behaviors" (p. 317).

In sum, the construct of moral injury continues to evolve, and there has been some disagreement as to whether it should be defined as the morally injurious event only and what exactly constitutes such an event, or whether the resulting psychological distress should be included in the definition. For clarity, I will refer to the term *morally injurious events* as the main construct of interest for the present study, defined as acts of commission or omission (i.e., not preventing an action) by self or other in combat that go against one's morality, as well as actions of the perceived abandonment or betrayal by

other individuals or the institution that is conceived as being immoral and inconsistent with moral beliefs learned through the military. Moral injury, then, is the overall construct that consists of both a morally injurious event (transgressive act) and a psychological reaction to that event (stimulus and response).

Table 1

Moral Injury Definitions

Stimulus [a]	Response	Factors[b]	Reference
Acts of wrongdoing or failing to prevent unethical behaviors		S, O, B	(Litz et al, 2009)
Betrayal of What is right by leadership		B	(Shay, 2011)
Inhumane actions that bring about pain and suffering		S, O	(Drescher et al., 2011)
Committing, witnessing or being a victim of an act that is perceived to be a violation of moral or ethical standards		S, O, B	(Stein et al., 2012)
Witnessing/participating in warzone acts that challenge sense of humanity	Erosion of global meaning systems	S,O	(Currier et al., 2015)
Acts of Omission, Commission or betrayal that transgress accepted behavioral boundaries and norms.	Guilt and shame based syndrome consisting of PTSD symptoms, demoralization, self-handicapping, and self-injury	S, O. B	(Frankfurt et al., 2017)
Transgressive act cited in Frankfurt and Frazier (2016)	Negative emotions, psychological symptoms, maladaptive behavior	S, O, B	(Lancaster & Erbes, 2017)

a. Morally Injurious Event/Transgressive act
b. Factors: self (S), other (O), betrayal (B)

Moral Development

To fully understand what constitutes moral injury, it is important to understand moral development and how one comes to hold certain views on what is considered right.

The understanding of what is right and what constitutes a moral action is developed through life and is brought into the military by individual members. Kohlberg (2008) identified three levels of moral development, with two types of value orientation in each level. This model shows that a child learns morality through their interactions with caregivers and moves from obedience of their caregivers' rules to a more autonomous understanding of what would be considered right and what would be considered wrong. A child progresses through these levels from lower to higher levels of moral reasoning. Once the higher level is achieved, moral decision making may be situationally based, but higher levels of reasoning are maintained through life (Kohlberg, 1975). This means that, though an individual may make a "poor" moral decision in life based on circumstances, one's higher-level thoughts, with regards to moral decision making, are still intact. Kohlberg (1975, 2008) developed his model based on cognitive development, though he pointed out that intelligence is not correlated to moral reasoning.

Morality in the Military

The construct of morality within the military and in war may seem to differ from the construct outside of the military. Outside of the military and outside of combat, taking another life may be seen as immoral, whereas in military combat, taking a life can be seen as justified and necessary. However, there are instances in war where taking a life can no longer be considered moral, such as going against the established laws that govern combat (established by the military service, the government, and international law). The military itself has its own moral code that is expected to be adhered to by those who serve (Shay, 1994). Within that moral code is duty and service, which members of the military are expected to hold first above everything else (Cook, 2000). Duty and service

is the obligation to one's comrades as well as the obligation to fulfill one's responsibilities.

Leadership is expected to protect their subordinates and adhere to their own moral code while in combat (Shay, 1994). Shay (1994) also explained that fairness in combat includes protecting subordinates. Fairness, in this sense is ensuring that the distribution of exposure to combat is even among those in the unit, such that each member of the unit is guaranteed to be equally exposed to combat, rather than shielding a select few. Fairness, in this case, becomes a part of the distinct moral code within the military.

Individual and Collective Morality

As stated, an individual develops a sense of moral agency throughout life. They also learn to adapt to the moral beliefs of the military upon entry. Both of these sets of moral beliefs can come into conflict when in combat. Killing an enemy combatant can come into conflict with a moral belief that killing another person is wrong, even though it may be seen as acceptable and necessary within the context of combat. Cook (2000) explained that there is a tension between higher moral codes (moral codes that are seen as derived from a religious code) that service members bring into the military and the military moral code. Service members are expected to follow specific laws of war that govern when killing is acceptable. This, in turn, is its own moral code with expected adherence with exemptions for when killing is considered morally acceptable.

Shay's (1994) original definition of moral injury emphasized that a moral injury could only come about when leadership betrays the individual. This definition views the betrayal as transgressing moral beliefs and as contradicting what one considers to be right based on military moral code which emphasizes loyalty among comrades. This definition,

however, does not cover the possible transgression of moral beliefs that one may encounter in combat because individuals enter the military with an already developed sense of morality. Later models take this into consideration and define the possible transgressive act as acts of omission or commission by the individual that go against their already developed moral agency as well as what was developed within the military context. In betrayal, the leadership violates what one considers morally right against the individual (Shay, 1994) where in moral injury by self, the individual acts in ways that transgress moral beliefs.

Battles et al. (2018) found that betrayal by leadership was associated with depression, PTSD symptoms, anxiety, and hazardous alcohol use. They hypothesized that the betrayal by leadership damaged their sense of membership within the organization, potentially bringing about psychological distress. They also found that both betrayal and exposure to atrocities had the most significant association with PTSD, depressive, and anxiety symptoms. Evans et al. (2018) proposed that when one is deeply aware of and connected to their personal values, they may experience relatively higher life satisfaction despite distress following exposure to moral violations by self than following moral violations by others. This may explain why those with greater exposure to morally injurious events by others and through betrayal showed in increase level of distress (Battles et al., 2018) and reported less life satisfaction (Evans et al., 2018).

Cook (2000) and Shay (1994) both looked at the justification for the wars that are fought. A war that has no apparent reason would bring about feelings of violation of those morals. This is similar to what was found by Gibbons et al. (2013), where service-

members in Iraq could not find meaning in the conflict, and this caused tension with their own morality.

The conflict between the core morals of the individual service members and the morals of the military brings about some confusion as to what could cause a moral injury, with some seeing moral injury as only arising from the violation of moral codes in the context of the military (going only against the military moral code) and some seeing it as a violation of either the military moral code or the moral code that was brought in from development (Frankfurt & Frazier, 2016; Litz, 2009). It would appear, based on the above, that there are two separate moral codes, one of the military and one that is brought by the individual from their own development, which could bring about tension while serving in combat.

Cognitive Dissonance

Cognitive dissonance occurs when one's cognitions and beliefs do not match one's actions. The result of dissonance is psychological discomfort motivating the individual to reduce dissonance through either avoidance of conflicting information/actions or through modifying cognitions in order to match actions or information that conflicts with beliefs (Harmon-Jones & Mills, 2019). This could be extended to holding moral beliefs and acting in a way that goes against those beliefs, resulting in cognitive dissonance. When one is not able to reduce the dissonance, this would result in distress.

One way that cognitive dissonance can be reduced is through reappraisal of actions or beliefs to remove the inconsistency (Freiman, 2010). This could be done through justification of actions both while they are occurring or after the fact (Freiman,

2010). Reappraisal of one's actions in order to justify going against cognitions and beliefs can reduce distress, referred to as moral disengagement.

Moral Disengagement

Because the violation of one's morality is hypothesized to result in psychological distress, it would follow that any action in combat that violates one's moral beliefs would result in psychological distress. As this is not always the case and psychological reactions to actions in combat do not occur in every combat veteran, protective factors may buffer the reaction to going against established moral beliefs. In order to protect oneself from the self-condemnation of going against one's own morality, Bandura (1999) proposed that people are able to disengage from their moral beliefs. To avoid self-censure, an individual is able to disengage from controls that regulate behavior that typically are guided by moral views by disengaging from their moral beliefs. Typically, when a person goes against what is right, in a moral sense, they then face the uncomfortable and distressing feeling of self-censure or self-devaluation (Bandura, 1999). In other words, they feel guilt or shame for violating what they consider to be morally right. In order to disengage from beliefs about what they consider to be right, to avoid that discomfort and distress, they must justify their actions, devalue or dehumanize the victims of their actions, minimize or ignore the consequences, justify why their actions were necessary, or displace the responsibility for their actions (Bandura, 1999). These forms of moral disengagement will be described in detail in this section.

Because higher level of thought regarding personal morality is still intact even after situationally going against one's moral conviction (Kohlberg, 1975), one must appraise what has been done. In that period, justification of what has been done, like

identifying it as a “worthy” or just cause, can prevent feelings of self-censure for personal actions (Bandura, 1999). In this case, the individual would need to see their actions in combat as being justified in order to meet the greater good. For example, the service members may rely on the justification for the war in which they are fighting, which would, as stated before, rely on their identification with the reason for entering the conflict. If meaning can be made regarding the actions and the individual identifies with the justification of the conflict, they may be able to protect themselves from the psychological distress that could result.

Bandura (1999) has examined the language used within a conflict. In order to engage in behavior that is in violation of personally held beliefs, one may use words for one’s actions that take away the emotional impact of the actions. Rather than killing in combat, one may refer to one’s actions as “eliminating the enemy.” Language is thought to shape thought patterns, which make actions appear different to the individual (Bandura, 2002). This process is referred to as sanitizing language or euphemistic language. In sanitizing the language, the individual can also turn a violent activity, or one that violates their morality, into a socially positive action (Bandura, 2002).

Displacement of responsibility is placing the responsibility of one’s actions onto another. A service member, rather than seeing themselves being in violation of their own morality by killing in combat, may view themselves as mere followers of orders that have been given. This takes the responsibility off themselves (Bandura, 1999). Being ordered to commit atrocities, however, has been seen to bring about psychological distress in veterans, due to a feeling of betrayal by the authority (Shay, 1994). Though the subordinates can displace the responsibility of their actions onto the leaders that gave

orders, there may still be a reaction due to the perceived betrayal. Bandura (1999) explained that it takes true belief in the purpose of the institution, and the leadership therein, to be able to carry out ordered acts and displace this type of responsibility.

Another means of moral disengagement is when a whole group is participating in an action, and therefore there is no personal responsibility that must be taken for the actions through diffusion of responsibility (Bandura, 1999). In a military context, actions in combat would be seen as the responsibility of the entire unit rather than an individual's responsibility.

Finally, dehumanizing the enemy takes the humane qualities away from the victim of one's actions, making it easier to commit those actions (Bandura, 1999). In combat, viewing the enemy as though they are not human makes it easier to kill because one's morality that would view killing a human as wrong is not violated. Dehumanizing terms have been used to equate the enemy to being less than human to make it easier to kill in combat. Nations and armies often make their enemy appear as less than human or even demonized in order to make it easier for the soldiers kill in combat because they are less likely to value the lives of the enemy (Bandura, 1999).

Bandura (1999) has shown that government and agencies have used moral disengagement, either wittingly or unwittingly, to bring their actors to act in ways that violate held moral beliefs for the benefit of the agency. This is a malicious way in which moral disengagement has been applied in society. This may make it appear as though moral disengagement is inherently detrimental to society. This, however, negates the idea that moral disengagement may have utility in lives that are not intentionally malicious. It may be that, as a society, morality is held to be such an important aspect of society and

disengagement from morals is seen as inherently antisocial. Shame and guilt following moral transgression is then seen as the primary prosocial reaction.

In combat, soldiers are expected to act in ways that may, outside the context of military action, be viewed as transgressions of morality. This may include killing in combat. Though it may be justified in this context, the consequences of violating one's morality may cause psychological distress, referred to as moral injury (Litz et al., 2009). To protect against the distress caused by such violations, the individual may morally disengage in order to protect themselves (Farnsworth et al., 2014). There is evidence that suggest that when this does not occur the soldier may experience distress. In fact, most soldiers will consciously or unconsciously choose inaction in combat rather than transgressing their moral beliefs (Grossman, 2009).

Moral disengagement is used to reappraise actions committed by the individual in order to avoid feelings of discomfort associated with the action (Bandura, 1999). Shame and guilt are feelings of discomfort, but are seen as prosocial responses to going against what one learns as socially appropriate behavior (Young et al., 2016). Individuals learn through their development what is considered morally right and also learn to feel guilty if they go against what is considered right and are socialized to learn that doing wrong means that they are wrong, leading to feelings of shame (Kohlerg, 1975; Young et al., 2016). Moral disengagement, then, is going against the social constraints of what one learns is right.

Though it is often employed by the individual to avoid the discomfort of going against their moral beliefs in small ways, it can also have serious consequences to society. Bandura (1999), for instance, looked at how this led to atrocities being

committed and how governments used this appraisal in order to convince the people to disregard their moral beliefs. A problem with researching this phenomenon on such a large scale is that the events that incorporate moral disengagement are typically so large and so egregious that it becomes hard to research. It would also be difficult for some researchers to place their own values aside to research the phenomenon without bias. Likewise, cultural factors are not typically considered when it comes to researching this phenomenon.

To minimize the uncomfortable feelings of self-censure from going against what one sees as morally wrong, one is able to disengage from one's moral beliefs and participate in morally incongruous activities by dehumanizing one's victims, minimizing or ignoring the consequences, justifying one's actions, or displacing the responsibility. Moral disengagement minimizes the discomfort one may feel after having gone against one's own moral beliefs.

Shame and Guilt

Shame can be defined as a feeling that there is something dishonorable in how a person acted in a particular circumstance (American Psychological Association, 2009). Similarly, guilt can be defined as distress over feeling that one has done something wrong (American Psychological Association, 2009). It would appear that these two definitions revolve around the concept of feelings relating to a past action. Because of their similarity, guilt and shame are typically combined in the literature as a single concept. Even as a combined definition of unpleasant feelings that one has done something wrong or dishonorable would match the subjective experience of a moral injury where the

individual feels unpleasantness resulting from past actions that could be deemed wrong or dishonorable.

Guilt could be conceptualized as a prosocial response to tension in one's past, but in military and combat veteran populations, guilt has been associated with poorer mental health outcomes (Farnsworth et al., 2014). Bryan et al. (2013) found that guilt and shame were higher for combat veterans who had a past history of suicidal ideations. The severity of suicidal ideations was correlated with ratings of guilt and shame independently. Kausch and Marks (2013) found in a case that some veterans' guilt regarding their past actions in combat could also lead to a greater reaction to other instances of violence like news of a mass shooting. They found that veterans' resonated more with these instances because of their own past moral transgressions. This would mean that guilt from a moral injury could have lingering effects that could also increase suffering related to moral injury (Kausch & Marks, 2013). This would make guilt associated with combat experience even more dangerous, as conceptualized by Farnsworth et al. (2014).

Litz et al. (2009) proposed that guilt and shame would follow a morally injurious event. Frankfurt et al. (2017) found that guilt was significantly associated with transgressive acts, with the most reported transgressive act being killing in combat. They also found that guilt was a significant pathway between transgressive acts and suicidality. Lancaster (2017) found that state guilt and shame was a mediator between morally injurious events and PTSD and depressive symptoms.

Yan (2016) found evidence that failure to integrate traumatic experiences with service-member's moral framework led to poorer mental health outcomes. This failure to integrate may be due to guilt and shame related to that traumatic experience and not

allowing the veteran to forgive themselves. Litz et al. (2009) proposed that the failure to integrate morally injurious experiences with morals brings about feelings of guilt and shame over one's actions, or lack thereof.

Proneness to guilt and shame is a trait that may make an individual more likely to experience guilt and shame after a dissonance provoking event (Cohen et al., 2011). Cohen et al. (2011) described shame and guilt as moral emotions that occur after a transgression. The proneness to shame and guilt is the propensity one holds to experience such emotions after a transgression.

Litz et al. (2009) theorized that proneness to shame, being prone to view oneself as dishonorable for one's actions, is a risk factor for psychological distress associated with a moral injury. Fergus et al. (2010) found that proneness to guilt and shame were predictors of symptom expression for generalized anxiety disorder (GAD) and social anxiety disorder (SAD) in a nonveteran sample. Young et al. (2016) found that proneness to shame and guilt was associated with development of depression based on situational factors. This would mean that a higher proneness to shame and guilt would influence the distress experienced when faced with life stressors. The proneness to shame and guilt then leads to the experience of shame and guilt following a morally injurious event which may lead to an inability to forgive oneself for what occurred and therefore greater distress. No studies have been published to date examining whether proneness to shame and guilt affects the relationship between morally injurious events and psychological outcomes.

Moral Injury and Mental Health

PTSD and Depression

Studies have investigated the association between moral injury and mental health outcomes, specifically depression and PTSD (Currier et al., 2015; Nash et al., 2013; Yan, 2016). Currier et al. (2015) found a positive correlation between moral injury as determined by the Moral Injury Questionnaire – Military Version (MIS-Q) and PTSD (r = .376) and depressive symptoms (r = .306, n = 131). Nash et al. (2013) found a positive correlation between moral injury and PTSD symptoms (r = .28) and depressive symptoms (r = .40, n = 533). Evans et al. (2017) found a correlation between moral injury and PTSD (r = 206) and depression (r = .125, n = 200), and Lancaster (2017) found a positive correlation between moral injury and depression (r = .33) and PTSD (r = .53, n = 161). The three latter studies utilized the Moral Injury Events Scale (MIES). Likewise, Yan (2016) found a significant association between morally injurious events and both depressive symptoms and PTSD symptoms, and found that PTSD and depression symptoms are affected by moral injury.

A morally injurious event may fall into what is considered a Criterion A event when it threatens the individual's life or serious injury, when they observe someone being killed or seriously injured, or when they learn of someone close to them being killed or seriously injured (American Psychiatric Association, 2013). Because many forms of morally injurious events include some sort of Criterion A event, it would follow that PTSD would also affect the individual. When the criteria for PTSD are met and the Criterion A event is one that deeply transgresses what one considers to be morally right, the individual may be considered having moral injury based PTSD (Held et al., 2017).

Though there is a correlation between moral injury and PTSD, the correlation is based on the correlation between experiencing a morally injurious event and the experience of PTSD after the event. It is likely that, like PTSD, there are those who do not experience psychological distress following the traumatic event, to the extent of PTSD, or who were able to recover from the traumatic experience. Also, the measures used only measured the extent to which one has experienced a morally injurious event, essentially only measuring Criterion A events when comparing it to the commonly used measures of PTSD.

Battles at al. (2018) found that, though moral injury mediated the relationship between morally injurious events and PTSD symptoms, moral injury was not found to be directly associated to poorer mental health outcomes, though PTSD was. They viewed moral injury as being completely separate from PTSD, though it mediated the relationship.

Table 2

PTSD and Moral Injury Correlations

MI Scale	PTSD Scale	*r*	*n*	Reference
MIES	PCL-S	.28	2610	(Nash et al., 2013)
MIS-Q	PCL-C	.376	131	(Currier et al., 2015)
MIES	PCL-C	.206	200	(Evans et al., 2017)
MIES	PCL-5	.53	161	(Lancaster, 2017)
MISS-M	PCL-5	.56	427	(Koenig, 2018)
MIQ-M	PCL-5	.72	244	(Battles et al., 2018)

Anxiety

Litz et al. (2009) hypothesized that a morally injurious event can lead to anxiety. Few studies, however, have looked at a direct correlation between anxiety and moral injury. Nash et al. (2013) found a positive correlation (r = 0.28, n = 533) between anxiety and moral injury and Evans et al. (2017) found similar results in a smaller sample (r = .221, n = 200). Evans et al. found that greater exposure to potentially morally injurious events, as measured by the Moral Injury Events Scale, was associated with increased anxiety ($p < .001$, n = 200). Litz et al. theorized that rumination of the morally injurious experience leads to anxiety via shame and guilt, though no studies have directly investigated rumination in this context.

Summary, Aims, and Hypotheses

Self-reported morally injurious experiences by combat veterans have been associated with PTSD, anxiety, and depressive symptoms. Morally injurious events have also been associated with feelings of guilt and shame, while proneness to guilt and shame as a trait has been theorized to exacerbate the effects of these events on psychological distress (Litz et al., 2009). On the other hand, moral disengagement may serve as a protective factor from experiencing the distress associated with morally injurious events. While this makes sense from a conceptual standpoint, this has not yet been examined in empirical research.

The aim of this research was to investigate the relationship between morally injurious events and psychological outcomes and the role of proneness to guilt and shame and moral disengagement as potential moderators of the relationship between morally injurious events and psychological outcomes in Operation Iraqi Freedom (OIF; Iraq)/

Operation New Dawn (OND; Iraq)/Operation Enduring Freedom (OEF; Afghanistan)/Operation Freedom's Sentinel (OFS; Afghanistan) Combat Veterans. It was hypothesized that morally injurious events would be associated with increased levels of anxiety, depressive, and PTSD symptoms. Proneness to guilt and shame was hypothesized to be a moderator between morally injurious events and anxiety, depressive, and PTSD symptoms such that those participants with high morally injurious events and higher proneness to guilt and shame were predicted to have the highest levels of anxiety, depressive, and PTSD symptoms, followed by those with high morally injurious events and low proneness to guilt and shame, while those with low morally injurious events were predicted to have the lowest levels of anxiety, depressive, and PTSD symptoms, regardless of proneness to shame and guilt. Moral disengagement was hypothesized to buffer the association between morally injurious events and anxiety, depressive, and PTSD symptoms such that those with high morally injurious events and high moral disengagement would report lower anxiety, depressive, and PTSD symptoms than those with low moral disengagement and high morally injurious events, while those with low morally injurious events would report lower anxiety, depressive, and PTSD symptoms, regardless of moral disengagement.

Methods

Participants

Based on a power analysis using a power of .80 and $\alpha = .05$, and a medium effect size for a multiple regression analysis, a minimum of 76 participants were required and 89 participants were recruited. Participants were included if they were post-9/11 combat veterans who have deployed to a combat zone between September 2011 and present. Participants were excluded if they are currently on active duty or are in transition from active duty. Twelve participants did not fully complete the survey, and no participants met exclusion criteria, resulting in a total of 77 participants.

Measures

Background Questionnaire

The participants completed a questionnaire to gather information on race/ethnicity, gender, marital status, employment, and highest level of education. Additionally, information on length of service, number of deployments, location and approximate dates of deployments, branch of service, current service status, and type of discharge were collected to ensure inclusion criteria were met. Participants were also asked if they are currently taking psychotropic medication, if they are currently attending psychotherapy, and the last time they attended psychotherapy.

Moral Injury

The Moral Injury Event Scale (MIES) is comprised of nine questions divided into two factors, with the first factor measuring perceived transgressions committed by the individual or others and the second factor measuring perceived betrayal (Nash et al., 2013). This provided data on transgressive acts of betrayal by the leadership as proposed

by Shay (1994) as well as data on individual commission or omission of wartime acts in accordance with the model proposed by Litz et al. (2009). The measure uses a 6-point Likert scale (1–Strongly agree, 2–Moderately agree, 3–Slightly agree, 4–Slightly disagree, 5–Moderately agree, 6–Strongly disagree). Respondents used this scale to identify agreement with statements made about their experiences in combat. Nash et al. (2013) reported a Cronbach's alpha of .86 for the entire measure (N = 1,039), indicating good internal consistency reliability for the original 11-item scale and a Cronbach's alpha of .90 when only the first nine questions were used. Because of the increased reliability for the nine-item assessment, the last two questions were removed for the purpose of this study, as recommended by Nash et al. (2013). Bryan et al. (2016) divided the scale into three factors—moral injury by self, moral injury by others, and moral injury by betrayal—with good internal reliability in two samples (N = 151 and 935). They reported a Cronbach's alpha of .96 and .94 for moral injury by self (Questions 3-6), .79 in both samples for moral injury by others (Questions 1 and 2), and .83 and .89 for moral injury by betrayal (Questions 7-9).

Moral Disengagement

The Moral Disengagement Scale introduced by Jackson and Sparr (2005) is an eight-item assessment that measures the moral disengagement factors proposed by Bandura (1999), with one question for each factor (1–euphemistic labeling, 2–moral justification, 3–dehumanization, 4–diffusion of responsibility, 5–minimizing consequences, 6–displacement of responsibility, 7–palliative comparison, 8–attribution of blame; Jackson & Sparr, 2005). The measurement uses a 5-point Likert scale (1–Not true, 2–A little true, 3–Middling true, 4–Quite true, 5–Very true) and respondents rate their

agreement with the given statement. Jackson and Sparr (2005) reported a Cronbach's alpha of .86 for the assessment in one study and .81 for their second study, indicating good internal reliability. This assessment was chosen over other possibilities because of its direct relation to military activity such that it focuses on counterterrorism and necessity of force from military. It was also chosen because it was normed in an adult population and has good internal reliability. One problem with this specific assessment was that it was normed in an Austrian population. The measure was translated by Jackson and Sparr, but the psychometric properties of the English version are unknown.

Anxiety

The Patient Reported Outcomes Measurement Information System (PROMIS) – Emotional Distress – Anxiety Short Form version 1.0 is an eight-item assessment of anxiety symptoms that have been experienced within the past 7 days. The measure uses a 5-point Likert scale where the respondent rates the frequency of symptoms, from "never" to "always." The PROMIS anxiety short form has good reliability with a Cronbach's alpha of 0.968 for ages 21 through 49 and 0.971 for those age 50 through 64 in a diverse population (N = 10,740; Teresi et al., 2016a). This assessment was chosen because of its validity and reliability and because it was validated in paper form as well as electronically. Validation of the digital version of this assessment showed no differences in validity or reliability from the paper version (Bjorner et al., 2014). This makes it possible to convert the assessment into an online assessment without jeopardizing the validity of the assessment.

Depression

The (PROMIS) – Emotional Distress – Depression Short Form version 1.0 is an eight-item assessment of depressive symptoms that have been experienced within the past 7 days. The measure uses a 5-point Likert scale where the respondent rates the frequency of symptoms, from "never" to "always." The PROMIS depression short form has good reliability with a Cronbach's alpha of 0.969 for ages 21 through 49 and 0.969 for those age 50 through 64 in a diverse population (N = 5,000; Teresi et al., 2016b). This assessment was chosen because of its validity and reliability and because it was validated in paper form as well as electronically. Validation of the digital version of this assessment showed no differences in validity or reliability from the paper version (Bjorner et al., 2014). This makes it possible to convert the assessment into an online assessment without jeopardizing the validity of the assessment.

Proneness to Shame and Guilt

The Guilt and Shame Proneness (GASP) scale was used to measure the proneness to experiencing guilt and shame. In this measure, there are two indices, one for guilt and one for shame. The GASP is a 16-question, situationally-based scale that measures one's propensity to feel guilt and shame in response to provided scenarios (Cohen et al., 2011). The measurement uses a 7-point Likert scale to rate the likeliness of their response to the given scenario (1–Very unlikely, 2–Unlikely, 3–Slightly likely, 4–About 50% likely, 5–Slightly likely, 6–Likely, 7–Very likely). The GASP scale has an alpha coefficient of .60, indicating acceptable reliability.

PTSD Checklist – Military Version

The PTSD Checklist – Military Version (PCL-M) was used to measure PTSD symptoms. The PCL-M is a 17-question, symptom-focused measure that uses a 5-point Likert scale to rate the severity of the symptoms. This scale was chosen over other PTSD scales because it has fewer questions on the measure and its validity and reliability in measuring PTSD symptoms. The PCL-M demonstrated good convergent validity when compared to similar measures of PTSD and had an internal consistency coefficient alpha of .96 for the full scale (Keen et al., 2008). The PCL-M was also found to have good diagnostic value for PTSD (Keen et al., 2008).

Combat Exposure

The Combat Exposure Scale (CES) was used to measure the amount to which the participant has experienced combat situations. The CES is a seven-question assessment that uses a 5-point Likert scale to rate the extent to which one was exposed to combat. Questions 1 and 5–7 are rated based on the amount of times the participant was exposed (1–None/Never, 5–51+ Times), Question 2 is rated based on the number of months one was exposed, and Question 4 is based on the percentage of time one was exposed. The CES has a coefficient alpha of .85 and a test–retest reliability of .97 for a 1-week retest, both indicating good reliability for this measure (Keane et al., 1989).

Table 3

Measures

Construct	Scale	Cronbach's Alpha	Reference
Morally Injurious Events (Overall)	Moral Injury Event Scale (MIES)	.90	(Nash et al., 2013)
Moral Injury from Self	Moral Injury Event Scale (MIES) Factor 1 (Questions 3–6)	.94	(Bryan et al., 2016)
Moral Injury from Other	MIES Factor 2 (Questions 1–2)	.79	(Bryan et al., 2016)
Moral Injury from Betrayal	MIES Factor 3 (Questions 7–9)	.89	(Bryan et al., 2016)
Anxiety	PROMIS Emotional Distress – Anxiety – Short Form 8a	.968	(Teresi et al., 2016a)
Depression	PROMIS Emotional Distress – Depression – Short Form 8a	.969	(Teresi et al., 2016b)
Moral Disengagement	Moral Disengagement Scale	.86	(Jackson & Sparr, 2005)
PTSD	PTSD Checklist – Military Version (PCL-M)		
Proneness to Shame and Guilt	Guilt and Shame Proneness (GASP)	.60	(Cohen et al., 2011)
Combat Exposure	Combat Exposure Scale	.85	(Keane et al., 1989)

Procedure

Participants were recruited online to take a survey. The measurements were converted into an online survey through surveymonkey.com. Recruitment was conducted through online communities for veterans and through Facebook posts. The survey was presented as a study looking at the respondent's reactions to actions in combat, taking approximately 30 min to complete.

The survey began with an informed consent that stated that the title of the research was *Predictors of Psychological Distress Following Experiences in Combat*. The title was changed to mask the main study hypothesis and to reduce demand characteristics. The participants were then asked to take a survey that would be used to verify their veteran status. The survey consisted of three questions used by Lancaster and Erbes (2017). The participants needed to either correctly answer the questions provided or indicate that they are not a veteran. Indicating that they are not a veteran discontinued the survey. Correctly answering the questions verified veteran status. The measure was then presented in the following order: the demographics questionnaire, the PROMIS anxiety measurement, PROMIS depression measurement, PCL-M, the MIES, the Moral Disengagement Scale, and then the GASP. There were a total of 58 questions for this study. After the participants submitted their responses, they were taken to a document that they could download which provided information regarding national and local services for veterans. The service referrals were focused on services that help veterans with combat-related trauma. A list of 24-hr crisis and suicide lines was also provided.

Statistical Analysis

SPSS was used for statistical analysis. Distribution of all variables examined normality and outliers. A zero-order correlation table was then created for all main study variables (Table 3). A Pearson *r* correlation was conducted to correlate the level of moral injury, as reported in the MIES to anxiety, depressive, and PTSD symptoms to test the first hypothesis that moral injury is associated with increased anxiety, depressive, and PTSD symptoms.

To test the second hypothesis that proneness to shame and guilt will be a moderator between morally injurious experiences and anxiety, depressive, and PTSD symptoms, a multiple regression analysis was used. Proneness to shame and guilt and moral injury scores were entered in Step 1, followed by their cross product in Step 2, and anxiety, depression, and PTSD scores were entered as the dependent variables. To test the third hypothesis that moral disengagement buffers the relationship between morally injurious and anxiety, depressive and PTSD symptoms were tested using a multiple regression. Moral disengagement and moral injury were entered in Step 1, followed by the cross product in Step 2, and anxiety, depression, and PTSD were entered at the dependent variables.

It was expected that proneness to shame and guilt and moral disengagement would moderate the relationship between moral injury and anxiety, depressive, and PTSD symptoms, with higher moral disengagement leading to lower anxiety, depression, and PTSD when moral injury is elevated and higher proneness to guilt and shame leading to higher anxiety, depression, and PTSD when moral injury is elevated. It was anticipated that proneness to shame and guilt and moral disengagement would be negatively correlated. Simple effects examined the nature of the interaction.

Results

Sample Characteristics

A total of 77 post-9/11 veterans completed the survey, 67.5% of whom identified as male and 28.8% of whom identified as female. This is an oversampling of females as the estimated percentage of the military is 15% female (ODASoD, 2014). This sample consisted of 16.3% African Americans, 10% Asian/Pacific Islander, 10% Hispanic/Latino (a/x), and 60% White. The mean age of this sample was 31 years and the mean total combat deployed months 18.5. This sample consisted of 34% Army, 21.3% Navy, 21.3% Air Force, and 11.3% Marines.

A zero-order correlation was completed using a Pearson-*r* two-tailed correlation to examine the connection between each of the main study variables measured (Table 4).

Table 4

Mean, Standard Deviations, and Bivariate Correlations for All Measures

	M (SD)	1	2	3	4	5	6	7	8	9	10
1. Total MI	*28.6*(12.4)	-									
2. MI-Self	*8.5* (2.7)	.725**	-								
3. MI- Other	*11.3*(7.9)	.942**	.620**	-							
4. MI- Betrayal	*8.9*(3.6)	.812**	.493**	.659**	-						
5. Moral Disengagement	*25.2*(11.4)	-.264*	-.272*	-.288*	-.207	-					
6. GASP	*74.9*(8)	.095	.047	.144	.042	.027	-				
7. Anxiety	*18.9*(10.7)	.383**	.234*	.427**	.286*	-.665**	.009	-			
8. Depression	*18.8*(10.7)	.298**	.182	.332**	.235*	-.657**	.004	.948	-		
9. PTSD	*47.6*(10.7)	.365**	.203	.402**	.279*	-.612**	-.012	.931	.892	-	
10. CES	*16*(4.3)	.513**	.318**	.327**	.201*	.245*	.032*	.743**	.683**	.786**	-

MI=Moral Injury, scores from MIES (MI-Self=acts of commission or omission; MI-Other=Observing the act; MI-Betrayal=betrayal by the institution that goes against moral beliefs); CES=Combat Event Scale; GASP=Guilt and Shame Proneness; PTSD=Posttraumatic Stress disorder, scores from PTSD Checklist-5.

*Correlation is significant at the p<0.05 level

**Correlation is significant at the p<0.01 level

MIES and Psychological Outcomes

Overall reporting of morally injurious events was positively correlated with anxiety (r = 0.388, p=0.001), depression (r = .298, p = 0.008), and PTSD (r = 0.368, p = 0.001). Moral injury–self was positively correlated with anxiety (r = 0.243, p = 0.033) but no significant correlation was found between moral injury–self and depression and PTSD outcomes. Moral injury–others was positively correlated with anxiety (r = 0.427, p = 0.000), depression (r = 0.332, p = 0.003), and PTSD (r = 0.402, p = 0.000). Likewise, moral injury–betrayal was positively correlated with anxiety (r = 0.286, p = 0.012), depression (r = 0.235, p = 0.040), and PTSD (r = 0.279, p = 0.014). Moral injury–others showed the strongest correlation with negative psychological outcomes, with the weakest correlation between moral injury-self and negative outcomes. Overall, MIES was found to be positively correlated with each negative psychological outcome, supporting the first hypothesis that there is a correlation between MIES reporting and negative psychological outcomes. Interestingly, anxiety was found to be the only psychological outcome that was significantly correlated with each MIES factor.

Shame and Guilt Proneness as a Moderator

Proneness to guilt and shame was hypothesized to be a moderator between morally injurious events and anxiety, depressive, and PTSD symptoms. Proneness to shame and guilt did not moderate the effect between MIEs and depression (r = -.0248, p = .0340), anxiety, (r = -.1081, p = .1554), or PTSD (r = -.0561, p = .1455). The second hypothesis of this study was rejected.

Figure 1

Moderation Chart for Guilt and Shame Proneness, Moral Injury Exposure, and PTSD

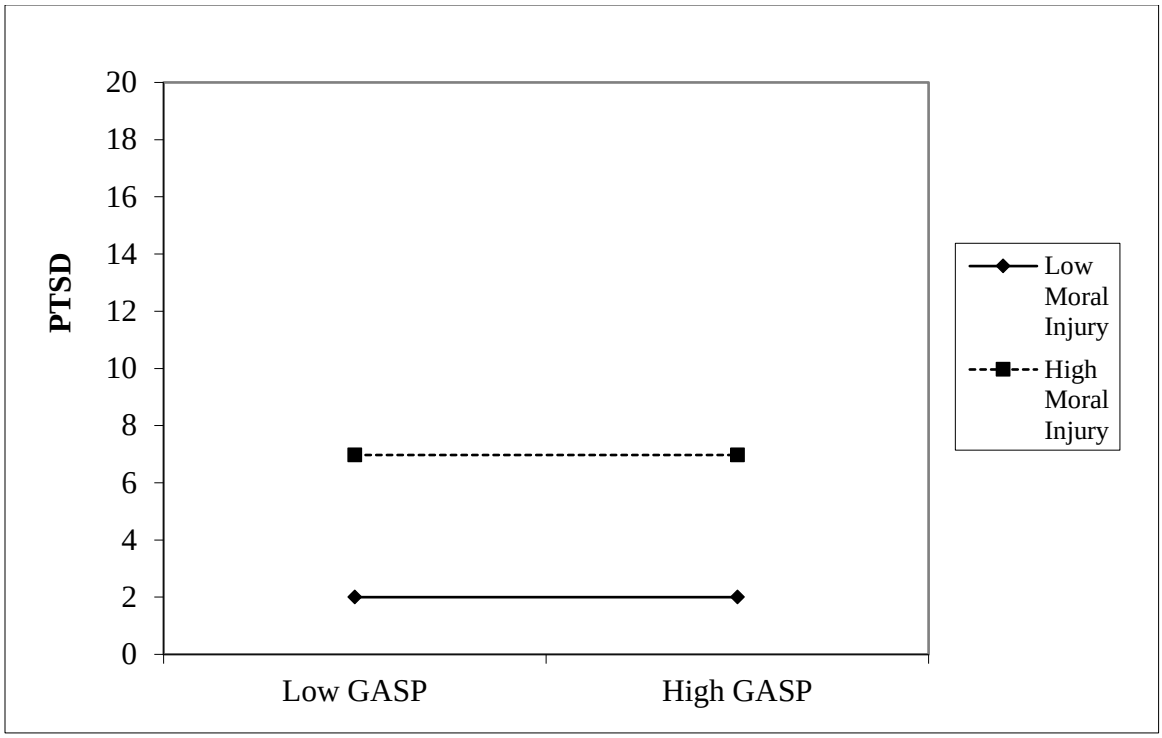


Figure 2

Moderation Chart for Guilt and Shame Proneness, Moral Injury Exposure, and Anxiety

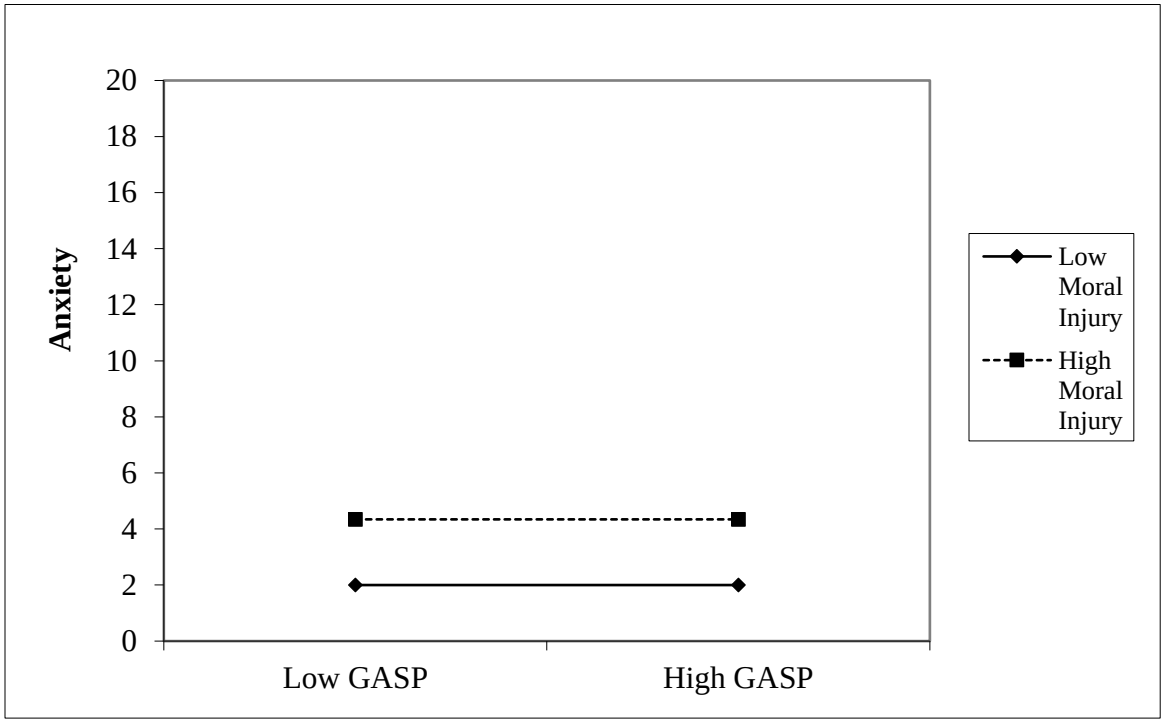
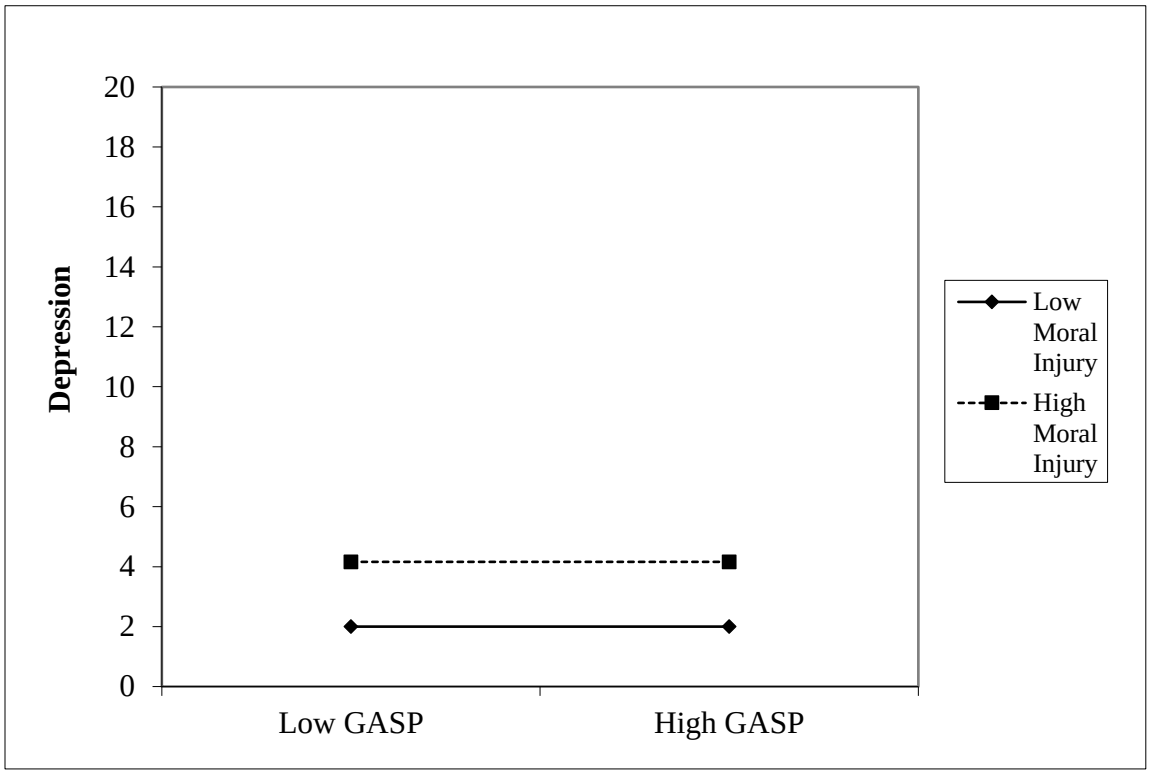


Figure 3

Moderation Chart for Guilt and Shame Proneness, Moral Injury Exposure, and Depression



Moral Disengagement as a Moderator

Moral disengagement was hypothesized to buffer the association between morally injurious events and anxiety, depressive, and PTSD symptoms. Moral disengagement did not moderate the relationship between moral injury and depression (r = -.0052, p = .4511), anxiety (r = -.0112, p=.0921), or PTSD (r = -.0273, p = .0629). This could be, in part, due to a ceiling effect with a high mean response on the MIES (M = 28.6, SD = 12.4). Moral disengagement also had significant negative correlation between PTSD (r = -.612), depression (r = -.657), and anxiety (r = -.665) and a moderate negative correlation with moral injury (r = -.264).

Figure 4

Moderation Chart for Moral Disengagement, Moral Injury Exposure, and PTSD

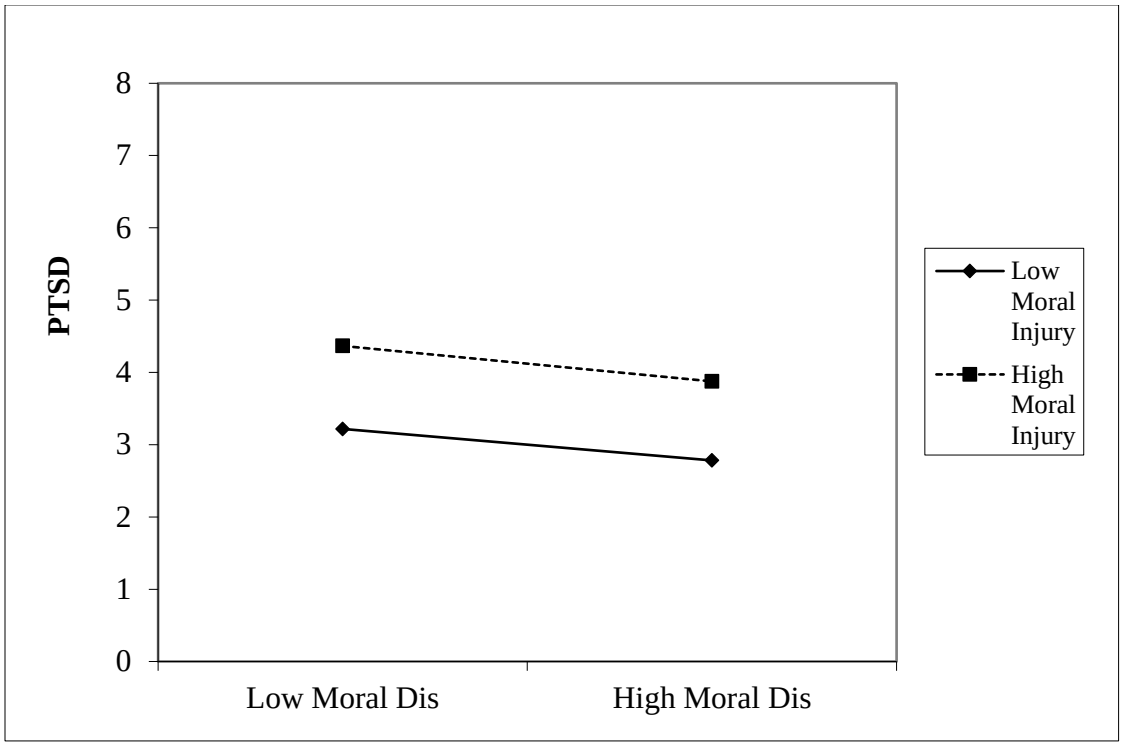


Figure 5

Moderation Chart for Moral Injury Exposure, Moral Disengagement, and Depression

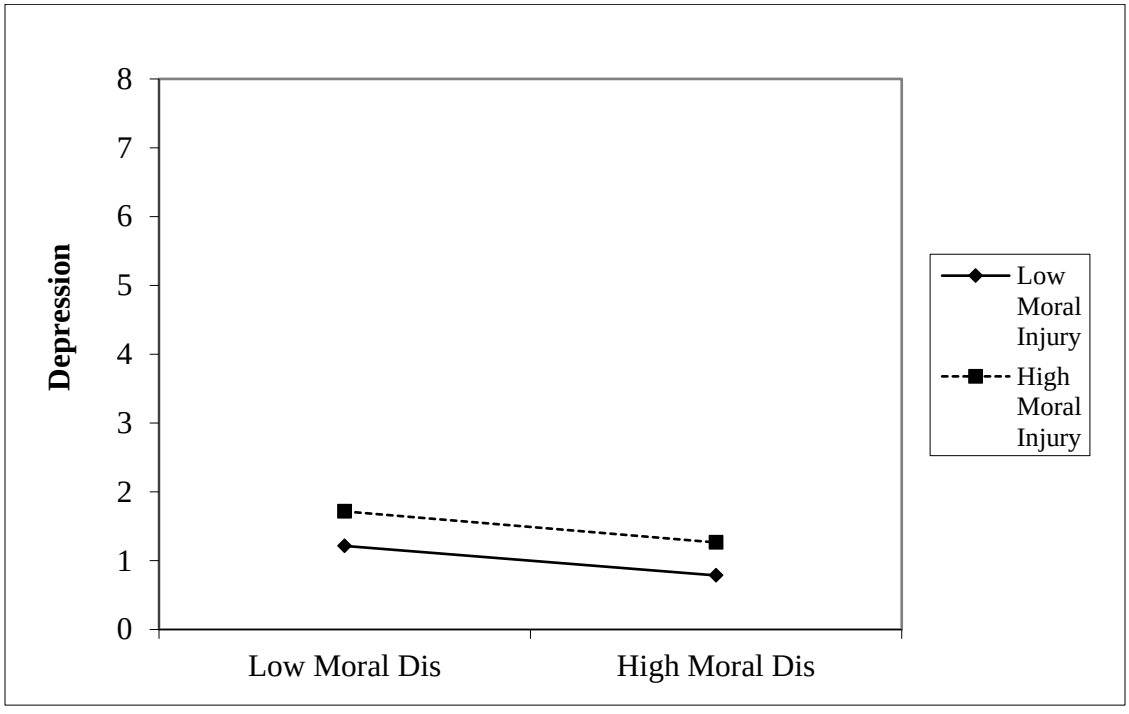
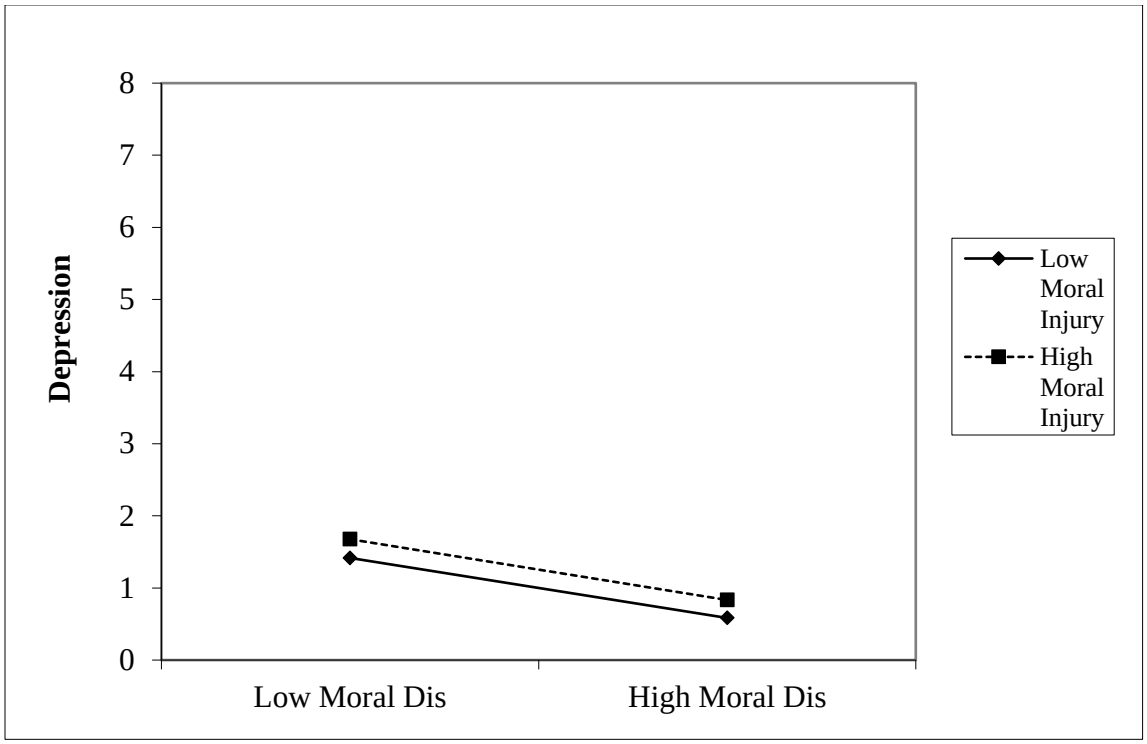


Figure 6

Moderation Chart for Moral Injury Exposure, Moral Disengagement, and Anxiety



Discussion

The aim of this study was to examine the relationship between exposure to morally injurious events and PTSD, depression, and anxiety and the role of proneness to guilt and shame and moral disengagement as potential moderators of the relationship between morally injurious events and psychological outcomes. The first hypothesis was that exposure to morally injurious events would be correlated to increased reporting of anxiety, depression, and PTSD. Supporting previous studies and theories regarding moral injury outcomes, anxiety, depression, and PTSD were found to be positively correlated with experiencing a morally injurious event.

Similar to Lancaster (2017), this study found a positive correlation between the PCL-5 and MIES. Previous studies with the MIES used the previous versions of the PCL (PCL-S, PCL-C) with a weaker correlation (Evans et al., 2017; Nash et al., 2013), possibly indicating a stronger correlation between the current measurement of PTSD and its relationship to exposure to MIEs.

Proneness to guilt and shame was hypothesized to be a moderator between morally injurious events and anxiety, depressive, and PTSD symptoms. Proneness to guilt and shame did not appear to moderate the relationship between moral injury exposure and psychological outcomes, though proneness to shame and guilt was negatively correlated to psychological outcomes. The GASP was designed to assess multiple factors. These factors were not used for the purpose of this study, adding a limitation to its analysis. Future research could focus specifically on a multiple factor analysis of the relationship between proneness to shame and guilt, moral injury, and psychological outcomes.

Proneness to shame and guilt was not significantly correlated to any of the study variables. Previous studies have noted the importance of state shame and guilt as a mediator between MIEs and psychological outcomes (Litz et al., 2009), but have not examined how traits could moderate the outcomes. This study found that preexisting traits may not exacerbate the relationship between experiencing MIEs and psychological outcomes, despite previous literature suggesting the moderating value of shame and guilt after MIE exposure. This would indicate that shame and guilt results from MIE exposure. Similarly, it would not appear that MIEs alter one's proneness to shame and guilt for experiences after MIEs.

Moral disengagement was hypothesized to buffer the association between morally injurious events and anxiety, depressive, and PTSD symptoms. Moral disengagement did not appear to moderate the relationship between moral injury and psychological outcomes. Moral disengagement has been theorized to either enable a person to commit an act against their moral beliefs or assist in appraisal of actions after they have already been committed (Bandura, 2002). This study was not able to conclude if moral disengagement was increased due to appraisal or if it was present during MIE exposure. A dose-response effect could also explain that increased MIE exposure would limit the effect of moral disengagement as it pertains to appraisal of MIEs.

Moral disengagement, however, had a strong relationship with each psychological outcome, indicating that moral disengagement, in and of itself, is a protective factor against psychological distress. Similar to previous studies (Farnsworth et al., 2014), moral disengagement appears to bring about some reduction in distress, with moral disengagement being negatively correlated with depression, anxiety, and PTSD. No

previous studies, however, have been found that measured this relationship directly. This study lends support to past research (Bandura, 2002) which found that moral disengagement can generally reduce distress; however, it was not found to specifically buffer the relationship between MIEs and distress.

Moral injury was also found to be negatively correlated with moral disengagement. This could indicate alterations in belief patterns resulting from MIE exposure or appraising experiences differently due to moral disengagement, leading to differences in MIES responding. Evans et al. (2017) also noted that those with a higher connection or better understanding of their moral beliefs may have higher reporting on the MIES, which could also be the case for moral disengagement. This could mean that those who have more of a connection with their moral beliefs appraise these beliefs more, leading to lower reporting on moral disengagement with higher MIES reporting. No previous studies have examined the relationship between moral injury and moral disengagement. Future studies may look to further examine alterations in beliefs following moral injury.

Limitations

Little research is currently available when it comes to the effects of moral injury. Several authors have proposed theoretical models for moral injury, but few studies have tested these models, like the one proposed by Lizt et al. (2009). This is both a strength and limitation of this study. While this study will add empirical data to the growing body of knowledge about moral injury, it is based on a theoretical construct that has limited testing. An additional complication comes from the different definitions of moral injury

confusion between action (transgressive act/morally injurious event) and reaction (psychological outcomes like anxiety, depression, and PTSD) in moral injury.

The cross-sectional design of this study likely impacted the validity of the results. The participants likely completed this survey with possibly a long period of time between their last deployment (and last experience in combat) and the time of this study. It is possible that participants may have undergone treatment that would have reduced the psychological impact of their actions in combat. It is also likely that this period of time could have impacted their moral disengagement because this construct has been found to be situationally based such that individuals may be morally disengaged when they commit the act but not in other situations or may only be morally disengaged due to the appraisal of that specific act (Bandura, 1999). No research has tested the effects of time on moral disengagement. Also, no study has tested the effects of time on moral injury. This study is also limited in concluding the direction of causality for the variables, such that the cause of PTSD, depressive, and anxiety symptoms may not be determined to originate from the transgressive act and could actually be caused by other factors such as general combat exposure.

PTSD is associated with problems with memory regarding the traumatic event. Posttraumatic amnesia may cause problems with remembering the details associated to events that may have transgressed moral beliefs. Alteration in mood, as caused by PTSD, may also bring about thinking that could come with overreporting by those with high PTSD scores. Likewise, alterations in worldview because of PTSD may bring about overreporting in moral disengagement and possibly underreporting on the GASP when it

comes to views of self, others, and the world. This may be particularly problematic with the moral disengagement rating.

Future Directions

Future studies should examine moral disengagement and symptoms prior to deployment as well as after deployment to examine the relationship between experiencing the deployment and increases in moral disengagement. It is likely that this construct could change based on experience and a cross-sectional design study may not fully capture the effect that moral disengagement has on outcomes. Many participants in this study scored above the threshold for PTSD on the PCL-5. Future studies should also look at the relationship of these variables when PTSD is not present to examine moral injury as a construct separate from PTSD.

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Appendix A

Moral Injury Event Scale (Nash et al., 2013)

	Strongly Agree (6)	Moderately Agree (5)	Slightly Agree (4)	Slightly Disagree (3)	Moderately Disagree (2)	Strongly Disagree (1)
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.						
5. I violated my own morals by failing to do something I felt I should have done						
6. I am troubled because I violated my morals by failing to do something that I felt I should have done.						
7. I felt betrayed by leaders who I once trusted						
8. I felt betrayed by fellow service						

members who I once trusted						
9. I felt betrayed by others outside the U.S. Military who I once trusted						

Appendix B

PROMIS Emotional Distress – Anxiety – Short Form 8a

In the past 7 days…	Never (1)	Rarely (2)	Sometimes (3)	Often (4)	Always (5)
I felt fearful					
I found it hard to focus on anything other than my anxiety					
My worries overwhelmed me					
I felt uneasy					
I felt nervous					
I felt like I needed help for my anxiety					
I felt anxious					
I felt tense					

Appendix C

PROMIS Emotional Distress – Depression – Short Form 8a

In the past 7 days…	Never (1)	Rarely (2)	Sometimes (3)	Often (4)	Always (5)
I felt worthless					
I felt helpless					
I felt depressed					
I felt hopeless					
I felt like a failure					
I felt unhappy					
I felt that I had nothing to look forward to					
I felt that nothing could cheer me up					

Appendix D

Guilt and Shame Proneness Scale (Cohen et al., 2011)

	Very Unlikely (1)	Unlikely (2)	Slightly Unlikely (3)	About 50% Likely (4)	Slightly Likely (5)	Likely (6)	Very Likely (7)
1. After realizing you have received too much change at a store, you decide to keep it because the salesclerk doesn't notice. What is the likelihood that you would feel uncomfortable about keeping the money?							
2. You are privately informed that you are the only one in your group that did not make the honor society because you skipped too many days of school. What is the likelihood that this would lead you to become more responsible about attending school?							
3. You rip an article out of a journal in the library and take it with you. Your teacher discovers what you did and							

tells the librarian and your entire class. What is the likelihood that this would make you would feel like a bad person?							
4. After making a big mistake on an important project at work in which people were depending on you, your boss criticizes you in front of your coworkers. What is the likelihood that you would feign sickness and leave work?							
5. You reveal a friend's secret, though your friend never finds out. What is the likelihood that your failure to keep the secret would lead you to exert extra effort to keep secrets in the future?							
6. You give a bad presentation at work. Afterwards your boss tells your coworkers it was your fault that your company lost the contract. What is the likelihood that you would feel incompetent?							

7. A friend tells you that you boast a great deal. What is the likelihood that you would stop spending time with that friend?							
8. Your home is very messy and unexpected guests knock on your door and invite themselves in. What is the likelihood that you would avoid the guests until they leave?							
9. You secretly commit a felony. What is the likelihood that you would feel remorse about breaking the law?							
10. You successfully exaggerate your damages in a lawsuit. Months later, your lies are discovered and you are charged with perjury. What is the likelihood that you would think you are a despicable human being?							
11. You strongly defend a point of view in a discussion, and though nobody							

was aware of it, you realize that you were wrong. What is the likelihood that this would make you think more carefully before you speak?							
12. You take office supplies home for personal use and are caught by your boss. What is the likelihood that this would lead you to quit your job?							
13. You make a mistake at work and find out a coworker is blamed for the error. Later, your coworker confronts you about your mistake. What is the likelihood that you would feel like a coward?							
14. At a coworker's housewarming party, you spill red wine on their new cream-colored carpet. You cover the stain with a chair so that nobody notices your mess. What is the likelihood that							

you would feel that the way you acted was pathetic?							
15. While discussing a heated subject with friends, you suddenly realize you are shouting though nobody seems to notice. What is the likelihood that you would try to act more considerately toward your friends?							
16. You lie to people but they never find out about it. What is the likelihood that you would feel terrible about the lies you told?							

Appendix E

Moral Disengagement Scale (Jackson & Sparr, 2005)

	Not True (1)	A Little True (2)	Middling True (3)	Quite True (4)	Very True (5)
1. In fast and clean military actions central bases of hostile movements can be neutralized and collateral damage can be minimized					
2. It is irresponsible to renounce the use of military force if a contribution to world-peace can be made by it.					
3. Terrorists are like pests in cornfields – one has to approach them relentlessly					
4. If the NATO asks us for military help to end a conflict in a foreign country, I support the use of armed forces in the crisis region					
5. In the struggle for peace I find the use of military force justified if death of innocent people is avoided					
6. If a soldier kills someone while on duty, he acts on behalf of military orders and thus carries no personal responsibility for his action					
7. If peaceful means cannot resolve a conflict effectively, I support the use of military intervention					
8. If extreme political groups are guilty of cruel crimes against humanity and serious human rights violations, they have not deserved to be treated sparely					

Appendix F

PTSD Checklist – for DSM-5

	Not at all (1)	A Little Bit (2)	Moderately (3)	Quite a bit (4)	Extremely (5)
1. Repeated, disturbing, and unwanted memories of the stressful experience?					
2. Repeated, disturbing dreams of the stressful experience?					
3. Suddenly feeling or acting as if the stressful experience were actually happening again (*as if you were actually back there reliving it*)?					
4. Feeling very upset when something reminded you of the stressful experience?					
5. Having strong physical reactions when something reminded you of the stressful experience (*for example, heart pounding, trouble breathing, sweating*)?					
6. Avoiding memories, thoughts, or feelings related to the stressful experience?					
7. Avoiding external reminders of the stressful experience (*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 cut off 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?					

Appendix G

Veteran Verification Survey (S. L. Lancaster, personal communication, November 21, 2017)

Please answer by typing in the box or selecting the alternative option.

1. In which state is your military branch's academy located?

Option 1: Text box for them to type.
Option 2: A box they can check that says "I am not a veteran."

2. What is the acronym for the locations where final physicals are taken prior to shipping off for basic training? (4 letters)

Option 1: Text box for them to type.
Option 2: A box they can check that says "I am not a veteran."

3. What is the acronym for the generic term the military uses for various job fields? (3/4 letters)

Option 1: Text box for them to type.
Option 2: A box they can check that says "I am not a veteran."

Appendix H

Combat Exposure Scale (Keane et al., 1989)

Please check the number for the answer that best describes your experience.

1) Did you ever go on combat patrols or have other dangerous duty?

1	2	3	4	5
No	1-3 times	4-12 times	13-50 times	51+ times

2) Were you ever under enemy fire?

1	2	3	4	5
Never	<1 month	1-3 months	4-6 months	7+ months

3) Were you ever surrounded by the enemy?

1	2	3	4	5
No	1-2 times	3-12 times	13-25 times	26+ times

4) What percentage of the soldiers in your unit were killed (KIA), wounded or missing in action (MIA)?

1	2	3	4	5
None	1-25%	26-50%	51-75%	76% or more

5) How often did you fire rounds at the enemy?

1	2	3	4	5
No	1-3 times	4-12 times	13-50 times	51+ times

6) How often did you see someone hit by incoming or outgoing rounds?

1	2	3	4	5
No	1-3 times	4-12 times	13-50 times	51+ times

7) How often were you in danger of being injured or killed (i.e., being pinned down, overrun, ambushed, near miss, etc.)

1	2	3	4	5
No	1-3 times	4-12 times	13-50 times	51+ times

Appendix I

Consent Form

This study is being done by Aaron Keating who is a student at the Illinois School of Professional Psychology at National Louis University working on a Clinical Research Project. This study is a requirement to fulfill the researcher's degree and will not be used for decision-making by any organization.

The title of this study is Predictors of Distress Following Experiences in Combat. The purpose of this study is to investigate the nature of the relationship between experiences in combat and distress and various contributing factors in post-9/11 Combat Veterans. Up to 300 participants will be recruited for this study. I was asked to be in this study because I am a combat veteran that served in the combat theatre of both Iraq and Afghanistan between 2001 and present. If I agree to be in this study, I will be asked to answer a survey about my military and combat experience as well as my current feelings. My participation in this study will take between 30 and 45 minutes. The risks associated with this study are re-exposure to memories associated with combat that I may consider uncomfortable, painful, or distressing. If at any time you need to speak to a mental health professional please contact your local Veteran's Affairs or call the Veterans Crisis line at 1-800-273-8255 or text 838255 to speak to aa mental health professions. The information I provide will be treated confidentially, which means that nobody except Aaron M Keating will be able to link data to me. The records of this study will be kept private and will be retained for 3 years, after which, the data will be deleted from all storage devices. No words linking me to the study will be included in any sort of report that might be published. IP addresses will not be recorded. The records will be stored securely and only Aaron M Keating and Dr. Sandra Zakowski will have access to the records. I understand that my participation is strictly voluntary. If I do not participate, it will not harm my relationship with Aaron Keating or Argosy University. If I decide to participate, I can refuse to answer any of the questions that may make me uncomfortable. I can quit at any time without my relations with the university, job, benefits, etc., being affected. I can contact Aaron Keating at aaron.m.keating@stu.argosy.edu, with any questions about this study and may request a summary of the study's results.

I understand that this study has been reviewed and certified by the Institutional Review Board, National Louis University. For problems or questions regarding participants' rights, I can contact the Institutional Review Board at the National Louis University, 122 N Michigan Ave, Chicago, IL 60603. The board is chaired by Leah Horvath, lhorvath@nl.edu, (312) 777-7681.

I have read and understand the explanation provided to me. I have had all my questions answered to my satisfaction, and I voluntarily agree to participate in this study. I have been given a copy of this consent form. By signing this document, I consent to participate in the study.

Name of Participant (printed) _____ Date: _____

☐ If you agree, click here to sign and continue to survey

Signature of Principal Investigator: _____
Date: _____

Aaron M Keating
Principle Investigator
National Louis University
122 N Michigan Ave
Chicago, IL 60603
(719)360-8514

Appendix J

Study Debriefing Form

Thank you for participating in this study. This study is being done by Aaron Keating who is a student at the Illinois School of Professional Psychology at National Louis University-Chicago working on a Clinical Research Project. This study is a requirement to fulfill the researcher's degree and will not be used for decision-making by any organization.

The title of this study is Risk and Protective Factors for Psychological Distress Following a Moral Injurious Event in Combat Veterans. The purpose of this study is to investigate the nature of the relationship between experiences in combat and distress and various contributing factors in Post-9/11 Combat Veterans. Up to 300 participants will be recruited for this study.

The risks associated with this study are re-exposure to memories associated with combat that I may consider uncomfortable, painful, or distressing. If at any time you need to speak to a mental health professional please contact your local Veteran's Affairs (https://www.va.gov/directory/guide/home.asp) or call the Veterans Crisis line at 1-800-273-8255 or text 838255 to speak to a mental health professional.

The information I provided will be treated confidentially, which means that nobody except Aaron M Keating will be able to link data to me. The records of this study will be kept private and will be retained for 3 years, after which, the data will be deleted from all storage devices. No words linking me to the study will be included in any sort of report that might be published. IP addresses will not be recorded. The records will be stored securely and only Aaron M Keating and Dr. Sandra Zakowski will have access to the records.

Please contact Aaron M Keating at akeating4@my.nl.edu, with any questions about this study and requests for a summary of the study's results.

Thank you again for your participation.

Appendix K

Survey Advertisement

Are you a Veteran that has deployed to Iraq or/and Afghanistan?

Please consider filling out this survey about your combat experiences and the challenges you may have experienced after redeployment. This study seeks to look at experiences in combat to better understand combat experiences and their possible psychological consequences. This survey will take between 30 and 45 minutes and your responses will remain confidential. Your participation will contribute to our understanding of the effects that combat has on veterans.