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Self-Forgiveness as a Moderator Between Moral Injury and Posttraumatic Growth Among Veterans

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Abstract

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MS, Texas Tech University, 2016

BS, Embry Riddle Aeronautical University, 2010

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Clinical Psychology

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Abstract

The process of reintegration after military combat service is a difficult path for many veterans. Countless studies have been conducted examining the effects of trauma secondary to military service that result in posttraumatic stress disorder and other related consequences. However, moral injury (MI) related to the shame and guilt experienced by veterans has been of particular interest among mental health providers. Researchers have investigated the effects of forgiveness as a moderator between MI and posttraumatic growth (PTG). Gaps remain in the current mental health literature regarding the effect of self-forgiveness as a moderator between MI and PTG among combat veterans. The present study examined the effects of self-forgiveness as a moderator between MI and PTG. Combat veterans were recruited via a veteran podcast website and an internet survey collection platform was used to collect data to examine whether high self-forgiveness correlates with reduced MI and increased PTG. Multiple regression was used to explain the relationship between MI, self-forgiveness, and PTG followed by a moderation analysis to examine the causal effect of self-forgiveness between MI and PTG. Findings from the research showed the interaction between self-forgiveness and MI significantly improved PTG. The findings of the study may help service agencies implement screening instruments to identify MI traits among service members deploying to combat theaters. The results of this study have potential implications for positive social change through outcomes such as creating clinical interventions associated with life meaning and purpose and the successful reintegration of combat veterans into society.

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Dedication

I dedicate this dissertation to my wife, Lisa Marie De Souza, who left me too soon to be with our Lord and earn her wings to become my guardian angel. She was my muse along the way, watching over me and encouraging me with ideas to write down on paper. Her heavenly guidance helped me make this study the best I could produce for a cause that is very dear to both of us. Rest in peace, my beautiful Angel, my dissertation journey is complete.

I also dedicate this dissertation to my first love, my dear mother, Magdalena Ramis. From humble beginnings as a shoemaker's daughter, she came to this country to follow the American dream of success but instead, she put aside her dreams and made sure her children pushed forward, to learn as much as possible and strive for success. Gracias Mami, por todo tu amor, por toda la afeccion, por la disciplina, y por la paciencia que tuviste para guiarme a seguir adelante.

Finally, I want to thank my son, Anthony M. De Souza, who from a very young age had a dream, stuck to it, and never gave up. I am grateful he taught an old man like me to follow in his footsteps. I am so proud of him for the young man he has become and for the inspiration he gave me to stay the course to finish my dream of becoming a doctor.

To all my fellow veteran brothers and sisters in arms, this one is for you!

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Chapter 1: Introduction to the Study

Introduction

The U.S. Armed Forces is comprised of approximately 18 million veterans (U.S. Census Bureau, 2020). According to Elnitsky et al. (2017), approximately three million service members have served and returned from combat service deployments to Iraq and Afghanistan since 2001. Combat veterans returning home experience many distressing circumstances, including psychological trauma. The U.S. Department of Veterans Affairs (VA) reported that approximately 46% of service members returning from deployment have sought help for mental health-related concerns, and almost half those individuals were diagnosed with a mental illness (Smith et al., 2016; Tsai et al., 2016). According to the 2020 National Veteran Suicide Prevention Annual Report, the rate of suicide among veterans was estimated at 18 per day in 2018 (VA, 2020).

Despite the alarming rates of mental illness and related suicides correlated with traumatic experiences resulting from service members participating in combat, mental health professionals continue to struggle to find evidence-based treatments to effectively address trauma-related issues among veterans. As such, it behooves researchers to examine other psychosocial difficulties that plague combat veterans. One such issue is moral injury (MI), which entails experiencing guilt and shame subsequent to engaging in behaviors incongruent with one's morals and values. Self-forgiveness has been shown to mitigate the effects of trauma and may be an effective psychotherapeutic approach to use in clinical settings with veterans, as self-forgiveness has been shown to enhance positive

health and mental health outcomes and increase posttraumatic growth (PTG; Maguen et al., 2017).

In this study, I examined the effects of self-forgiveness as a moderator between MI and PTG. In this chapter, I provide background information relevant to the study, discuss the research problems and the purpose of the study, state the research questions and hypotheses, and describe the theoretical framework of the study. I will conclude the chapter with an overview of the nature of the study, definitions of key terms and variables for the study, and a discussion of the limitations of the study.

Background of the Study

In the past century, the U.S. Department of Defense and the U.S. military have implemented strategies to connect and adapt to world changes, including peacetime and wartime operations (Baylis & Gray, 2015; Bodie, 2015; Freedman, 2015). The necessary strategies used by the military in combat operations to stabilize political and military objectives have incurred lasting effects (Freedman, 2015). Besides the effects imposed by war on societies at large, the resulting outcomes have had a tremendous impact on veterans returning home from combat operations (Baylis & Gray, 2015; Brodie, 2015; Currier et al., 2015; Hoge et al., 2014). A comprehensive literature review conducted by the VA (2014) revealed a deficiency in the reintegration and transition of combat veterans returning from deployment, and this transition deficiency continues to be a growing problem. Many of the issues surrounding veterans returning home focus on anger, frustration, anxiety, depression, shame, and guilt (Currier et al., 2015; Nash et al., 2013). The focus of many studies has been on posttraumatic stress disorder (PTSD) as the

culprit of many issues, such as guilt and shame faced by veterans returning from combat, when the issues might also entail MI.

Studies have directed attention to the increase in issues related to MI (Johnson et al., 2015; Hoge, 2010). MI relates to a standard of guilt, shame, anger, spiritual problems, and alienation from others that transpires after being a witness to or being part of combat events that challenge one's personal moral beliefs (Litz et al., 2009; Nash et al., 2013). Koenig et al. (2018) conducted a study examining the development of measurements used in intervention studies of MI. The study was conducted among 427 veterans and active-duty military members with PTSD symptoms. The findings indicated MI symptoms were prevalent among those individuals who demonstrated high levels of PTSD. As such, psychotherapeutic interventions can be tested and used by clinicians and the pastoral care field to treat the psychological and spiritual/religious symptoms of MI that may hinder the successful treatment of PTSD (Koenig et al., 2018).

One of the concerns researchers have highlighted regarding MI is the spiritual struggles that affect the reintegration and transition of veterans back into society (Currier et al., 2015). Forgiveness, as a component of spiritual wellness, is a concept that was relatively nonexistent in psychological literature until the 1980s (Sanjay & Hooda, 2019) as it was mainly relegated to theological studies. More recently, forgiveness has become of increased interest in the social and psychology literature as a measure to resolve personal conflict. Many definitions of forgiveness exist, varying from reconciliation and resolution (Worthington & Wade, 1999) to feelings of revengeful acts (Forward, 1989). For this study, key elements of Hall and Finchman's model (2005) of self-forgiveness

seem most appropriate. Hall and Finchman described forgiveness as a means of making amends to oneself and to an afflicted person. For example, Wusik et al. (2015) conducted a study to examine the influence of forgiveness as a mediator between posttraumatic stress (PTS) and PTG. The study consisted of a panel of 1,191 college students affected by the 2007 Virginia Tech mass shooting. The researchers suggested further research to ascertain if forgiveness serves as a moderator between PTS and PTG. MI has been shown to correlate with PTS characteristics, often co-occurring with PTSD, but automatously different (Barnes et al., 2019).

Many individuals have researched the relationship between PTSD and PTG. However, while MI has close ties to PTSD, there appears to be no research showing a connection between MI and PTG. Koenig et al. (2018) stated that MI and PTSD share a common bond of anxiety, depression, and suicide. However, while individuals with MI may not experience some of the characteristics of PTSD, such as hypervigilance, hyperarousal, and avoidance, they often experience psychological and spiritual symptoms stemming from internal moral incongruence. Tedeschi and Calhoun (2004) posited that negative situations lead to psychological distress, which results in a personal journey to strive and achieve PTG. Through a network of support systems, it is possible for combat veterans to work significantly to achieve PTG (Tedeschi & Calhoun, 2004). The results of achieving PTG can prove beneficial in the enhancement of relationships and improvement of self-view and self-worth and can lead to a new improved lifestyle outside the traumatic event.

Problem Statement

The research has shown that despite numerous psychotherapeutic treatment approaches, many combat veterans experience chronic PTSD, often leading to suicide (Mahoney et al., 2020). Conversely, existing psychosocial literature shows myriad studies (e.g., Whealin et al.,2020; Wozniak et al., 2020) that illustrate how the negative effects of PTSD can be mitigated, resulting in PTG. However, few studies depict how protective factors such as forgiveness can impact the relationship between PTSD and PTG. Even less research has been conducted to address how forgiveness (notably self-forgiveness) can mediate the impact of MI and trauma, thus resulting in PTG. Determining the effects of self-forgiveness as a moderator between MI and PTG among veterans involved in a combat environment could have a significant impact on the mental health treatment outcomes of these veterans. In this study, I examined whether there is a positive correlation between veterans who score low on MI and high on measures of PTG and self-forgiveness.

The potential for growth following traumatic events is possible despite the psychological outcomes from PTS (Wusik et al., 2015). For example, survivors from traumatic events (e.g., Virginia Tech shootings) have experienced positive psychological transformation from the stressful occurrence (Tedeschi et al., 2017). Several factors have been shown to correlate with PTG, including spirituality (Wusik et al., 2015), PTSD (Tedeschi et al., 2017), and MI (Litz et al., 2009). Self-forgiveness, which offers an opportunity for self-actualization and resiliency, correlates with the growth of psychological health and mental improvement, therefore permitting the alleviation of

anger, hurt, and pain associated with transgression (Balkin et al., 2016). Forgiveness, in the onset of a traumatic event, may result in PTG (Wusik et al., 2015). Although a traumatic event may lead to negative psychological response, Tedeschi et al., 2017 suggested PTG is the response to hostile situations, and spiritual guidance (e.g., forgiveness) presented a method of positive psychological growth.

Starnino et al. (2019) conducted a qualitative study on how MI depicts dissonance between an individual's beliefs about how they and the world should function along with the trauma events they experienced. The study was comprised of 18 participants who took part in a spiritual search for meaning intervention program set up at a VA Medical Center (Starnino et al., 2019). The purpose of the study was to explore what guilt, shame, anger, sense of betrayal and the desire for forgiveness meant to the participants. Starnino et al. used a spiritually related intervention group process designed to treat spiritual and moral wounding experienced by combat veterans with PTSD. The findings pointed toward the combination use of chaplain/pastoral and mental health professionals to fill an important gap in treatment (Starnino, et al., 2019). Furthermore, the use of spiritual integrated interventions may bridge the issues of MI (e.g., guilt, shame, betrayal) and mindfulness and compassion-based practices (Starnino et al., 2019). The researchers indicated a need for additional studies that address moral and spiritual aspects related to trauma. In the present study, I sought to address the dearth of research regarding how self-forgiveness moderates between the predictor variable MI and outcome variable PTG (Creswell & Creswell, 2018).

Purpose of the Study

The purpose of the present study was to investigate whether self-forgiveness serves as a moderator between the independent variable MI and the dependent variable PTG among combat veterans. Understanding the ability of self-forgiveness to serve as a moderator between MI and PTG could lead to significant changes in how combat veterans transition into society. These findings can also change the way counselors screen for MI and understand the functional impact (i.e., physiological, psychological, social, spiritual) of MI on an individual. Furthermore, due to the nature of self-forgiveness and its relationship with spirituality, the involvement of members of the clergy conducting screening evaluations for MI prior to spiritual counseling may be an option for treatment.

Research Questions and Hypotheses

RQ1: Does a relationship exist between MI and PTG among combat veterans?

$H_0$1: There is no relationship between MI and PTG among combat veterans.

H_a1: There is a relationship between MI and PTG among combat veterans.

RQ2: Does a relationship exist between forgiveness and PTG among combat veterans?

$H_0$2: There is no relationship between self-forgiveness and PTG among combat veterans.

H_a2: There is a relationship between self-forgiveness and PTG among combat veterans.

RQ3: To what degree does the presence of self-forgiveness moderate the relationship between MI and PTG among combat veterans?

$H_0$3: The presence of self-forgiveness does not moderate the relationship between MI and PTG among combat veterans.

H_a3: The presence of self-forgiveness does moderate the relationship between MI and PTG among combat veterans.

Theoretical Framework

Tedeschi and Calhoun's (1996) theory of PTG demonstrates the basis of a positive psychological transformation due to tribulations and other challenges following traumatic events. Tedeschi and Calhoun (1996) posited five general domains that engage the traumatic event and determine the meaning of it: (a) appreciation of life, (b) relationship with others, (c) new possibilities in life, (d) personal strength, and (e) spiritual enhancements. The PTG theory is a method used by researchers to comprehend the relationship between emotional and psychological growth among individuals who experience traumatic events.

When an individual experiences a traumatic incident in a perceived assumptive world, the reaction may trigger a need to cognitively process the experience. This process is called *rumination* (Lindstrom et al., 2013). PTG theory notes that an event may conjure an upsetting reaction that leads to questions about a person's goals and beliefs. The management of affliction and stress create change in the individual's worldview or self and may result in positive growth. PTG shows a minimal focus on the emotional process rather than the cognitive processing of creating meaningful growth and learning to deal with life's future challenges. One general domain of PTG involves spiritual enhancements, such as forgiveness. The process of forgiveness allows for personal

emotions, motivations, and behavioral intentions toward an offender to become less negative and more positive over time (Fernandez-Capo et al., 2017). In this study, I focused on forgiveness as a transition of growth to minimize the effects of MI and increase PTG because forgiveness is important to healthy human functioning and to restoring interpersonal relationships after conflict (Fernandez-Capo et al., 2017).

Forgiveness is considered a channel for positive growth and healing in comparison to therapeutic methods (e.g., exposure therapy, medication, interpersonal therapy) that may not be sufficient for treatment of individuals who experience MI. According to Wusik et al. (2015), PTG evolved from the PTS magnitude when forgiveness measures were active. Self-forgiveness, as a derivative of forgiveness, involves accepting the responsibility for infractions, making amends, and reinstating moral values leading to negation of moral guilt (Purcell et al., 2018). Veterans returning from war can exhibit self-forgiveness when they atone for their actions committed during the war. The concept of using self-forgiveness as a measure between MI and PTG may invoke the future cooperation of mental health professionals connecting with spiritual counselors when treating combat veterans with MI (Sullivan & Starnino, 2019).

Nature of the Study

The research design used for this study was a quantitative nonexperimental design. I investigated MI as reported by combat veterans. Potential participants for the study were selected from an internet podcast platform that caters to veteran's needs. One other form of data collection involved directing potential participants to an electronic version of a survey packet generated by the internet survey collection website, a service

provider for online survey and research projects. The collected and stored data were exported to the IBM Statistical Product and Service Solutions (IBM SPSS), Version 27, for data analysis (Wagner, 2017).

In the study, I used a multiple regression analysis to examine self-forgiveness as a moderator between MI and the criterion variable PTG. An interaction between self-forgiveness and MI could moderate the relationship with PTG (Warner, 2013). Cognitive discord exists as an antecedent for MI, which is described in PTG models (Litz et al., 2009). I anticipated the quantitative analysis would demonstrate how self-forgiveness functioned as a moderator to reduce MI and increase PTG for the combat veterans who participated in this study.

Definition of Terms

Combat veteran: A military service member who experienced any level of hostility for any duration consequent to offensive, defensive, or friendly fire military action involving a real or perceivable enemy (VA, 2017). The term veteran is assigned to individuals who served in active-duty status as well as those who obtained an honorable discharge at last time of discharge or release but does not require wartime service (VA, 2014). For this study, the term *combat veteran* was used from federal law stating that a combat veteran is a person who served honorably on active duty in a combat theater (VA, 2014).

Forgiveness: An intentional motive, through a voluntary process, to which an individual who has been a victim of an offense has a change in feelings and attitudes toward the aggressor (Doka, 2017).

Moral injury (MI): "The betrayal of what's right, by a person in legitimate authority or in a high stakes situation" (Shay, 2014, p. 182). In addition, the self can be the cause of betrayal by witnessing and not stopping an event (Litz et al., 2009). MI can be viewed as a collection of symptoms that may include shame, anger, demoralization, self-minimization, poor self-care, and guilt (Maguen & Litz, 2014). Little formal research exists on MI; however, a wide range of cognitive, behavioral, and affective symptoms are associated with MI. For this study, the term *MI* was used to describe the inner conflict based on a moral examination of having inflicted harm and a judgment based in the sense of personal activity (Litz et al., 2009; Maguen & Litz, 2014).

Posttraumatic growth (PTG): A positive psychological (cognitive–emotional) transformation resulting from the struggle to process a challenging life event. Tedeschi and Calhoun's (1995) Posttraumatic Growth Inventory (PTGI) may be used for measurement.

Self-forgiveness: Self-acknowledgment of fault about an incident that fosters a positive relationship; forgiveness allows for the peaceful resolution and restoration of positive perception (Lichtenfeld et al., 2019). The term *self-forgiveness* in this study is a form of auto reconciliation between MI and PTG.

Assumptions

In this study, I examined self-forgiveness as a potential moderator in the relationship between MI and PTG among combat veterans who have served in conflicts since World War II to present-day operations, such as Operation Enduring Freedom and Operation Iraqi Freedom. I assumed (a) the veterans taking part in the study had self-

awareness to truthfully answer the online questionnaire, including sections assessing demographics, MI, and PTG; (b) veterans only referred to the experience of combat when answering the online questionnaire; and (c) veterans were knowledgeable in using the technology required to complete the online questionnaire.

Scope and Delimitations

In this quantitative study, my exploration centered on the predictor variable MI, self-forgiveness as the moderation variable, and PTG as the criterion variable. I used an internet platform to collect data from the target population (i.e., combat veterans) via a survey. As an added resource, an internet podcast service platform website was used to recruit participants who could access the survey through a URL on the website's homepage. The research problem was focused on the lack of studies addressing self-forgiveness as a predictor variable that affects the direction or strength of the relationship between MI and PTG among combat veterans. To lessen the noted gap, I employed specific study tools and PTG theory to conduct this research investigation.

According to Cesur et al. (2013), military personnel entering the armed forces bring personal cultural backgrounds, values, and beliefs and are trained and equipped to use strength, force, and aggression and to cause substantial amounts of harm to meet a military objective. Service members may be assigned to combat operations around the world and may be composed of different ranks and time in service (Cesur et al., 2013). The scope of the study focused on the role of combat veterans consisting of those who served in past combat theaters and who subscribed to an internet podcast service as well

as those veterans who were invited by an internet survey platform to participate in the survey.

The delimitation factors of the research study included population theoretical perspective, variables, and research questions. According to Creswell (2009), delimitations set limits to the scope and define the study boundaries. The purpose of the study was to investigate self-forgiveness as a potential moderator between MI and PTG. Studying the quality of life, reintegration into society, mental disorders beyond PTSD, and specific treatment choices for combat veterans was not covered in this research study. Precise components linked with these issues were related to the study purpose but were not covered in their entirety.

Limitations

Potential limitations for this research study involved the application of instruments in an online environment. Multiple variables regarding the online survey interface were not controlled and may have influenced the external validity of the study. The generalization of the population may not be represented because some individuals may not have had access to computers or online services for multiple reasons. For example, some geographical areas in the United States and worldwide may be considered too remote to access the internet; therefore, qualifying individuals may not have had the ability to participate in the study. Some qualified participants may be deficient in computer and internet use competency and therefore were unable to access the online instruments. For example, elderly veterans from the WWII, Korean, and Vietnam eras. Furthermore, because of the online nature of the instrument, there may be potential for

certain areas of the United States to be more represented than other areas, which may affect the generalizability of the targeted population.

Another uncontrolled measure that contributes to the limitations of the study involved the self-report nature of the measurements. The possibility existed for participants of the study to have not responded truthfully to multiple questions in the questionnaire and psychometrics. The use of online surveys afforded a chance for fraud. For example, participants may be involved in the surveys to receive incentives for participation, which may be disingenuous and fail to offer true data for the study. An ethical concern regarding confidentiality and anonymity cannot be guaranteed to any participants. The design of the research cannot control the background in which subjects participate in the online survey. The data submitted by the test subjects may be susceptible to interception and potential manipulation.

Significance of the Study

In the present study, I investigated self-forgiveness as a potential moderator between the independent variable MI and the dependent variable PTG. The relationship between MI and the moderating effect of self-forgiveness, which may increase PTG, is an important concept to examine. If positive results from the study indicate that self-forgiveness moderates or lessens MI and increases PTG, then forgiveness and self-forgiveness can be used in psychotherapeutic settings.

Countless psychotherapeutic treatments exist for trauma-related symptoms, but many of the intervention processes have not yielded positive results. For example, in a review of evidence-based therapies (e.g., cognitive processing therapy, prolonged

exposure therapy, eye movement and desensitization reprocessing) for the treatment of PTSD, Ortega and Miller (2020) found that while these treatments may be effective for some, negative individual responses to these treatments may persist posttreatment. The multitude of trauma-related issues resulting from treatment-resistant results require the need to identify alternative measures to meet the needs of veterans, such as those who experience MI. Forgiveness has been shown to reduce symptoms of PTS among veterans (Currier et al., 2016), allowing for the healing process to begin within oneself and others (Purcell et al., 2018). However, a dearth of research exists to show the effects of self-forgiveness as a moderating factor between MI and PTG, leading to the reason for this study to examine the correlation between MI, self-forgiveness, and PTG. The results of the study could bear innovative counseling techniques that may provide positive growth among combat veterans who experience MI.

Summary

The goal of PTG research is to instill a positive psychological change that arises following exposure to trauma and that results from the survival of a traumatic event and the vision of new possibilities in life (Calhoun & Tedeschi, 2014). According to Wagner et al. (2017), little is known about PTSD treatments to increase PTG. Extensive research on PTSD has been conducted, and the focus of this study involves MI, which is not a diagnosis in the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; *DSM*-5) but may co-occur with PTSD (Haleigh et al., 2019). Purcell et al. (2018) stated that MI is a decreasing factor of PTG, whereas forgiveness could increase PTG. I focused on the function of self-forgiveness that may be associated with the perceptions of growth or

inhibit PTG among combat veterans. The study's results may be informative as to the development of a forgiveness-based intervention that specifies how combat veterans can apply self-forgiveness to promote PTG. In Chapter 2, I discuss the literature review and offer a comprehensive examination of PTSD, MI, self-forgiveness, and PTG.

Chapter 2: Literature Review

Introduction

Military combat can be a highly distressing experience that can cause severe psychological trauma. The combat situations in Afghanistan and Iraq have qualities different from those of previous wars. Hawker and Nino (2017) noted the wars in Afghanistan and Iraq have been called unconventional in that many of the insurgent tactics by the enemy cause slow erosion of strength and will of the adversary. For example, in these two wars, Afghani and Iraqi soldiers have not adhered to rules of engagement that prohibit shooting noncombatants such as children or clergy. This warfare is far more psychological than conventional tactics (e.g., tank warfare, trench warfare, artillery warfare) of previous wars, and upon returning home from combat, more veterans than ever carry the emotional and traumatic scars from the battlefield (Hawker & Nino, 2017). The traumatic effects of war transfer to the home front upon a veteran's return from duty in the form of conditions such as PTSD.

Approximately 11–20% of veterans who served in Operations Iraqi Freedom and Enduring Freedom screen positive for PTSD each year (Reisman, 2016; VA, 2019). Trauma, secondary to serving in the military, can also lead to long-term MI, which entails the "betrayal of 'what's right' in a high-stakes situation by someone who holds power" (Shay, 2012, p. 183). MI is not a diagnosis in the *DSM-5,* but it has been compared to PTSD in that the two co-occur, but one may exist without the other (Haleigh et al., 2019). Litz et al. (2009) described MI as the harmful result that takes place when an individual's action (or inaction) violates their moral beliefs. I begin the following literature review

with an overview of PTSD followed by MI and the relation between the two psychological conditions. Following the overview of PTSD and MI, I discuss the term *forgiveness* and how it can be used to reduce PTSD and MI. In a section following forgiveness, I address PTG and how it entails positive growth secondary to trauma. In the final section, I discuss how forgiveness can show potential to decrease MI and increase PTG.

With this study, I intended to support the need, value, and benefits of researching the potential relationship between MI, forgiveness, and PTG. Forgiveness (i.e., self-forgiveness) may benefit the outcome of the characteristics of MI (e.g., guilt, shame) in a positive direction leading to PTG, resulting in improved treatment methods for veterans, and creating beneficial impact on society. While this study was focused on MI, PTSD is also discussed as the two concepts are closely related; clarifying the similarities and differences between these two psychological wounds is important. The key terms, PTSD, MI, forgiveness/self-forgiveness, and PTG are reviewed based on the literature. I also address how self-forgiveness can be used as a moderator between MI and PTG. An explanation of search strategies, key variables, and concepts is followed by a summary and recommendations for future research.

Literature Search Strategies

A systematic review of the current investigation on PTS, forgiveness, self-forgiveness and PTG could help connect prior investigations by involving spiritual counseling in therapeutic counseling sessions on the topic (Wusik et al., 2015). Researchers have conducted studies on the effects of forgiveness and spirituality on

PTSD (Currier et al., 2016), and the effects and evaluation of MI on combat veterans (Frankfurt & Frazier, 2016; Nash., 2013). Reviewing results of past studies, examining implications for future research, and evaluating theoretical frameworks and methodologies of leading research shows a dearth of empirical evidence analyzing the effects of forgiveness between MI and PTG among veterans. A thorough search, review, analysis, and synthesis of the literature indicated a need to study the relationship between MI, forgiveness, and PTG (Currier, 2016; Garcia, 2015; Wusik, 2015). The literature search consisted of clinical and empirical studies without restriction of the type of research and number of participants. There is a lack of empirical-based review and evidence from peer-reviewed articles and other sources regarding specific investigations of the correlation between MI, self-forgiveness, and PTG. To address the issue, an empirical-based review of the history of MI, self-forgiveness, and PTG related to equivalent research and themes helped to find the need, prospects, and significance to this specific study.

The research used in this review included articles published within the last 5 years; some articles related to forgiveness dated 5 to 20 years ago are used fir historical and critical relevance. The search strategies included multiple searches using the following databases: Academic Search Complete, Journals @ OVID, CINAHL Plus with full text, MEDLINE with full text, and ScienceDirect. My Thoreau multi-database search consisted of the following keywords: *veterans, MI, forgiveness, self-forgiveness, PTSD symptoms, surveys, PTG, guilt,* and *shame*. Using the Walden University Library EBSCO search engine for sources published within the last 5 years produced 791 results using the

following keywords: *history of PTSD* and *combat veterans*. The search engine produced six results with keywords *forgiveness, combat veterans,* and *moral injury* published within the last 5 years. The articles presented regarding *forgiveness* yielded 9,886 references more than 5 years old. A refined search regarding *forgiveness*, *moral injury,* and *combat veterans* resulted in six articles. A search using the keywords *self-forgiveness, combat veterans, moral injury*, and *PTG* yielded zero results published within the last 5 years. Using the most search studies involving MI, forgiveness, PTG, and veterans produced one qualitative study result: Starnino et al., 2019. Researchers found strong support to understand the association between PTSD, MI, and spirituality. However, there is a lack of empirical studies and evidence from peer-reviewed journals and other sources with specific investigation on the significance of PTG on MI and self-forgiveness among veterans. A comprehensive review of the psychosocial literature suggests no research exists examining the correlation between MI, self-forgiveness, and PTG among U.S. veterans.

Key Variables, Concepts, and Themes

In the current study, I used a multiple regression analysis to examine MI and PTG, using self-forgiveness as a moderator. I examined the history of PTSD and the connection with MI. I discus the roles of PTSD, MI, forgiveness/self-forgiveness, and PTG in detail including a definition, overview, relationship with the *DSM-5*, and how PTSD and MI affect veterans. Furthermore, I explored PTG theory (Tedeschi & Calhoun, 1996) and how the use of self-forgiveness applied to people experiencing MI may benefit from positive growth. In this literature review, I explore the role of self-forgiveness as it

applies to MI and PTG. Furthermore, I review and synthesize the key independent variables (i.e., MI, self-forgiveness) and the dependent variable (i.e., PTG) to determine what is known about the variables, what is debated, and implications for further study. An exhaustive review of the current literature on PTSD, MI, self-forgiveness, and PTG as well as their related research methods and theoretical framework follows.

Literature Review

Posttraumatic Stress Disorder

The exposure of military soldiers to combat in the American Civil War (1861–1865) and the Franco–Prussian War (1870–1871) resulted in medical research conducted to examine the psychological traumatic effects of war on veterans (Friedman, 2015). The aftermath of combat operations also resulted in legislation targeting the welfare of returning veterans from World War I. The Smith-Hughes National Vocational Education Act of 1917 provided federal aid in the form of vocational preparation for injured service members returning from combat operations (Imperatore, 2017). The purpose of the Act was federal sponsorship in career and technical education (Imperatore), with a mandate for states to create boards of vocational education (DeWitt, 2017).

Vocational rehabilitation services have since evolved to meet the needs of veterans who experience physiological as well as trauma-related symptoms. Programs through the VA such as Therapeutic and Supported Employment Services are in place to help veterans with psychiatric disorders such as PTSD acquire employment (Davis et al., 2019). However, veterans in transitional work situations have been found to be noncompliant with work schedules, nonadherent in follow up with assignments,

noncompliant with substance use treatment, and often show a loss of interest in returning to work (Davis et al., 2019).

While the primary focus has been on helping post-combat veterans obtain employment, psychological trauma continues to affect many soldiers returning from combat and requires further research (Davis et al., 2019; Vance et al, 2016). As such, another surge of research was conducted to examine the psychological trauma experienced by soldiers close to blast sites during World War I (Vance et al., 2016). Countless traumatic experiences from the combat frontlines introduced numerous psychological and physiological disorders (Church, 2016).

One traumatic event that caused major concerns in recent conflicts such as Operation Iraqi Freedom and Operation Enduring Freedom involves mild traumatic brain injury (mTBI). The U.S. Department of Defense statistics accounted for 383,947 service members who have been diagnosed with mTBI between the years 2000 and 2018 (Defense & Veterans Brain Injury Center, 2018). A common occurring comorbidity associated with mTBI is PTSD. PTSD and mTBI have overlapping symptoms, such as decreased cognitive functioning and poor emotional functioning (Katz et al., 2015; Losoi et al., 2016; Scott et al., 2016). The effects of mTBI and other factors contribute to ongoing psychological trauma experienced by veterans returning from combat. The connection between mTBI and PTSD may also be linked with individuals who experienced MI. Further research may be needed to see if a connection exists between combat veterans who experienced MI and mTBI. PTSD and MI are the same animal, but different species in the sense there is an overlap in the symptoms of fear and those related

to guilt and shame. However, in this study, I explored PTSD only as it relates to MI. To understand the psychological impact of traumatic events veterans endure in combat and how PTSD is best understood today, an overview of PTSD and related sequelae is necessary.

Shell Shock

Myers (1915) introduced *shell shock* as predicaments soldiers endured in combat, which included physical damage of the nervous system and related psychological symptoms such as panic and sleep problems. For example, soldiers experienced blindness, paralysis, and other symptoms directly connected with the nervous system that are not related solely by physical injury. Initially, the effects of shell shock were thought to be the result of exposure to explosion of artillery shells. According to Crocq and Crocq (2000), the effects of heavy artillery used on the battlefield caused psychological disturbance among soldiers. The development of this phenomenon resulted in the establishment of new psychiatric wards due to the overfilling of hospitals. Myers established four receiving medical centers in France and introduced individual psychotherapy and hypnosis as acute treatments for soldiers experiencing symptoms of shell shock.

Overwhelming cases of soldiers afflicted with fright and anxiety because of their exposure to the combat environment (e.g., enemy shells, mines, exposure to maimed or dead comrades) manifested in cases of mutism, general tremors, inability to stand and walk, and loss of consciousness. The evacuation of the afflicted soldiers was not carried forward and treatment centers were established near the frontline of the battlefield. The

premise of maintaining soldiers close to the frontline was an idea psychiatrists thought moving patients away from the frontline may have caused chronic disability (Crocq & Crocq, 2000). The process ideology assumed that soldiers experiencing shell shock would benefit from the emotional support of their wounded comrades, thus having a high likeliness to return to their units. The treatment of wounded soldiers in the forward combat frontline area was comprised of five important principles and established by American Expeditionary Forces Physician Salmon (1917); they are: brevity, immediacy, proximity, expectancy, simplicity, and centrality.

Immediacy meant treating soldiers promptly before stress leading to chronic manifestations could take effect; *proximity* implied keeping the soldier close to the battlefield instead of a peaceful environment they will never want to leave; *expectancy* refers to the positive results anticipated through the use of psychotherapy; *simplicity* involves the use of simplistic treatments such as rest and sleep as well as psychotherapy that did not involve past experiences or childhood traumas; *centrality* was a process used to understand the flow of "psychiatric casualties" stemming from events endured in the frontline of combat to the rear in the psychiatric unit (Crocq & Crocq, 2000).

As the technical and industrial advances in warfare equipment and tactics continued to progress, the psychological and physiological well-being of service members involved in combat deteriorated from exposure to the new tactics of warfare (e.g., trench warfare) (Popkirov et al., 2017). The ideology changed when soldiers not involved in the explosions showed similar symptomology to those exposed to explosions (Friedman, 2015). The chronological order of trauma-based psychological injuries

progressed to include other labels/symptoms (e.g., war neurosis, combat stress). The recognition of treatment for shell shock among soldiers, in part, was due to many researchers such as Sigmund Freud. Freud's work with patients exposed to shell shock allowed him to realize the mental wounds were of equal importance to physical wounds, which should be treated with dignity (Janowitz, 2019). For their part, the American Psychiatric Association, in turn, continued to monitor the development of combat-related traumatic experiences and provided definitions and guidelines leading to the current classification and treatment of PTSD as it is known today.

Posttraumatic Stress Disorder and the Diagnostic and Statistical Manual of Mental Disorders

Although PTSD has been described in numerous ways (e.g., nostalgia, soldier's heart, battle fatigue, combat stress reaction), the psychological classification of trauma has evolved to the present category of traumatic stress. PTSD was introduced by the American Psychiatric Association in *The Diagnostic and Statistical Manual of Mental Disorders* (3rd ed; DSM-III; American Psychiatric Association [APA], 1980). The initial *DSM-III* described a traumatic event as a devastating stressor outside the scope of the normal human experience. PTSD is exclusive because of the significance it places on the traumatic stressor. For example, a PTSD diagnosis could not be made unless a person met the stressor criterion which entails traumatic stressors that are different from "normal" painful stressors of life (e.g., bankruptcy, rejection) (Friedman, 2015).

The Diagnostic and Statistical Manual of Mental Disorders (4th ed; DSM-IV; American Psychiatric Association [APA], 1994) diagnostic criteria for PTSD included

exposure to the traumatic event and symptoms relating to: intrusive recollections, avoidance/numbing, and hyperarousal. A fifth and a sixth criterion were added to the DSM-IV. The fifth criterion concerned the duration of symptoms of PTSD and the sixth criterion addressed distress and functional impairment associated with PTSD symptoms (APA, 1994).

The Diagnostic and Statistical Manual of Mental Disorders (5th ed.; DSM-5; American Psychiatric Association, 2013) defines PTSD as, "the development of characteristic symptoms following exposure to one or more traumatic event" (p. 274). Furthermore, individuals affected by PTSD may experience reoccurring, fear-based events followed by emotional and behavioral symptoms. Other individuals may experience "anhedonic and dysphoric mood states" (APA, p. 274). The evolution of the PTSD underwent important changes from the DSM-IV-TR (APA, 1994) to the DSM-5 (APA, 2013). PTSD was moved out of the anxiety disorders into a new class of *trauma- and stressor-related disorders*. The definition of what constitutes PTSD was revised to include learning about the death of a family member or a close friend, separating PTSD criteria for adults and children, introducing a new four-cluster organization and diagnostic algorithm, and adding a dissociative subtype to the diagnosis. In addition, PTSD is currently viewed as being external (i.e., experiencing a traumatic event) rather than being viewed as an individual internal weakness (i.e., traumatic neurosis). The DSM-5 (APA, 2013) expanded on:

- The addition of the trauma- and stressor- related disorders and placement of these disorders adjacent to categories for anxiety disorders and dissociative disorders to emphasize the similarities between them.
- The expansion of the criteria to include "learning the traumatic event(s) occurred to a close family member or a close friend." (p. 271).
- The transition also evolved to diversify PTSD criteria as it effects age group categories (e.g., adult, children).

A notable finding regarding PTSD that was not apparent when it was first introduced in 1980 is that PTSD is relatively common (Friedman). According to the U.S. Department of Veteran Affairs [VA] (2019), the prevalence of PTSD in the U.S. general population is approximately seven to eight percent. The VA also reported the number of veterans with PTSD varies by service era such as Operations Iraqi Freedom (OIF) and Enduring Freedom (OEF) 11-20%, Gulf War (Desert Storm) 12%, and Vietnam War 15% (VA, 2019).

PTSD and Veterans

According to the VA (2017), for over a decade, U.S. service members have deployed to combat operations in OEF, OIF, and Operation New Dawn (OND), which has resulted in over 400,000 returning members enrolled in mental health treatment centers requiring PTSD treatment. PTSD is a cause of significant distress in individuals and often impedes personal and social interactions with family, friends, and negatively affects employment (Xue et al., 2015). The veteran returning home often encounters numerous obstacles when trying to reintegrate into civilian life, which involves coping

with war time experiences (Miller et al., 2017). The consequences veterans experience secondary to PTSD can have detrimental effects on the veteran as well as their family members.

Reintegration After Combat Exposure

Combat soldiers may experience recurring, distressing dreams regarding a traumatic event such as attacking non-combatants under orders from superiors. Another factor affiliated with the exposure to combat events is that PTSD can contribute to negative post-deployment reintegration experiences (Elnitsky & Kilmer, 2017). For example, combat exposure may lead to isolation through avoidance of external reminders such as people, places, activities, or situations that arouse distressing feelings or thoughts. Reintegration into family and society, as well as living with posttraumatic memories, are major concerns that affect veterans with PTSD. The effects of isolation from family and friends may cause the veteran to not seek help from agencies such as the VA for fear of the stigmatization it creates. One measure to evaluate the mental acuity of veterans returning from combat operations is using a post deployment health assessment (PDHA).

The PDHA is a screening instrument distributed among service members upon returning from deployment. The PDHA consists of a short questionnaire which evaluates mental health measures such as PTSD, depression, alcohol abuse, in addition to anger issues, relationship problems, and the interest of the service member wanting to get help (Britt et al., 2019). After completion of the assessment the veteran is interviewed by a primary care physician who documents and recommends further treatment options. A second assessment is issued to service members 3-6 months after a deployment called the

post-deployment health re-assessment (PDHRA). Service members not completing both the PDHA and PDHRA have been found to have different post-deployment health outcomes (Luse et al. 2016). The results of not completing the required assessments may lead to behavioral health risks. The only available data about this risk to be found is through the periodical *Marine Times* "An audit from the Navy Department states, the Marine Corp failed to comply in the completion of PDHA from 46 percent in fiscal year 2008 to 64 percent in 2016." (Snow, 2019). Service members have also been known to minimize mental health symptoms due to concerns of stigmatization; 23% to 40% of veterans returning from combat duty access mental health care (Kehle et al., 2010; Majette, 2013).

Men and women serving in the military may not seek mental health treatment for PTSD due to the stigmatization of mental health problems, as these problems are often seen as weaknesses in a culture that adheres to masculine standards (Stana et al., 2017). The stigma, in turn, frequently results in an unwillingness to accept or seek help (Elliot et al., 2018). Furthermore, veterans have reported feelings of alienation from friends, family, and society due to others' lack of understanding regarding PTSD. Research shows veterans returning from combat (e.g., Afghanistan, Iraq) are depicted as "broken", even though the majority do not endure physical or psychiatric impairment (Wilbura, 2016). Mental health stigma is a severe obstacle in the treatment and care of individuals with mental health problems, especially in military and veteran populations (Nash, 2019). The stigmatization of mental health issues among veterans returning from combat operations

may lead to the use of alcohol and illegal substances as they turn to their own devices for dealing with their mental health problems (Birtel et al., 2017).

The mental health problems veterans face, including PTSD, may lead to high rates of consumption of alcohol and illegal substances such as opioids. If an individual meets the criteria for PTSD, more than likely the individual will meet *DSM-5* criteria for comorbid disorders (e.g., alcohol and other substance abuse disorders) (APA, 2013). Research shows alcohol use disorder is four times more likely to relate to lifetime PTSD compared to individuals abstaining from alcohol use (Fuehrlein et al., 2016). Veterans with PTSD are also susceptible to opioid misuse and overdose (Mahoney et al., 2020). According to Mahoney et al., veterans with comorbid PTSD and opioid use disorder tend to experience frequent primary care and mental health visitations as well as increased risk of homelessness, other comorbid mental health disorders, and suicide risk. The co-occurrence of chronic pain (e.g., pain severity, pain disability, fear of pain) (Herbert et al., 2020) and PTSD have been documented but are outside the scope of this study.

Suicide is a common risk among veterans who have served in combat. According to Hendin (2017) the amount of combat exposure determines the nature of guilt and risk for suicide. The rate of suicide among veterans who served in Operation Enduring Freedom /Operation Iraqi Freedom/ Operation New Dawn rose from 10.3% – 11.3% per 100,00 individuals in 2005 to a rate of 16.3% per 100,000 individuals in 2008 (Ramchand et al., 2011). Guilt has been included in the DSM-5 as a symptom of PTSD (APA, 2013). Evidenced-based treatments to reduce trauma-related guilt exist such as prolonged exposure (PE) and cognitive processing therapy (CPT); however, to date no research

exists showing the efficiency of treatments improving the symptoms of guilt (Tripp & McDevitt-Murphy, 2017). However, eye movement desensitization and reprocessing (EMDR) has been effective in treatments of veterans diagnosed with PTSD using treatment formats targeting dissociative exhibits and MI issues (Hurley, 2018).

Psychotherapy and Veterans

PTSD has many other long-term debilitating effects on war veterans and psychotherapy has been identified as a primary means to help remediate the effects of the disorder. The National Center for PTSD (2019) recommended three trauma-focused psychotherapies, with emphasis on the memory of the traumatic event: CPT, PE, and EMDR. CPT is a therapeutic process where individuals learn skills to understand how to modify and challenge the obstructive beliefs related to trauma. PE is a therapeutic process which involves repetitive talking (can be imaginal or in vivo exposure) about the traumatic event which, in turn, diminishes the intensity of the disturbance. The process allows for gaining positive control over feelings and thoughts. EMDR involves the conjunction of hand and eye movement while describing the trauma. According to Shapiro (1989), EMDR therapy helps an individual access and process traumatic memories and adverse life experiences to reach an adapted solution. After successful treatment, affective distress is alleviated, negative beliefs are revised, and physiological arousal is decreased. The use of psychotherapies such as CPT, PE, trauma-based CBT and EMDR are instrumental in the resolution of PTSD-related events; however, further studies contradict the positive results of these psychotherapeutic approaches in the treatment of PTSD. One concern involving the use of PE and CPT was the increase in

trauma focus did not predict the dropout rate. Imel et al. (2013) pointed out that in three separate trials in comparison between present centered therapy (PCT) and trauma specific therapy (TST), PCT resulted in a lower dropout of 22% compared to TST which displayed a 36% dropout rate. Data collected showing comparison between the therapies showed participants prefer the use of cognitive therapy and exposure therapy over psychodynamic psychotherapy, EMDR, and the use of novel technologies (e.g., virtual reality, computer-based therapy) (Watkins et al. 2018). Providers that petition the use of such treatments (e.g., novel treatments) show concern that trauma focused treatments may pose distress-related symptoms, such as asking the patient to focus on the trauma. The action may limit the providers' capacity reimbursement for other kinds of treatments for the client.

Veterans who participated in evidenced-based psychotherapy (EBP) treatments have not always benefitted from these procedures (Steenkamp, 2015). A study by Walters et al. (2020) demonstrated the use of PE did not improve sleep efficiency among 55 veterans and active-duty personnel with PTSD, resulting in continuous sleep impairment and nightmares. Two consecutive research studies examining CPT and PE failed to find a significant relationship between the efficacy regarding PTSD among 247 mental health care professionals, and subsequently resorted to other non-CBT orientation (Finley et al., 2015; Raza & Holohan, 2015).

CPT is viewed as a difficult process for individuals to adhere to due to structured sessions and the amount of homework assigned (Najavits, 2015). Furthermore, an independent VA study of 796 veterans attending CPT and PE resulted in only 11.4% of

veterans who began the therapy and of those only 7.9% completed the treatment; furthermore, more dropouts occurred after three CPT sessions and two PE sessions (Mott et al., 2014). The findings concur with other nationwide veteran studies indicating the probability that less than 10% of veterans with PTSD finished the EBP treatments (Mott et al., 2014; Seal et al, 2010). The reasons for the dropout rates may be that PTSD is not the only issue veterans face and this leads to incomplete treatment. An alternative action to help veterans with PTSD treatment is to evaluate their spiritual environment or measures interconnected with PTSD and the recovery effort (Currier et al., 2015). Spirituality is a multifaceted concept which covers many angles of intrapersonal and communal elements that may help recovery efforts for veterans with PTSD. For example, the application of spiritual concepts (e.g., forgiveness) with PE in vivo exercises among veterans who are spiritually oriented could lead to an appreciation for faith, confidence, values, and goals (Currier et al.) which improves quality of life. Empirical evidence exists to show the connection between MI and PTSD symptoms among combat veterans (Barnes et al., 2019). MI entails an individual being placed in a situation where they are forced to behave in a manner that is incongruent with their personal values. A considerate amount of overlap exists between PTSD and MI; however, an important distinction between the two is based on the core sentiment that PTSD is founded on anxiety and fear whereas MI deals with guilt and shame (Antal & Winings).

Moral Injury

The characteristics of MI are essential to understanding the guilt and shame many veterans endure. Shay (1991) coined the term MI based on commentaries by veterans

regarding the perceptions of the war-related injustices they experienced because of their superiors' professional misconduct. For example, a commander directing their platoon to harm innocent civilians may result in the development of MI among members of that platoon. According to Shay (2014), MI involves three circumstances that must be present "(a) the betrayal of "what's right"; (b) by a person in legitimate authority (c) in a high-stakes situation" (p.182). Litz et al. (2009) added to Shay's statement that one-self can be the cause of betrayal by witnessing and not stopping the event.

Shay's (1991) definition of MI places responsibility for the development of MI on following orders from authoritative figures, undermining the personal moral code of the subordinates. MI is closely related to PTSD in that MI is a type of trauma resulting from inner conflict, this phenomenon is known as "soul injury" (Koenig et al., 2018; Morris, 2018). Individuals with MI may not show PTSD-related symptoms of hypervigilance, hyperarousal, and avoidance, but may instead experience psychological and spiritual symptoms stemming from internal moral incongruence. However, Koenig et al. (2018) reported MI has been closely compared to PTSD in that both share common symptoms such as anxiety, depression, and suicidal behavior. There is considerable overlap between MI and PTSD in that both begin with an event that is often life threatening or harmful to the individual or others. Nevertheless, with MI, one tends to experience guilt and shame whereas with PTSD, symptoms tend to be fear-laden (Norman & Maguen, 2020). In addition, Nazarov et al. (2015) noted the use of a pre-deployment assessment, which entails measuring an individual's moral judgement style, may predict perceived MI symptoms (e.g., shame, guilt) thus reducing the possibility of developing combat-related

PTSD. Furthermore, measuring moral judgement prior to deployments along with early intervention programs increases the possibility to predict the likelihood of PTSD-related symptoms that improve guilt and shame conditions to prevent long-term growth of psychological distress caused by deployments (Nazarov et al.)

Overview of Moral Injury

The term for MI is derived from the Greek term *miasma*, which entails a moral, corruptive state of mind that arose from participation in war campaigns (Nash et al., 2013). The current-day concept of MI evolved from exposure to trauma that resulted in acute effects on emotional, psychological, behavioral, social, and spiritual functions (Antal & Winings, 2015; Drescher et al., 2011; Litz et al, 2009; Maguen & Litz, 2012). During conflicts such as the Korean and Vietnam Wars, experiences involving killing or violence secondary to combat resulted in MI (e.g., My Lai Massacre in Vietnam, Non-Gun Ri Massacre in Korea) which, in turn, led to mental health problems such as PTSD (Fontana & Rosenheck, 1994; Maguen et al., 2011). Combat veterans subjected to guerilla-style tactics were known to share war stories (e.g., not knowing if they were shooting at the good guys or the bad guys) that often led them to deviate from their personal moral beliefs, subsequently developing MI (Sullivan & Starnino, 2019). The effects of these and similar transgressions resulted in the need to clarify the differences between MI and PTSD, and it was through these analyses that MI emerged as a separate construct from PTSD. Notably, studies conducted among Vietnam veterans determined war-related actions that violated veterans' moral and ethical practices, over time, caused behavioral problems and reintegration difficulties (Shatan, 1973). Today, veterans

continue to suffer and experience guilt and shame because of their transgressions, which can result in both MI and PTSD.

The etiology of MI is a source of wide discussion. Litz and colleagues (2009) elaborated on Shay's (1991) postulations and proposed the term "morally injurious" which posits MI is the "lasting psychological, biological, spiritual, behavioral, and social impact of perpetrating, failing to prevent, or bearing witness to acts that transgress deeply held moral beliefs and expectations" (2009, p. 697). A primary difference between the Shay and Litz et al. definition of MI is Shay attributed MI to following superiors' orders that conflicted with one's personal beliefs whereas Litz et al. attributed MI to witnessing someone committing a transgression or the failure to prevent a transgression committed by someone else.

MI can trigger self-conflict and emotional anguish, and it falls upon the individual to distinguish whether they will accept the experience or whether they will live with the shame or guilt associated with the experience (Bryan et al., 2016). For example, military service members may witness human anguish and atrocities and will either draw upon various protective factors (e.g., belief in a just world) or they may experience shame and guilt which can eventually manifest as MI. Bryan et al. asserted if an individual's personal belief system is repeatedly contradicted, his/her trust and faith are lost, and he/she become increasingly susceptible to developing MI.

A substantial amount of research has been conducted around PTSD, which results from the development of fear secondary to trauma because of exposure to life-threatening events (Currier et al., 2013, Litz et al., 2009, Nash et al., 2013). MI, on the other hand,

stems from engaging in transgressions, as well as from feeling betrayed for being "pushed" to perform transgressions that are incongruent with one's personal morals. Furthermore, Litz et al. noted the effects of internal moral conflict causes a negative response to the significance of transgressive acts, therefore causing reoccurring episodes of shame, guilt, and fear of judgement by others. As a result of these actions, the veteran may self-impose a thought process of self-stigmatization. According to Kalisova et al. (2018) individuals with mental conflicts may internalize stigmas derived from public view and recognize self-stigmatizing biases. For example, a veteran with MI may develop self-stigmatization perceiving herself in a negative manner after witnessing or committing a transgressive act which renders her immoral, irredeemable, or unrepairable or believing she exists in an imperfect world (Litz et al., 2009).

Litz's Moral Injury Model

Litz et al. (2009) described moral injurious events (MIE) as transgressions that lead to conflict and violate personal moral codes and beliefs. For example, a soldier who believes killing is morally wrong but is faced with a situation of committing the act of killing due to an authoritative directive, from a superior that is not fully aware of the scenario or has issued orders that are not legally (i.e., Geneva Convention) compliant, may experience MI. Litz et al. studied numerous measures and elements that established links to personal growth, including forgiveness. MI and PTSD share a correlation of effects (e.g., deep fear of trust, aloneness, loss of faith) but are separated between the guilt and shame associated with MI and the trauma and subsequent fear associated with PTSD. The MI syndrome is a concept that is not new to combat veterans who witnessed

morally injurious transgressions that violated personal moral codes. MI involves an offense of wrongdoing that contradicts an individual's moral conscience on the rules of conduct (Litz et al., 2009). According to Litz et al., the MI model consists of a process of events resulting from dissonance between one's personal morals and the behaviors in which he/she has engaged. In the event of a severe act of transgression, the experience is contrasting and inconsistent with the perception of how the world appears and how a person should be treated. For example, an individual having to place an elderly parent in a nursing home for extra care, knowing there is a strong possibility of contracting the Covid-19 virus, and in turn, the elderly parent dying from exposure to other people who are infected by the virus in the nursing home. Litz et al. proposed the act of transgression can be categorized as global, internal, and stable and may lead to a moral emotional state of anxiety and shame for fear of being judged by others. Global attributions are those applied broadly (e.g., "I fail in everything), internal attributions apply to personal characteristics (e.g., "I failed because I am no good"), and stable attributions are those assumed to be permanent (e.g., "I always fail"). MIEs are moral transgressions that may cause a negative perception of how veterans see their environment and how their environment contradicts their moral character.

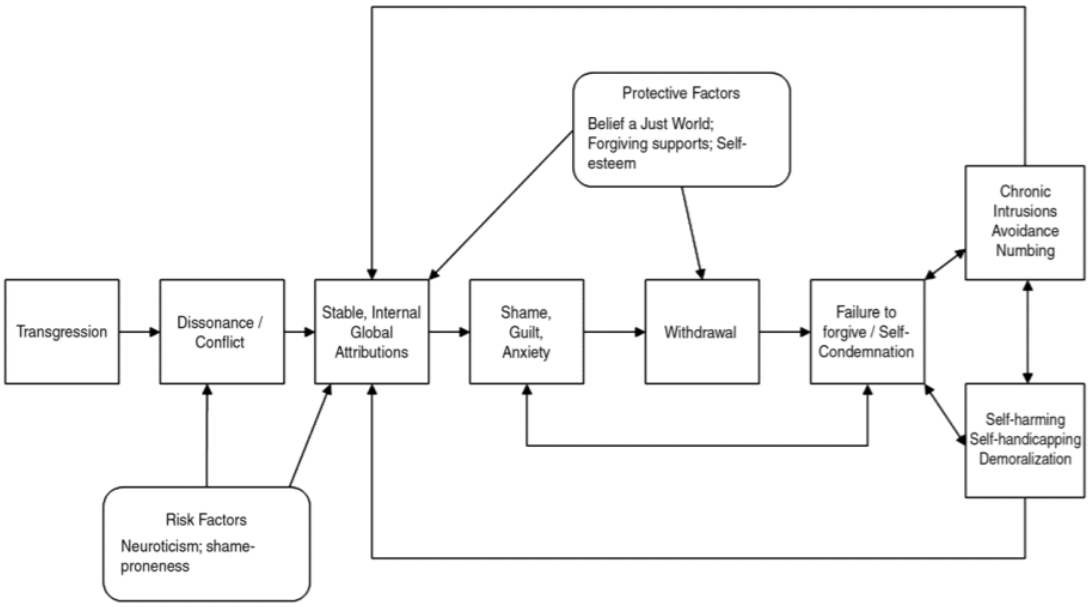
The results of moral transgressions may cause lasting, moral emotional grief (e.g., shame and guilt). It is this shame and guilt that often causes a person to withdraw, hindering him from performing corrective and repairing actions with family, friends, and other people in his lives (Litz et al., 2009). The results of withdrawal and self-conviction associated with MI are reflective of the avoidance and emotional numbing associated

with PTSD. Litz et al. suggested that, as with PTSD, the trauma associated with MI results in re-experiencing the trauma, possibly causing painful recollection leading to personal guilt and negative emotions. From there, the guilt and negative emotions (e.g., shame) manifests by way of self-harming behaviors that include poor self-care, alcohol and drug abuse, negligent recklessness, and parasuicidal behavior. Litz et al. postulated the longer the corrective action to rectify a transgression is delayed, the greater the likelihood a loss of confidence will develop and the greater the likelihood the person who committed the act will perceive the act as being unforgiveable.

Another vulnerability factor associated with MI is neuroticism. Neuroticism is a general personality trait that involves a person perceiving his/her environment in a distressing, threatening manner. Litz et al. (2009) proposed this neuroticism impedes an individual's ability to engage in self-forgiveness, subsequently reducing his/her chances for developing positive goals and enhancing self-esteem. Because self-esteem functions as a positive means to deal with a moral transgression, a damaged self-esteem can result in MI. Conversely, achieving a level of self-appraisal and self-forgiveness following a moral transgression reduces the chances of developing MI and increases one's motivation to take remedial action. Litz's model of MI is illustrated in Figure 1.

Figure 1

Working Causal Framework for Moral Injury



Source: Litz et al., 2009

Moral Injury and Veterans

Major research on veterans has focused on PTSD as both a fear and trauma disorder associated with exposure to life-threatening events rather than the guilt associated with engagement in combat (Currier et al., 2013; Drescher et al., 2011; Frankfurt & Frazier, 2016; Maguen & Litz, 2014; Nash et al., 2009.) Transgression and betrayal are key elements affecting veterans with MI, and factors of spirituality (e.g., forgiveness) serve as moderators for MI (Currier et al., 2013). A National Health and Resilience in Veterans study (Wisco et al., 2016) surveying a random sample of 2,273 veterans concluded 25.5% of the population affirmed at least one transgression on the moral injurious event scale (MIES). Morally injurious events are characterized as

psychological, biological, behavioral, spiritual, and social impacts resulting from an individual's inability to reconcile the guilt and shame he/she feel after witnessing a transgression that contradicts his/her deep moral values (Litz et al., 2009). For example, combat veterans committing or witnessing attacks on civilians who are non-combatants, are victims themselves of MIE. Unlike traumas such as witnessing a highway accident, war-related traumas involve the act of perpetrators breaching social ethics such as killing innocent people or failing to prevent the atrocity (Lee et al., 2020). Such exposure to MIE can cause serious reintegration issues upon returning home from deployment.

Personal conflicts such as social withdrawal, trust diminishment, anger, and grief contribute to the hindrance of reintegration into family and society once combat is over. According to Litz et al. (2009) war time killing-related cognitions invoke MIEs of guilt and shame which often lead to self-condemnation. Such transgressions must be addressed, and the veteran must realize a moral boundary was crossed (Burkman et al., 2020). According to Litz et al. the *impact of killing* (IOK) incidents experienced by veterans often goes beyond the scope of evidence-based psychotherapies and requires additional interventions. In the case of IOK, there is a process involved that requires acceptance and grievance-related processing that ultimately leads to self-forgiveness (Burkman et al.).

The assessment process used in psychotherapies is a vital factor in comprehending the distinction as to why certain veterans experience MI symptoms and others do not (Farnsworth et al., 2017). The genesis of MI symptoms arises from incongruence following a traumatic event that disrupts an individual's integral moral

structure (Litz et al., 2009). A MI model introduced by Farnsworth et al. highlighted the role of moral pain, which describes the moral cognition directed toward guilt and judgment or the differences between both. The model combines the use of acceptance and commitment therapy (ACT) as a therapeutic approach which has proven to be a sound approach for reducing MI (Nieuwesma et al., 2015). The use of ACT helps individuals identify inherent personal values while using acceptance and mindful methods in the process of clarifying life events and challenges (Farnsworth et al.). However, limitations have been noted in the use of this treatment, including the emotional challenges reported by veterans due to the compressed schedule of the method and completion of homework. For example, older veterans may have a harder time completing worksheets as homework as opposed to younger veterans who may be more emotionally open and agreeable to such tasks. Karlin et al. (2013) noted older veterans are less likely to participate in psychotherapy which may, in and of itself, deter them from wanting to complete psychotherapeutic homework. However, using ACT, clients can learn to become open to experiencing challenges related to changing life circumstances. With control-oriented strategies, the veteran may be able to resolve sadness such in cases of personal loss (Karlin et al., 2013). Therefore, Farnsworth et al. suggested addressing MI using forgiveness-focused ACT exercises would be beneficial for future assessments and research.

Reintegration Concerns

Post-deployment from combat operations adjustments to personal surroundings play a crucial role in the assessment process of reintegration. As such, veterans may find

difficulty distinguishing between existing values (i.e., military versus civilian) leading to negative cognitive and emotional outcomes (e.g., shame, guilt, worthlessness) (Drescher et al., 2011; Frankfurt & Frazier, 2016; Litz et al., 2009). In other cases, veterans acknowledge that they can find solutions on their own (Williamson et al., 2020). One such way is through religious and spiritual practice. Three out of four service members agree that religion and spirituality play an important part in their lives (Koenig et al., 2017). Chaplain services (e.g., Priests, Pastors, Rabbis, Imams) play an important role in providing religious/spiritual counseling to their congregations and refer individuals, in need, to appropriate mental health professionals (VanderWeele, 2018). However, spiritual conflict in the form of religious beliefs could cause distress when an individual is confronted with a traumatic or stressful event (Koenig et al., 2018). The distinction between religion and spirituality conflict is spiritual conflict is an important focus of and has been a key component used in various MI models (Farnsworth et al., 2017; Jinkerson, 2016). Religious conflict can range from anger toward a deity to divisions between members of other faiths (Lancaster & Miller, 2020). Despite the conflicts, spiritual and religious practices may yield an altruistic engagement approach to conflict resolution (McClintock et al., 2019).

The influence of spiritual and religious methodology may contribute to an altruistic mindset. Veterans may hold strong “familial” values from personal upbringing which carries forward to include a strong bonding with comrades serving together and considering them as “kin.” These values include altruistic traits such as forgiveness. Litz et al. (2009) stated interpersonal forgiveness is a process to help individuals adapt and

recover from harm, and similarly important is self-forgiveness. Self-forgiveness, which involves the preventative action of self-condemnation and shame, can play an important role in a healing process from committing or witnessing transgressive actions. Self-acknowledging fault about an incident fosters a positive relationship, and forgiveness allows for the peaceful resolution and restoration of positive perception of an individual (Lichtenfeld et al., 2019). Sharma et al. (2017) stated individuals with positive religious and spiritual morals engage in altruistic behaviors and tend to exhibit less unhealthy and risky behaviors. The altruistic aptitude of forgiveness includes the person's will to forgive as well as the emotional experience it garners. For example, veterans returning to Vietnam to atone for transgressive actions they committed during the Vietnam war and finding peace within themselves talking to victims of the war and understanding the anguish and tribulations of the actions of war.

Forgiveness

Forgiveness involves an intentional motive, through a voluntary process, to which an individual who has been a victim of an offense has a change in feelings and attitudes toward the aggressor (Doka, 2017). The act of forgiveness is an important element to bear in mind when conflict exists, as it allows people to move forward in a positive direction and resolve problems peacefully (Forster et al., 2020). Forgiveness plays an integral role in dealing with morally injurious events (MIEs) in that the guilt and shame associated with MI are spotlighted as the main culprits of the MIEs. However, veterans may not have the opportunity to interface with and apologize to the individual(s) they hurt (e.g., innocent civilians) and may find reassurance for their transgressions through self-

forgiveness which helps them deal with their conflicted moral values. Self-forgiveness, which is a form of forgiveness, involves intrinsic motivational and affective repair following a transgression, which leads to a shift from blame to beneficence (Hall & Finchman, 2005). Veterans are often plagued by MIEs and can be "healed" through self-forgiveness (Litz et al., 2009). However, to better understand self-forgiveness, the concept of forgiveness was addressed.

Guilt and shame have been identified as key elements of MI but differ on a spectrum between interpersonal and intrapersonal outcomes (Litz, 2009; Shay 2012; Tangney, 1995; Tangney et al., 2007) and are both important to consider when examining forgiveness. Shame involves a perception of a "flawed self," which is often accompanied by feelings of powerlessness and worthlessness (Tangney, 1995). Guilt, on the other hand, involves one's belief regarding flawed behaviors so when one feels guilty, he/she perceives the past behaviors as being flawed but may still perceive the self as a worthwhile person (Tangney, 1995). Guilt can motivate an offender to seek responsibility and forgiveness for his or her transgressions or it may cause the offender to self-inflict punishment if amends are deemed unattainable (Gausel & Leach, 2011; Griffin et al., 2016; Jennings et al. 2016; Nelisson & Zeelenberg, 2009; Schmader & Lickel, 2006). Conversely, shame is avoidance-oriented in that it has been linked to punishing and excusing oneself but not with forgiving oneself. As such, offenders who feel guilt may also feel compelled to offer apologies to their victims, while individuals experiencing shame may display avoidance-oriented behavior conveyed through a lack of empathy or remorse (Leith & Baumeister, 1998; Roseman et al., 1994; Wolf et al., 2010).

More recently, researchers (e.g., Kouchaki et al., 2014; Leach & Cidam, 2015) have contradicted the ideology of the positive and negative effects of guilt and shame. That is, shame connected with positive social motivation is seen as mendable when mistakes or offenses are committed, whereas guilt has been associated with increased risk-taking behavior (e.g., heavy alcohol consumption) considering failure outcomes (e.g., failed relationships). Woodyatt et al. (2013) posited three measures to counteract shame: self-punitiveness, pseudo self-forgiveness, and genuine self-forgiveness. Self-punitiveness displays an avoidant emotion coping mechanism may initially show positive results but will diminish with time. Pseudo self-forgiveness lays on the notion of the offender externalizing responsibility to nullify one's shame. Genuine self-forgiveness is the process of acknowledging self-culpability, making amends for offenses and in the process restoring one's moral character. Guilt may also have consequential effects when repair efforts for transgressions seem fruitless. The offender may forgive him or herself by either deciding to accept socio-moral values; therefore, accepting responsibility and replacing self-blaming feelings with self-validating sentiments (Woodyatt et al., 2013). For example, a convicted felon who seeks counseling may be willing to accept the transgression they committed and seek to find ways to provide restitution to the victim as a form of substituting guilty feelings.

Researchers (e.g., Bryan et al., 2016; Maguen et al., 2017; Wortmann et al., 2017) recognized the value of forgiveness in identifying, evaluating, and handling shame and guilt associated with MI among veterans exposed to combat related transgressions, PTSD, and MI. Evidence shows forgiveness as a coping mechanism for transgressions

may encourage meaning, which in turn is conceived as a vital facet of recovery from trauma-related circumstances such as MI and PTSD (Griffin et al., 2020). The act of forgiveness is not a simple process involving an interpersonal relationship (Sandage, et al., 2000); the act of seeking forgiveness for a transgression requires understanding and effort. According to Sandage et al., forgiveness is defined as, "A motivation to accept moral responsibility and to attempt interpersonal reparation following relational injury in which one is morally culpable" (p. 22). As such, the transgressor must feel empathy for his or her victims as well as guilt for his or her transgressions (Tangney, 1995).

The path to genuine self-forgiveness begins with the outline an offender needs to follow, starting with acknowledging responsibility, working through the guilt, and seeking to comprehend the wrongdoing committed, which leads to acceptance of goodness in self. Two important processes exist in understanding the act of forgiveness: *decisional* and *emotional forgiveness* (Weinberg, 2020). Decisional forgiveness is defined as the choice to reduce the negative behavior, allowing for possible recovery of positive behavior toward an aggressor. Emotional forgiveness is the internal action of switching negative feelings (e.g., anger, sadness, guilt, shame) with positive feelings (e.g., empathy, love, compassion). The path of self-forgiveness remains a dual-process interpretation where there is a need for an emotional release from self-blame and the moral responsibility to admit wrongdoing (Griffin et al., 2016).

McCullough (2000) classified the conceptualization of forgiveness through an instrument along three dimensions. The first dimension explains the specific nature in which forgiveness is measured, to include dispositional (e.g., a constant personality

characteristic), episodic (e.g., connected to a precise event or occurrence), and dyadic forgiveness (e.g., specific occurrences related within the association). The second dimension involves the category in which forgiveness is classified. Forgiveness can be categorized while granting forgiveness, seeking, or accepting forgiveness, or self-forgiveness. The third dimension is a measurement of how forgiveness is evaluated. This third dimension entails several processes (a) a victim evaluates forgiveness given to the offender, (b) the victim realizes how the offender feels about the forgiveness (e.g., remorse), and (c) an intermediary (e.g., clinician) evaluates both the effectiveness of the forgiveness the victim gives the offender and the offender's response to the victim's offering of forgiveness (McCullough, 2000). Forgiveness has been researched extensively and results show there are stages an individual follows to reach reconciliation for their transgressions such as the process described in the Cornish and Wade (2015) forgiveness model.

The Forgiveness Model

Research on forgiveness is relatively new and is often overshadowed by studies on resilience (Sanjay et al., 2019). According to Sanjay et al., forgiveness has been researched across two major periods. During the first phase (1932 to 1980), forgiveness research focused on theoretical and conceptual aspects of forgiveness. The second phase (1980 to present) entailed ongoing study of the construct of forgiveness as well as the development of instruments to assess forgiveness. Sanjay et al. also reported many theories have been developed (e.g., radical theory of forgiveness, the cognitive theory of forgiveness, the social-psychological theory of forgiveness). These theories have led to

the construct of many models related to forgiveness. The self-forgiveness model (Cornish &Wade, 2015) addresses the concept of self-forgiveness which focuses on emotional, motivational, and behavioral components. The goal is for the offender to realize repair for the damage they have caused is needed because of their offense. The Cornish and Wade model of self-forgiveness entails four "R" components: *responsibility, remorse, restoration, and renewal* that are delineated below.

Responsibility is defined as a passage the offender must take in accepting fault for his or her actions and the consequences that result from those actions. *Remorse* entails the emotions an individual feels (e.g., shame) regarding their actions. During this phase, global shame-based responses are to be minimized and replaced with appropriate remorse-based (specific to the offense) responses. *Restoration* follows responsibility and remorse and is directed toward the offender performing amends for harm caused to the victim. The behavior that led to the action/transgression is explored at this stage. *Renewal* is the emotional state of forgiveness the offender feels, including empathy, acknowledgment of harm caused, and regard for oneself, all of which led to moral growth (Cornish & Wade, 2015). According to Cornish and Wade, if empathy, acknowledgement, and regard for oneself are not addressed, future offenses are likely to occur, and reconciliation may seem useless. For example, Cornish and Wade noted a father who abuses both alcohol and his family must first learn to address each act of abusive behavior before reconciliation can take place. The abusive behavior will likely cease once the individual (the father) gains emotional control over the situation and can realize self-forgiveness. Litz et al. (2009) reported the act of forgiveness may serve as a

positive moderator following MIEs among veterans. The application of the self-forgiveness model processes (i.e., responsibility, remorse, restoration, and renewal) play a pivotal role in addressing guilt and shame-related issues associated with MI.

Self-Forgiveness

Genuine self-forgiveness involves the psychological process where an individual assumes responsibilities for transgressions he or she committed upon another individual (Cornish & Wade, 2015). Spirituality can be an important factor regarding self-forgiveness, leading to physical and mental health well-being (Currier et al., 2016). Presently, there is little empirical research in recognition of forgiveness problems veterans with PTSD face (Litz et al., 2009; Worthington & Langberg, 2012). However, for forgiveness to be attained, the offender must accept and make amends for any damage or injury he or she committed, and the offender must understand that he or she is an imperfect person and in constant moral growth (Purcell et al., 2018; Webb et al., 2017). Therefore, the process of self-forgiveness is an important part in addressing MIEs as a measure to avert guilt and shame (Litz et al.). Forgiveness involves overcoming one's guilt and shame and helps a person lead a positive lifestyle.

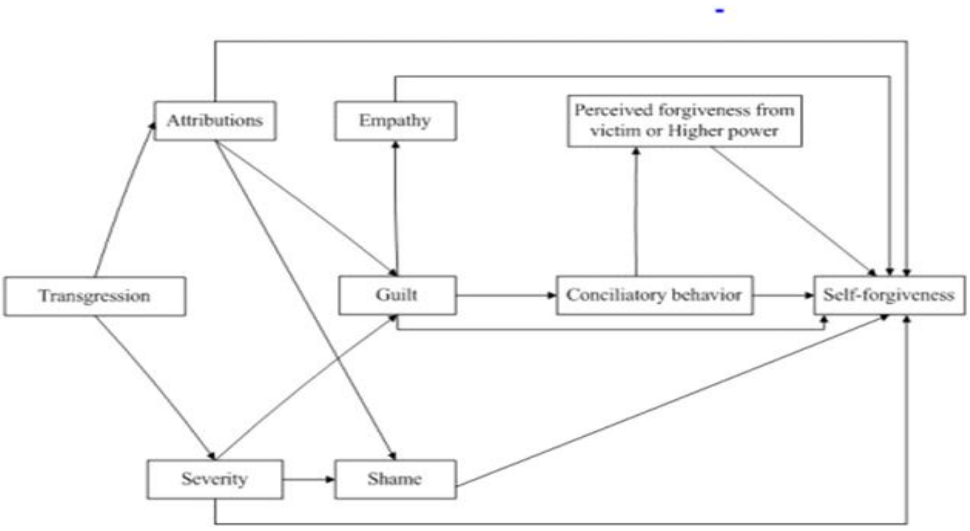
Life events involving trauma may lead to guilt and shame sensations. Guilt- and shame- proneness are transgression-response approaches in which guilt proneness is identified as self-imposed fault (Tangney et al., 2007). *Guilt-proneness* is considered an adaptive style wherein an individual reconciles and repairs wrongdoings instead of letting them prolong and worsen. In contrast, *shame-proneness* is a less adaptive style of self-fault leading to defensiveness and evasion (Tangney et al.). Therefore, shame-proneness

predicts decreased levels of self-forgiveness and guilt-proneness predicts increased levels of self-forgiveness which is explained by approach and repair qualities (e.g., apology, behavior conditioning) that promote resoluteness (Carpenter et al., 2016; McGaffin et al., 2013). However, there are coping methods such as forgiveness available to deal with issues of the self-condemnation associated with shame and guilt.

Like the decisional and emotional forgiveness elements associated with forgiveness (Weinburg, 2020), decisional forgiveness and emotional forgiveness are also associated with self-forgiveness but have different meanings (Worthington & Langberg, 2012). *Decisional forgiveness* is a choice to act in a malicious way toward oneself using self-blame and self-condemnation and lowering oneself to standards below others. *Emotional forgiveness* is the replacement of an individual's relentless emotions with positive self-empathy and self-sympathy. Hall and Finchman (2005) used a model of self-forgiveness which discussed the idea of forgiveness as it is related to making amends to the afflicted person. Hall and Finchman's model of self-forgiveness is illustrated in Figure 2.

Figure 2

Proposed Model of Self-Forgiveness



Source: (Hall & Finch, 2005)

Worthington (2006) suggested a therapeutic psycho-educational approach to moving toward self-forgiveness by books, counseling support groups, and self-directional activities. Scherer et al. (2011) tested the efficiency of brief self-forgiveness groups with a sample of 79 individuals. He found those who took part in a psychoeducational program pertaining to alcohol abuse for at least 10 hours in addition to self-forgiveness treatment had more positive results compared to individuals who only received psychoeducation. Scherer et al. concluded psychotherapy and psychoeducation facilitates self-forgiveness through a method of steps used to help with the healing process. Because veterans are at risk for developing MI due to exposure to combat and other military-related events, self-forgiveness may help to alleviate the guilt and shame associated with the MI they incur following their transgressions.

Forgiveness and Veterans

Hurtful situations following transgressions can progress from failed promises, abusive behavior, and breaking trust among individuals and those close to them (Wenzel et al., 2020). Relationship transgression among individuals may escalate, and the result may lead to events such as relational breakups and productivity loss. Wenzel et al. postulated transgressional situations have two sides: the victim, who has been harmed, and the offender who inflicts the pain. The act of transgression is a breach of expected moral behaviors and an apology signifies the offender's responsibility for the act committed against the victim. Lessening the injustice gap between the offender and the victim entails reduction in fear, sadness, and anger (Davis et al., 2016; Witvliet et al., 2008; Worthington, 2006) and the introduction of positive actions such as gratitude, empathy, and forgiveness. However, in the case of veterans, they typically do not have the opportunity to apologize to people they have hurt during military service and, as such, must rely on intrinsic means to attain self-understanding and self-satisfaction. The nature and pace of the combat theatre scenario does not allow a means to go back to the enemy and apologize for actions committed in battle; in war the soldier moves on to the next mission/objective. Self-forgiveness is one technique veterans can use to cope with their transgressions and related MI.

In combat, service members may be called upon to make choices (e.g., shoot or kill) realizing afterwards the actions caused the death of innocent people, leading to a feeling of a debt to settle, and the debt is a continuing feeling of guilt and shame (Purcell et al., 2018). As such, forgiveness of self may not be feasible because soldiers feel that

the act of serving in war may have awakened a darker side that remains within and removes the positive identity traits of themselves (e.g., good person, kind spouse, good friend) (Purcell et al., 2016). Bryan et al. (2015) surveyed 474 military and veteran personnel to examine the correlation between self-forgiveness and severity of posttraumatic symptoms, suicidal ideation, and suicide attempts. The purpose of the study was to ascertain if self-forgiveness would moderate the effects of PTS on suicidal ideation/attempts. The results showed higher levels of self-forgiveness were correlated with significantly less severe PTS, regardless of trauma exposure intensity. The results also showed participants in the suicide attempt group scored the lowest on self-forgiveness and participants in the suicidal ideation group had significantly higher self-forgiveness scores than the suicide attempt group. Participants with no history of suicidal ideation or suicide attempts scored the highest on self-forgiveness. As such, it appears self-forgiveness leads to resilience in that self-forgiveness can serve as a protective factor to moderate not only the effects of trauma but also the effects of MI, both of which are common among combat veterans (Worthington and Langberg, 2012).

Combat Deployments

During deployments, combat veterans typically witness atrocities and are involved in trauma-related transgressions and MIEs. These individuals return home and are often afflicted by occurrences they experienced in combat and require attention to meet their psychological needs (Miller et al., 2017). Wisco et al. (2017) surveyed 564 combat veterans regarding their own transgressions, transgressions by others, and their feelings of being betrayed. The results showed 10.8% of the veterans reported engaging

in personal transgressions (e.g., violation of own moral code or values), 25.5% reported transgression by others that included witnessing others' immoral transgressions, and 25.5% reported feeling betrayed by leaders and other service members who were once trusted. While it appears evident that many combat veterans experience MIEs, not all of them develop MI. Therefore, it is likely those who do not develop MI may be using some form of intrinsic cognitive processes such as self-forgiveness to deal with the MIEs. One possible attribute to the decrease of MI could involve the use of self-forgiveness as a measure to increase PTG (Purcell et al., 2018). These high levels of endorsement indicate a significant minority of U.S. combat veterans experienced potential MIEs, although acceptance of a single item does not suggest lasting MI was sustained from that experience (Wisco et al.).

Some veterans attribute their moral violation actions to personality deficits that lead to trauma-related guilt and shame (Levi-Belz, 2020). As such, forgiveness/self-forgiveness portrays a protective role in connection with making sense of trauma and reintegration into family, community, and spirituality (Currier et al., 2016). Barriers to care associated with reduced help-seeking (Jones, 2018) may present self-forgiveness as a possible solution and a means of reaching out to others who have been victims of their transgressions. The effects of moral violations may lead veterans to consequences such as self-condemnation if they do not reach some type of resolution for their immoral violations.

Self-condemnation can result from immoral acts committed by combat veterans who disagree with orders yet follow those orders as well as by veterans watching others

commit immoral acts (Litz et al., 2009). As a result, soldiers may condemn themselves for their involvement in such immoral acts. Judgment from others, to include family and friends, may trigger thoughts of self-condemnation among veterans and may increase their thoughts of being condemned by others (Hoge et al., 2004). The results of this self-condemnation can have long-term, adverse effects that interferes with veterans' mental health, relationships, and spiritual functioning (Litz et al., 2009; Maguen et al., 2009; Pargament & Sweeney, 2011). Furthermore, the "machismo" culture of the military provides a big hurdle in the self-condemnation process. According to Worthington and Langeberg (2012), the military mindset is ingrained in the ideology of self-reliance and "no room for weakness." This ideology extends to the avoidance of seeking emotional support for self-condemnation regarding incidents that occurred in the line of duty. Self-condemnation, because of engaging in or witnessing immoral acts can be a contributing factor of MI among veterans and the military culture mindset (e.g., machismo mentality, "no pain-no gain", "suck it up!") may deter veterans from seeking professional help to address MI-related issues.

Self-Forgiveness and Moral Injury

The first step to self-forgiveness is the open acknowledgement of the wrongdoing and the acceptance of responsibility for that wrongdoing (Wenzel et al., 2012). In cases involving veterans with MI, the guilt and shame resulting from involvement in or witnessing transgressions can be a burden to carry. In turn, seeking emotional support for this shame and guilt may be seen as a sign of weakness, leaving an individual with drastic negative alternative options (e.g., suicide) (Lansky, 2003; Taylor, 2015; Violanti et al.,

2015). Risks for suicidal behavior may stem from involvement in *potentially morally injurious events* (PMIEs) (Litz et al., 2009) that include killing innocent civilians or observing others engage in serious combat-related wrongdoings. In the MI integrative model (Litz et al.), forgiveness support can act as a moderator between transgressions and MI resulting from the detrimental psychosocial aftermath after exposure to a PMIE. The role of self-forgiveness may play an instrumental role in helping veterans cope with PMIEs to avert self-condemnation and shame and to facilitate corrective action. For example, Levi-Belz et al. (2020) surveyed 191 Israeli combat veterans to examine the protective role of self-forgiveness and perceived social support in relation to PMIEs and suicidal ideation/suicidal behavior. The results indicated veterans with a history of suicidal ideation/suicidal behavior reported significantly higher levels of PMIEs exposure and lower levels of self-forgiveness compared to veterans with low suicidal ideation/suicidal behavior. As such, the role of self-forgiveness may have served as a protective factor against self-condemnation and related suicidal ideation and behavior in the aftermath of PMIE exposure.

Protective Factors

While there is little research regarding self-forgiveness and veterans, other protective factors related to self-forgiveness which have been shown to reduce the effects of PMIEs are religion and spirituality. According to Brémault-Phillips et al. (2019), spiritual and religious communities may be an indispensable recourse for veterans with MI because they may support the healing process of moral emotions leading to mending personal relationships, self-regulation, and social connection. The Carey and Hodgson

(2018) research showed chaplains were an important source for pre-and post-deployment screening among veterans to assess for issues related to shame and guilt which are associated with MI. According to Kopacz et al. (2015), researchers and medical specialists have acknowledged chaplains play an important role in utilizing spiritual screening scales to identify individuals who pose a threat for suicidal ideation as well as factors/symptoms of MI. Furthermore, the advantages of pastoral care may help veterans by resolving MI-related issues (e.g., lack of self-forgiveness and guilt) through pastoral counseling.

In contrast, spirituality can undermine the MI healing process by reducing one's own responsibility for their transgressions, and instead placing responsibility on an external, divine source. Self-forgiveness, on the other hand, places sole responsibility for transgressions on the person committing those transgressions. As such, in the case of veterans who are typically unable to repent or apologize for their transgressions, self-forgiveness affords them the opportunity to take responsibility for their transgressions and make appropriate amends.

Posttraumatic Growth

Numerous concepts have been used to describe the positive transformation after the occurrence of a traumatic event; however, the most well-known and accepted is PTG by Tedeschi and Calhoun (1996). An individual afflicted by trauma tackles afflictions through a cognitive-emotional process to integrate the traumatic event into a more understandable and significant "life changing event" where the individual's beliefs fit in the world (Calhoun & Tedeschi, 2001; Janoff-Bulman, 2006; Janoff-Bulman & Frantz,

1997). A predictor of PTG is measured on the intensity level of the trauma afflicted on the individual's world beliefs, wherein the higher the level of disturbance, the most potential for growth exists (Calhoun et al., 2010).

Overview of Posttraumatic Growth

The notion that suffering and distress can yield positive change is an old concept (Tedeschi and Calhoun, 2004). Many cultures (e.g., Greek, Christian, Hinduism, Buddhism, Islam) throughout the years have embraced the positive change of suffering (Tedeschi and Calhoun, 1995). Individual resilience is the ability of a person's grasp on a stressful situation, proceeding from adversity, and reverting to normal (i.e., bounce back) and appear stronger than before (i.e., thriving despite adversity) (Vera et al., 2020). For example, objectives of reaching a grade of resilience after trauma for combat soldiers could be to focus on having prevention measures in place, back up plans, and a "buddy system" prior to going on combat missions. The term PTG was coined by psychologists Tedeschi and Calhoun (1998).

Two variants that helped shape the PTG theory include the stress-related growth model (SRGM) and the adversarial growth model (AGM). The SRGM describes the sense of meaning as it is applied to challenges and stressful circumstances (Park, 2010). The AGM associated growth with psychological well-being (Linley et al., 2004) which invokes the idea that an individual experiencing a challenging situation comes across two options that may take place. The traumatic experience can be linked into the person's world belief, or a modification of personal beliefs can be changed based on present circumstances. The potential for positive psychological growth exists if the individual

assimilates the trauma-related information and prior beliefs (Linley, 2004). To illustrate, a veteran may have a greater appreciation for his or her family following a traumatic event such as witnessing a transgression against innocent civilians in combat which may strengthen the bond between family members.

Contributors of Posttraumatic Growth

Negative circumstances are main factors that contribute to high levels of psychological distress (i.e., personal crisis) resulting in an individual's attempt to achieve PTG (Tedeschi & Calhoun, 2004). Growth stems from struggling and surpassing the effects of the trauma; PTG is a topic of great concern among researchers. The increased scientific understanding of the effects caused by traumatic events has evolved from a negative perspective of consequences to the redevelopment of well-being and growth (Tsai, et al. 2015). Certain predictors exist in PTG, including social support and spirituality that contribute to the success of the reduction of negative trauma effects.

Recent studies account for social support as a major contributor to PTG (Pietrzak et al., 2010; Prati & Pietratoni, 2009). Trauma, in connection with social support, can be used as a remedial tool for the negative self-awareness often found in a traumatized person (Taku et al., 2009; Tedeschi & Calhoun, 2004). Nordstrand et al. (2020) surveyed 4,053 Norwegian Armed Forces veterans to explore the social support and social barriers as experienced by veterans witnessing war-related traumatic events after deployment to Afghanistan. The results showed the use of social support among veterans contributed significantly toward PTG after exposure to combat duty. Previous studies have focused on effects measured by the PTGI (Tedeschi & Calhoun, 1996) but this study used the

Posttraumatic Change Scale (PTGCS) (Nordstrand et al., 2017). The PTGI captures the effects of social support as it relates to posttraumatic changes benchmarked using a unipolar growth measure. The PTGCS collects negative (e.g., posttraumatic deprecation) and positive (e.g., PTG), as well as if no change occurred (Nordstrand et al.).

In contrast, the disclosure of trauma may not be beneficial. The discussion of war time experiences by veterans may cause social stigmatization which reduces the benefits of social support regarding PTG (Guay et al., 2006; Zeligman et al., 2016). The disclosure of trauma further raises questions about how important it is for combat veterans to share personal negative experiences from combat operations. Social support is a possible measure that may provide the veteran an avenue to disclose sentiments about feelings regarding past traumatic experiences. Tedeschi and Calhoun (2004) posited a social support relationship needs to be meaningful to the veteran and as such, finding a meaning in life is a significant component of PTG. The study of social support as a protective factor in growth has been studied as an avenue to recover from a traumatic experience (Zeligman et al.).

Characteristics of Posttraumatic Growth

The outcomes of traumatic events as reported by survivors produce positive and negative effects that can influence the well-being of individuals (Linley & Joseph, 2004). The positive psychological effect (e.g., PTG) can enhance relationships, change views of self, and a lead to new life philosophy which has occurred because of traumatic events (e.g., accidents, sexual assault, and illnesses). PTG is characterized as the positive result of following a range of stressful and traumatic events (Tedeschi & Calhoun, 1996). An

individual facing a traumatic event (e.g., witnessing the death of friend) can cause grief but accepting the situation and moving forward could increase positive growth. Tedeschi and Calhoun (2004) outlined the process of growth as an outcome variable in a functional-descriptive model (FDM) of PTG. The FDM maintains growth is established when beliefs are reconciled because of negative event symptoms that are strong enough to dispute core beliefs and allow for cognitive processing (Brooks et al., 2019). As such, PTG is identified as a coping mechanism to decrease distressful situations.

Certain coping skills have been associated with positive growth as applied to circumstances of distress. Spiritual coping techniques are associated with growth as they can influence a restoration of spiritual beliefs and minimize distress (Prati & Pietantoni, 2009). Spiritual change involves a deeper connection within, respect for a higher power, and the meaningful purpose of our existence (Kramer et al., 2019). Positive spiritual transformation includes a deeper understanding of life, personal strength and self-understanding leading to a renewed appreciation of intimate relations in life (Tedeschi et al., 1998). As such, social support and intrinsic spirituality are associated with PTG, therefore, promoting the positive psychological growth from traumatic experiences among veterans (Tsai et al., 2015). However, other skills such as avoidant and emotional coping have not had positive results. Avoidance coping has a long-term maladaptive result as it restricts recovery and preserves posttraumatic symptoms (Hagenaars, et al., 2011). Emotional coping produces negative emotional experience revival and releases suppressed feelings of the experience (Litman, 2006). For example, a veteran may resort to alcohol or drug abuse to suppress emotions relating to their past transgressions. In

contrast, research has shown emotional coping can assist with making sense and meaning of a traumatic situation (Larsen & Berenbaum, 2015). In addition to the coping mechanisms in place, other characteristics involving PTG are the five general domains that measure the traumatic event.

Tedeschi and Calhoun (1998) posited there are five general domains that gauge the traumatic event and make meaning of it: *appreciation of life, relationship with others, new possibilities in life, personal strength,* and *spiritual change*.

Appreciation of life. Trauma can cause a hardship that threatens personal values, and the process of recovery can lead to an appreciation or gratitude for inconspicuous things. The effects of trauma may readjust priorities and give an individual a sense of appreciation of life and importance to unnoticed matters. (e.g., “I changed my priorities about what matters to me in life”).

Relationship with others. Traumatic events expose the care and concern others show toward the individual in recovery. The ability to reach out for help and the acceptance of support from others steer toward a stronger bond of an individual’s feeling toward people around them (e.g., “I feel a connection with those around me”).

New possibilities in life. The results of traumatic events can end personal goals and dreams individuals set out to achieve. In redirecting new priorities and establishing new goals, individuals rediscover new passages and opportunities they never knew existed (e.g., “I can improve things with my life”).

Personal strength. Traumatic events often present new opportunities for individuals to learn and reevaluate difficult circumstances leading to strengths never envisioned (e.g., “I am better capable of handling difficult situations”).

Spiritual enhancement. A traumatic offense is followed by an individual’s grasp on the reasons of the occurrence. The effort to realize an individual’s personal worldview can clarify life’s meaning and purpose leading to a discernment of something greater than themselves (e.g., spiritual, religious).

Applying the five general domains that gauge a traumatic event has the possibility of enhancing the positive growth process from MI to PTG. The application of the five domains can help with the transition process from a negative perception to one of personal growth. For example, a combat veteran experiencing MI may establish goals based on the five general domains of PTG from a mental health clinician leading to positive growth. The transition follows an individual such as a combat veteran realize the negative perception of life and commit to change. Through the help of others among him or her, new possibilities can be explored. The result of this transition can provide personal strength to move forward in a better outlook at life. The process continues with the individual realizing that the process holds a higher purpose in life and one greater than themselves.

Posttraumatic Growth and Behavioral Changes

Calhoun et al. (2010) stated the two categories of distress (e.g., psychological, and emotional) contribute to the traumatic experience and create a facilitator for rumination which begins automatically and continues to grow strenuously. During this period of

PTG rumination, an individual can reflect on cognitive behavior changes that may increase positive changes following a traumatic event. The PTG model (Tedeschi & Calhoun, 1998) demonstrates the transition from an individual's assumptive world beliefs prior to the traumatic event and how the development of emotional distress and assumptive beliefs afterwards lead to an acceptance of a "changed world" and increased wisdom resulting in positive growth. However, McMillen (2004) and Hobfoll et al. (2007) argued PTG, which is based on Frankl's (1985) *"Man's Search for Meaning"*, should not only consist of talk and meditational routines but also of actions and rightful conduct. Hobfoll et al. concluded PTG transpires along with a change in behavior, whereas Tedeschi and Calhoun projected growth occurs when an individual's assumptive cognition transforms into a positive change of thought and outlook.

Shakespeare-Finch and Barrington (2012) surveyed 176 participants (88 trauma survivors and their significant others) to identify positive behavioral changes following a traumatic event using the *PTG Inventory* (Tedeschi & Calhoun, 1996). The purpose of the study was to ascertain whether trauma survivor's significant others would support the changes to positive cognitive and behavioral developments of PTG encountered by the trauma survivors. The results showed many survivors (69.8%) reported positive change in behavior and the accounts were validated by their significant others. The findings underscore the validity of the PTG Inventory as a measure for survivors (e.g., combat veterans with PTSD) to report cognitive growth and positive behavioral changes (Shakespeare-Finch & Barrington). The process between a traumatic event and positive transformation is attainable but it requires a change in behavior as well as a support

network. The support network allows the individual to feel that he or she is not alone. Through the process of family, friends, and including spiritual support, the individual can grow and surpass the anguish of trauma.

Tedeschi and Calhoun's Posttraumatic Growth Model

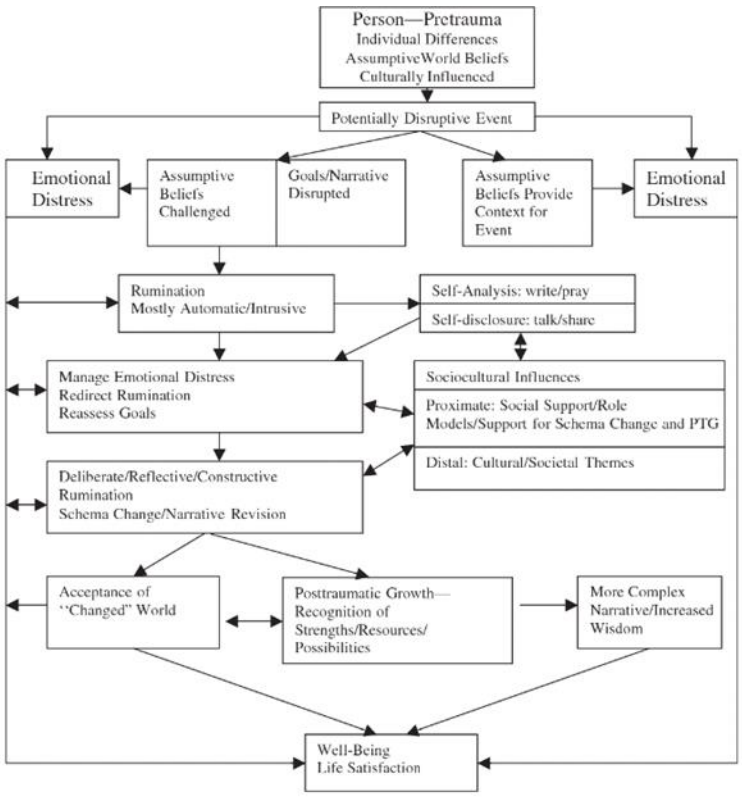
PTG is the process an individual takes to deal with the experienced trauma in a positive manner (Tedeschi & Calhoun, 2004). Tedeschi and Calhoun designed a PTG model that encompasses the struggle of an individual with stressful and traumatic events in life. The model displays a systematic process which places an individual in a pre-bereavement position prior to the occurrence of a traumatic event and entails how traumatic events can unsettle a sense of self and how they perceive him/herself and how the world sees them. The individual may be caught up in certain challenges where it is necessary to handle emotional distress and undertake in cognitive processing of beliefs, goals, and life narratives.

During the PTG process, intrusive rumination is possible but can be deflated through writing (e.g., journaling) and talking with others. The result of disengaging from the automatic rumination allows the individual to focus on new goals which are meaningful and coherent and to discard previous goals that might have seemed significant. For example, a veteran who is plagued by thoughts of events he or she witnessed in combat may be able to channel the thoughts into journaling. Tedeschi and Calhoun advised individuals to participate in the growth process using two socio-cultural categories: *proximate* and *distal*. The proximate category involves a small social network, while the distal category involves broader cultural themes for the purpose of minimizing

the perceptive view of traumatic event. The result of reaching PTG sees the individual in a position to manage the distress, realize new personal narratives, and become wiser and more understanding. The effort and work put into the process allows the individual to adopt new beliefs and values and to a develop a different view of the world that is positive and yields a clear understanding of life. Tedeschi and Calhoun's model of PTG is illustrated in Figure 3.

Figure 3

Theoretical Model of Posttraumatic Growth



Source: (Tedeschi et al., 2010)

Posttraumatic Growth and Veterans

The involvement of troops in Operation Enduring Freedom and Operation Iraqi Freedom have reopened issues pertaining to PTSD and depression in the mental health treatment and research arena (LaRocca et al., 2018). According to Hoge et al. (2004), although combat exposure is connected to PTSD, many combat veterans find ways to cope with stressful situations and do not develop PTSD symptomology (Institute of Medicine, 2008; Thomas et al., 2011). The positive outcome many veterans strive to achieve after facing trauma is PTG. However, PTSD and PTG are *not* at opposite ends of the spectrum (Hawker & Nino, 2017). Instead, the two are correlated through a linear or curvilinear link where moderate level of PTSD is connected to the highest level of PTG (Tsai et al., 2015). Calhoun and Tedeschi (2013) proposed a drastic amount of distress must occur to cause a traumatized view of the presumptive world which opens the path to PTG. Therefore, individuals who are not seriously traumatized will not go on to develop PTG. The plausible achievement of PTG is often overshadowed by how combat evolves to further worsen the psychological health of those service members that currently are involved in combat operations. Modern warfare and unconventional tactics used by enemy combatants have had significant and drastic effects on combat veterans. Enemy combatants use asymmetrical warfare such as guerrilla tactics to create fear and slowly undermine the will power of the adversary (Arnold 2009).

Veterans exposed to traumatic events in combat may transfer the negative effects of their traumas to their daily lives, resulting in financial distress, familial problems, substance abuse, suicidal ideation, and difficulties integrating into the community (Moran

et al., 2013; Rothbaum et al., 2007). For example, Sayer and colleagues (2010) found more than half of a select population of Afghani and Iraqi veterans struggled with issues of anger control, and one-third engaged in self-destructive behaviors (e.g., drug and alcohol abuse, reckless driving). Anger issues and the possibility of self-medication are examples of symptoms associated with PTSD. The veteran's reintegration into society may worsen combining domestic issues and their social environment with the unresolved chapter from combat traumatic experiences (Freytes et al., 2017).

PTSD is a constant and abundantly studied concept; however, one of the positive outcomes of PTSD is the opportunity for PTG. PTG surpasses the core of trauma exposure and PTSD. Joseph and Linley (2005) maintained PTG has three main facets: *personal resilience, wisdom,* and *strength*, wherein individuals find a new appreciation for things that matter to them. Veterans who are striving for PTG are introduced to a new hope since the trauma they experienced may have inhibited their chances of advancing from the trauma in a positive direction. It is during this process that veterans can develop a clear and meaningful view of the world around them. New world view perspectives may include religious and spiritual interest to help deal with the traumatic experience as well as social support. A strong social support is a positive measure that can help turn the tides of negative thinking into positive outcomes. Stana et al. (2017) studied 466 response posts, from a VA online support group for combat veterans diagnosed with PTSD, written by 63 veterans. The purpose of the study was to find types and frequencies of support used by the participants. The study found a significance in members being more open to receive informational support rather than receive emotional support. The

informational support provided a medium of reducing incertitude and the chance to offer direction by other members who already had longevity in the forum to newcomers (Stana et al.). A finding indicated that this result could be due to stigma due to masculinity norms within the veteran group. Such stigmatization encountered by veterans may impede seeking support from professionals therefore aggravating guilt and shame from MI and hindering PTG.

Posttraumatic Growth and Moral Injury

Transgressions that cause an individual to question their moral beliefs and values can result in distressful situations leading to MI (Litz et al. 2009). The consequences of MI often entail negative mental health outcomes such as depression, suicidality, substance misuse, and PTSD (Frankfurt & Frazer, 2016; Litz et al., 2009; Maguen et al, 2010; Williamson et al., 2018). Veterans who experienced life-threatening trauma and developed PTSD displayed symptoms such as memory loss, nightmares, flashback, and strong startled reflexes. Whereas those veterans who experience MI show predominant symptoms of guilt, shame, anger, and depression (Griffin et al., 2019; Williamson et al, 2019) but also effect moral and custom personal beliefs. PTSD and MI are similar but with different characteristics. PTG has been shown to be a positive outcome from PTSD and is also associated with MI leading to greater life satisfaction (Evans et al., 2018).

PTG is followed by experiences of appreciation toward the value of life. Williamson et al. (2020) surveyed 30 United Kingdom veterans of the Armed Forces who experienced a challenging event while in military service. The purpose of the study was to examine responses from veterans' responses to trauma and MI and the impact of the

events on their psychological wellbeing. The study had two classifications: (a) morally injured veterans who were classified as being part of or witnessing transgressive acts and, (b) non-morally injured veterans who were classified as experiencing a traumatically or life-threatening event. The study yielded information about the existence of veterans experiencing trauma and MI simultaneously, as well as veterans can experience ethically challenged and life-threatening consistent with PTSD criteria. The study showed that PTG included an appreciation of life, provided a positive ability to empathize with others, and positive relations with family members between morally injured and non-morally injured veterans.

Moral Injury, Self-Forgiveness, and PTG

There are studies that address MI and forgiveness (e.g., Purcell et al., 2018; Sullivan et al., 2019; Wusik et al., 2015) and studies that address MI and PTG (e.g., Evans et al., 2018; Nordstrand et al., 2019; Williamson et al., 2020). However, there are no studies that address MI, self-forgiveness, and PTG, with self-forgiveness serving as a moderator between MI and PTG. Starnino et al., (2019) conducted a qualitative study on spiritually integrated group intervention intending on helping veterans with PTSD in the process of moral and spiritual repair. The article describes MI and the connection it has with spiritual injury. The article focuses on forgiveness as a measure to forgive others with no mention of self-forgiveness due to morally injurious events or transgressions witnessed by the veteran. PTG is defined in the article but does not mention how self-forgiveness or MI are connected. Overall, the purpose of this study will combine all the

factors (e.g., MI, self-forgiveness, PTG) and demonstrate the interaction as well as if self-forgiveness significantly moderates the correlation between MI and PTG.

Summary

This chapter will provide an overall composition of what the study entails. The chapter will allow the reader to be aware of the gap in literature in which no other study provides information examining the influence of self-forgiveness as a moderator between MI and PTG. The population targeted in this chapter were combat veterans experiencing MI. The chapter will inform the readers about the evolution of PTSD in the nineteenth century until present time and how it has affected veterans who have been involved in combat operations. Furthermore, the chapter will describe the concept of MI and the correlation it has with PTSD. The chapter will describe forgiveness the concept of self-forgiveness and how it can be used as a measure to overcome a personal sense of guilt and shame to overcome ideas of self-damnation for results stemming from MI. The chapter will continue with the overview of PTG and how it sets a positive direction from MI. Information relating to the instruments used were described in the study. The information will relate to gathering quantitative data for analysis. This chapter will provide information about literature search strategies, key variables, concepts, and themes.

Chapter 3: Research Method

Introduction

The problem statement and literature review in Chapters 1 and 2 directed the development of research questions and hypotheses to evaluate the moderator, predictor, and outcome variables through an empirical evaluation of the quantitative data. The present study was designed to assess whether self-forgiveness will serve as a moderator between MI and PTG among U.S. combat veterans. Specifically, the aim of this study was to ascertain whether the presence of self-forgiveness diminishes MI and enhances PTG among combat veterans. In this chapter, I provide a detailed overview of the research design, instrumentation, data collection procedures, and data analysis plan. The sample selection and composition are discussed, followed by a detailed description of procedures used to conduct the study. Information describing the instruments used and their psychometric properties is also addressed. This section will conclude with an identification and rationalization of variables selected for the study followed by a detailed description of the research design and data analyses.

Research Design and Rationale

A cross-sectional and non-experimental quantitative design was used to examine self-forgiveness as a moderator between MI and PTG among U.S. combat veterans. The cross-sectional design is an appropriate research design to make inferences about characteristics shared by a population while the sample is taken. The characteristics of a population might consist of variables such as interests, ethnicity, gender, disability type, and academic class (Hawker & Boulton, 2000). The use of a quantitative approach

enables a descriptive and correlation-based analysis of the hypotheses. Examining quantitative data instead of other research methods can help determine trends, attitudes, and opinions of populations (Creswell & Creswell, 2018).

Methodology

Population

In this study, I targeted veterans of the U.S. Armed Forces who have been involved in combat operations from WWII to OEF/OIF. The federal government defines a veteran as an individual who served honorably on active duty, the Reserves, or the National Guard in the Armed Forces (VA, 2017). According to the U.S. Census Bureau (2019), there are 17.4 million veterans in the U.S. Armed Forces. VA defines a combat veteran as a military service member who experienced any level of hostility for any duration consequent to offensive, defensive, or friendly fire military action involving a real or perceivable enemy (VA, 2017). Individuals involved in a theater of combat operation are classified as active duty regardless of experience in the Reserve or National Guard component (VA, 2015). The demographic survey used in this study queried veterans about the number of combat tours served and the duration of the tours.

Sampling and Sampling Procedures

In this research study I used nonprobability convenience sampling to create a sample consisting of veterans who are subscribers to an internet podcast website. The podcast website is a veteran-operated nonprofit organization dedicated to the enrichment of the life and lifestyle of veterans and their families. The mission of the internet podcast service is to provide a platform where veterans' voices are heard, action is taken, and

outcomes are obtained. The ultimate outcome is relying on veterans helping veterans for advocacy of the prevalence of PTSD among veterans and the influences it has on their life and their families. With nonprobability sampling method, there is no probability attached to the unit of the population and the selection relies on the subjective judgment of the researcher (Fraenkel et al., 2015). Convenience sampling consists of a group of individuals who are conveniently available for study (Fraenkel et al., 2015). The advantage of convenience sampling is the convenience of selecting one or more research sites and recruiting participants who are willing to complete the survey. Convenience sampling is a cost-effective way of saving time, as doing a pilot study in selected sites takes time. However, a researcher needs to be careful to include information on demographic and other characteristics of the sample studied.

The participants were recruited in specific sites and the data results might not be entirely generalizable to the entire population. For instance, the results collected from a podcast or social media related to veterans might not comprehensively represent the entire veteran population across the United States. Therefore, convenience sampling needs to consider the extent to which the study protocol and data collection methods can be replicated at different sites (Fraenkel et al., 2015). Additionally, the conclusions drawn by a researcher need to be carefully inferred from the results of the sample and cannot be generalized to the entire population.

Approximately 17,500 audience members have tuned into the veteran-supported podcast as the sample frame in this study. Eligibility to participate in the web-based survey was determined by having the prospective participants answer the following three

screening questions: Did you serve in the armed forces during the timeline of WWII to OEF/OIF? Were you deployed overseas in support of combat operations? Did you participate in combat while you were deployed to a forward operating location? If prospective participants answered yes to all three questions, confirming eligibility to participate, the remaining portion of the survey would appear. If a prospective participant responded no to any of the screening questions, the participant did not meet inclusion criteria. A pop-up appeared thanking them for their participation and the survey was terminated.

A power analysis was performed using G*Power (Buchner et al., 1997) to determine the minimum number of participants needed for the study. According to the hypothesis testing of the present study, type of statistical analysis, effect size, critical significance level, power value, and number of variables were used in G* Power. The following G*Power criteria were used: *F*-Tests; multiple linear regression, fixed model R^2 deviation from zero; with two predictors; an alpha of .05; a power of .8 (Newton & Rudestam, 2013) and an effect size f^2 of 0.15 (Cohen, 1992). The analysis indicated a required minimum sample size of 68 participants for this study.

Procedures for Recruitment, Participation, and Data Collection

Study participants were recruited from among veterans who subscribe to or frequent the podcast website. During the COVID-19 pandemic, many constraints impeded collecting data from live participants. Policies to prevent the transmission of COVID-19 led to medical, government, and state mandated resolutions placing limits on social interaction (Dian et al., 2020). Therefore, in this research I abided by these

restrictions and recruited a convenience sample and collected all data participant data online.

I conducted a web-based survey to collect data via an internet survey collection website. The internet survey collection website offers a survey platform that gathers opinions through surveys, quizzes, and polls from any audience. The use of online surveys provides efficiency, speed, and a low-cost method for collecting empirical data (Cobanoglu & Cobanoglu, 2003). Each participant could elect to participate in this study by clicking on the provided link and was redirected to the internet survey collection website. I emailed two follow-up solicitations to the person in charge of the podcast's post and announcement of the survey for their audiences. The first follow-up email solicitation was forwarded 14 days after sending the first email solicitation. The second follow-up email solicitation was forwarded 14 days after the first follow-up. The podcast host briefly introduced this study during their weekly podcast and invited their veteran audience to participate in the study. Prospective veteran participants were informed they could access a link that was placed on the podcast's website, mobile chat, and social media of the internet podcast (see Appendix H). In addition, the management team of the internet podcast service forwarded an email solicitation with the web-based survey link for veteran audiences allowing their access to this study participation.

A demographic questionnaire I designed was used to collect demographic information to describe the respondents. The demographic information included race/ethnicity, age, gender, branch of service, component of service, religious preference, service campaign, number of combat tours served, and the duration of the tours. Eligible

participants were required to read and sign a consent form provided in the web-based survey. Specifically, the informed consent consists of: (a) information explaining the study, and the research purposes; (b) the facts that research participation was voluntary, and participants can withdraw at any time by merely closing the survey; (c) indications that all collected data were anonymous (a function of online surveys) and would never be associated with the participants; (d) my contact information was provided should a participant have further questions; and (e) resources for participants to prevent harm or any adverse mental health consequences resulted from taking the survey. For example, while completing the survey, some participants might have experienced a heightened risk of anxiety due to the MI associated with their combat exposure. The participants might have needed mental health services or crisis interventions to ease their anxiety. Thus, a detailed informed consent was helpful to follow research ethics and decrease harm on vulnerable veteran participants during the study participation process.

The participants were recommended to carefully read and acknowledge the instructions on the consent form. All eligible participants needed to check the box located next to the consent statement, “I have read and understand the nature of this online survey research in which I am about to participate and do so voluntarily.” Finally, clicking on the “submit” button started the questionnaire. Participants could withdraw from the study any time without any penalty or consequences. After completing the questionnaire, participants received an acknowledgment letter expressing appreciation for their participation.

The survey had 45 questions, consisting of the MIES that has nine questions, the HFS that has 18 questions, the PTGI that has 10 questions, and eight demographic questions. No individual identifying information was requested or collected in this questionnaire. This web-based survey took approximately 20 minutes to complete. No incentives were provided for participants in this study.

Instrumentation and Operationalization of Constructs

I sought and received permission to use the three instruments included in the present study (see Appendices A, B, C). To establish readability and the average amount of time needed to complete the survey, three combat veterans and one clinical psychologist who works with veterans were asked to complete the demographic questionnaire and the survey and provide feedback. Modifications were made on the survey based on the feedback provided. The instruments examined the independent predictors which were MI as measured by the MIES (Nash et al., 2013), forgiveness and self-forgiveness measured using the HFS (Edwards et al., 2002), and the dependent criterion PTG measured using the PTGI (Tedeschi & Calhoun, 1996). Cronbach's alpha calculated the reliability as the internal consistency of all the instruments. Cronbach's α more than .8 means good reliability of an instrument; the range between .7 to .79 is acceptable reliability, .6 to .69 means marginally acceptable reliability, .5 to .59 means poor reliability, and less than .5 means unacceptable reliability of the instrument (George & Mallery, 2003). The MIES, the HFS, and the PTGI met acceptable criteria.

Moral Injury Event Scale

MI has been studied to enhance understanding of the relation between behavioral and emotional issues regarding combat veterans (Bryan et al., 2014). The MIES (Nash et al., 2013) was used to measure the multiple dimensions of MI in a military population through a nine-item survey. According to Bryan et al. (2016), the MIES can be used in pencil-and-paper and online format. The three dimensions of MI assessed by the MIES are: perceived transgressions by self (three items), perceived transgressions by others (three items), and perceived betrayal by others (three items) which combine into one total score. The resulting data could be used to assess the prevalence and perceived intensity of war-zone experiences which is a required forerunner to evaluating the biological, psychological, social, and spiritual consequences of MI (Nash et al., 2013). The MIES assesses factors such as witnessing acts of commission, perpetrating acts of commission, or perpetrating acts of omission (Koenig, 2019). The MIES consists of nine-item measure based on a 6-point Likert scale with the following ratings:1 = strongly agree, 2 = moderately agree, 3 = slightly agree, 4 = slightly disagree, 5 = moderately disagree, and 6 = strongly disagree. Higher mean scores of MIES indicates that having experienced greater intensity of events (Nash et al., 2013).

The Likert scale on the MIES has two reverse-keyed items. The role of the reverse coding is to ensure participants are paying attention to the scale and questions while taking the survey (Suárez Álvarez et al., 2018). The MIES demonstrated a good internal reliability ($\alpha = .90$) and an excellent reliability for the transgressions by self ($\alpha = .93$), transgressions by others ($\alpha = .84$), and perceived betrayal ($\alpha = .79$) subscales (Nash

et al., 2013). The MIES shows strong construct validity (Bryan et al., 2016; Nash et al., 2013). The MIES is a tool that offers the opportunity for clinicians and researchers to measure moral contentions experienced by individuals exposed to military surroundings (e.g., combat situations) that conflict with personal moral values. According to Zhizhong et al. (2020), a study conducted applying the MIES among Chinese health professionals during the COVID pandemic resulted in acceptable results (0.71 for nurses and 0.70 for physicians). The Cronbach's alpha of MIES in this present study is $\alpha = .97$ with good reliability.

Heartland Forgiveness Scale (HFS)

The Heartland Forgiveness Scale (HFS, [Thompson et al., 2005]) was used to evaluate the general tendency to forgive the self (e.g., "I hold grudges against myself for negative things I've done," "I don't stop criticizing myself for negative things I've felt, thought, said, or done"). The 18-item HFS consists of three 6-item subscales measuring other, self, and situational forgiveness. The scale uses a seven-point Likert scale with the following ratings: 1 = almost always false of me, 3 = more often false of me, 5 = more often true of me, 7 = almost always true of me. Each response was given a numerical value and the scores were calculated from two sources: one total scale score and three subscales. Higher mean scores of HFS represented greater self, others, and situational forgiveness. The HFS can be administered to individuals ages 18 and up and takes no longer than 5-10 minutes for completion (Asgari & Roshani, 2013).

According to Thompson et al. (2005), HFS total ($\alpha =. 83$), HFS Self subscale ($\alpha =. 72$), HFS other subscale ($\alpha =. 73$), and HFS Situation subscale ($\alpha =. 77$) indicated

acceptable test-retest reliability. The HFS has shown significant correlation and criterion validity with other spiritual and emotional scales such as the Mauger Forgiveness Scale (MFS) and the Multidimensional Forgiveness Inventory (MFI) (Thompson et al., 2005). According to Asgari and Roshani (2013), the HFS shows high validity in correlation with the Forgiveness Scale (r =.841). According to the Heartland Forgiveness Survey Psychometric website (2005), the HFS can be completed with paper-and-pencil or on the computer. The MFI focused on the process of granting forgiveness in a multi-dimensional capacity such as forgiveness of self, forgiveness of others as well as other options beyond one's control (e.g., natural disaster or illness) (Thompson et al., 2005). According to Ikedo et al. (2020), a cross-cultural adaptation and validation of the European Portuguese version of the HFS resulted in Cronbach's alpha score of 0.86. The Cronbach's alpha of HFS in this present study was $\alpha = .92$ with good reliability.

Posttraumatic Growth Inventory

PTG is defined in the current study as a positive psychological (cognitive-emotional) transformation experience from the result of struggles to handle life events that are challenging (Tedeschi & Calhoun, 1996). The PTGI involves a 21-item scale which includes five factors of new possibilities, relating to others, personal strength, spiritual change, and appreciation of life (Tedeschi & Calhoun, 1996). The scale pinpoints five empirically derived subscales in which PTG could be measured resulting in one overall score. Higher mean score of PTGI means greater degree of positive change that occurred in participants' lives due to their combat crisis. The items of the PTGI are based on a 6-point Likert-type scale with the following ratings: 0 = I did not experience

this change as a result of my crisis, 1 = I experienced this change to a very small degree as a result of my crisis, 2 = I experienced this change to a small degree as a result of my crisis, 3 = I experienced this change to a moderate degree as a result of my crisis, 4 = I experienced this change to a great degree as a result of my crisis, and 5 = I experienced this change to a very great degree as a result of my crisis (Tedeschi & Calhoun, 1996). The item scores will form total scores in the range of 0 to 105.

The PTGI was an appropriate instrument of measure for the study. According to Tedeschi and Calhoun (1996), an internal consistency and re-test reliability of the PTGI shows an α = .90; even with the deletion of individual items did not result in a drop below an alpha of .89. The factors composing the PTGI showed the following reliability scores: new possibilities (α =. 84); relating to others (α = .85); personal strength (α = .72); spiritual change (α = .85); appreciation of life (α = .67) (Tedeschi & Calhoun, 1996). Also, the PTGI has shown validity with other measures of growth for college students, cancer survivors and victims of assault (Tedeschi et al., 2016). According to Konkolÿ Thege et al. (2014) a study using the PTGI was completed using paper-and-pencil and online and resulted in a Cronbach's α = .93 with the full scale and the test-retest reliability of (*r* = .90). Stein et al. (2018), conducted a longitudinal assessment between PTG and loneliness among combat veterans and the results yielded excellent internal consistency regarding the total score (α = 0.93). The PTGI is a published instrument available in the public domain and does not require researchers to secure permission for its use when conducting non-profit studies. The Cronbach's alpha of PTGI in this study was α = .97 with good reliability.

Data Analysis Plan

The Statistical Package for Social Sciences (SPSS) 27.0 was used to perform descriptive statistics, preliminary assumption screening, and hierarchical linear regression with moderation analysis to test research hypotheses. After collecting data, all data would be screened and cleaned for missing information and outliers by Mahalanobis distances.

Descriptive Statistics

The research study will report descriptive statistics to assess frequency and percentage of each demographic variable (e.g., age, gender, branch of service, component of service, religious preference, service campaign). The statistics in the study will include the mean and standard deviation of the variables. The descriptive statistics data will demonstrate how combat veterans are categorized according to the demographic variables. The skewness and kurtosis of the MIES, HFS, and PTGI was calculated both in total to determine the data was normally distributed.

Hierarchical Linear Regression

The following three research questions with respective hypotheses, predictor variables, and outcome variables were analyzed by a hierarchical linear regression with moderation analysis in the present study.

RQ1: Does a relationship exist between MI and PTG among combat veterans?

$H_0$1: There is no relationship between MI and PTG among combat veterans.

H_a1: There is a relationship between MI and PTG among combat veterans.

RQ2: Does a relationship exist between forgiveness and PTG among combat veterans?

$H_0$2: There is no relationship between self-forgiveness and PTG among combat veterans.

H_a2: There is a relationship between self-forgiveness and PTG among combat veterans.

RQ3: To what degree does the presence of self-forgiveness moderate the relationship between MI and PTG among combat veterans?

$H_0$3: The presence of self-forgiveness does not moderate the relationship between MI and PTG among combat veterans.

H_a3: The presence of self-forgiveness does moderate the relationship between MI and PTG among combat veterans.

Predictor variable (X_1* M): the interaction of moral injury (MI) and self-forgiveness.

Outcome variable (Y): Posttraumatic growth (PTG).

First of all, a bivariate correlation analysis was used to test the statistical significance of the relationship between MI, self-forgiveness, and PTG. The purpose is to primarily identify relationships between MI and PTG and if self-forgiveness correlates within the two variables. The correlational analysis will indicate the strengths of the relationships between these variables. Following, hierarchical linear regression is an analysis strategy of multiple linear regression based on previous literature models. The present author will decide in which order to enter predictors into the regression model (Field, 2017). One predictor variable and a moderator were added to the regression model in a particular order or interactions by separate steps. Hence, the researcher in this study

will use a hierarchical linear regression analysis to estimate the conditional expectation of MI scores given PTG scores on top of the predictive value provided by the self-forgiveness variable in the test of means and correlational analyses (Creswell, 2009).

Moreover, the hierarchical strategy was to control for certain predictor variables and viewed whether adding a new predictor variable produced a significant regression model to predict the outcome variable. An *F*-test was used to examine the significance of the regression models, and a *t*-test was used for determining the individual relationships between predictor variables and outcome variables (Tabachnick & Fidell, 2018). In both of the tests, the present author set the significance value at an alpha level of .05. The amount of R^2 change and *F* change were examined at each hierarchical regression model.

Moderation Analysis. According to Warner (2013), moderation is present when the scores to predict Y differ from X_1 across from the scores of M. Although the terms Moderation and Mediation sound similar, they should not be confused (Baron & Kenny, 1986). A moderation variable (M) is a third variable that influences the association between a predictor variable (X_1) and an outcome variable (Y). The outcome variable for the analysis was PTG (Y). The predictor variable for the analysis was MI (X_1). The moderator variable evaluated for the analysis was self-forgiveness (M). The moderation hypotheses, including X_1 and M as predictors, and the interaction of X_1 and M of Y can be examined in a hierarchical linear regression model. The outcome variable Y is the result of a regression model producing a correlation between the three predictors (Warner, 2013). The interaction between X_1 and M was analyzed to find if they are statistically significant ($p < .05$). The conditional effect of X_1 on Y will show

corresponding effects at low moderation, middle moderation, and high moderation. The results of the analysis will identify M as a negative/positive moderator of the relationship between X_1 and Y (Warner, 2013). The hierarchical regression analysis with moderation consists of the following steps:

- Step 1: MI and self-forgiveness was entered to see the effects on PTG. The statistical outputs obtained from the step 1 of hierarchical regression analysis was used to examine the first and second research hypotheses in this study.
- Step 2: The interaction of MI and self-forgiveness was entered. In this step, the interaction of MI and self-forgiveness on PTG were determined, after controlling for the effect of MI and self-forgiveness covariate. The statistical output obtained from this step 2 analysis will examine the third research hypothesis about moderation between three variables.

While performing hierarchical linear regression with moderation analysis, all predictor variables and their interaction terms might be grade mean centered. Centering refers to a transformation that a variable into deviations around a fixed point (Field, 2017). Grade mean centering is used to take each score and subtract from the mean of all scores of a variable. The purpose of centering is to enhance the interpretation of regression coefficients and decrease multicollinearity. Finally, assumptions of the hierarchical linear regression with moderation model were assessed prior to data analysis.

Assumptions of Hierarchical Linear Regression

The preliminary examination of regression assumptions, including linear relationship, multivariate normality, multicollinearity, and homoscedasticity were tested

(Mendenhall & Sincich, 2011). The assumptions of hierarchical linear regression analyses are listed as follows.

Linear Relationship. There must be a linear relationship between the predictor variables and the outcome variables. Outliers are required to check. Scatterplots can show whether there is a linear or curvilinear relationship (Cohen et al., 2003).

Multivariate Normality. Multiple linear regression analysis requires that the errors between observed and predicted values (i.e., the residuals of the regression) should be normally distributed. This assumption may be checked by looking at a histogram or a Q-Q-Plot. If there are outliners that influence the normality of multiple linear regression function, the researcher may consider transforming the data or removing the outliners. Moreover, normality can be checked with a goodness-of-fit-test (e.g., the Kolmogorov-Smirnov test or the Shapiro-Wilk Test) (Meyers et al., 2017). The statistically significant value is obtained greater than .05 in Kolmogorov-Smirnov test or the Shapiro-Wilk Test ($p > .05$), which means the variables are expected to be normal distributions. If the value is less than .05, the variable violates the assumption of the normal distribution, which means the data needs to be transformed (Williams et al., 2013).

Multicollinearity. Multiple linear regression assumes that there is no multicollinearity in the data. Multicollinearity occurs when the predictor variables are too highly correlated with each other. A matrix of Pearson's bivariate correlations among all predictor variables was computed and the correlation coefficients between variables typically should be less than .80 (Vatcheva, et al., 2016). In addition, the value of tolerance should be less than 1 (Tabachnick & Fidell, 2018). The value of the Variance

Inflation Factor (VIF) was conservatively suggested to be less than 5 to meet multicollinearity assumption (Tabachnick & Fidell, 2018). If the multicollinearity is found, transforming data would be one solution. The other solution might remove the variable which cause multicollinearity from the regression model.

Homoscedasticity. A scatterplot of standardized residuals versus predicted values can show whether points are equally distributed across all values of the predictor variables. If there is a cone-shaped pattern, the data is heteroscedastic. If the data are heteroscedastic, a non-linear data transformation or addition of a quadratic term might fix the problem (Tabachnick & Fidell, 2018).

Threats to Validity

External Validity

According to Cohen (2016) external validity consists of the degree to which the results of a study could be generalized toward the veteran population. The research study was planned to have procedures, parameters, and instruments in place at the beginning to reduce any influence of external validity. The research study will use accepted, established, and tested instruments to reduce the threat. The research design may be inflexible. A minimum amount or no change can work on a survey project once data collection commences (Haberman & Yao, 2015). Due to the quantitative and non-experimental nature of the study, threats to external validity were avoided by establishing datasets from a recognized group. The external validity threats that were bypassed included analyzing and testing interactions, and inferences upon differences shown over time (Gravetter & Wallnau, 2016). The distinctiveness of the research study's sample of

the data collected was from a specific background on a defined group of participants. A reduction in generalization was a benefit of applying this model.

Internal Validity

Internal validity implies the extent to which the findings of a study measure what the researcher's intentions and are truthful to measured populations (Patino & Ferreira, 2018). For example, measurements used from recognized data may cause contradictory issues when precautionary steps are taken in the sample collection process. For the research study, many foreseen threats such as statistical regression, maturation, history, testing, and instrumentation were avoided using random sampling to diminish selection bias (Gravetter & Wallnau, 2016).

Ethical Procedures

The approval of Walden University's Institutional Review Board (IRB) was secured before conducting any research involving human subjects. The Approval Number is 11-17-21-0758939. An e-mail response to an inquiry about this matter was received from the Walden University IRB explaining the procedures of using non-Department of Defense entities (e.g., podcast services, survey platforms) is permissible and does not classify the veterans that volunteer to take the surveys as a vulnerable population (see Appendix I). Likewise, permission from the podcast service management group was obtained prior to using the podcast's website to recruit participants.

Data Security

Participants will not be asked to provide any personal identifying information. The online survey's demographic information section will merely seek sociodemographic

information. The raw data file collected using and supplied by the internet survey collection website was filed in a password and biometrics fingerprint scanner protected laptop. As a secondary protection measure, I stored the data in a password-protected file on a personal USB flash drive in a locked file cabinet and the laptop file will remain password protected for 5 years from the date of dissertation approval.

Managing Risks of Harm to Participants

In the informed consent of the survey, participants were given national and international assistance contact information pertaining to mental health issues. The resources available (free of charge) for participants are *Veterans Crisis Line* website, *Tragedy Assistance Program for Survivors* (TAPS), and the *Suicide & Crisis Hotline*. The Veterans Crisis Line website is a confidential support organization available seven days a week, 365 days a year. The organization connects veterans who are in crisis (as well as their families and friends) with qualified and caring Department of Veterans Affairs responders via a toll-free number. If the individual is overseas and has access to the Internet, then he or she can access the website, otherwise they can visit their local hospital or mental health clinic for assistance. Another option offered by the Veterans Crisis Line website is a number to text on a personal mobile phone.

TAPS is an organization that offers information about helpful services and offers personnel available to talk with the veteran. The services are available 24 hours a day, seven days a week, 365 days a year. A toll-free number is available. If the individual is located out of the country, they can access the website for assistance. The Suicide & Crisis Hotline provides free and confidential assistance for individuals in distress as well

as, prevention and crisis resources for the individual and loved ones. Services are available 24 hours a day, seven days-a-week via a toll-free number provided in the form.

Summary

In this chapter, the researcher discussed the quantitative research design and a deductive approach to examine self-forgiveness as a moderator between MI and PTG among combat veterans. The research will use a descriptive, moderation analysis with hierarchical linear regression to test the moderating role of self-forgiveness (as measured by the HFS) on the relationship between MI (as measured by the MIES) and PTG (as measured by the PTGI). Data was collected through a web-based survey collection questionnaire. An URL link of the survey was shared in the internet podcast website. The findings of this study were included in Chapter 4 and the results were reviewed in detail in the concluding chapter.

Chapter 4: Results

Introduction

In this study, I investigated whether self-forgiveness serves as a moderator between the independent variable MI and the dependent variable PTG among combat veterans. I hypothesized that a relationship would exist between MI, self-forgiveness, and PTG. Furthermore, I hypothesized that self-forgiveness would moderate the relationship between MI and PTG. Several factors exist as evidence that PTG can correlate with spirituality, PTSD, and MI (Litz et al., 2009; Tedeschi et al., 2017; Wusik et al., 2015). A three-part survey questionnaire was available to participants who were recruited through a veteran podcast website. The questionnaire was composed of three instruments: the MIES (see Appendix E) consisted of nine items ($\alpha = .97$), the HFS (see Appendix F) consisted of 18 items ($\alpha = .92$), and the PTGI subscale (see Appendix G) consisted of 21 items ($\alpha = .97$). The questionnaire also included an instrument to gather demographic data. The purpose of the study was to help feel a gap that remains in the current mental health literature regarding the effect of self-forgiveness as a moderator between MI and PTG among combat veterans.

In this chapter, I describe the data collection, review the research questions and hypotheses, and discuss the results of the study. The section also contains the details of the data collection including discrepancies in data collection, descriptive characteristics and validity of the sample. The following were the research questions and hypotheses of the research study:

RQ1: Does a relationship exist between MI and PTG among combat veterans?

$H_0$1: There is no relationship between MI and PTG among combat veterans.

H_a1: There is a relationship between MI and PTG among combat veterans.

RQ2: Does a relationship exist between forgiveness and PTG among combat veterans?

$H_0$2: There is no relationship between self-forgiveness and PTG among combat veterans.

H_a2: There is a relationship between self-forgiveness and PTG among combat veterans.

RQ3: To what degree does the presence of self-forgiveness moderate the relationship between MI and PTG among combat veterans?

$H_0$3: The presence of self-forgiveness does not moderate the relationship between MI and PTG among combat veterans.

H_a3: The presence of self-forgiveness does moderate the relationship between MI and PTG among combat veterans.

Predictor variable (X_1 * M): the interaction of moral injury (MI) and self-forgiveness.

Outcome variable (Y): Posttraumatic growth (PTG).

Data Collection

The required documentation was submitted to the Walden University Institutional Review Board (IRB) for review on November 2, 2021. IRB approved the materials on December 14, 2021 (approval number 11-17-21-0758939). Data collection began through an online podcast service organization on January 18, 2022, and prior to that, a survey

was constructed through an online survey platform and a URL was created. The partner site embedded the URL in the company website and informed subscribers of the survey's availability. I did not collect identifying information from participants, and protocols were in place within the survey platform and the partner podcast website omitting the collection of IP addresses.

The veteran's service organization sent invitations through their podcast broadcast to all veterans who tune into the weekly and monthly podcast episodes. The invitation explained what the research study consisted of and invited listeners to visit the website homepage and participate in the survey. The home page of the survey, accessed through the link, contained information regarding the research purpose, protocols, and uses and informed consent allowing participation. I used the Qualtrics survey software for collecting demographic data with an outside link to the MIES, HFS, and PTGI surveys. Participants were required to enter completion codes to ensure they finished the survey. A total of 99 participants responded to the surveys. Of the survey responses collected, 80 valid responses were used for data analysis after cleaning the data. Participants responded over a period of 3 months, and the data collection was complete on March 17, 2022. The collection of the survey responses was delayed for 1 month due to the partnership agreement letter between the veteran service organization and researcher not being submitted to the IRB. Due to COVID-19, the veteran service organization was shut down for a month. Discrepancies were detected during the cleaning of the data resulting from several missing data responses.

I asked participants to answer seven questions about demographics information (see Appendix D). The questions pertained to (a) age, (b) gender, (c) ethnicity/race, (d) branch of service, (e) service component, (f) combat operation, and (g) religious affiliation. Age categories were from 18 to 65 and above. Gender categories were male, female, nonbinary, third gender, and prefer not to say. Ethnicity/race categories were Asian or Pacific Islander, Black or African American, Hispanic or Latino, Native American or Alaskan Native, White or Caucasian, multiracial or biracial, and a race or ethnicity not mentioned. The branch of service categories were Army, Navy, Air Force, Marines, and Coast Guard. The service component categories were active duty, Reserve and National Guard. The combat operations categories were from WWII through Operation Enduring Freedom/ Operation Iraqi Freedom. The religious affiliation categories were Catholic, Protestant, Christian Orthodox, Jewish, Muslim, Sikh, Hindu, Buddhist, atheist, other, or none. All participants answered each demographic indicator.

Results

Descriptive Statistics

A total of 80 participants completed the full survey with valid responses. In the study, 19 records were barred from the investigation for the following reasons: 17 did not meet the requirements of the screening questions, while two records were started but not completed by the participants. The sample consisted of 49 men (61.3%) and 31 women (38.8%). Among 80 participants, 29 (36.3%) were ages 45–54. A large number of participants identified as White or Caucasian (n = 29 or 36.3%). The majority of participants served in the U.S. Army (n = 41 or 51.2%), identified mainly as active duty

(*n* =62 or 77.5%), and the majority served in Operation Enduring Freedom (*n* = 32 or 40.0%). The majority of the veterans participating in the survey identified as Catholic (including Roman Catholic and Orthodox; *n* = 26 or 32.5%). Frequencies and percentages are presented in Table 1.

Table 1

Demographics of Survey Participants, N = 80

Demographic	n	%
Age		
18–24	5	6.3%
25–34	6	7.5%
35–44	18	22.5%
45–54	29	36.3%
55–64	10	12.5%
65+	12	15.0%
Gender		
Male	49	61.3%
Female	31	38.8%
Race/ethnicity		
Asian or Pacific Islander	4	5.0%
Black or African American	13	16.3%
Hispanic or Latino	21	26.3%
Native American or Alaskan Native	8	10.0%
White or Caucasian	29	36.3%
Multiracial or biracial	4	5.0%
A race/ethnicity not listed	1	1.3%
Branch of service		
Army	41	51.2%
Navy	3	3.8%
Air Force	10	12.5%
Marines	26	32.5%
Service component		
Active duty	62	77.5%
National Guard	3	3.8%
Reserves	15	18.8%
Combat operation		
Vietnam War	13	16.3%
Persian Gulf War	6	7.5%
Bosnian War	1	1.3%
Operation Enduring Freedom	32	40.0%
Operation Iraqi Freedom	28	35.0%
Religious affiliation		
Catholic	26	32.5%
Protestant	24	30.0%
Christian Orthodox	7	8.8%
Jewish	2	2.5%
Muslim	1	1.3%
Buddhist	2	2.5%
Atheist	11	13.8%
Other	5	6.3%
None	2	2.5%

The predictor and outcome variables of the study measured by the three instruments reported the range of minimum and maximum scores, the mean, and the standard deviation (Table 2). The mean scores (*M*) of MIES were 4.26, and the standard deviation (*SD*) was 1.83. The mean scores of HFS were 5.08, and the *SD* was 1.25. The mean scores of PTGI were 3.85, and the *SD* was 1.37.

Preliminary Data Examination

Before conducting statistical analysis, the missing data, outliers, and assumptions were tested. The mean scores of the three instruments were calculated to present the continuous values of predictor variables and outcome variables. There were several missing data in these 80 responses. An imputation way is appropriate if missing data of a study takes less than 5% of the responses (Howell, 2012; Tabachnick & Fidell, 2018). Mean substitution was used for the missing data of one variable because listwise deletion would decrease the sample size (Howell, 2012; Tabachnick & Fidell, 2018). Thus, the mean score of each variable was manually typed in the missing items in the present study. The Mahalanobis distance was used to check for multivariate outliers (Meyers, et al., 2017). No outlier was determined in the present study. Finally, a test of assumption was conducted to examine correlation, linearity assumptions, normality of residuals of outcome/dependent variables, multicollinearity assumptions, and homoscedasticity assumptions.

First, an examination of Pearson correlation coefficients (*r*) (see Table 2) revealed that all independent variables were significantly correlated with the outcome variables. Second, scatterplot was used to examine the linear relationship between independent

variables and outcome variables; no violation of linearity assumptions were identified in the study. Third, the normality of the residuals of outcome/dependent variables was tested. The residuals of the regression between observed and predicted values in a normal Q-Q plot following the residual line as normally distributed. No need for transformation of outcome/dependent variables in the study. Fourth, the multicollinearity assumptions were evaluated after running the regression analysis. Also, the interaction term including the independent variable (MI) and the moderate variable (self-forgiveness) were centered to avoid multicollinearity. All the tolerance values of the variables ranging from .704 to .846 presented in the regression coefficient tables were less than 1. Also, the VIF values of the variables in the regression models ranging from 1.183 to 1.421 were less than five as acceptable limits. The assumption of multicollinearity was deemed to have been met in the study. Finally, a scatterplot of standardized residuals versus predicted values of the model showed that the data points were equally distributed across all values of the predictor variables; thus, the assumption of homoscedasticity was satisfied. Therefore, there was no linearity, normality, multicollinearity, and homoscedasticity assumption violations in the study.

Table 2

Descriptive Statistics and Correlations (N = 80)

Variables	*Mean*	*SD*	MIES	HFS	PTGI
MIES	4.26	1.83	–		
HFS	5.08	1.25	.425***	–	
PTGI	3.85	1.37	.257*	.399***	–

Note. $*p < .05.$; $**p < .01.$; $***p < .001$

Hierarchical Regression Analysis

A hierarchical regression analysis (HRA) was performed in the present study to analyze three research questions. The *F* values were provided to examine the significance of the regression models. The amount of R^2 change (ΔR^2) and significant *F* change (ΔF) were examined since a particular or combination of predictor variables were added into each hierarchical regression model. A standardized correlation coefficient (β) and a t-test value were used for determining the individual relationships between predictor variables and outcome variables at (Tabachnick & Fidell, 2018). All the significance values set at an alpha level of .05 were reported in each regression model and the relationship of individual predictor variables.

A two-step hierarchical linear regression was conducted with PTG as the outcome variable. The predictor variables, MI and self-forgiveness, were entered at the first model of the regression, and the interaction of MI and self-forgiveness was added to the second step model. The Table 3 illustrated the model summary and the regression coefficients of variables.

Assumptions Hypothesis 1

Hypothesis 1 is the questioning of the existence of a relationship between MI and PTG. Bivariate correlations were computed among the two scales. The results of the correlational analyses presented in Table 2 show that each of the correlations were statistically significant were greater or equal to 1.25. In general, the results suggest a low relationship between MI and PTG.

A hierarchical regression analysis (HRA) tested the predictor (MI) compared to the dependent variable (PTG). Regression is useful in testing the influence that individual or sets of predictors have on a dependent variable (Cohen, Cohen, West, & Aiken, 2002; Hoyt, Imel, & Chan, 2008; Hoyt, Leierer, & Millington, 2006). The HRA investigated the role of the Moral Injury Event Scale (MIES) as a predictor of general disposition. The MI showed positive non-significant associated with PTG (β =.107, t (77) = .29, $p > .05$). Moreover, the result of the first regression model indicated that statistically significant at an alpha level of .05, F (2, 77) = 7.798, $p < .001$. MI and self-forgiveness were significant predictors, which accounted for 16.8% of the variance in PTG (R^2 = .168, $p <$ .001).

Assumptions Hypothesis 2

Hypothesis 2 is the questioning of the existence of a relationship between self-forgiveness and PTG. Bivariate correlations were computed among the two scales (Heartland Forgiveness Scale, PTGI). The results of the of the correlational analyses presented in Table 2 showed the three correlations were statistically significant and were greater than or equal to .399. In general, the results suggest a moderate relationship

between self-forgiveness and PTG. In addition, the PTGI appears to have a stronger relationship with the Homeland Forgiveness Scale than it does with the Moral Injury Events Scale. The results support the hypotheses that self-forgiveness is positively correlated with PTG.

A HRA tested the moderator (self-forgiveness) compared to the dependent variable (PTG). The HRA investigated the role of the Homeland Forgiveness Scale (HFS) as a predictor of general disposition. The self-forgiveness showed significantly positive association with PTG (β =.354, t (77) = 3.08, p = *.03*).

Assumptions Hypothesis 3

A test of moderation was conducted as a competing hypothesis to determine if levels of self-forgiveness meaningfully impact the relationship between MI and PTG. The moderation analysis utilized the interaction effect between MI and self-forgiveness in predicting levels of PTG. To avoid multicollinearity with the interaction terms, the variables were standardized and centered, and an interaction term of MI and self-forgiveness was calculated. The second regression model reported found that the standardized partial regression for MI (β =.259, t (.76) = 2510, p =.014) was significantly positive associated with PTG, while self-forgiveness (β = .354, t (3.080), p < .05) was not significant. The interaction of MI and self-forgiveness (β =.510, t (76) = 5,232, p < .001) was significantly positive associated with PTG. Additionally, the result of the second regression model indicated that statistically significant at an alpha level of .05, F(3, 76) = 16.106, p < .001. MI and the interaction term were significant predictors, which accounted for 38.9% of the variance in PTG (R^2 = .389, p < .001). Introducing the

interaction of MI and self-forgiveness as a significant predictor explained an additional 22% of the variation in PTG, and the change in R^2 was significant, R^2 change (ΔR^2) = .220, $p < .001$, controlling for MI and self-forgiveness. Therefore, self-forgiveness is a significant moderator between MI and PTG.

When holding levels of forgiveness at different levels (i.e., unforgiveness, half unforgiveness and half forgiveness, frequent forgiveness), no relationship was found between MI and PTG. For low level of forgiveness as unforgiveness of self, others, and situations, the partial regression coefficient for MI was β = .106, t (74) = .296, $p > .05$. The middle level of forgiveness, half unforgiveness and half forgiveness of self, others, and situations, was β = - .126, t (54) = -1.646, $p > .05$. The high level of forgiveness as frequently forgiving self, others, and situations was β = .833, t (54) = 7.193, $p < 0.001$. The interaction effects could be found in Figure 4. Thus, the finding reported that the high level of forgiveness had a significant moderation effect on the relationship between MI and PTG.

Table 3

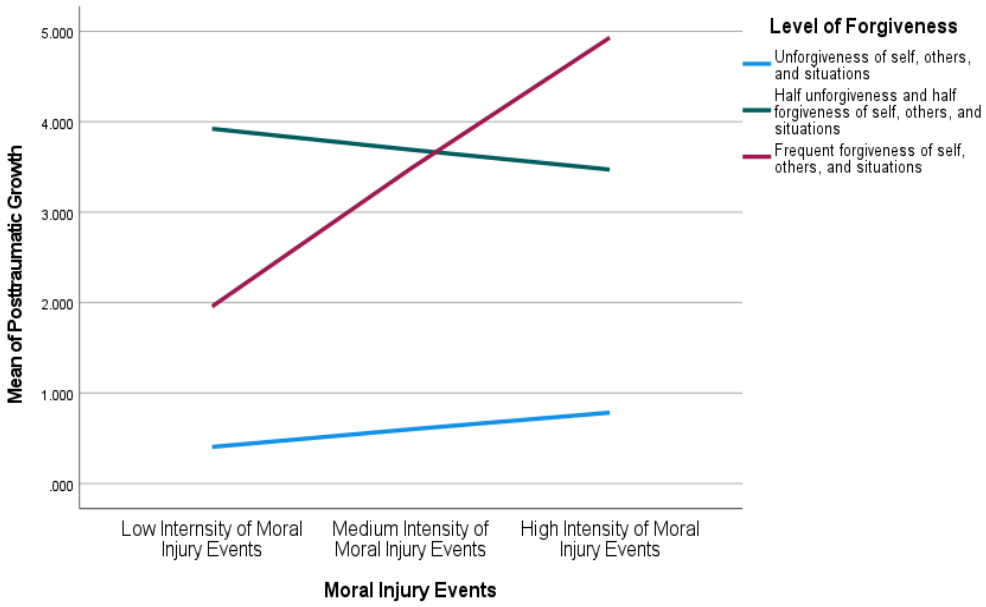
Regression Coefficients of Predictors on Posttraumatic Growth

Variables		*B*	SE *B*	β	*t*	*p*	*R2*	Δ*R2*	*F*	*p of F*
Step 1							.168	.168	7.798***	0.000
	Moral injury	.080	.086	.107	.929	.356				
	Forgiveness	.388	.126	.354**	3.080	.003				
Step 2							.389	.220	16.106***	0.000
	Moral injury	.194	.077	.259*	2.510	.014				
	Forgiveness	.157	.117	.143	1.340	.184				
	Interaction	.375	.072	.510***	5.232	.000				

Dependent Variable: posttraumatic growth. *p < .05. **p < .01. ***p < .001.

Figure 4

Interaction Effects of Intensity of Moral Injury Events and Levels of Forgiveness on Posttraumatic Growth



Summary

The statistical analyses conducted with the sample data for this study, and presented in this chapter, supported the first null hypothesis, which stated that MI predicted the criterion PTG. However, the second and third null hypotheses were rejected, as findings supported the hypothesis that self-forgiveness predicted positive correlation between the MI and moderate to high levels of PTG in combat veterans. The results of the study show that self-forgiveness is a significant predictor of PTG. Furthermore, self-forgiveness is a significant moderator to influence MI and PTG. Chapter 5 will include a discussion of the findings, implications of the study, and recommendations for future studies presented above.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of the present study was to investigate whether self-forgiveness serves as a moderator between the independent variable MI and the dependent variable PTG among combat veterans. Understanding the ability of self-forgiveness to serve as a moderator between MI and PTG could lead to significant changes in how combat veterans' transition into society. The study was conducted in such a way to measure the perceptions of combat veterans who subscribe to a specific veteran podcast website. The construct of MI has not been measured in relationship to PTG among combat veterans. The intention of this study was to measure both constructs in the presence of self-forgiveness. In the present study, my hypothesized outcome was that combat veterans experienced a higher level of PTG where self-forgiveness subscribed to Tedeschi and Calhoun's theory of PTG (1996). The study findings indicated a positive correlation in both the PTG and MI styles. However, I hypothesized that the influence of self-forgiveness would be significantly related to PTG. Survey data were collected and analyzed using a hierarchical regression. The results of the data analysis revealed that MI did not show significant results interacting alone with PTG. However, the interaction between MI and self-forgiveness resulted in a positive and significant outcome interacting with PTG.

Interpretation of the Findings

Hypothesis 1

In Hypothesis 1, the null hypothesis is supported, concluding that a relationship does not exist between MI and PTG among combat veterans. MI can be sustained by combat veterans who experience both ethically challenging and life-threatening events (Nordstrand et al., 2019). Furthermore, the possibility exists that trauma and morally injurious events may cause a double stressor that may complicate treatment from therapists who only focus on the traumatic aspects of the event (Williamson et al., 2020). My study confirmed the absence of MI in the presence of PTG. The variable MI explains 16.8% of PTG.

Hypothesis 2

As described in the PTG theory, spiritual enhancement, which entails self-forgiveness, sets out to realize an individual's personal worldview. The outlook of using self-forgiveness may clarify life's meaning and purpose, leading to a discernment of something greater than the self (Tedeschi & Calhoun, 1996). In Litz et al.'s (2009) MI integrative model, the use of forgiveness acted as a moderator between transgressions and MI after potential MI exposure. The second hypothesis in this study was focused on the relationship between self-forgiveness and PTG among combat veterans. The subscales of the HFS, developed by Thompson et al. (2005), included forgiveness of self, forgiveness of others, and forgiveness of situations.

Hypothesis 3

Hypothesis 3 sought out to explain to what degree the presence of self-forgiveness moderates the relationship between MI and PTG among combat veterans. The model was an attempt to offer a solution to the problem discussed in Chapter 1 that there is insufficient research addressing how forgiveness (notably self-forgiveness) can intervene the impact of MI and trauma, resulting in PTG (e.g., Whealin et al., 2020; Wozniak et al., 2020). In previous studies related to spirituality and the intervention group process designed to treat spiritual and moral wounding, a combination of chaplain/ pastoral and mental health professionals has been able to help combat veterans diagnosed with PTSD (Starnino et al., 2019).

Within the model, MI did not predict PTG as indicated in Hypothesis 1. Further, self-forgiveness predicted PTG as attempted and confirmed in Hypothesis 2. However, when MI and self-forgiveness were combined, PTG heightened. Both the analysis and the hierarchical regression resulted similarly. As the study did not intend to explain all organizations of the U.S. Armed Forces, the collected data led to the conclusion in the veteran partner organization.

Limitations of the Study

The study was the examination of the relationship between MI and self-forgiveness in the presence of PTG. The collection of the data originated from a single organization. The qualification for participation in the study was involvement in combat operations between World War II and Operations Enduring Freedom and Iraqi Freedom. The intention of the study was not to explain all service branches of the U.S. Armed

Forces but rather to acquire and examine the data in the selected organization to explore the correlation in the representative context. A possible solution to the overview of the current study is sample size.

The limited sample size for the study was 68 responses, as calculated using G*Power Analysis. According to data provided by the veteran podcast support group used for this study, the majority of the subscribers to the program identify as men between ages 45 and 54, Christians, assigned to the Army serving in Operation Enduring Freedom and Iraqi Freedom. According to a study Hamrick et al. (2019), a sample of 285 Operation Enduring Freedom and Operation Iraqi Freedom participants who identified with witnessing morally injurious transgressions were polled to understand the association between MI and suicidal ideations. The most represented branch of the military was the U.S. Army (n = 136, 47.7%). The majority of the participants were male (n = 174, 61.1%) and White (n = 197, 69.1%). The study showed that MI mediated the connection between morally injurious events and suicidality. I believe the case of MI among male White/Caucasian who served in the U.S. Army is worth further investigation. Hoge et al. (2004) posited that 45–65% of combat veterans in Operation Iraqi Freedom reported involvement in killing enemy combatants. Furthermore, killing during combat is associated with PTSD, which is associated with MI (Hamrick et al., 2019).

The use of larger sample size may have allowed data to be representative of larger groups and organizations and applied in a more general way. Additionally, the use of larger sample sizes may assist with exclusion of incomplete surveys, which may help

with examining significant relationships between the variables of the study. The data were collected via an internet survey collection platform. Due to the anonymity of the survey participants, there was no way to validate participants comprehended the questions in the survey. The study has to rely on the integrity of the participant taking the time to answer the questions, how they interpreted the questions, and how they represented answers thoughtfully and honestly.

Recommendations

Recommendations for future study are multidirectional. The present study was designed as a quantitative study with a survey methodology. Future studies may use a qualitative approach. The qualitative method allows a researcher to interview participants and clarify comprehension and accuracy of responses. The veteran support group used in this study is just one of many organizations available for veterans to use for support after military service. Future studies could focus reaching out to VA to conduct studies with more combat veterans.

The present study is a first of its kind and used a broad demographic base. The demographics were composed of age, gender, race/ethnicity, branch of service, component of service, combat operation, and religious beliefs. Future research may explore each of the demographic categories individually. Studies may also focus on pastoral/religious counseling along with mental health practitioners. For those individuals who identify as agnostics or nonbelievers, atheists, and conscientious objectors, a holistic approach may be more suitable. Holistic approaches to counseling focus on the

individualistic values and self-assertion, while religious approaches focus on spirituality, obedience, and humility (Farias & Lalljee, 2008).

Implications

The current study has implications in the field of clinical psychology, veteran support organizations, and combat veterans. As posed by Starnino et al. (2019), the use of spiritual integrated interventions may bridge a gap between MI and mindful and compassion-based practices that may lead to positive outcomes. Through the investigation of distinctive situations, mental health therapists create an environment where veterans receive strengthening from a professional and personal standpoint. The study hoped to help combat veterans, who have endured MI, with an avenue of professional assistance (Chaplain/Mental health) in self-forgiveness that may lead to PTG.

Bryan et al, (2016) noted that MI is a trigger for self-conflict and emotional anguish. The result of the trigger lies upon the individual to decide whether to accept the experience or live with the shame and guilt associated with the experience. Although a perfect environment may not be created where conflict does not exist, mental health professionals and chaplains/pastoral members may use the results of this study, adding positive elements to the quality of life of combat veterans who have MI. The results of this study could foster compassion and collaboration in the veteran. Griffin et al. (2020) stated that forgiveness may encourage meaning and is conceived as a vital factor of recovery from MI.

Finally, the addition to social change is associated with the positive relationship between spiritual treatment, veteran advocate services agencies, and clinical interventions. For the spiritual treatment, the opportunity is open to the possibility of combining spiritual (religious, non-religious) counseling as a treatment for MI among veterans who have experienced morally injurious events. Veteran advocate service agencies may explore spiritual program options and advise veterans of sources that offer spiritual healing to compliment mental health treatments. The clinical intervention in the end would help enhance quality of life and life meaning among veterans who have experienced MI, therefore allowing for successful reintegration of combat veterans into society.

Conclusion

Veterans service organizations are continuously striving to optimize the efficiency and operational efficiency of support programs for veterans who need help dealing with the transgressions of war such as PTSD and MI. This study presents preliminary evidence that optimum levels of innovation in counseling treatment care exists for the veteran. Further, the results provide additional evidence that self-forgiveness has a significant role in PTG. There is data supporting the hypothesis that self-forgiveness moderates the relationship between MI and PTG. The study examined whether levels of PTG were influenced by levels of MI and whether self-forgiveness moderated that relationship. Adding self-forgiveness when examining levels of MI and PTG is the first of its kind that I am aware. The statistical tests did yield a significant relationship for moderation when adding self-forgiveness.

Positive social change not only develops a supportive group based on a mental health treatment enhanced by spiritual counseling, but creates a network of additional support avenues for veterans who have been diagnosed with PTSD to get additional assistance with MI. Through the process of self-forgiveness an individual's personal emotions, motivations, and behavioral intentions toward the offender may become less negative and more positive over time (Fernandez-Capo et al., 2017). Working with veterans before they deploy to combat may be the most effective way to increase self-forgiveness for the events, they may encounter during combat operations. The results may lead to a solid foundation of stress coping mechanisms and life skills that might reduce the stress they feel returning from combat operations and being involved with morally injurious events.

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Appendix A: Permission to Use Moral Injury Event Scale

Subject: [EXTERNAL] Question regarding the use of the moral injury event scale

Greeting Dr. Nash,

My name is Mario S. De Souza and am a student at Walden University currently working on my dissertation. I wanted to know how to acquire permission to use the moral injury event scale for the purposes of my study. My research involves moral injury leading to posttraumatic growth using forgiveness as a moderator. I plan on using survey samples (e.g. Qualtrics, Survey monkey) to reach veterans through podcast services catered to them. Thank you for your time.

Respectfully,

Mario S. De Souza

Subject: RE: Question regarding the use of the moral injury event scale

No permission is needed since the MIES is in the public space.

Keep in mind that the MIES is intended to be a measure of exposure to potentially morally injurious events, not a measure of moral injury as an outcome. No valid measure yet exists for moral injury as an outcome.

Have fun.

Bill

Appendix B: Permission to Use Homeland Forgiveness Scale

Subject: Re: Requesting permission to use the Heartland Forgiveness scale

Dear Mr. De Souza,
You have permission to use the Heartland Forgiveness Scale (HFS) for your research.
Regards,
Laura

Dear Dr. Thompson,

I hope this letter finds you well. My name is Mario De Souza and I am a doctoral candidate at Walden University. I would like to request permission to use the Heartland Forgiveness Scale as part of my research. If you have any questions regarding my research study, please feel free to contact me. Thank you for your time in the matter.

Respectfully,

Mario S. De Souza

Appendix C: Permission to Use Posttraumatic Growth Inventory Scale

Subject: Re: Requesting permission to use the Posttraumatic Growth Inventory

You have my permission to proceed. I am attaching a copy of the PTGI for your use.

Richard G. Tedeschi, Ph.D.
Distinguished Chair
Boulder Crest Institute for Posttraumatic Growth
Bluemont, VA

See my latest publications:

Transformed by Trauma: Stories of Posttraumatic Growth (2020)

Posttraumatic Growth: Theory, Research, and Applications (2018) at
https://www.taylorfrancis.com/books/9781315527444

The Posttraumatic Growth Workbook (2016) at
https://www.newharbinger.com/posttraumatic-growth-workbook

Dear Dr. Tedeschi,

I hope this letter finds you well. My name is Mario De Souza, and I am a doctoral candidate at Walden University. I would like to request permission to use the Posttraumatic Growth Inventory as part of my research. If you have any questions regarding my research study, please feel free to contact me. Thank you for your time in the matter.

Respectfully,

Mario S. De Souza
Reply
Forward

Appendix D: Demographics Survey

1. Age

- ○ 18-24
- ○ 25-34
- ○ 35-44
- ○ 45-54
- ○ 55-64
- ○ 65+

2. Gender

- ○ Male
- ○ Female
- ○ Non-binary
- ○ Third gender
- ○ Prefer not to say

3. Ethnicity / Race

- ○ Asian or Pacific Islander
- ○ Black or African American
- ○ Hispanic or Latino
- ○ Native American or Alaskan Native
- ○ White or Caucasian
- ○ Multiracial or Biracial
- ○ A race/ethnicity not listed here

4. Branch of Service

- ○ Army
- ○ Navy
- ○ Air Force
- ○ Marines
- ○ Coast Guard

5. Service Component

- ○ Active Duty
- ○ National Guard
- ○ Reserves

6. Combat Operation

- ○ World War II
- ○ Korean War
- ○ Vietnam War
- ○ Persian Gulf War
- ○ Bosnian War
- ○ Operation Enduring Freedom
- ○ Operation Iraqi Freedom

7. Religious Affiliation

- ○ Catholic (including Roman Catholic and Orthodox)
- ○ Protestant (Anglican, Orthodox, Baptist, Lutheran)
- ○ Christian Orthodox
- ○ Jewish
- ○ Muslim
- ○ Sikh
- ○ Hindu
- ○ Buddhist
- ○ Atheist (does not believe in God)
- ○ Other
- ○ None

Appendix E: Moral Injury Event Scale

MIES

Instructions: Please circle a number to indicate how much you agree or disagree with each of the following statements about your experiences at any time since joining the military.

		Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree
1.	I saw things that were morally wrong.	1	2	3	4	5	6
2.	I am troubled by having witnessed others' immoral acts.	1	2	3	4	5	6
3.	I acted in ways that violated my own moral code or values.	1	2	3	4	5	6
4.	I am troubled by having acted in ways that violated my own morals or values.	1	2	3	4	5	6
5.	I violated my own morals by failing to do something that I felt I should have done.	1	2	3	4	5	6
6.	I am troubled because I violated my morals by failing to do something I felt I should have done.	1	2	3	4	5	6
7.	I feel betrayed by leaders who I once trusted.	1	2	3	4	5	6
8.	I feel betrayed by fellow service members who I once trusted.	1	2	3	4	5	6
9.	I feel betrayed by others outside the U.S. military who I once trusted.	1	2	3	4	5	6

Source: William P. Nash, Brett T. Litz. Public Domain

Scoring instructions:

The original 11-item Moral Injury Events Scale shown in the Appendix of Nash et al. (2013) shows **response choices from 1 to 6 corresponding to labels of "strongly agree" to "strongly disagree,"** such that, using the 9 items included in the final scale, **higher scores on the MIES would correspond to lower intensity of Moral Injury Events.**

The correct response choice labels are shown in the table above and described accurately in the text of Nash et al. (2013). The response choices from 1 to 6 correspond to labels of "strongly disagree" to "strongly agree," such that higher scores on the MIES correspond to higher intensity of Moral Injury Events.

Reference: Nash, W. P., Marino Carper, T. L., 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.

Appendix F: Homeland Forgiveness Scale

HFS

Directions:
In the course of our lives negative things may occur because of our own actions, the actions of others, or circumstances beyond our control. For some time after these events, we may have negative thoughts or feelings about ourselves, others, or the situation. Think about how you **typically** respond to such negative events. Next to each of the following items write the number (from the 7-point scale below) that best describes how you **typically** respond to the type of negative situation described. There are no right or wrong answers. Please be as open as possible in your answers.

1	2	3	4	5	6	7
Almost Always False of Me		More Often False of Me		More Often True of Me		Almost Always True of Me

____ 1. Although I feel badly at first when I mess up, over time I can give myself some slack.

____ 2. I hold grudges against myself for negative things I've done.

____ 3. Learning from bad things that I've done helps me get over them.

____ 4. It is really hard for me to accept myself once I've messed up.

____ 5. With time I am understanding of myself for mistakes I've made.

____ 6. I don't stop criticizing myself for negative things I've felt, thought, said, or done.

____ 7. I continue to punish a person who has done something that I think is wrong.

____ 8. With time I am understanding of others for the mistakes they've made.

____ 9. I continue to be hard on others who have hurt me.

____ 10. Although others have hurt me in the past, I have eventually been able to see them as good people.

____ 11. If others mistreat me, I continue to think badly of them.

____ 12. When someone disappoints me, I can eventually move past it.

____ 13. When things go wrong for reasons that can't be controlled, I get stuck in negative thoughts about it.

____ 14. With time I can be understanding of bad circumstances in my life.

____ 15. If I am disappointed by uncontrollable circumstances in my life, I continue to think negatively about them.

____ 16. I eventually make peace with bad situations in my life.

____ 17. It's really hard for me to accept negative situations that aren't anybody's fault.

____ 18. Eventually I let go of negative thoughts about bad circumstances that are beyond anyone's control.

Appendix G: Posttraumatic Growth Inventory

Post Traumatic Growth Inventory

Client Name:_____ Today's Date:_____

Indicate for each of the statements below the degree to which this change occurred in your life as a result of the crisis/disaster, using the following scale.

0 = I did not experience this change as a result of my crisis.
1 = I experienced this change to a very small degree as a result of my crisis.
2 = I experienced this change to a small degree as a result of my crisis.
3 = I experienced this change to a moderate degree as a result of my crisis.
4 = I experienced this change to a great degree as a result of my crisis.
5 = I experienced this change to a very great degree as a result of my crisis.

Possible Areas of Growth and Change	0	1	2	3	4	5
1. I changed my priorities about what is important in life.						
2. I have a greater appreciation for the value of my own life.						
3. I developed new interests.						
4. I have a greater feeling of self-reliance.						
5. I have a better understanding of spiritual matters.						
6. I more clearly see that I can count on people in times of trouble. Text						
7. I established a new path for my life.						
8. I have a greater sense of closeness with others.						
9. I am more willing to express my emotions.						
10. I know better that I can handle difficulties.						
11. I am able to do better things with my life.						
12. I am better able to accept the way things work out.						
13. I can better appreciate each day.						
14. New opportunities are available which wouldn't have been otherwise.						
15. I have more compassion for others.						
16. I put more effort into my relationships.						
17. I am more likely to try to change things which need changing.						
18. I have a stronger religious faith.						
19. I discovered that I'm stronger than I thought I was.						
20. I learned a great deal about how wonderful people are.						
21. I better accept needing others.						

Appendix H: Survey Invitation

Combat Veterans Wanted

Are you a Veteran of the United States Armed Forces who served in combat between WWII and Operation Iraqi Freedom/Operation Enduring Freedom?

Research is being conducted to explore the relationship of self-forgiveness as a moderator between moral injury and posttraumatic growth. Participation may improve reintegration of combat veterans back home to families and society.

All that is needed are answers to three very brief surveys (48 questions total – 10 minutes)

Surveys and eligibility questionnaires located at the Voice of the Veteran website.

If you are interested or would like more information, please contact Mario S. De Souza*
Phone:
Email:

*Mario S. De Souza is a Doctoral Candidate at Walden University as well as a combat veteran who served two tours in Afghanistan. This study is being conducted to meet partial fulfillment for the degree of PhD in Clinical Psychology.

Appendix I: Permission to use non-Department of Defense entities

Mario De Souza
Thu 7/23/2020 12:21 PM
To: IRB

To whom it may concern,
I am writing to seek ethical guidance regarding collecting data from a vulnerable population. The population I refer to is regarding the veterans of the U.S. Armed Forces. The topic of my dissertation involves seeking a cross-sectional, correlational analysis to help me evaluate the connection between posttraumatic growth (PTG), and posttraumatic stress (PTS), moral injury (MI), and forgiveness among combat veterans. I also plan on collecting data thru an online survey method such as survey monkey distributed through various internet podcast services that cater to the veteran population. Any guidance you can share with me is appreciated.

Very Respectfully,
Mario S. De Souza

IRB
Tue 7/28/2020 4:38 PM
Mario De Souza
Cc: Denise A. Horton

Hi Mario,

As long as you recruit through non-Dod entities (like podcast services), the veterans are not considered vulnerable populations and do not require anything different from other adult research participants. We do not recommend that you try to recruit through the VA- they are not typically very supportive of doctoral student research, even when the researchers are veterans themselves. But if you decide to try to recruit through the VA or any DoD entity, be prepared for a lengthy process that takes many months.

There will be a lot of details you need to work out but given the sensitivity of that data, you should plan on using anonymous survey methods (with no consent signature). And all studies need to meet the criteria in this checklist.

Sincerely,
Libby Munson
Research Ethics Support Specialist
Office of Research Ethics and Compliance
Walden University