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Mindful Growth: The Potential Benefits of Mindfulness and Self-Compassion Fostering Characteristics of Posttraumatic Growth in Combat Veterans

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Mindful Growth: The Potential Benefits of Mindfulness and Self-Compassion Fostering

Characteristics of Posttraumatic Growth in Combat Veterans

Master's Thesis

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"When you observe things through the lens of mindfulness . . .

you invariably begin to appreciate things in a new way because your very perceptions change."

Jon Kabat-Zinn, in *Full Catastrophe Living*

Abstract

Posttraumatic growth is an emerging field of study that has garnered world-wide attention for its valuable influence on our lives. Posttraumatic growth involves experiencing positive change and transformation as a result of successful coping skills in the aftermath of a traumatic event. An individual's struggle with a "new reality" that occurs following an extremely stressful situation is the central element that generates growth. There are numerous attributes associated with posttraumatic growth that cultivate a foundation of body, mind, and spirit including personality characteristics, cognitive factors, social support, and religion and spirituality. Mindfulness, the ability to be in the present moment in a non-judgmental way, is gaining traction as a useful tool to support the development of characteristics associated with posttraumatic growth. This thesis provides a comprehensive description of trauma, the foundations of posttraumatic growth, and the role of mindfulness and self-compassion in terms of thriving and renewed growth with particular emphasis on veterans. It explores the impact mindfulness applications can have on fostering and strengthening certain qualities associated with posttraumatic growth. This thesis hopes to provide a compelling argument for the use of mindfulness and self-compassion as important tools to help veterans develop characteristics of posttraumatic growth.

Keywords: posttraumatic growth, mindfulness, characteristics, veterans

MINDFULNESS, SELF-COMPASSION, POSTTRAUMATIC GROWTH

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Reactions to traumatic life events can vary greatly. Immediately after a traumatic event, shock and denial are typical. While these feelings are normal, some people experience acute distress (i.e. unpredictable emotions, flashbacks, strained relationships and even physical symptoms like headaches or nausea) and have difficulty moving on with their lives, unable to recover. Others may suffer but with less intensity and duration. Or, some may recover quickly yet, at a later date, experience unexpectant health problems, have difficulty concentrating, or lose interest in their lives. However, most people successfully adjust to traumatic events without obvious disruption to their daily activities and interactions, while others even grow from their trauma and experience positive, life-altering changes to their lives.

The study of positive growth arising from adversity has blossomed over the last two decades and, consequently, the potential impact of mindfulness on the theory of constructive transformation is slowly entering the field of research. This thesis will analyze aspects of posttraumatic growth from an evidenced-based standpoint rooted in clinical research and a theoretical-based perspective based on the foundations of Buddhist traditions. Characteristics of posttraumatic growth including personality traits, cognitive factors, social support, and religion and spirituality will be analyzed. Special emphasis will be presented on the efficacy and potential role of mindfulness and self-compassion in fostering the four characteristics of posttraumatic growth which, in turn, can lead one to heal and flourish in the aftermath of adversity. This thesis will examine facets of trauma, resiliency, posttraumatic growth, and the possible application of a mindful and self-compassionate practice to facilitate characteristics of posttraumatic growth in United States combat veterans.

Introduction to Trauma

Trauma is an unfortunate component of being human. Most individuals experience one or more traumatic events throughout their lives. Wartime combat, physical assault, natural disasters (i.e. earthquake, fire, hurricane, flood, or tornado), observing violence, loss of health or finances, transportation accidents, and unexpected or sudden loss of relationships due to death, illness, or divorce are all common examples of physical and emotional distress that can negatively affect our well-being. While most are able to resist long-term debilitating effects of their trauma, many suffer from lingering negative consequences due to their hardship (American Psychology Association, 2017).

Trauma

Defining trauma has been an ongoing struggle for mental health professionals. The *Diagnostic and Statistical Manual of Mental Disorders* (*DSM*; American Psychiatric Association [APA]) is used by clinicians and psychiatrists to diagnose psychiatric illness in all categories of mental health disorders. The *DSM-III* (1980) initially included and classified the description of trauma as an event existing "outside the range of usual human experience" (APA, 1980, p. 236). Throughout the years, the APA has presented and defined a more inclusive definition of trauma (APA, 1994, 2000, 2013) in which military combat, physical or sexual assault, domestic violence, natural disaster, a severe accident, learning about a death of a loved one, refugee experiences, being taken hostage, and even a particularly difficult divorce are considered variations of traumatic events. Other types of trauma come in the form of medical conditions such as being diagnosed with HIV, rheumatoid arthritis, or cancer; or the debilitating effects of a stroke or heart attack (APA, 2017).

Ronnie Janoff-Bulman (1992), a social psychologist researcher on survivors of overwhelming life events, constructed the first comprehensive framework for understanding the psychology of victimization and trauma. She described a traumatic experience as events that question one's accepted norms and challenge previous assumptive worldviews and conceptions of predictability. Leading trauma and transformation researchers and therapists Tedeschi and Calhoun (1995) describe the qualities that make an event traumatic including their shocking nature due to a sudden and unexpectant occurrence, a feeling of perceived lack of control, unusual and out of the ordinary, the creation of long-lasting problems (such as psychological distress), blame directed at the self or others, and the varying impact of a particular crisis at different times in the life cycle. No matter what the actual description of trauma is, highly stressful events can have a profound and lasting impact on our bodies and minds, and those around us.

Effects of Trauma to Body and Mind

Exposure to various forms of trauma is a common part of the human experience and certain behaviors are normal in the aftermath of traumatic life events. However, highly stressful situations may result in significant psychological and physical distress that negatively affects thoughts, emotions, and the body (Tedeschi & Calhoun, 1995) called posttraumatic stress (PTS). PTS includes a wide range of symptoms and reactions that may occur after experiencing trauma in which one may find themselves overwhelmed with "intrusive thoughts, images, or memories of the event, as well as difficulties in managing strong emotions" (Dietrich, 2012, p. 358). Nightmares or bad dreams, heightened awareness, anxiety, and panic attacks including physical reactions associated with anxiety such as a racing heart, muscle tension, and shortness of breath may arise. Traumatic grief, if great loss is part of the event, is also a possible outcome (Dietrich,

2012). Long term symptoms are not the only aftermath of trauma, some individuals may lack immediate or lasting effects and others may find that navigating through their trauma leads to life-changing effects and tremendous growth (Tedeschi & Calhoun, 2004). When facing a life-altering situation, resilience is one positive reaction that may arise.

Resilience. Resilience is the most common adaptation after experiencing a traumatic event (Bonanno, 2004). It can be defined as the "capacity to respond to pressures and tragedies quickly, adaptively, and effectively" (Graham, 2013, XXV). According to the APA (2014), resilience is the ability "to adapt well in the face of adversity, trauma, tragedy, threat, or even significant sources of stress such as family and relationship problems, serious health problems or workplace and financial stressors" (What is Resilience section, para. 1). It is commonly thought of as "bouncing back" from the difficult and challenging experiences we all face at certain times throughout our lives. Emotional distress, grief, sadness, sorrow, and the plethora of emotions that accompany adversity still occurs. However, in due time, normal behavior and daily living continue for most. Resilience can be learned and developed by anyone, it is not a characteristic or trait that people either have or do not have. Accepting change and having a positive outlook and optimism are key components to being resilient and moving forward while presenting healthy day-to-day functioning (APA, 2014).

George Bonanno (2004), a prominent researcher in the study of loss and resilience, defines resilience as

> the ability of adults in otherwise normal circumstances who are exposed to an isolated and potentially highly disruptive event, such as the death of a close relation or a violent or life-threatening situation, to maintain relatively stable, healthy levels of psychological and physical functioning. (p. 20)

Simply put, resilience is a stable trajectory of healthy functioning after a highly adverse event; resilience trajectory is characterized by a relatively brief period of disequilibrium, but otherwise continued health. Although resilient individuals can have distress due to a traumatic event, the difficulty is usually mild and tends not to interfere with normal functioning in everyday life (Bonanno, 2004; Bonanno, Westphal, & Mancini, 2011). Remarkably, the vast majority of individuals exposed to traumatic events do not have chronic symptoms due to such distress (Bonanno, 2004). Overall, resilient people are more likely to live by meaningful principles; turn to religious or spiritual practices; stay physically, emotionally, and mentally healthy; be able to cope and problem solve; maintain optimism in all types of situations; and learn from distressing events in their lives (Southwick & Charney, 2012). If an individual is not resilient, if he or she does not stabilize after encountering a difficult situation, the traumatic events may lead to chronic suffering and distress.

Posttraumatic Stress Disorder. When posttraumatic stress (PTS), the normal strain associated with trauma, does not dissipate and diminish with time, the stress may become chronic. This extreme, non-normative, response to a traumatic event is called posttraumatic stress disorder (PTSD). According to the *DSM–5*, PTSD is a Trauma-and Stressor-Related Disorder resulting from exposure to an extreme traumatic event. PTSD symptoms lead "to overactivity of the amygdala, symptomatically manifesting as fear, phobic avoidance, hyperarousal, poor impulse control, and re-experience of intrusive negative thoughts and emotions and painful memories" (Khusid & Vythilingam, 2016, p. 964). The APA (2013) reports that PTSD affects approximately 3.5 percent of U.S. adults, and an estimated one in 11 people will be diagnosed PTSD in their lifetime.

A PTSD diagnosis requires several unique defining features; it is given when four types of symptoms last for at least one month (and often persists for months and sometimes years) and cause significant distress or impairment of functioning. The first of four types of symptoms include intrusive thoughts that cause reliving the traumatic event. In addition to disturbing thoughts, images, and feelings, the "flashbacks" are often accompanied by a sense of touch, taste, or smell and the individual feels as though the event is actually happening again (i.e. feeling as though they are back in a burning car or smelling the body odor of their assailant). Second, an individual avoids people, places, activities, situations, and objects that are reminders of the event that result in distressing thoughts and memories. Also, they try to avoid remembering, thinking, or talking about the traumatic event. Third, there are negative changes in beliefs about oneself or others that lead to feelings of fear, horror, guilt, shame, or anger. As a result, detachment or estrangement from others occurs. The fourth symptom involves feelings of increased arousal that leads to irritability and angry outbursts, reckless or self-destructive behavior, hyperarousal, exaggerated startle response, problems sleeping, and difficult concentrating (APA, 2013).

While symptoms of PTSD are normal responses to traumatic events, they are usually resolved over time for the majority of people without professional treatment (Bonanno, 2004). However, for those unable to cope well and bounce back, many risk factors may surface. If PTSD lingers, significant problems in daily living may ensue including alcohol and drug abuse, marital problems, unemployment, and suicide and require greater intervention by medical services. A recent meta-analysis of over 1,300 studies on the health effects of PTSD determined that PTSD is associated with reduced healthy eating and physical activity, as well as increased obesity and smoking (van den Berk-Clark, Secrest, Walls, Hallberg, & Lustman, 2018).

Fortunately, there is hope that those struggling with PTSD or other overwhelming and lingering types of stress can overcome their pain and suffering.

The Foundations of Posttraumatic Growth

Tedeschi and Calhoun (1995) coined the term "posttraumatic growth." They define the phrase as positive change and transformation as a result of successful coping following a stressful and traumatic event. Growth does not occur directly from the trauma, but rather from the individual's struggle with their "new reality in the aftermath of trauma that is crucial in determining the extent to which posttraumatic growth occurs" (Tedeschi & Calhoun, 2004, p. 5). More descriptively, posttraumatic growth

> describes the experience of individuals whose development, at least in some areas, had surpassed what was present before the struggle with crisis occurred. The individual had not only survived, but has experienced changes that are viewed as important, and that go beyond what was the previous status quo. Posttraumatic growth is not simply a return to baseline – it is an experience of improvement that for some persons is deeply profound. (p. 4)

 Considerable growth may require a significant threat or a shattering of fundamental ideas on life and may be partnered with significant psychological stress. The higher the intensity of perceived harm, threat, and lack of control during a traumatic event is associated higher levels of growth in survivors of trauma (Linley & Joseph, 2004).

Thankfully, PTG has been found to be a more common response to trauma than PTSD (Linley & Joseph, 2004; Tedeschi & Calhoun, 2004). Calhoun and Tedeschi (2006) recommend listening to a person's personal narrative and how they refer to a negative event in order to judge whether a difficult event is actually traumatic. If the event divides their life into "before and

after" the event, it is likely traumatic enough to be a foundation for experiencing PTG. A narrative of personal changes "after" the painful experience include facets of PTG such as improved relationships with others, openness to new possibilities, greater appreciation of life, increased sense of personal strength, positive spiritual or religious change, and realignment of life priorities (Tedeschi & Calhoun, 1996). Essentially, a major life crisis transforms every fiber of one's being and helps to establish new norms and new ways of thinking and living in the world. The new belief system "is more complex and flexible and therefore resistant to being shattered by future stressors" (Hijazi, Keith, & O'Brien, 2015). Linley and Joseph (2004) suggest that PTG may be an accumulative response to repeated traumatic events in which people's character is shaped by lessons learned about life and, thereby, leads to growth.

Returning back to the differences between resilience and PTG, it must be noted that equating PTG with resilience or considering PTG as superior to resilient outcomes is not an accurate way to describe the terms. Resilience may be the only factor necessary after a traumatic or stressful event. Tedeschi and Calhoun (1995) hypothesized that resilient individuals innately utilize positive coping mechanism which make them less likely to struggle with life altering and traumatic events; therefore, able to come to terms with their new reality. Whereas one high in resilience will experience a relatively rapid return their baseline functioning following their traumatic event, PTG is about struggling to deal with trauma and its psychological consequences and experiencing positive change as a result (Tedeschi & McNally, 2011). Unlike resilience, posttraumatic growth represents a change for the better following adversity (Tedeschi & Calhoun, 1996); it "implies an established set of schemas that are changed in the wake of trauma" (Tedeschi & Calhoun, 2004, p. 4). However, once time has passed and the trauma is processed, posttraumatic growth can lead to the enhancement of subsequent resilience.

Levine, Laufer, Stein, Hamama-Raz, & Solomon (2009) determined that highly resilient individuals have less PTSD and PTG. Furthermore, Westphal and Bonanno (2007) argue that "it is highly unlikely that resilient individuals would engage in the kind of meaning-making behaviors associated with PTG for the simple reason that they tend not to struggle to the same extent as might other, more traumatized individuals" (p. 420). Therefore, PTG and resilience are two different facets of trauma yet have a direct relationship. While PTG has a distinct element of transformation, or a measurable change in functioning, resiliency has a more steady-state aspect to it. Due to the greater awareness and study of PTG, there are now various ways to measure perceived benefits of adversity and hardship.

Measuring Posttraumatic Growth

The Posttraumatic Growth Inventory (PTGI), developed by Tedeschi and Calhoun (1996), is the most frequently used and best-validated questionnaire to assess and measure positive changes in the aftermath of trauma. Based on a perception of benefits, the PTGI consists of a 21-item scale assessing five factors including new possibilities, relating to others, personal strength, spiritual change, and appreciation of life. The PTGI was developed and tested with college psychology students who had experienced a significant negative life event (i.e. bereavement, injury-inducing accidents, separation or divorce of parents, relationship break-up, criminal victimization, academic problems, unwanted pregnancy) during the previous five years. It measures

> a general tendency to experience difficult events in a way that produces perceptions
> of benefits, but its focus is on the variety of possible benefits that may be discovered or
> constructed, given that people may find some benefits and not others. (p. 467)

Notably, those who suffered more severe trauma perceived to have experienced stronger positive change in their lives, such as living life to the fullest, becoming a better person by being more experienced with life, and enjoying closer family relations.

Cann et al. (2010) developed the Posttraumatic Growth Inventory-Short Form (TGI-SF) to measure perceived benefits while maintaining the validity and reliability shown to exist in the longer scale. The idea behind shortening the original version was to mentally and physically support participants with fewer questions as they relive their trauma, as well as to ensure time requirements did not adversely affect the administration of future clinical research studies. The scale was shortened from the 21-item scale to a 10-scale questionnaire which considers only 2-items in each of the five factors in the PTGI. The PTGI-SF "had internal reliability only very slightly lower than the full form PTGI" (p. 134). Overall, the study determined that the PTGI-SF efficiently captured relevant information associated with each factor and provided a meaningful total score in terms of trauma and posttraumatic growth.

One important limitation when considering the validity and applicability of measuring posttraumatic growth is the element of self-reporting. As part of being human, a person's outlook on their perceived positive change due to adversity can be affected or altered by time and memory. The process of determining any sort of personal growth is based on the subjective baseline of feeling and thoughts from pre- to post-trauma. Because of this complex task, self-reporting questionnaires may lead to an air of caution when results are reported (Perra & Frazier, 2013). Another concern of the PTGI and PTGI-SF is the measure of only positive outcomes which does not allow for any consideration or evaluation of negative outcomes (Aldwin & Levenson, 2004). In order to determine the ability to experience the benefits of posttraumatic

growth, it is important and constructive to identify what personal characteristics have been found to have a direct impact on an individual's experience with trauma and positive change.

Characteristics of Posttraumatic Growth

Specific characteristics have been identified in people who have experienced growth following adversity. These characteristics are applied during the aftermath of trauma to heal and flourish. Posttraumatic growth is not a static concept, it develops over time with the aid of particular qualities. This section will address the APAs (2017) four key attributes associated with PTG - personality characteristics, cognitive factors, social support, and religion and spirituality - that cultivate a foundation of body, mind, and spirit which supports and, consequently, leads to growth in the aftermath of highly challenging life circumstances.

Personality Characteristics. Character strengths can be defined as "positive traits reflected in thoughts, feelings, and behaviors" (Park, Peterson, & Seligman, 2004, p. 603) which exist at varying levels and to different degrees. Examples of positive traits include being honest, dependable, compassionate, encouraging, and persistent. Certain personality and character traits have been found to be associated with PTG. Fundamentally, a more open and receptive mindset to different ways of thinking may have an overall positive impact on those struggling with adversity (Lindstrom, Cann, Calhoun, & Tedeschi 2013; Linley & Joseph, 2004; Tedeschi & Calhoun, 2004).

Peterson, Park, Pole, D'Andrea, and Seligman (2008) reviewed strengths of character and their relation to growth following trauma. In a web-based study, researchers investigated whether there were any benefits associated with traumatic, threatening experiences. They proposed that the more traumatic the event someone experiences, the greater life lessons are learned which, in turn, leads to character development and growth. The research study was based on the Values in

Action website and included 1,739 adults averaging 40 years of age. All participants had completed some college; 80 percent were white, 69 percent were women, and 72 percent were U.S. citizens. Character traits - interpersonal, cognitive, fortitude, temperance, and transcendence - were assessed through self-reported questionnaires including the VIA Inventory of Strength (VIA-IS), which focuses on strengths of character (Park & Peterson, 2009), and the Post-Traumatic Growth Inventory (PTGI).

The findings of the self-reported questionnaires showed that traumatic experience is associated with increased character strength, confirming the study by Tedeschi and Calhoun (1995). Specific characteristics were identified in individuals who experienced growth after a traumatic event. The results concluded that high levels of any of the five character traits were likely to be associated with PTG development: 1) interpersonal traits including humor, kindness, and love; 2) cognition, such as learning and curiosity; 3) fortitude, such as honestly, self-regulation, and judgment; 4) temperance, such as forgiveness, modesty, and fairness; and 5) transcendence, such as gratitude, hope and religiousness (Peterson et al., 2008). Other characteristics that have been positively associated with PTG include extraversion, openness, and agreeableness (Linley & Joseph, 2004). Positive emotions, optimism, and self-discrepancy are three factors that have been shown to have an important role in developing personality characteristics associated with PTG.

Positive emotions. The role of positive emotions on PTG is under a brighter spotlight and, therefore, receiving more of an interest in research circles (Werdel & Wicks, 2012). Barbara Frederickson (2001), a leading researcher in the field of positive psychology, asserts that positive emotions expand one's thoughts and actions. Additionally, they can be considered dispositional, rather than a temporary state characteristic (Calhoun & Tedeschi, 2006). Focus, attention, and

behavior may benefit from joy, hope, gratitude, and other positive emotions which, in turn, set the stage for more creative and open thoughts and actions. In essence, positive emotions have a pivotal role in individual growth by encouraging and urging one to explore, take in new information, share, and expand the self (Frederickson, 2001) while helping to connect people which creates a sense of community and caring (Graham, 2013).

A study conducted by Cohn, Fredrickson, Brown, Mikels, and Conway (2009) considered the impact of happiness and other positive emotions on building resilience. They contemplated the association between positive emotions and change in ego resilience, defining ego resilience as "a fairly stable personality trait that reflects an individual's ability to adapt to changing environments" (p. 362). In their analysis, adapting and responding in positive ways included adapting to constraints, identifying opportunities, and bouncing back from misfortune and adversity. Cohn et al. (2009) tested whether or not positive emotions were linked with growth in ego resilience, which in turn predicts subsequent positive emotions. Their study examined day-to-day positive emotions, ego-resilience, and life satisfaction through a web-based diary. Eighty-six college students participated in the study by submitting daily emotion reports detailing their strongest emotional experiences throughout the day. Ego resilience was measured with the Ego-Resiliency 89 (measures the ability to be flexible during shifting circumstances) and the Satisfaction with Life Scale (measures positive life outcomes). Cohn et al. (2009) established strong evidence that participants who were happy and experienced positive emotions became more content because they built resources that help deal with a wide variety of life's challenges. Their findings also suggest that daily positive emotions are a predictor of growth in ego resilience in the aftermath of traumatic events. Peterson, Ruch, Beermann, Park, and Seligman

(2007) assessed similar findings in terms of happiness and life satisfaction. Optimism is another important personality characteristic of growth following traumatic situations.

Optimism. Martin E. P. Seligman (2006) is one of the leading researchers in the field of optimism. His straightforward description of an optimist is best kept in his own words:

> The optimists, who are confronted with the same hard knocks of this world, think about misfortune in the opposite way [of pessimists]. They tend to believe defeat is just a temporary setback, that its causes are confined to this one case. The optimists believe defeat is not their fault: Circumstances, bad luck, or other people brought it about. Such people are unfazed by defeat. Confronted by a bad situation, they perceive it as a challenge to try even harder. (p. 5)

This type of internal thought process and way of living has been determined to be a key ingredient to recover and flourish after pain and suffering.

Roepke and Seligman (2015) proposed that maintaining an optimistic view during adversity is an integral component for growth. They hypothesized that sustaining an internal thought process, focused on new possibilities and "seeing 'opening doors' in the wake of loss" (p. 107) is a mechanism for following new paths after trauma. Therefore, when core beliefs a are shattered due to traumatic events, not only would growth from adversity occur but relationships, spirituality, appreciation for life, and strength would all prosper with an optimistic attitude. To test their hypothesis, Roepke and Seligman (2015) recruited participants from two websites: "Authentic Happiness," associated with the University of Pennsylvania, and "Mechanical Turk," an Amazon crowdsourcing marketplace web service. A total of 276 individuals from the United States and India completed an online survey containing questions focused on their experience and thoughts on adversity due to traumatic events and measures

related to growth. The study included three tools to measure growth, deterioration, and potential mediators of growth via the Posttraumatic Growth Inventory 42 (PTGI-42), Core Beliefs Inventory (CBI), and the Multidimensional Scale of Perceived Social Support (MSPSS). Additionally, the researchers created a new scale called the Doors Opening Questionnaire (DOQ) to measure the level of participants' engaging with new possibilities after adversity. Roepke and Seligman (2015) reasoned that engaging with new possibilities and seeing new doors opening after experiencing adversity was a powerful predictor of growth. Such engagement also played a role in core belief disruption due to certain traumatic events and growths, "suggesting that core belief disruption needs to be transformed into a sense of new possibilities to create positive change" (p. 112). In essence, the study found that posttraumatic growth is more likely to occur as one's foundational beliefs are deeply affected by a challenging event if they believed in creating a new life with new possibilities.

The relationship between optimism and posttraumatic growth has been considered in a variety of other studies. Linley and Joseph (2004) conducted a meta-analysis of 39 studies and concluded that optimism is particularly relevant in terms of PTG. Tedeschi and Calhoun (1996) and Prati and Pietrantoni (2009) also confirmed the positive role of optimism on PTG because people who were more optimistic tended to report more growth. However, Tedeschi and Calhoun (2004) expressed a different perspective when they questioned whether or not optimism is actually a characteristic trait related to PTG or, rather, an influence on the cognitive processing of the trauma that leads to PTG. Limited research has also considered self-discrepancy and motivation in the eyes of posttraumatic growth.

Self-discrepancy. Researchers recently explored personality and trauma dynamics that affect posttraumatic growth. Shuwiekh, Kira, and Ashby (2018) examined PTG in terms of

personality dynamics of "striving for standards" and "order," also referred to as perfectionistic striving. The results, gathered from 620 students enrolled in Cairo University and South Valley University in Egypt, replicated previous findings that "multiple trauma and personality variables independently influence PTG" (p. 189). The researchers specifically state that the those that aspire to reach a level of "standard" and "order," with a strong desire to make meaning of the traumatic event and its aftermath, appear to predict higher PTG along with greater well-being in terms of mental and physical health. To successfully cope in the aftermath of challenging times, reassessing the meaning of trauma through cognitive processing is another character trait of individuals who experience PTG.

Cognitive Factors. In order to find ways to face, process, manage, and thrive after adversity, constructive cognitive processing must occur. Reconstructing basic assumptions through challenging, often distressful, inner thought processing can lead to positive schema changes that will contribute to posttraumatic growth (Janoff-Bulman, 2006; Tedeschi & Calhoun, 2004; Werdel & Wicks, 2012). Linley and Joseph (2004) indicate that the amount of cognitive activity surrounding the trauma is directly related to the amount of growth reported. If cognitive processing is effective, "it leads to disengagement from previous goals and assumptions, as it becomes clear that the old way of living is no longer appropriate in radically changed circumstances" (Tedeschi & Calhoun, 2004, p. 8). Therefore, making meaning of difficult, possibly life-changing events, can be viewed as one of the most important components of growth (Janoff-Bulman, 2006).

Werdel and Wicks (2012) believe that for people to experience genuine posttraumatic growth, effort must be spent toward finding ways to "explore new ways of viewing themselves and the world given the occurrence of the trauma" (p. 31). They stress that meaning-making is a

vital part of posttraumatic growth and transformation after intensely stressful experiences. The counselors explain that the course of cognitive processing is a delicate balance of reflection, awareness, exploration of growth, and newfound meaning in which one must honor, process, and sit with their pain and suffering. Coping and rumination are facets of cognitive factors that have been highly associated with PTG.

Coping. The effort that it takes for trauma victims to cope can be considered a monumental task. The combination of leading a "normal" life that may appear alien and unwelcoming (while attempting to construct a new inner world) requires a strategy of cognitive processing to assist in managing and making meaning of the adversity. Initially, symptoms of PTSD may be the first reaction of someone reeling from trauma where avoiding people, places, thoughts, and memories of the event are common. However, with time, confronting the specifics of the situation with active and/or passive coping strategies will hopefully arise (Janoff-Bulman, 1992; Tedeschi & Calhoun, 2004).

In a very recent study, Kunz, Joseph, Geyh, and Peter (2018) analyzed the role of coping strategies in the development of PTG. More specifically, the researchers aimed to find possible reasons that high levels of PTG occurred in individuals recently diagnosed with spinal cord injuries (SCI) that used both avoidance- (i.e. denial, behavioral disengagement, self-distraction) and approach- (i.e. positive reinterpretation, active coping, acceptance) oriented coping strategies. The study included 122 newly diagnosed SCI individuals admitted to rehabilitation centers in Switzerland. Participants completed assessments and questionnaires at four specific times during their rehabilitation – 1, 3, and 6 months after SCI diagnosis, and at rehabilitation discharge. Data was collected from the PTGI-Short-SF, a Posttraumatic Depreciation (PTD) questionnaire corresponding to the PTGI-SF with negatively worded items, a coping and coping

flexibility form, and a control variable (Impact of Event Scale-Revised) to measure symptoms of

PTSD as a response to the SCI (Kunz et al., 2018). Surprisingly, the findings concluded that both

approaches to coping, approach- and avoidance-coping, predicted higher levels of PTG post-

injury. The researchers surmised that applying both coping strategies may align with how we

process the non-linear ups and down of grief. Therefore, the Kunz et al. (2018) suppose that a

flexible use of approach- and avoidance-oriented coping strategies may provide differing, yet

appropriate, tools for individuals to process trauma.

Brooks, Graham-Kevan, Robinson, and Lowe (2019) also explored the relationship

between coping and PTG. Their study aimed to explain the impact of three trauma characteristics

(interpersonal trauma, number of trauma types, and childhood trauma) and coping strategies

(active coping avoidant coping, emotional coping, intrusive thoughts, social support, and

spirituality) on PTG to perhaps explain why some people report more PTG than others. The

researchers questioned whether previously identified predictors of PTG would affect individuals

differently due to the characteristics of trauma they experienced. The 268 selected individuals

who participated in the research described their experience detailing one or more traumatic

events in their lives and reported their symptoms (within the past two weeks) on an online

survey. The survey centered on a variety of topics through a series of questionnaires including

traumatic experiences (Posttraumatic Diagnosis Scale), spirituality (Beliefs and Values Scale),

coping styles (Brief COPE), posttraumatic stress (PTSD-8), perceived social support (Two-Way

Social Support Scale), and posttraumatic growth (PTGI-SF). The results were evaluated to

determine the indirect relationship between the type, frequency, and timing of trauma and PTG.

Brooks et al. (2019) surmise that coping strategies following a traumatic event appear to be

useful when experiencing difficult and stressful situations. With regard to childhood trauma

survivors, it was determined that avoidant coping can promote PTG. Surprisingly, active coping and emotional coping did not emerge as an influencing factor on PTG regardless of trauma characteristics.

A meta-analysis by Linely and Joseph (2004) provided a comprehensive review on positive change following trauma and adversity. Their examination of 39 previous studies concluded problem-focused coping, acceptance, positive reinterpretation, and emotion-focused coping were all found to be positively associated with growth following trauma. Religious coping and positive reappraisal have been found to be strongly associated with PTG; however, there does not seem to be any sort of negative correlation between specific types of coping and PTG (Prati & Pietrantoni, 2009).

At the heart of coping, the literature suggests that personal strength and an outlook of having new possibilities in life after experiencing difficult challenges are the outcome of successful internal cognitive processing of the trauma (Larsen & Berenbaum, 2015). Survivors of trauma realize that they can handle difficult situations and they are stronger than imagined, they recognize the overwhelming challenges they faced and overcame. Survivors are more confident they can handle subsequent trauma because of how they previously fared. And, in terms of PTG, "newly recognized coping skills and resources can become the basis for new choices in the way survivors live their lives" (Janoff-Bulman, 2006, p. 88). The role of ruminating thoughts, both intrusive and deliberate, as part of cognitive processing and coping have also been considered a positive contribution to PTG.

Rumination. Although the term rumination often brings to mind negative connotations (Tedeschi & Calhoun, 2004), rumination is one of the more positive associations with PTG (Linley & Joseph, 2004; Tedeschi & Calhoun, 2004). Tedeschi and Calhoun (2006) found that

"the degree of PTG reported tends to be related to rumination about elements related to the stressful event" (p. 9). Rumination can be defined as the "process of re-examining the beliefs that characterize one's assumptive world in light of an unexpected trauma, and these processes are related to posttraumatic growth" (Tedeschi, Calhoun, & Cann, 2007, p. 378). Also referred to as repetitive thinking or "getting stuck" in obtrusive thoughts, rumination is usually paired with significant levels of psychological distress and provides the foundation from which new "insights" about life can emerge (Tedeschi & Calhoun, 1995). Rumination can take the form of reminiscing and problem solving as well as self-disclosure through talking, writing, or artistic expression.

To understand and make a crisis manageable, as well as make meaning from it, thinking over and over about the large and small details of an adverse event may need to occur. Questions and thoughts may arise pertaining to what happened such as what could have done differently, why it happened, and what will happen in the future. This type of reexamination can take the form of both positive and negative though patterns in either deliberate or intrusive manners. Whereas intrusive rumination refers to more unwanted and automatic thoughts of the adverse event, deliberate rumination can be defined as conscious efforts to understand the impact of the adverse event (Tedeschi & Calhoun, 2004). It has been suggested that a more deliberate, reflective ruminating process "tends to be the repair, restructuring, or rebuilding of the individual's general way of understanding the world" (Calhoun & Tedeschi, 2006). Therefore, when an individual works towards making sense of what actually happened by ruminating with a vast array and range of information, PTG is more likely to occur because a certain amount of cognitive processing is necessary to rebuild shattered perceptions of life following trauma (Calhoun & Tedeschi, 2006; Janoff-Bulman, 1992).

The general nature of rumination's effect on individuals facing trauma was validated in a small study of 54 college students (Calhoun, Cann, Tedeschi, & McMillian, 2000). The participants were screened and selected based on their experience of a major traumatic event within the previous three years. One of the three questionnaires they filled out focused on rumination. Although a small sample size, the findings indicated a correlation between event-related rumination and the degree of posttraumatic growth reported. Additionally, a greater level of reported posttraumatic growth was directly associated with more rumination soon after the event occurred. Calhoun et al. (2000) findings suggest that deliberate rumination can have a profound impact on PTG if undertaken sooner rather than later.

Intrusive and deliberate rumination may occur when an individual is in the process of working through a traumatic experience. With intrusive rumination (also referred to as automatic rumination), involuntary thoughts and images enter the mind and lead to a sense of lacking control (Werdel & Wicks, 2012). Although intrusive rumination may have adverse reactions on general psychological functioning, it may also provide a certain amount of support to stimulate PTG in order to rebuild shattered views following trauma (Janoff-Bulman, 1992). Deliberate rumination has been proposed as a "complementary posttraumatic cognitive coping process" (Hanely, Garland, & Tedeschi, 2017, p. 526) used to make meaning of a traumatic event and emerges later in the posttraumatic response. In terms of PTG, "deliberate ruminations are thought to be crucial and most productive when they are undertaken only after one is able to manage distress" (Werdel & Wicks, 2012, p. 81). Research and evidence presented by Triplett, Tedeschi, Cann, Calhoun, & Reeve (2012) suggest that higher levels of intrusive rumination predict greater amounts of deliberate rumination. Therefore, intrusive rumination may prompt deliberate rumination which, in turn, leads to greater PTG. Brooks et al. (2019) inquiry on

rumination and its effects on PTG concluded that "intrusive thought mediated the relationship between interpersonal trauma and PTG" (p. 5); thereby, suggesting that intrusive thoughts bring value when it comes to adjusting new beliefs and making meaning of traumatic events. The researchers noted that "these automatic thoughts can precipitate intentional attempts to reassess the events" (p. 5) which, in time, can play a leading role in experiencing PTG.

Overall, by reflecting on traumatic events, individuals attempt to make sense of what occurred, to gain some sort of perspective on what happened, and to determine what positive change it brings to them. This type of cognitive processing is indicative of the necessary steps to rebuild shattered world views following trauma (Janoff-Bulman, 1992; Tedeschi & Calhoun, 2004). Making sense of how experiences affect us is a source of strength, resilience, and growth because "making sense is essential to our well-being and happiness." (Seigel, 2010, p. 172). Such internal reflection can also enhance PTG in conjunction with social support.

Social Support. Social support can be defined and measured in various ways including functional/tangible support, informational support, emotional support, quality of support, or level of satisfaction with support (Werdel & Wicks, 2012). The role of social support, specifically in terms of family, friends, neighbors, and co-workers, has emerged as an interesting topic of contemplation with regards to its role in PTG. The quality of relationships before and after a traumatic event have a primary role in determining the likelihood of growth. Supportive people, especially those who have faced similar challenges, present a comfortable audience to craft narratives about changes that have occurred as well as the ability to provide different perspectives and new ways of thinking about the world (Tedeschi & Calhoun, 1995). By disclosing traumatic experiences to others in an emotionally revealing way, a deeper level of intimacy develops that can have a tremendous impact on PTG (Tedeschi & Calhoun, 2004).

According to Seigel (2010), social support has been found to have a profound impression on how an individual views their trauma; the ability for a person to put their story into words so they can express their "life narrative" is fundamental to the process of making sense of what happened.

Woike and Matic (2004) examined the impact of personality motivation on the perception of memories of traumatic events. Two studies focused on narrative memories of students from Barnard College and Columbia University. The first study centered on participants' experience of living in New York City during the September 11, 2001 terrorist attacks. The second study targeted a personal traumatic experience. In Study 1, each participant completed a Thematic Apperception Test which is used to assess achievement and intimacy motivation, a self-report questionnaire (Personality Research Form), a written narrative about their thoughts and feeling about the public trauma of September 11th, another self-report on dissociative and anxiety symptoms such as "I had difficulty falling or staying asleep" (Stanford Acute Stress Reaction Questionnaire), and, finally, a Stress-Related Growth Scale which consisted of 14 statements about growing from stress experiences. In Study 2, a total of 72 other students from the same schools followed identical procedures as Study 1 except they wrote about their deepest personal thoughts and feeling about a traumatic event that occurred in their lives. Woike and Matic (2004) determined that communal motives, being supported or supportive of others, was "linked to stress-related growth for both public and private trauma experiences" (p. 651). The findings suggest that communal motives, including the desire to form relationships and care for others, predicted stress-related growth. Therefore, "having a purpose beyond one's personal needs may provide an impetus to derive meaning and positive insight from one's challenging life experiences" (p. 654). Fostering close relationships with others, as well as feelings of belonging

to a community, may be a significant reason why posttraumatic growth occurs after public and personal traumatic events.

A more recent study by Southwick et al. (2016) found that social support is associated with resiliency and growth due to

> a number of psychological and behavioral mechanisms, including motivation to adopt healthy and reduce risky behavior; feelings of being understood; appraisal of potentially stressful events as being less threatening; enhanced sense of control or mastery; increased self-esteem; use of active coping strategies; and impact of social influence and social comparison. (p. 78)

Tedeschi and Calhoun (2004) also determined that social support is related to PTG as a predictor of positive change after traumatic events, perhaps arising from the encouragement of others. They concluded that "supportive others can aid in posttraumatic growth by providing a way to craft narratives about the changes that have occurred, and by offering perspectives that can be integrated into schema change" (p. 8). Brooks et al. (2019) and Tsai, Sippel, Mota, Southwick, & Pietrzak (2016) acknowledged the nature of social support as a direct role in achieving a level of PTG in the aftermath of adversity by engaging in altruistic behaviors that support a mindset of empathy, compassion, and generosity which stimulates PTG.

Not all studies report similar findings on social support. Prati and Pietrantoni (2009) examined its role in relation to PTG. Their findings, gathered from 103 studies published between 1990 and 2006, indicated that social support was only moderately associated with PTG. Furthermore, Linley and Joseph (2004) asserted that "social support generally tended not to be associated with growth, but social support satisfaction was positively associated with growth" (p.

16). The final two characteristics that have been acknowledged as having a positive effect on PTG are religion and spirituality.

> **Religion and Spirituality.** According to Hodge (2001),
>
> *spirituality* can be understood as individual's existential relationship with God (or perceived transcendence), and *religion* can be seen as flowing from spirituality, the actual expression of the spiritual relationship in particular beliefs, forms, and practices that have been developed in the community with other individuals who share similar experiences of transcendence. (p. 315)

Religion and spirituality can be a source of strength for those facing the aftermath of trauma and adversity. They can "provide higher-order schemas that can serve to preserve meaning in life even when events themselves seem senseless and tragic" (Tedeschi & Calhoun, 1995, p. 72). The foundation of the psychological processing of PTG can be observed in theological beliefs from numerous religious traditions. When hardship arises, many turn to faith as inspiration to help them cope, carry them through difficult times, and find meaning in their lives (Calhoun & Tedeschi, 2006). As characteristics of posttraumatic growth, research on the topic is limited; however, current findings mainly point to the importance and validity of religion and spirituality in one's ability to overcome distress (Linley & Joseph, 2004).

Recent literature supports the positive impact of religion and spirituality on posttraumatic growth in undergraduate college students. A study by Perera and Frazier (2013) investigated the relationship between positive and negative changes in religiosity and spirituality and change in distress among university students who had or had not recently experienced a potentially traumatic event. The participants completed online questionnaires that measured exposure to trauma (Traumatic Life Events Questionnaire), religious commitment (Intrapersonal Religious

Commitment Scale), spirituality/meaning in life (Presence of Meaning Subscale), perceived

changes in religiosity/spirituality (PTGI), and distress (Depression Anxiety Stress Scale). The

findings suggest that perceived growth and enhanced religious commitment may be coping

strategies to support individuals who have experienced trauma (Perera & Frazier, 2013). There

are limitations to the study. First, the degree or aspect of religion and/or spirituality, which was

not evaluated, might play a significant role in growth after adversity. Additionally, measuring the

degree of trauma may also have a noteworthy impact to the level of self-reported changes.

Calhoun, Cann, Tedeschi, and McMillian (2000) explored the relationship between

religious orientation and posttraumatic growth. The pool of participants included 54 college

students who had experienced a traumatic event within the three years prior to the study. The

Quest Scale was used to measure religious participation and included three subscales: openness

(openness to religious change), readiness (readiness to face existential questions), and doubt

(self-criticism and perception of religious doubt as positive). It was ascertained that the subscale

of readiness was positively linked and correlated to growth. Additionally, openness to religious

change was also found to be predictive of the amount of growth reported by the university

students. Although the study was small in scale, the essence of the data indicates that those who

lean on or could consider leaning on religious or spiritual beliefs can have a profound impact on

their ability to process, work through, and overcome distress (Calhoun et al., 2000).

Various studies (Brooks et al., 2019; Linley & Joseph, 2004; Peterson et al., 2008; Tsai et

al., 2016) conclude that exposure to trauma led to an increase in religiousness which plays a

positive role in overcoming traumatic events. The importance of religion and spirituality has also

been found to be a positive influence in the relationship between forgiveness and posttraumatic

growth (Schultz, Taliman, & Altmaier, 2010). Prati and Pietrantoni (2009) conducted research of

pertinent studies associated with PTG. Their meta-analysis review revealed that religious coping was strongly correlated with growth while spirituality was moderately related to positive change. Another meta-analysis by Shaw, Joseph, and Linley (2005) analyzed 11 studies that reported a connection between religion, spirituality, and posttraumatic growth. Their examination yielded three main findings. First, the role of religion and spirituality is usually positive and beneficial to the lives of those in the aftermath of trauma. Second, a deeper religious and spiritual life may arise due to the trauma. And lastly, posttraumatic growth is typically associated with positive religious coping, religious openness, readiness to face existential questions, religious participation, and intrinsic religiousness (Shaw et al., 2005).

However, there are instances in which religion and spirituality can add a layer of stress in individuals who are experiencing an already difficult time due to trauma (Werdel & Wicks, 2012). Religious coping can present itself in both positive and negative patterns (Pargament, Koenig, Tarakeshwar, & Hahn, 2004). Positive religious coping strategies express "a secure relationship with God, a belief that there is a greater meaning to be found in life, and a sense of spiritual connectedness with others" (Pargament et al., 2004, p. 498) whereas a negative religious coping strategy expresses "a less secure relationship with God, a tenuous and ominous view of the world, and a religious struggle to find and conserve significance in life" (Pargament et al., 2004, p. 498). Pargament et al. (2004) examined this concept of religious coping and PTG in a study of 268 medically ill elderly patients over two years. The findings concluded that those with negative religious coping, both in the beginning and the end of the study, reported significant declines in quality of life, depression, and function. Research supports the notion that changes in PTG over time can be predicted by either positive or negative religious coping. With this review of the literature on characteristics of PTG, considering the efficacy of mindfulness to enhance

these characteristics may have far-reaching applications when struggling to come to terms with traumatic events.

Mindfulness and Self-Compassion

In Buddhist tradition, suffering and transforming suffering are central themes to the Buddha's teaching. The Buddha used his suffering not only to liberate himself, but to help each of us become free from the pain. He taught that when we recognize and acknowledge our suffering, "we look at it, discover what has brought it about, and prescribe a course of action that can transform it into peace, joy, and liberation" (Nhat Hahn, 1998, p. 3). The Four Noble Truths, the Buddha's primary teachings on suffering, explain that "our suffering is holy only if we embrace it and look deeply into it. If we don't it isn't holy at all. We just drown in the ocean of our suffering (Nhat Hahn, 1998, p. 9). While the Buddha did not deny the existence of suffering, he also did not deny the existence of joy and happiness. He believed that once you how suffering came to be, you are on the path to be free of it (Nhat Hahn, 1998). With mindfulness strategies, based in Buddhist traditions of consciousness, attention, and awareness, the ability to bear witness to a tremendous amount of suffering without becoming overwhelmed is possible.

Mindfulness

Mindfulness provides a path for us to travel through the hardships, struggles, and trauma that we may face throughout our lives. From a Buddhist perspective, in order to go down that path, there is a process that may take us to grueling and complex thoughts and emotions where we must face all degrees of suffering with a sense of awareness and less need to escape unpleasant experiences (Germer, 2009). "Mindfulness practice helps us to relax and to soften into whatever life presents" (Gunaratana, 2003). Therefore, with mindfulness,

we must be willing to encounter darkness and despair when they come up and face them

over and over again if need be without running away or numbing ourselves in the

thousands of ways we conjure up to avoid the unavoidable. (Kabat-Zinn, 1994, p. 85)

At the end of this path is awareness that brings clarity to the present moment. In terms of trauma,

the practice of non-avoidance, when we face our suffering directly, is one of the most

challenging aspects of mindfulness (Niemiec, 2014).

Mindfulness has been defined as "an umbrella term used to characterize a large number

of practices, processes, and characteristics, largely defined in relation to the capacities of

attention, awareness, memory/retention, and acceptance/discernment" (Van Dam et al., 2018, p.

36). It involves attending to the present moment in a nonjudgmental way (Brown & Ryan, 2003;

Nhat Hahn, 1998). Kabat-Zinn (2003) defines mindfulness as "the awareness that emerges

through paying attention on purpose, in the present moment, and nonjudgmentally to the

unfolding of experience moment to moment" (p. 145). Bishop et al. (2004) similarly describes

mindfulness practice as directing one's attention to the present moment, while being non-

judgmental and aware of one's own experience with a curious and accepting attitude as well as

being open to whatever thoughts, emotions, or sensations may arise. Mindfulness can also be

defined as a form of mental training with the goal of improving core psychological function such

as emotional self-regulation (Tang, Hotzel, & Posner, 2015) because it reduces the amygdala

activity which results in improved emotional regulation and impulse control (Van der Kolk,

2014).

Mindfulness may take a variety of forms such as a concentrative or an insight practice. A

concentration practice is a form of practice undertaken for varying periods of time on a regular

basis (Kabat-Zinn, 2003) in which one focuses on a single object such as the body, the inhale and

exhale of each breath, or a specific sound. Insight practice is often referred to as open awareness

and involves focusing on whatever arises in the mind and body at any given moment - thoughts,

emotions, sensations; nothing is excluded. Informal practice takes place off the meditation

cushion and is "aimed at cultivating a continuity of awareness in all activities in daily living"

(Kabat-Zinn, 2003, p. 147) such as when tasting a delicious meal, brushing teeth, washing

dishes, or driving a car. (Kabat-Zinn, 1994). Informal mindfulness is not confined to routine

activities, it involves being mindful of speech, thoughts, emotions, and sensations as they arise

naturally throughout the day.

An extensive number of mindfulness-based interventions (MBI) have been developed to

support stress reduction and overall well-being (Baer, 2003; Khusid & Vythlingam, 2016).

Mindfulness-based stress reduction (MBSR), an established and systematic 8-week course

developed by Kabat Zinn (2003), is one of the most common MBIs. Mindfulness has also been

integrated into various forms of therapy to include mindfulness-based cognitive therapy

(MBCT), dialectical behavior therapy (DBT), acceptance and commitment therapy (ACT) and

mode deactivation therapy (MDT). Other mindful interventions include focusing on

contemplative meditation approaches such as walking meditation, yoga, loving-kindness

meditation, mantra meditation, transcendental meditation, and insight meditation (Steinberg &

Eisner, 2015). Self-compassion is a major aspect of mindfulness that has a profound impact on

our ability to cultivate inner wisdom in order to overcome suffering from trauma.

Self-Compassion

From the Buddhist point of view, compassion is given to our own as well as others'

suffering. Simply put, "at the heart of compassion is the invitation to turn toward suffering"

(Feldmann, 2017, p. 57). Compassion, one of the four immeasurables or brahmaviharas of

Buddhist practice (Gethin, 1998), is part of the pathway of awareness that "encourages us to

investigate anguish and its origins and to cultivate the path to the end of struggle and

discontentment" (Feldman, 2017, p. 2). When compassion is directed toward ourselves, it opens

to door for each of us to heal, grow, and transform from our trauma (Feldman, 2017).

One of the leading researchers in the field, Kristin Neff (2003a), drew upon the writings

of Buddhist scholars and defined self-compassion as being comprised of three basic components:

(1) Self-Kindness – extending kindness and understanding to oneself rather than harsh

judgement and self-criticism.

(2) Common humanity – seeing one's experience as part of the larger human experience

rather than seeing them as separating and isolating.

(3) Mindfulness – holding one's painful thoughts and feelings in balanced awareness

rather than over-identifying with them. (p. 89)

Although each element has a distinct purpose, they overlap and interact by mutually supporting

and developing one another. In essence, mindfulness is a key dynamic in self-compassion where

the ability to consider one's present moment with acceptance and to allow feelings of kindness

and common humanity to arise. Conversely, self-kindness and feeling of connectedness can

increase one's sense of mindfulness which allows for non-judgmental self-reflection (Neff,

2009). In return, any negative emotions pointed at oneself can be held more gently. As a whole

and in its parts, self-compassion can be viewed as a useful emotional approach coping strategy

towards well-being (Neff, 2003a, 2009).

The level of one's self-compassionate mindset is most commonly assessed with the Self-

Compassion Scale (SCS; Neff, 2003b). The scale describes self-compassion thorough three

components: (1) self-kindness versus self-judgment (i.e. treating oneself with understanding/care

as opposed to harsh self-judgement), (2) common humanity versus isolation (i.e. seeing one's

distress/failures as part of the larger human experience rather than feeling separated from others), and (3) mindfulness versus overidentification (i.e. having a balanced present-moment awareness of affective experience in contrast to dwelling on painful thoughts or emotions. The SCS has been determined to be a valid measure of self-compassion and linked to psychological well-being (Neff, 2003b).

The act of self-compassion leads to a greater sense of awareness which, in turn, opens the door for self-reflection in conjunction with a non-judgmental attitude toward personal shortcomings. As a result, negative emotions directed at ourselves can be transformed into a more positive mind state that provides clarity and well-being. Because self-compassionate people do not "beat themselves up" when they fail or face personal setbacks, a greater sense of personal initiative to make needed changes in one's life, health, and well-being exists because they are willing to admit mistakes, adjust behaviors, and seek new challenges (Neff, 2009).

Mindfulness and self-compassion have similar and unique features; therefore, it is important to understand the symbiotic and intertwined relationship between the two concepts. As previously discussed, mindfulness involves turning toward the painful thoughts and suffering and accepting them for what they are, while self-compassion provides the emotional safety needed to fully feel open to one's pain (Neff & Germer, 2013). Mindfulness is a core influence of self-compassion and they mutually enhance one another. Self-compassion is a feature of mindfulness that can have positive effects on our lives. With self-compassion, we treat ourselves kindly, the same way we would treat our child, our friend, or our loved ones. It includes an openhearted willingness to face suffering, rather than denying or turning away from it, and the acknowledgment that failings and adversity are universal human experiences (Goldstein & Kornfield, 2001). Self-compassion can also encourage and ease our personal hardships and

struggles, providing the safety and security to lead a more peaceful and content life without emotional pain and suffering (Germer, 2009). The mutually supportive relationship between mindfulness and self-compassion may have a profound impact on fostering characteristics of posttraumatic growth.

Mindfulness and Self-Compassion Support to Posttraumatic Growth

The Buddha taught that when we recognize and acknowledge our suffering, "we look at it, discover what has brought it about, and prescribe a course of action that can transform it into peace, joy, and liberation" (Nhat Hahn, 1998, p. 3). Mindfulness and self-compassion support us in this process. Although mindfulness requires introspection and being with thoughts (some very difficult), the present, non-judgmental awareness that comes from mindfulness, paired with self-compassion, may add some degree of support in the growth process following a traumatic event. Research on the relationship between mindfulness, self-compassion, and PTG is in its infancy, but the subject matter is gaining traction as the notion of PTG becomes more of a talking point and an explored theory. Mindfulness and self-compassion offer trauma survivors helpful tools that can play an integral role in strengthening characteristics of PTG by enhancing personality characteristics, cultivating cognitive factors, facilitating a degree of social support, and developing or boosting a connection with religion and/or spirituality.

Personality Characteristics

In Buddhist theory, mindfulness is associated with an individual's internal well-being (i.e. compassion, joy, personal growth) rather than external aspirations such as money or status (Nhat Hanh, 1998). It fosters a more present-state of living and improves our awareness of the potential within us to face our challenges. Mindfulness allows each of us to be more open, accepting, and engaged in developing characteristics that promote a positive state of emotional

regulation (Vukanovic, Niles, Pietrefesa, Schmertz, & Potter, 2011). Through mindfulness, trauma survivors may build strength and insight "by acquiring a sense of control, developing internal resources for symptom reduction and healing, and facilitating the meaning-making process" (Goodman & Calderon, 2012, p. 254). While it has been established that the efficacy of mindfulness enhances positive emotions in daily life (Lindsay et al., 2018), the particular aspect of self-compassion has been found to have a significant impact on the development of positive emotions, optimism, and self-discrepancy.

Higher levels of self-compassion have been linked to increased feelings of happiness, optimism, curiosity, connectedness, and overall increased well-being as well as decreased anxiety, depression, rumination, and fear of failure (Neff, 2009). Additionally, research by Neff, Rude, & Kirkpatrick (2007) has provided strong support that self-compassion predicts positive emotional strengths because "approaching painful feelings with self-compassion is linked to a happier, more optimistic mindset, and appears to facilitate the ability to grow, explore, and wisely understand oneself and others" (p. 914). These findings suggest that self-compassion has the factors to bolster positive emotions such as forgiveness and self-forgiveness (Neff & Pommier, 2012), gratitude, and love (Neff, 2003a) that contribute to successfully adapting to trauma and encourage PTG with nonjudgement of one's distress.

In terms of self-discrepancy, a study by Leary, Tate, Adams, Allen, & Hancock (2007) concluded that holding a "perfectionist attitude" can be directly supported by mindfulness and self-compassion. The researchers considered the cognitive and emotional process in which self-compassionate people deal with difficult and unpleasant life events. The study suggests that self-compassion is associated with holding realistic self-appraisals in terms of moderating "reactions to distressing situations involving failure, rejection, embarrassment, and other negative events"

(p. 901) which can have a positive impact on how one feels about themselves and their dealings with trauma. Consequently, self-compassionate people have been linked to self-improvement motivation because they understand and accept that failing, as well as disappointment is common to all. They look at their difficult situations with acceptance and work to overcome and to improve because of their internal drive to succeed (Neff, 2003b). However, contradicting research has determined that self-compassion involves less self-evaluation and self-enhancement (Neff, 2011) which may not support the notion that self-compassion can lessen the impact of perfectionism on how one struggles with their trauma.

Building on research by Leary et al. (2007), Breines and Chen (2012) tested the theory that self-compassion increases the belief that shortcomings can be overcome and that self-compassion motivates an individual to improve themselves and acquire new skills when faced with personal weaknesses, failures, and past moral transgressions. The study concluded that self-compassion leads to self-improvement motivation because it "provides a safe and nonjudgmental context to confront negative aspects of the self and strive to better them" (p. 8). Other research has shown self-compassion to be associated with personal initiative, perceived self-efficacy, and intrinsic motivation (Neff, Hseih, & Dejitthirat, 2005; Neff, Kirkpatrick, & Rude, 2007). Additionally, it has been determined that self-compassion does not include elements of self-evaluation or comparison with others. Instead it is a non-judgmental way to relate to ourselves even in times of failure, perceived inadequacy, and imperfection that may be connected with traumatic events (Kaurin, Schonfelder, & Wessa, 2018). Consequently, there is ample room for PTG (Neff, 2011). This type of thought process has a direct effect on a mindset that makes meaning of the difficult challenges of life that we all face. Aspects of mindfulness and self-

compassion may prove to have tremendous application for cultivating characteristics of PTG, especially cognitive factors associated with processing difficult thoughts and emotions.

Cognitive Factors

The final step in the Four Noble Truths is to end suffering by way of the Noble Eightfold Path. In Buddhist tradition, meditation is an integral part of this process through calm and insight meditation. The goal of meditation is the "cultivation of deep states of concentration" (Gethin, 1998, p. 174) to ease the mind and acquire wisdom. The two forms of mediation complement one another to bring the mind to a state of comfort. First, calming mediation, which focuses on the direct concentration on one object such as the breath or sound, allows the mind to be still and rest. Once a level of calm is achieved and traumatic events are not as difficult or painful, insight meditation can be practiced to understand the suffering and come to see realize its impermanence; "in this way, the practice of calm and insight meditation are bound together" (Gethin, 1998, p. 199). During meditation, there is no judging, just observing and examining because as you look deeply into your mind and "see its true nature clearly, you become dispassionate with regard to its emotions, sentiments, and states. Thus you become detached and free, so that you may see things as they are" (Rahula, 1959, p. 73). By appreciating the significance of the Buddhist's path to end suffering, there is a clear roadmap to understand how coping and rumination can be supported with mindfulness and self-compassion.

Im and Follette (2016) investigated the relationship between rumination, mindfulness, and trauma. The researchers found that "mindfulness negatively correlated with trauma symptomology and psychological distress, and this relationship was mediated through rumination" (p. 403). More specifically, the study determined that "individuals with higher mindfulness were less likely to engage in ruminative thinking" (p. 403). Increased mindfulness

and self-compassion can play a critical role in how a trauma survivor "relates to their internal experiences and reduce their need to avoid unwanted feelings, thoughts, and memories associated with trauma" with nonjudgmental awareness and acceptance of the present experience and allow for healing and growth to occur (p. 403). Self-compassion also has a direct effect on decreasing the amount of rumination one suffering from distress may face (Neff, 2009).

A current investigation on the effects of mindfulness and PTG was conducted by Hanley et al., (2017) that considered the relationship of dispositional mindfulness and PTG. Dispositional mindfulness is described as the propensity to experience mindful awareness in terms of daily life with openness and nonjudgment. A multidimensional concept, dispositional mindfulness is often is associated with five elements: observing, describing, acting with awareness, nonreacting, and nonjudging (Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006). In terms of PTG, researchers were interested to explore the role mindfulness plays in how one copes with all types of adversity. The study required the 505 college-aged participants to complete questionnaires in an online survey including trauma history (Trauma History Questionnaire), core beliefs (Core Beliefs Inventory), rumination (Event Related Rumination Inventory), posttraumatic stress (Events Scale-Revised), posttraumatic stress disorder (Posttraumatic Growth Inventory), dispositional mindfulness and contemplative practice involvement (Five Facets Mindfulness Questionnaire), and positive reappraisal (Cognitive Emotion Regulation Questionnaire). Nearly half of respondents reported association with a contemplative practice, mainly prayer, yoga, and mindful meditation.

The results suggest that including dispositional mindfulness into established models of PTG "increases the model's explanatory power and that contemplative practice substantially alters relationships between the core PTG variables" (Hanley et al., 2007, p. 532). In general,

more dispositional mindfulness appeared correlated with less PTS and greater PTG. In a more detailed explanation, lower levels of PTS may be due to mindful tendencies of nonjudgment and observance while acting with awareness and mindful inclinations to not react to distressing experiences may be related to greater PTG. Overall, cognitive coping strategies supported by dispositional mindfulness foster healing and recovery after trauma through intentional processing of the trauma with more mindful reappraisal, deliberate rumination, or trying to envision benefit to the event which encourages greater PTG. By having core beliefs disrupted by trauma, dispositional mindfulness paired with deliberate rumination "may transform intrusive posttraumatic cognitive experiences into opportunities for meaningful reflection" (p. 533) rather than avoiding the trauma which may lead to posttraumatic stress.

To demonstrate the long-term influence of mindfulness training on emotional regulation and well-being, a six-year longitudinal study to investigate its impact on coping strategies was conducted by de Vibe et al. (2018). The randomized control group included 288 medical and psychology students in which half of the participants completed an abridged seven-week Mindfulness-Based Stress Program course, similar to the one developed by Kabat-Zinn's, that included information regarding dispositional mindfulness and coping skills. To maintain mindfulness skills, there were four scheduled booster sessions for two years to check-in on mindfulness skills. Upon completed of the six year study, all participants completed the Five Facet Mindfulness Questionnaire and the Ways of Coping Checklist. Upon analysis, de Vibe et al. (2018) reported that participants who received mindfulness training had a higher overall sense of well-being along with greater increase in dispositional mindfulness, problem-focused coping, and lower levels of avoidance-focused coping. The findings demonstrate the validity of

mindfulness training that consists of meditation and insight skills to bring a greater level of awareness, emotional regulation, and well-being to those coping with trauma.

Self-compassion has a profound impact on how traumatic events are analyzed and worked through in one's mind. Self-compassion "entails balanced awareness of one's emotions – the ability to face (rather than avoid) painful thoughts and feelings" (Neff, Rude, & Kirkpatrick, 2007, p. 909) as well as indirectly improving an individual's future outlook (Philip, 2018). Essentially, self-compassion fosters a greater ability to cope with negative emotions (Neff, 2003b; Neff, Kirkpatrick, & Rude, 2007) and promotes adaptive responses to difficult situations (Neff, 2003b). It has been found to predict mental health, particularly by being negatively associated with rumination (Leary et al., 2007), thought suppression, self-criticism, depression, and anxiety (Neff, 2003b). However, conflicting information on actual benefits of self-compassion is found in the literature. While research has confirmed that self-compassion aids in the ruminating process that must take place for PTG to arise, it has also been found to suppress negative thoughts and emotions which, therefore, make it less likely that the rumination and processing of the trauma necessary for PTG to occur (Neff, 2003b; Neff, Kirkpatrick, & Rude, 2007).

One area of concern surrounding mindfulness and characteristics of PTG is the prospect of trauma related symptoms being provoked during mindfulness practice. Although research has found that rumination has a positive impact on PTG, there may be reasons for further investigation when it comes to certain types mindfulness practice. As previously stated, the process of transforming intrusive rumination to a more deliberate rumination has a direct correlation to growth, life satisfaction, and well-being for trauma survivors (Cann et al., 2011). Yet, while the process is not linear, mindful reappraisal is crucial to transforming the rumination

from intrusive rumination to deliberate rumination via "mechanisms of mindfulness, decentering, and positive reappraisal" (Tedeschi & Blevins, 2015, p. 374). A note of caution is warranted because intrusive and deliberate rumination may have questionable implications during more intense and traumatic periods and events. Numerous studies have been conducted on potential adverse effects associated with mindfulness meditation (Lindahl, Fisher, Cooper, Rosen, & Britton (2017); Van Dam et al., 2018; Van Gordon, Shonin, & Garcia-Campayo, 2017). In the study by Lindahl et al. (2017), 59 different kinds of negative meditation experiences that could be difficult, distressing, or functionally impairing were identified. The experiences ranged from changes in mental functioning, the five senses, emotions, bodily functions or physiological processes, motivation or goal-directed behavior, and interpersonal activities or functioning. Sustaining attention on one's internal experience while in a deep meditation can open old wounds. Therefore, careful consideration must be applied when working with overwhelming thoughts and stressful memories in mindful practice (Cann et al., 2011; Tedeschi & Blevins, 2015).

To manage traumatic symptoms, specific guidance and tools must be provided to assist meditators to "stabilize themselves and navigate their symptoms" (Treleaven, 2018, p. 43) so that the trauma does not become overwhelming. For example, perhaps individuals who are not ready for deliberate rumination should be encouraged to focus on an object of meditation until they are able to hold a more calm and steady state of mind and body if troubling thoughts enter their minds. Another possibility is to incorporate other types of meditative interventions such a mindful movement or yoga into a mindfulness-based program which allows one to stay more present with their bodily sensations while moving (Treleaven, 2018). Mindfulness and self-

compassion, in theory and application, create a foundation of social support and strength to encourage PTG.

Social Support

In Buddhist teachings, there is a connection between all people. Nhat Hahn (1998) uses the word "interbeing" to refer to the mutual relationship and interconnection between people, places, and things. In terms of feelings and emotions, happiness and suffering are not personal experiences, they belong to all human beings. These emotions and experiences are part of the human condition in which difficulties are a normal part of life and common to all, particularly in times of confusion, sorrow, and suffering (Gethin, 1998; Neff, 2003b). The Sangha, a community of Buddhist practitioners, is an encouraging network of people that is available to provide a safe, non-judgmental circle for survivors of trauma to share their narrative and explore their traumatic experience which facilitates growth (Gethin, 1998). With mindfulness, people do not try to avoid their painful experiences, thoughts, and feelings; rather, they strive to experience them without being overcome with negative emotions (Neff, 2003b). The Sangha can offer one of the most valuable elements for survivors to "approach, reappraise, and work through their experience" (Janoff-Bulman, 1992, p. 172) with the support of close and caring people that can help make trauma manageable, meaningful, and foster growth.

Self-compassion has been found to be positively associated with social connectedness (Neff, 2003b). People who are more-compassionate have been found to have a better perspective on their challenging situations and were less likely to feel alone in their challenges compared to those who were less compassionate (Leary et al., 2007). As a valuable human strength, self-compassion can summon people to have deeper feelings of kindness and inter-connectedness which helps to find hope and meaning when faced with trauma (Neff, Kirkpatrick, & Rude,

2007). This attitude and desire to make meaning of the trauma, as a member of a group or community with a shared humanity, is a vital part of the path leading to PTG.

Moshe Bensimon (2017) conducted a comprehensive review of the literature surrounding self-compassion as applied to the experience of victimization. Her examination revealed the promising notion of communal compassion in which self-compassion expands to compassion in the community. This "perspective stresses the role of society and community in acceptance, encouragement, faith, forgiveness, goodness, gratitude, and compassion toward victims" (Bensimon, 2017, p. 44). Therefore, just as the Sangha is available to provide compassion and support in the aftermath of trauma, to tell our story in order to make meaning of it, so might a community focused on a collective approach to compassion for those suffering. Just as mindfulness and self-compassion have an influence on social support's role in the cultivation of PTG, they also have a significant capacity to impact religion and spirituality's part in the process of PTG.

Religion and Spirituality

The foundation of a spiritual life and it's expression through religion can have a pivotal role in the development of PTG. According to Gethin (1998), "the Buddhist conception of spiritual training is mental clarity: this helps create the conditions that conduce to seeing the way things truly are" (p. 171). Therefore, no matter what viewpoint is held in terms of one's faith, spirituality and religion bring an element of encouragement and assistance to those suffering from a traumatic experience (Werdel & Wicks, 2012).

Religion has been found to be directly associated with meaning-making after loss. After conducting a study of 169 bereaved college students who experienced a significant loss within the past year, Park (2005) contends that religion has a positive role in the coping process

following difficult and emotional stressors. Her findings indicate that religion is related to meaning-making coping where the individual reinterpreted the loss to find something positive in it which is part of the process of experiencing subjective well-being and stress-related growth.

In a study for a Veterans Administration Medical Center, Ogden et al. (2011) conducted a post-deployment adjustment study to evaluate the effects of religion on combat stress, replicating a similar study evaluating the civilian population (Harris et al., 2008). They evaluated a sample of 110 veterans who had recently returned from combat and experienced trauma during their deployment. Results were gathered from a number of measures including the Combat Exposure Scale, the PTSD Checklist, the PTGI, the Religious Comfort and Strain Scale, the Brief RCOPE (measures positive and negative religious coping), and the Prayer Functions Scale (assesses how individuals incorporated prayer into their coping process). The findings conclude that higher levels of religious comfort and useful religious coping strategies were related to PTG, mirroring the outcome of the Harris et al. (2008) analysis. The results suggest that those finding encouragement in their faith groups use it as a source of comfort which, in turn, plays a central role in developing PTG by uncovering meaning to the trauma, assistance in the application of positive coping strategies, and finding a sense of purpose. However, Ogden et al. (2011) established that those facing internal and external challenges with their spiritual beliefs reported higher levels of PTSD symptoms. This outcome may arise from feelings of alienation, fear, guilt, feeling punished, and religious struggles within their faith communities. The studies provide empirical data and clear indicators to the importance of addressing religious and spiritual implications for trauma survivors. The literature provides clear evidence that mindfulness has positive implications for building characteristics of PTG; therefore, the feasibility of integrating

mindfulness and self-compassion training to boost PTG of combat veterans should be considered.

Mindfulness, Self-Compassion, and Veterans

Serving in the military comes with inherent risks and, regrettably, exposure to trauma can be expected. A reaction to a life-altering psychological "shattering" of core beliefs is often considered an "invisible wound of war" for combat veterans (Janoff-Bulman, 1992). According to the U. S. Department of Veteran's Affairs (VA), Health Care (2018), the number of veterans with PTSD varies by service era:

(1) Operations Iraqi Freedom (OIF) and Enduring Freedom (OEF): About 11-20 out of every 100 veterans (11-20%) who served in OIF or OEF have PTSD in a given year.

(2) Gulf War (Desert Storm): About 12 out of every 100 Gulf War Veterans (12%) have PTSD in a given year.

(3) Vietnam War: About 30 out of every 100 (30%) of Vietnam Veterans have had PTSD in their lifetime.

Due to these statistics, growing research to treat PTSD has sparked an interest in non-traditional therapies. Consequently, mindfulness and self-compassion approaches have become part of mainstream treatment plans for military veterans.

Mindfulness and Self-Compassion Support to Veterans with Posttraumatic Stress Disorder

Thanks to the acknowledgement and awareness PTSD among the ranks of combat veterans, the demand for effective treatments has risen. A broad range of agencies have conducted numerous studies to determine the value of mindfulness-based approaches to treat symptoms of PTSD not only in the general population but also combat veterans (Banks, Newman, & Saleem, 2015).

Dahm et al. (2015) studied the connection of mindfulness and self-compassion with PTSD symptoms and functional disability in the military veteran community. They concluded that mindfulness and self-compassion positively influence a veteran's disability, proposing that both focus areas may have a direct effect on how veterans relate to combat stress. Furthermore, a study by Held, Owens, Monroe, and Chard (2017) established the efficacy of mindfulness skills on PTSD and trauma-related guilt in veterans participating in a Veteran's Affairs Medical Center PTSD Residential Rehabilitation Program. Their research concluded that by increasing mindfulness skills - such as describing, acting with awareness, and accepting whatever arises without judgement - trauma-related guilt was significantly reduced.

Various types mindfulness meditation have been studied by the VA and other agencies such as MBSR, meditation, yoga, and mantra meditation. The research was undertaken to establish the efficacy of mindfulness meditation with providing veterans with tools to better cope with painful memories, thoughts, emotions and feelings; to lessen physical health symptoms such as increased blood pressure and heart rate, fatigue, muscle tension, nausea, joint pain, headaches, back pain or other types of pain; and to improve quality of life with family and friends (Dahm et al., 2015; Department of Veteran's Affairs, 2002; Meyer et al., 2019). The meditative aspects of mindfulness have been studied and successfully incorporated into veteran therapies diagnosed with PTSD, and reaped positive results (Dahm et al., 2015; Kearny, McDermott, Malte, Martinez, & Simpson, 2013; Meyer et al., 2019; Stephenson, Simpson, Martinez, & Kearney, 2017). Self-compassion has been found to predict PTSD recovery (Meyer et al., 2019). One of the unquestionable benefits of mindfulness meditation is an approach that puts the path to well-being in the hands of veterans to calm their minds through self-treatment, without the need for individual or group therapy, mental health services, or medication. For those veterans who are

unable to bounce back from adversity and who suffer with lingering symptoms of PTSD, there is promising news when it comes to redefining their lives and experiencing posttraumatic growth.

Posttraumatic Growth in Veterans

Despite the many challenges that arise from participating in combat, most service members who have returned home after combat deployments do not have substantial negative mental health issues (Bonanno et al., 2012). A longitudinal study by Bonanno et al. (2012) analyzed United States military personnel deployed either once or numerous times to Afghanistan and Iraq. Their findings concluded that 83% of service members exhibited resilient pre-to-post deployment trajectories whether from a single or multiple deployments. In general, younger veterans were more likely to experience growth than older veterans (Pietrzak et al., 2010).

In a study of PTG in 30 former Vietnam Prisoners of War (Feder et al., 2008), researchers confirmed that it is "possible to achieve long-lasting personal growth even in the face of prolonged extreme adversity" (p. 359). The Prisoner of Wars reported moderate levels of PTG via self-reported questionnaires including the PTGI, the Life-Orientation Test-Revised (measures dispositional optimism), the RCOPE (measures religious coping), the MOS Social Support Survey (measures perceived availability of emotional and informational support), and the Purpose in Life Scale (measures a person's sense of purpose and direction in life). The findings suggest that the more severe stress, measured in duration of captivity, was correlated with "significantly higher posttraumatic growth" (p. 365). Clear linkage was found between positive emotions and religion as instruments of constructive coping with their stress along with increased spirituality which, consequently, fostered PTG. Of particular interest was the substantial relationship between PTG and optimism. This relationship could possibly arise from

optimism being vital to positively reframing their POW experience and supporting the process of making meaning of their adversity. During their experience as POWs, a correlation was found between the importance of social support and optimism. However, social support was not associated with PTG which perhaps confirms the need for social support over time as a predictor of maintaining PTG (Tedeschi & Calhoun, 2004).

Research by Benetato (2011) explored PTG in Operation Enduring Freedom and Operation Iraqi Freedom amputees. Specifically, the study of 210 veterans examined the relationship between social support, rumination, length of time since amputation, and PTG. The analysis involved two types of social support experienced by the participants - instrumental (i.e. tangible goods or services) and emotional support (i.e. family, friends, therapy, or support group). The findings revealed that the relationship between PTG and rumination was moderate, while the connection between PTG and social support was small. The results suggest that the participants benefited to examining their life assumptions or core beliefs in relation to their traumatic experience in which their amputation carries meaning and gives them a new worldview. Cognitive processing plays a pivotal role in this process because through active and deliberate rumination, making meaning of the trauma can be explored and, with time, PTG may occur. In terms of social support, Benetato (2011) concludes that confiding in healthcare providers, friends, family, and other supportive outlets can positively affect PTG by having a platform to share one's story and associated struggles after such life-changing experiences. This supportive network allows for the development of trusting relationships where one can be vulnerable during such difficult and emotionally draining times.

Moran, Burker, and Schmidt (2013) were curious to determine proven therapies and treatments techniques that might be presented to rehabilitation counselors as recommendations to

help "recognize and facilitate PTG in veteran clients post-trauma" (p. 34). Their results, centering on Dialectical Behavior Therapy (DBT) and mindfulness, pointed to the efficacy of mindfulness to support the treatment of PTSD and foster the development of PTG by supporting the foundation of DBT which emphasizes the concept of wholeness, interrelatedness, and change as fundamental characteristics of reality. The researchers reason that the relationship of DBT and mindfulness promotes a supportive approach to therapy and draws on interdependence and social support which promotes PTG. Therefore, this bond encourages the ability to nurture the active and deliberate rumination process as well as positive coping strategies, both needed for a revision of life narratives necessary to promote and encourage PTG (Tedeschi & Calhoun, 2006).

A number of published studies acknowledge the pervasiveness of PTG within military veterans. Research conducted by Hijazi et al. (2015) investigated the prevalence and predictors of PTG in U. S. combat veterans from various wars ranging from Vietnam to Afghanistan. Participants were referred to the study by the Veterans Administration and included 167 treatment-seeking combat veterans with PTSD, specifically 7 females and 160 males. The veterans completed various personality and psychological functioning measures including the PTGI-SF, the Combat Experiences Scale, the PTSD Checklist-Specific Version, the Wrongdoing portion of the Trauma Related Guilt Inventory, the Cognitive Flexibility Scale, and the State Trait Anger Expression Inventory. The findings determined that about one-third of the sample reported at least a moderate degree of PTG in one or more of the of PTG dimensions of growth. Appreciation of life, the most recognized dimension of PTG, was positively reported in 69% of the sample, followed by personal strength. Researchers concluded that higher levels of anger were associated with lower levels of PTG. Of particular interest, Hijazi et al. (2015) noted that

the amount of perceived PTG in the study was lower than in other samples, but hypothesized that their findings might be atypical due to the veterans' need for continued and current treatment.

Tsai et al. (2016) assessed PTG in 1,838 U. S. military veterans over a 2-year period and examined sociodemographic, military, trauma, medical, and psychosocial predictors of PTG. After analyzing data from a web-based survey, researchers found that more than half of the participants (59%) reported moderate or greater PTG in terms of their worst traumatic event at the initial assessment and maintained a consistent level of PTG two years later. The results of the self-reported survey found that a number of factors predicted consistence maintenance or increased PTG including medical conditions, feelings of purpose in life, altruism, gratitude, intrinsic religiosity, and active lifestyle (particularly reading). Interestingly, the researchers stated that their results showed that altruism can "increase empathy and help veterans aspire for greater meaning and aspirations in their lives, which can in turn help foster PTG" (p. 17). Notably, over a third of the participants either had a moderate or greater decline in PTG which suggests that positive psychological changes due to trauma may not always be sustainable.

For those struggling with PTSD, a study of a representative sample of U. S. veterans determined that 50% of all veterans and 72% of veterans who screened positive for PTSD reported a moderate or greater degree of PTG (Tsai & Pietrzak, 2017). Unfortunately, this same study concluded that the development, consistency, and maintenance of PTG changed with time for almost 90% of the sample. The study identified 74% of the veterans rated "Low and Decreasing PTG" whereas 12% displayed "Consistently Moderate PTG" and 14% reported "High and Increasing PTG." Therefore, for some veterans, PTG may be not be sustained over time, while for others PTG may continue to develop. The researchers concluded that significant psychosocial characteristics predicted the development and maintenance of PTG. In particular,

"veterans who scored higher on measures of purpose in life, spirituality, gratitude, and social support were more likely to have a High and Increasing PTG trajectory" (p. 489). Overall, the study found that those with PTG reported better cognitive functioning and better health than those without PTG. The positive application of mindfulness and self-compassion in the support of veterans struggling with PTSD and the interest in the prevalence of PTG in the veteran population presents an opportunity to specifically consider developing or strengthening characteristics of PTG to mitigate future suffering due to combat.

Discussion

Although the Army and Marines have considered the possible applications of resilience training as part of their fitness regimes (Brewer, 2014; Torres-Cortes, 2010), the notion that the U. S. Government and U. S. Military are contemplating the possible impacts of posttraumatic growth within its ranks is a pleasant surprise. In May 2018, the Bill Mulder and Ryan Larkin Posttraumatic Growth Act (2018) was introduced to Congress and directs the Secretary of Veterans Affairs to conduct a 2-year pilot program on PTG to highlight and explore effective alternative treatments for veterans' mental health. This noteworthy legislation is the first step to formalizing and accepting the concept of PTG for combat veterans.

Meanwhile, Tedeschi and McNally (2011) have been part of the ongoing development of the Comprehensive Soldier Fitness program that the U. S. Army is developing and testing to determine the efficacy of training veterans to cultivate posttraumatic growth. The objective of the program's posttraumatic component is to provide "skills training to foster resilience prior to deployment" (p. 21) and to lay the foundation for posttraumatic growth following a soldier's exposure to traumatic stressors. The aspects of the training include: (1) understanding traumatic response as a precursor to posttraumatic growth by acknowledging that "basic physiological and

psychological responses are normal reactions to the experience of combat" (p. 21); (2) emotional

regulation enhancement to encourage "reflective rumination in contrast to brooding" (p. 22); (3)

constructive self-disclosure where the soldier can "tell the story of the trauma" (p. 22); (4)

creating a trauma narrative with posttraumatic growth domains such as establishing new goals

and processes of living; and (5) developing life principles that are robust to challenges which

enhance resilience. All five components of the training involve cultivating the characteristics of

PTG previously discussed by creating the space and tools to thrive. Other military services are

also considering the role of PTG.

To address the ongoing incidents of suicide in their ranks, the Marines recently

"weaponized" the concept of "Post Traumatic Winning" with a three-hour long mandatory

mental health training class with additional online podcasts, studies, blogs, and a Facebook page.

The feedback of the mandatory training was overwhelming positive and none of the thousands of

Marines sitting through the presentation fell asleep, an unprecedented feat in itself according to

the 2d Marine Division Commander (Tim, 2019).

Non-profits are also beginning to address posttraumatic growth. In 2014, Boulder Crest

Retreat began to work on a new and innovative program addressing the shortcomings of

veterans' mental health to ensure they could thrive at home. "Warrior PATH" became the first-

ever program intended to cultivate and facilitate posttraumatic growth within the military and

veteran community. Dr. Tedeschi, while continuing collaboration with the U. S. Army, is also

part of the small team evaluating the effectiveness of the alternative program in the hopes of it

becoming an evidenced-based standard to help combat veterans overcome their struggles

(Boulder Crest Institute, 2018).

The literature on PTG, mindfulness, and self-compassion begs the question: What aspects of mindfulness and self-compassion practices would be most beneficial in educating - either before or after combat deployments - service members to foster characteristics of PTG? Can the foundation of Buddhism and the application of a mindfulness practice facilitate and bolster the development of a motivated military mindset to make meaning of traumatic events? Studies in this thesis support the notion that mindfulness can cultivate the development of characteristics of PTG and can play a significant role in either preparing or encouraging military service members to thrive in the aftermath adversity.

In terms of personality characteristics and positive emotions, mindfulness and self-compassion are grounding forces that nurture a more present-state of living that allows one to promote the self-regulation of emotions by being more accepting and engaging (Vujanovic et al., 2011). Mindfulness and self-compassion build a sense of gratitude, hope, and optimism which raises one's ability to heal and thrive. This research further supports previous studies that dispositional gratitude, focusing and appreciating positive aspects of life, has both interpersonal and emotional benefits (Wood, 2010). Veterans who have a grateful outlook may view their traumatic experiences as "second chances" and opportunities to grow and better their lives. Self-discrepancy can be an extremely motivating factor to make meaning of trauma when it comes to a military mindset which is molded and intended to "strive for standards" and "order" (Leary et al., 2007). Effort and perseverance have been positively associated with PTG development in United States veterans (Pietrzak et al., 2010). Self-improvement motivation has been shown to be a direct result of the safe and non-judgmental nature of self-compassion (Breines & Chen, 2012). As discussed, self-compassion is linked to positive psychological strengths and emotional intelligence (Neff, 2003a) which are necessary to overcome feelings of guilt due to moral

struggles associated with combat operations or survivor's guilt because those with self-compassion are less likely to suppress negative thoughts and emotions (Neff, 2003a) and are more likely to acknowledge that their emotions are valid and important (Leary et al, 2007).

Mindfulness and self-compassion support the cognitive processing required for posttraumatic growth. Cognitive factors, such as coping and processing thoughts and feelings associated with trauma, are core aspects to experiencing PTG. The nature of the military, whether it be the extremely masculine environment or the constant stress that becomes second-nature to the body and mind, calm or insight meditation may not always be the most accepted or practical part of mindfulness and self-compassion. However, mindful skills such as dispositional mindfulness (Hanley et al., 2017) can be a powerful addition to either general military training or specific PTG training that educates service members how to experience daily life with awareness, openness, and nonjudgement. Rather than avoiding difficult thoughts and feelings associated to trauma, deliberate re-examination of troubling experiences via dispositional mindfulness can lead to deliberate rumination and meaningful reflection that is necessary for PTG to occur. The longitudinal study of dispositional mindfulness by de Vibe et al. (2018) may be a valid option in terms of conducting pilot studies within military units and VA hospitals. Focusing on the foundations of self-compassion, the aspect of shared humanity in particular, can also be a relative talking point during training on skills to support oneself when coping with negative emotions and intrusive rumination (Neff, 2003a).

Social support provides a valuable component of experiencing PTG because it gives an avenue for veterans to share their stories of trauma to an understanding audience, one that has faced similar challenges and understands the extreme emotions and turmoil that arises from combat or military service. The spirit de corps of military life, as well as the benefits of

mindfulness and self-compassion, can help service members manage and grow from their trauma. Research found that veterans of combat operations in Afghanistan and Iraq have experienced more growth if there were greater perceptions of unit member support (Pietrzak et al., 2010). As in Buddhism where all people are connected, a military unit requires all service members to work together as one team. By taking a creative approach to the notion of interconnectedness, establishing types of "Military Sanghas" can be regarded as possible centerpieces of safe, non-judgmental circles for survivors to share their stories and make meaning of their trauma. It seems plausible that self-compassion training could help veterans gain a broader perspective to looking at their trauma by emphasizing their common humanity, especially through the lens of their "Band of Brothers" mentality that is essential to the lifestyle and mission (Leary et al., 2007). With self-compassion, this circle of survivors experience a deeper sense of connectedness and kindness that can be nurtured and "build a bridge" for combat veterans to find hope and meaning from their suffering.

Religion and spirituality may provide beneficial ways for veterans to make sense of their trauma, to make meaning of their experience which leads to a greater sense of purpose. Vietnam POWs (Feder et al., 2008) leaned on their religion and increased their degree of spirituality to help them cope which fostered PTG. In today's military units, religious or faith-based study groups are often formed by individuals. These groups may be interested in sharing aspects or themes of Buddhism to lay the foundation of PTG and provide a safe space for social support to take place which will prepare veterans to flourish in the aftermath combat trauma or support those who are currently struggling. Similar information could be presented in military schools which offer a platform to initially plant the seed and educate recruits with the theory of Buddhist principles and reinforce the concept throughout their military careers. With a balanced approach

to the addition of mindfulness and self-compassion into military training, there is reason to be hopeful that combat veterans struggling with PTSD or similar qualities of trauma can experience posttraumatic growth.

Conclusion

While it had been established that the overwhelming number of U. S. service members are resilient to trauma arising from combat, there are still too many suffering from posttraumatic stress disorder and linger effects from their military experiences. Although research on posttraumatic growth is in the preliminary stages of study, the notion of incorporating mindfulness and self-compassion into the mindset of the military organization may have far-reaching implications in terms of fostering characteristics of posttraumatic growth which can lead to elevating the suffering that arises in the aftermath of military trauma. The current findings in this thesis may provide the groundwork for the application of mindfulness practices to encourage and promote posttraumatic growth within the United States military population.

References

American Psychiatric Association. (1980). *Diagnostic and statistical manual of mental disorder (3d ed)*. Washington, DC: Author.

American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders (4th ed)*. Washington, DC: Author.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders (4th ed., text rev.)*. Washington, DC: Author.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders (5th ed)*. Washington, DC: Author.

American Psychological Association. (2014). The road to resilience. Washington, DC: American Psychological Association. Retrieved from http://www.apa.org/helpcenter/road-resilience.aspx

American Psychology Association, edited by S. N. Gold. (2017). *Handbook of Trauma Psychology: Trauma Practice*. Washington, DC: American Psychological Association.

Baer, R. A. (2003). Mindfulness training as a clinical intervention: A conceptual and empirical review. *Clinical Psychology: Science and Practice, 10*, 125-143.

Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J., & Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment, 13*, 27-45. http://dx.doi.org/10.1177/1073191105283504

Banks, K., Newman, E., & Saleen, J. (2015). An overview of the research on mindfulness-based interventions for treating symptoms of posttraumatic stress disorder: A systematic review. *Journal of Clinical Psychology, 71*(10), 935-963. DOI: 10.1002/jcip.22200

Benetato, B. B. (2011). Posttraumatic growth among Operation Enduring Freedom and

      Operation Iraqi Freedom amputees. *Journal of Nursing Scholarship, 42*(4), 412- 420.

Bensimon, M. (2017). Victimization in light of self-compassion: Development toward communal

      compassion. *Aggression and Violent Behavior, 25*, 44-51.

      http://dx.doi.org/10.1016/j.avb.2017.06.002

Bill Mulder and Ryan Larkin Posttraumatic Growth Act of 2018, H.R. 5986, 115th Cong. (2018).

Bishop, S. R., Lau, M., Shapiro, S., Carlson, L., Segal, V., Abbey, S.,…Devins, G. (2004).

      Mindfulness: A proposed operational definition. *Clinical Psychology: Science and*

      Practice, 11, 230-24. https://doi.org/10.1093/clipsy.bph077

Bonanno, G. A. (2004). Loss, trauma, and human resilience: Have we underestimated the human

      capacity to thrive after extremely aversive events? *American Psychology, 59*(1), 20-28.

Bonanno, G. A., Mancini, A., Horton, J., Powell, T., LeardMann, C., Boyko, E.,… & Smith, T.

      (2012). Trajectories of trauma symptoms and resilience in deployed US military service

      members: Prospective cohort study. *British Journal of Psychiatry, 200,* 317-323.

      doi.org/10.1192/bjp.bp.111.096552

Boulder Crest Institute. (2018). Warrior Path. Retrieved from

      https://www.bouldercrestinstitute.org/research-evaluation-1

Breines, J. G., & Chen, S. (2012). Self-compassion increases self-improvement motivation.

      Personality and Social Psychology Bulletin, 38(9), 1133-1143.

Brewer, J. (2014). Mindfulness in the military. *American Journal of Psychiatry, 17*(8), 803-806.

Brooks, M., Graham-Kevan, N., Robinson, S. J., & Lowe, M. (2017). Rumination, event-

      centrality, and perceived control as predictors or post-traumatic growth and distress: The

cognitive growth and stress model. *British Journal of Clinical Psychology, 56*, 286-302.

DOI: 10.1111/bjc.12138

Brooks, M., Graham-Kevan, N., Robinson, S. J., & Lowe, M. (2019). Trauma characteristics and

posttraumatic growth: The mediating role of avoidance coping, intrusive thoughts, and

social support. *Psychological Trauma: Theory, Research, Practice, and Policy, 11*(2),

232-238. http://dx.doi.org/10.1037/tra00003722

Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its role in

psychological well-being. *Journal of Personality and Social Psychology, 84*(4), 822-848.

Calhoun, L. G., Cann, A., Tedeschi, R. G., & McMillan, J. (2000). A correlational test of the

relationship between posttraumatic growth, religion, and cognitive processing. *Journal of

Traumatic Stress, 13*(3), 521-527.

Calhoun, L. G., & Tedeschi, R. G. (2006). The foundations of posttraumatic growth: An

extended framework. In L. G. Calhoun & R. G. Tedeschi (Eds), *Handbook of

posttraumatic growth: Research and practice* (p. 3 - 23). Mahwah, NJ: Erlbaum.

Cann, A., Calhoun, L. G., Tedeschi, R. G., Taku, K., Vishnevsky, T., Triplett, K. N., &

Danhauer, S. C. (2010). A short form of the posttraumatic growth inventory. *Anxiety,

Stress & Coping, 23*, 127-137. doi: 10.1080/10615800903094273

Cann, A., Calhoun, L. G., Tedeschi, R. G., Triplett, K. N., Vishnevsky, T., & Lindstrom, C.

(2011). Assessing posttraumatic cognition process: The event related rumination

inventory. *Anxiety, Stress, & Coping, 24*(2), 137-156.

Cohn, M., Fredrickson, B., Brown, S., Mikels, J., & Conway, A. (2009). Happiness unpacked:

Positive emotions increase life satisfaction by building resilience. *Emotion, 9*(3), 361–

368. doi: 10.1037/a0015952

Dahm, K. A., Meyer, E. C., Neff, K. D., Kimbrel, N. A., Gulliver, S. B., & Morissette, S. B. (2015). Mindfulness, self-compassion, posttraumatic stress disorder symptoms, and functional disability in U.S. Iraq and Afghanistan war veterans. *Journal of Traumatic Stress, 28,* 460-464.

Department of Veterans Affairs. (2002). Post-traumatic stress disorder: Implications for primary care. *Independent study course*. Department of Veterans Affairs Employee Education System and The National Center for PTSD.

De Vibe, M., Solhaug, I., Rosenvinge, J. H., Tyssen, R., Hanley, A., & Garland, E. (2018). Six-year positive effects of a mindfulness-based intervention on mindfulness, coping, and well-being in medical and psychology students; Results from a randomized controlled group. *PLoS ONE, 13*(4),1-17. https://doi.org/10.1371/journal.pone.0196058

Dietrich, A. (2012). Managing trauma symptoms. In C. R. Figley (Ed), *Encyclopedia of Trauma: An Interdisciplinary Guide* (pp. 358-362). Thousand Oaks, CA: SAGE.

Feder, A., Southwick, S. M., Goetz, R. R., Wang, Y., Alonso, A., Smith, B. W.,… & Vythilingam, M. (2008). Posttraumatic growth in former Vietnam prisoners of war. *Psychiatry, 71*(4), 359-370.

Feldman, C. (2017). *Boundless heart: The Buddha's path of kindness, compassion, joy, and equanimity.* Boulder, CO: Shambhala Publications, Inc.

Frederickson, B. (2001). The role of positive emotions in positive psychology: The broaden and build theory of positive emotions. *The American Psychologist, 56*, 218-226.

Gethin, R. (1998). *The foundations of Buddhism*. New York, NY: Oxford Press.

Germer, C. K. (2009). *The mindful path to self-compassion: Freeing yourself from destructive thoughts and emotions.* New York, NY: The Guilford Press.

Goldstein, J., & Kornfield, J. (2001). *Seeking the heart of wisdom: The path of insight meditation*. Boston, MA: Shambhala Classics.

Goodman, R. D., & Calderon, A. M. (2012). The use of mindfulness in trauma counseling. *Journal of Mental Health Counseling, 34*(3), 254-268.

Graham, L. (2013). *Bouncing back: Rewiring your brain for maximum resilience and well-being*. Novato: CA: New World Library.

Gunaratana, B. H. (2003). *Eight mindful steps to happiness*. Somerville, MA: Wisdom Publications.

Hanley, A., Garland, E., & Tedeschi, R. G. (2017). Relating dispositional mindfulness, contemplative practice, and positive growth reappraisal with posttraumatic cognitive coping, stress, and growth. *Psychological Trauma, Theory, Research, Practice, and Policy, 9*(5), 526-536.

Harris, J. I., Erbes, C. R., Engdahl, B. E., Olson, R. H. A., Winskowski, A. M., & McMahill. (2008). Christian religious functioning and trauma outcomes. *Journal of Clinical Psychology, 64,* 17-29. doi: 10.1002/jclp.20427

Held, P., Owens, G. P., Monroe, J. R., & Chard, K. M. (2017). Increased mindfulness skills as predictors of reduced trauma-related guilt in treatment-seeking veterans. *Journal of Traumatic Stress, 30,* 425-431. DOI: 10.1002/jts.22209

Hijazi, A. M., Keith, J. A., & O'Brien, C. (2015). Predictors of posttraumatic growth in a multiwar sample of U. S. combat veterans. *Peace and Conflict: Journal of Peace Psychology, 21*(3), 395-408. http://dx.doi.org/10.1037/pac/0000077

Hodge, D. R. (2001). Spiritual assessment: A review of major qualitative methods and a new framework for assessing spirituality. *Social Work, 46*, 203-214.

Im, S., & Follette, V. (2016). Rumination and mindfulness related to multiple types of trauma

    exposure. *Translational Issues in Psychological Science, 2*(4), 395-407.

    http://dx.doi.oeg/10.1037/tsp0000090

Janoff-Bulman, R. (1992). *Shattered assumptions: Towards a new psychology of trauma*. New

    York, NY: Free Press.

Janoff-Bulman, R. (2006). Schema-change perspective on posttraumatic growth. In L. G.

    Calhoun & R. G. Tedeschi (Eds), *Handbook of posttraumatic growth: Research and*

    practice (p. 81-99). Mahwah, NJ: Erlbaum.

Kabat-Zinn, J. (2003). Mindfulness-based intervention in context: Past, present, and future.

    Clinical Psychology: Science and Practice, 10, 144-156.

Kabat-Zinn, J. (1994). *Full catastrophe living*. New York, NY: Bantam Books.

Kaurin, A., Schonfelder, S., & Wessa, M. (2018). Self-compassion buffers the link between self-

    criticism and depression in trauma-exposed firefights. *Journal of Counseling Psychology,*

    65(4), 453-462. http://dx.doi.org/10.1037/cou0000275

Kearny, D., McDermott, K., Malte, C., Martinez, M., & Simpson, T. (2013). Effects of

    participation in a mindfulness program for veterans with posttraumatic stress disorder: A

    randomized controlled pilot study. *Journal of Clinical Psychology, 69*(1), 14-27.

Khusid, M. & Vythilingam, M. (2016). The emerging role of mindfulness meditation as effective

    self-management strategy, part 1: Clinical implications for depression, post-traumatic

    stress disorder, and anxiety. *Military Medicine, 181*(9), 961-968.

Kunz, S., Joseph, S., Geyh, S., & Peter, C. (2018). Coping and posttraumatic growth: A

    longitudinal comparison of two alternative views. *Rehabilitation Psychology, 63*(2), 240-

    249.

Larson, S. E., & Berenbaum, H. (2015). Are specific emotion regulation strategies differentially associated with posttraumatic growth versus stress? *Journal of Aggression, Maltreatment & Trauma, 24*, 794-808. DOI: 10.1080/10926771.2015.1062451

Leary, M. R., Tate, E. B., Adams, C. E., Allen, A. B., & Hancock, J. (2007). Self-compassion and reactions to unpleasant self-relevant events: The implications of treating oneself kindly. *Journal of Personality and Social Psychology, 92*(5), 887-904.

Levine, S. Z., Laufer, A., Stein, E., Hamama-Raz, Y., & Solomon, Z. (2009). Examining the relationship between resilience and posttraumatic growth. *Journal of Trauma and Stress, 22*(4), 282-286.

Lindahl, J. R., Fisher, N. E., Cooper, D. J., Rosen, R. K., & Britton, W. B. (2017). The variety of contemplative experience: A mixed-method study of meditation-related challenges in Western Buddhists. *PLoS ONE, 12*(5), 1-38. https://doi.org/10.1371/journal.pone.0176239

Lindstrom, C. M, Cann, A., Calhoun, L. G., & Tedeschi, R. G. (2013). The relationship of core belief challenges, rumination, disclosure, and sociocultural elements to posttraumatic growth. *Psychological Trauma: Theory, Research, Practice, and Policy, 5*(1), 50-55. DOI: 10.1037/a0022030

Lindsay, E. K., Greco, C. M., Brown, K. W., Smyth, J. M., Chin, B., Young, S.,…& Creswell, J. D. (2018). How mindfulness training promotes positive emotions: Dismantling acceptance skills training in two randomized controlled trials. *Journal of Personality and Social Psychology: Attitudes and Social Cognition, 115*(6), 944-973. http://dx.doi.org/10.1037/pspa0000134

Linley, P. A. & Joseph, S. (2004). Positive change following trauma and adversity: A review. *Journal of Traumatic Stress, 17*(1), 11-21.

Meyer, E. C., Szabo, Y. Z., Frankfurt, S. B., Kimbrel, N. A., DeBeer, B. B., & Morissette, S. B. (2019). Predictors of recovery from post-deployment posttraumatic stress disorder symptoms in war veterans: The contributions of psychological flexibility, mindfulness, and self-compassion. *Behavior Research and Therapy, 114*, 7-14. https://doi.org/10.1016/j.brat.2019.01.002

Moran, S., Schmidt, J., & Burker, E. J. (2013). Posttraumatic growth and posttraumatic stress disorder in veterans. *Journal of Rehabilitation, 79*(2), p. 34-43.

Neff, K. D. (2003a). Self-compassion: An alternative conceptualization of a healthy attitude toward oneself. *Self and Identity, 2*, 85-101.

Neff, K. D. (2003b). The development and validation of a scale to measure self-compassion. *Self and Identity, 2,* 223-250.

Neff, K. D., Hseih, Y., & Dejitthirat, K. (2005). Self-compassion, achievement goals, and coping with academic failure. *Self and Identity, 4*, 263-287.

Neff, K. D., Kirkpatrick, K. L., & Rude, S. S. (2007). Self-compassion and adaptive psychological functioning. *Journal of Research in Personality, 41*(1), 139-154.

Neff, K. D., Rude, S. S., & Kirkpatrick, K. L. (2007). An examination of self-compassion in relation to positive psychological functioning and personality traits. *Journal of Research in Personality, 41*(4), 908-916. https://doi.org/10.1016/j.jrp.2006.08.002

Neff, K. D. (2009). The role of self-compassion in development: A healthier way to relate to oneself. *Human Development, 52*, 211-214.

Neff, K. D. (2011). Self-compassion, self-esteem, and well-being. *Social and Personality Psychology Compass, 5*(1), 1-12.

Neff, K. D., & Pommier, E. (2012). The relationship between self-compassion and other-focused concern among college undergraduates, community adults, and practicing meditators. *Self and Identity*. DOI: 10.1080/15298868.2011.649546

Neff, K. D., & Germer, C. K. (2013). Self-compassion in clinical practice. *Journal of Clinical Psychology, 69*(8), 856-867.

Niemiec, R. (2014). *Mindfulness character strengths: A practical guide to flourishing*. Boston, MA: Hogrefe Publishing.

Nhat Hahn, T. (1998). *The heart of the Buddha's teaching: Transforming suffering into peace, joy, and liberation*. New York, NY: Harmony Books.

Ogden, H., Harris, J. I., Erbes, C. R., Engdahl, B. E., Olson, R. H. A., Winskowski, A. M., & McMahill, J. (2011). Religious functioning and trauma outcomes among combat veterans. *Counselling and Spirituality / Counseling et spiritualité, 30*(1), 71-89.

Pargament, K. I., Koenig, H. G., Tarakeshwar, N., & Hahn, J. (2004). Religious coping methods as predictors of psychological, physical, and spiritual outcomes among medically ill elderly patients: A two-year longitudinal study. *Journal of Health Psychology, 9*, 713-730.

Park, C. L. (2005). Religion as a meaning-making framework in coping with life stress. Journal of *Social Issues, 61*, 707-729.

Park, N., Peterson, C., & Seligman, M. E. P. (2004). Strengths of character and well-being. *Journal of Social and Clinical Psychology, 23*(5), 603-619.

Park, N., & Peterson, C. (2009). Character strengths: Research and practice. *Journal of College and Character, 10*(4), 1-10. doi: 10.2202/1940-1639.1042

Perera, S. & Frazier, P. A. (2013). Changes in religiosity and spirituality following potentially traumatic events. *Counseling Psychology Quarterly, 26*(1), 26-38. http://dx.doi.org/10.1080/09515070.2012.728883

Peterson, C., Ruch, W., Beermann, U., Park, N., & Seligman M. E. P. (2007). Strengths of character, orientations to happiness, and life satisfaction. *The Journal of Positive Psychology, 2*(3), 149-156.

Peterson, C., Park, N., Pole, N., D'Andrea, W., & Seligman, M. E. (2008). Strengths of character and posttraumatic growth. *Journal of Traumatic Stress, 21*, 214-217. DOI: 10.1002/jts.20332

Philips, W. J. (2018). Future-outlook mediated the association between self-compassion and well-being. *Personality and Individual Differences, 135*, 143-148. https://doi.org/10.1016/j.paid.2018.07.006

Pietrzak, R. H., Goldstein, M. B., Malley, J. C., Rivers, A. J., Johnson, D. C., Morgan, C. A. III, & Southwick, S. M. (2010). Posttraumatic growth in veterans of Operations Enduring Freedom and Iraqi Freedom. *Journal of Affective Disorders, 126*(1-2), 230-235. http://dx.doi.org/10.1016/j.jad.2010.03.021

Prati, G., & Pietrantoni, L. (2009). Optimism, social support, and coping strategies as factors contributing to posttraumatic growth: A meta-analysis. *Journal of Loss and Trauma, 14*, 364-388. doi: 10.1080/15325020902724271

Rahula, W. (1959). *What the Buddha taught us.* New York, NY: Grove Press.

Roepke, A. M. & Seligman, M. E. P. (2015). Doors opening: A mechanism for growth after

adversity. *The Journal of Positive Psychology, 10*(2), 107-115.

http://dx.doi.org/10.1080/17439760.2014.913669

Schultz, J. M., Taliman, B. A., & Altmaier, E. M. (2010). Pathways to posttraumatic growth: The

contributions of forgiveness and importance of religion and spirituality. *Psychology of

Religion and Spirituality, 2*(2), 104-114. DOI: 10.1037/a0018454

Seigel, D. J. (2010). *Mindsight: The new science of personal transformation*. New York, NY:

Bantam Books.

Seligman, M. E. P. (2006). *Learned optimism: How to change your mind and your life*. New

York, NY: Random House, Inc.

Shaw, A., Joseph, A., & Linley, P. A. (2005), Religion, spirituality, and posttraumatic growth: A

systematic review. *Mental Health, Religion, & Culture, 8*(1), 1-11.

Shuwiekh, H., Kira, I., & Ashby, J. (2018). What are the personality and trauma dynamics that

contribute to posttraumatic growth? *International Journal of Stress Management, 25*(2),

181-194.

Southwick, S. M., & Charney, D. S. (2012). *Resilience: the science of mastering life's greatest

challenges.* Boston, MA: Cambridge University Press.

Southwick, S. M., Sippel, S., Krystal, J., Charney, D., Mayes, L., & Pietrzak, R. H. (2016). Why

are some individuals more resilient than others: The role of social support? *World

Psychiatry 15* (1), 77–79.

Steinberg, C. A., & Eisner, D. A. (2015). Mindfulness-based interventions for veterans with

posttraumatic stress disorder. *International Journal of Behavioral Consultations and

Therapy, 9(4), 11- 17.*

Stephenson, K., Simpson, T., Martinez, M., & Kearney, D. (2017). Changes in mindfulness and posttraumatic stress disorder symptoms among veterans enrolled in mindfulness-based stress reduction. *Journal of Clinical Psychology, 73*(3), 201-217.

Tang, Y., Holzel, B. K., & Posner, M. I. (2015). The neuroscience of mindfulness meditation. *Nature Reviews/Neuroscience, 16*, 213-222. doi:10.1038/nm3916.

Tedeschi, R. G., & Calhoun, L. G. (1995). *Trauma & transformation: Growing in the aftermath of suffering.* Thousand Oaks, CA: Sage.

Tedeschi, R. G., & Calhoun, L. G. (1996). The posttraumatic growth inventory: Measuring the positive legacy of trauma. *Journal of Trauma and Stress, 9*(3), 455–471.

Tedeschi, R. G., & Calhoun, L.G. (2004). Posttraumatic growth: Conceptual foundations and empirical evidence. *Psychological Inquiry, 15*(1), 1-18.
doi: 10.1207/s15327965pli1501_01

Tedeschi, R. G. & Calhoun, L. G. (2006). Expert companions: Posttraumatic growth in clinical practice. In L. G. Calhoun & R. G. Tedeschi (Eds), *Handbook of posttraumatic growth: Research and practice* (p. 291-310). Mahwah, NJ: Erlbaum.

Tedeschi, R. G., Calhoun, L. G., & Cann, A. (2007). Evaluating resource gain: Understanding and misunderstanding posttraumatic growth. *Applied Psychology: An International Review, 56*(3), 396-406.

Tedeschi, R. G. & McNally, R. J. (2011). Can we facilitate posttraumatic growth in combat veterans? *American Psychologist, 66*(1), 19-24.

Tedeschi, R. G., & Blevins, C. (2015). From mindfulness to meaning: Implications for the theory of posttraumatic growth. *Psychological Inquiry, 26*, 373-376.

Tim, B. (2019). Post traumatic winning hits the 2d Marine Division: The response is beyond

overwhelming. Retrieved from:

https://thefregmedia.com/2019/01/19/military/patbristol70/post-trau...e-2nd-marine-

division-the-response-is-beyond-overwhlming/#comments

Torres-Cortes, M. (2010). Army master resilience training course provides valued instruction.

Retrieved from

https://www.army.mil/article/36520/army_master_resilience_training_course_provides_

valued_instruction

Treleaven, D. A. (2018). *Trauma-sensitive mindfulness: Practices for safe and transformative

healing.* New York, NY: W.W. Norton & Company.

Triplett, K. N., Tedeschi, R. G., Cann, A., Calhoun, L. G., & Reeve, C. L. (2012). Posttraumatic

growth, meaning in life, and life satisfaction in response to trauma. *Psychological

Trauma: Theory, Research, Practice, and Policy, 4,* 400–410.

Tsai, J., Sippel, L. M., Mota, N., Southwick, S. M., & Pietrzak, R. H. (2016). Longitudinal

course of posttraumatic growth among U. S. military veterans: Results from the national

health and resilience in veterans study. *Depression and Anxiety, 33*, 9-18.

Tsai, J. & Pietrzak, R. H. (2017). Trajectories of posttraumatic growth among US military

veterans: a 4-year nationally representative, prospective cohort study. Acta Psychiatrica

Schan, 136, 483-492. DOI: 10:1111/acps.12800

U.S. Department of Veterans Affairs, Health Care. (2018) PTSD: National Center for PTSD.

Retrieved from https://www.ptsd.va.gov/understand/common/common_veterans.asp

Van Dam, N. T., Van Vugt, M. K., Vago, D. R., Schmalzl, L., Saron, C. D., Olendzki,

A.,…Meyer, D. E. (2018). Mind the hype: A critical evaluation and prescriptive agenda

for research on mindfulness and meditation. *Perspective on Psychological Science, 13*(1), 36-61. DOI: 10.1177/1745691617709589

Van den Berk-Clark, C., Secrest, S., Walls, J., Hallberg, E., & Lustman, P. J. (2018) Association between posttraumatic stress disorder and lack of exercise, poor diet, obesity, and co-occurring smoking: A systematic review and meta-analysis. *Health Psychology, 37*(5), 407-416. http://dx.doi.org/10.1037/hea0000593

Van der Kolk, B. (2014). *The body keeps the score: Brain, mind, and body in the healing of trauma*. New York, NY: Penguin Books.

Van Gordon, W., Shonin, E., & Garcia-Campayo, J. (2017). Are there adverse effects associated with mindfulness? *Australian & New Zealand Journal of Psychiatry, 51*(10), 977-979. DOI: 10.1177/0004867417716309

Vukanovic, A., Niles, B., Pietrefesa, A., Schmertz, S., & Potter, C. (2011). Mindfulness in the treatment of posttraumatic stress disorder among military veterans. *Professional Psychology, 42*(1), 24-31.

Werdel, M. B., & Wicks, R. J. (2012). *Primer on posttraumatic growth: An introduction and guide.* Hoboken, NJ: Wiley.

Westphal, M., & Bonanno, G. (2007). Posttraumatic growth and resilience to trauma: Different sides of the same coin or different coins? *Applied Psychology, 56*(3). doi.org/10.1111/j.1464-0597.2007.00298.x

Woike, B. & Matic, D. (2004). Cognitive complexity in response to traumatic experience. *Journal of Personality, 72*(3), 633-657.