

Cultivating Resilience: Post Traumatic Growth, Mindfulness, and Trauma Recovery

Dr. Stephanie D. Shelburne

Live Life Resources

9/18/2012 Original
2/2/2020 Updated
Westmoreland, NH

Abstract

According to the National Institute of Mental Health (NIMH, 2012), the prevalence of traumatic stress and Posttraumatic Stress Disorder (PTSD) are on the rise, both through direct and vicarious means. It is estimated that currently, between 52-67% of Americans will experience traumatic or repeated traumatic events in their lifetime. While not all of them will develop symptoms related to acute traumatic stress or develop PTSD, the number of individuals who do appears to be on the rise (NIMH, 2012). The impact of PTSD and related symptoms for the individual, their loved ones, and the community at large can be physically, mentally, emotionally, and financially devastating for everyone involved. The purpose of this paper is to introduce the potential for utilizing mindfulness practices to promote or stimulate post traumatic growth (PTG) and decrease or mitigate the prevalence of PTSD in individuals who find themselves experiencing repeated traumatic event or suffering from traumatic stress due to insufficient coping skills.

Keywords: posttraumatic growth, ptsd, mindfulness, first responders

Cultivating Resilience: Post Traumatic Growth, Mindfulness, and Trauma Recovery

Statistics from the National Institute of Mental Health suggest that while 60.7% of men in the U.S will experience a traumatic event in their life, roughly only 5% of them will develop recurring symptoms such as traumatic stress or post-traumatic stress disorder (PTSD) (NIMH, 2012). Likewise, while 51.6% of women in the U.S will experience a traumatic event, approximately 10% of them will develop PTSD. From these results, it can be surmised that merely experiencing a traumatic event does not necessarily mean an individual will develop lasting repercussions with regards to the experience. It is possible that from an overarching cultural viewpoint, these numbers might seem rather benign in their potential impact on the socio-economic and social structure. However, not included in these statistics are individuals who suffer repeated trauma or find themselves in professions that put them at risk for repeated contact with traumatic events or vicarious trauma. Police, Firefighters, individuals who spend time in warzones are all at increased risk for PTSD. The percentage of impact increases incrementally, with about 30% of the men and women in war zones, or police and fire professions, experiencing lasting repercussions from repeated exposure (NIMH, 2012; Maia, et al. 2007). Also not included in these statistics are the numerous individuals that go undiagnosed due to the occurrence of comorbid ailments; such as anxiety disorders, depression, or acquired maladaptive behaviors such as drug and alcohol addiction or eating disorder (Cross & Ashley, 2004). Comorbid physical ailments can be chronic issues such as heart disease, hypertension, gastrointestinal disorders, and chronic pain issues (van der Kolk, McFarlane, & Weisaeth, 1996). If a diagnosis focuses on comorbid symptomology, the identification of PTSD could well go unearthed and, therefore, untreated (Bowins, 2010; Brewerton, 2004), which could prolong the existence of comorbid symptoms indefinitely. Mental health professionals agree that when these

demographics and the individuals who remain undiagnosed due to the comorbid occurrence of other mental and physical ailments are factored in, then the statistics provided by NIMH change drastically. It becomes apparent that teaching individuals to not only cope with traumatic stress but to mitigate it all together can have a considerable impact individually and communally (Foa & Rothbaum, 1998).

Overview

Historically, and most often still, treatment of traumatic stress and PTSD has been and is focused on the psychopathology and, therefore, simply the regulation of symptoms. More recently, there has been a small but growing body of research into the possibility of helping individuals identify and cultivate coping mechanisms that result in growth or resilience after a traumatic experience (Follette, Palm, & Pearson, 2006; Linley & Joseph, 2004). This paper suggests it is a worthwhile endeavor to investigate further the value of teaching individuals who are suffering from trauma, PTSD, or other trauma-related ailments, the skills of mindfulness and concepts of personal mastery. Doing so would potentially increase their capacity for resilience and resulting in post-traumatic growth. People with trauma-induced maladaptive behaviors, such as eating disorders, could benefit from a therapeutic intervention that focuses on treating the trauma and increasing self-concepts of resiliency rather than focusing on the behavior or comorbid symptoms. In essence, focusing on the root cause rather than the symptoms could be a game-changer.

Trauma and Traumatic Stress

Merriam-Webster (2012) defines trauma as:

*“a : an injury (as a wound) to living tissue caused by an extrinsic agent
b : a disordered psychic or behavioral state resulting from severe mental or emotional stress or physical injury”*

PTG, MINDFULNESS, TRAUMA

This definition is further understood in the realm of mental health by including the American Psychological Association (2012) definition of:

“Trauma is an emotional response to a terrible event like an accident, rape or natural disaster.”

Stress has been identified as anything that places undue pressure on an organism. For humans, this can occur emotionally as well as physically and trigger psychophysiological responses designed to help regulate the response to the perceived stressor. If a chosen coping strategy is effective, the body returns to a state of homeostasis. If coping is ineffective or the stressor is prolonged, the system cannot regulate, and the individual begins to suffer the consequences of chronic stress (Baumeister, 2002; Corrigan, Fisher, & Nutt, 2010). Such is the case with individuals suffering from chronic traumatic stress or PTSD. Traumatic stress is a result of experiencing a traumatic event and having a recurrence of mental/emotional and physiological arousal for an undesignated but prolonged amount of time. Individuals suffering from traumatic stress can find themselves suffering from physiological, apathy, and emotional disconnection. This disconnect contributes to longer-term issues related to chronic traumatic stress and can often lead to maladaptive avoidant coping mechanisms (Ostafin & Marlatt, 2008;). If coping strategies are not adequate traumatic stress can develop into posttraumatic stress disorder (American Psychological Association, 2012; Kloet, Joels, & Hoelsberg, 2005).

The Diagnostic and Statistical Manual of Mental Disorders, or DSM-IV-TR defines trauma as:

involving direct personal experience of an event that involves actual or threatened death or serious injury, or other threat to one’s physical integrity; or witnessing an event that involves death, injury, or a threat to the physical integrity of another person; or learning about unexpected or violent death, serious harm or threat of

PTG, MINDFULNESS, TRAUMA

death or injury experienced by a family member or other close associate. The person's response to the event must involve intense fear, helplessness, or horror (or in children, the response must involve disorganized or agitated behavior) (American Psychiatric Association, 2000, p 463).

Being the victim of even a single event and having the inability to develop effective coping mechanisms can elicit prolonged traumatic stress and cause major disruptions in an individual's life (Ozar, Best, Lipsey, & Weis, 2008).

Individuals who have PTSD or traumatic stress engage in behaviors that help them avoid stimuli that could evoke feelings and sensations similar to the state experienced during the traumatic event or continued traumatic stress. For this reason, in many cases, co-morbid mood disorders such as depression and anxiety disorders, substance abuse, and/or eating disorders can accompany the symptoms of PTSD. These comorbid disorders can become unconscious coping mechanisms and strategies in an attempt to help mitigate the systemic agitation and emotional re-experiencing that can occur as a result of traumatic stress (Dennis, 2010). This process of developing or unconsciously sustaining a comorbid disorder as a coping mechanism is one of the many factors that can present pharmacological and more mainstream therapeutic interventions with a more significant challenge for effective treatment (Corrigan, Fisher, & Nutt. 2010).

There is a consensus in the field of trauma recovery that a primary contributing factor to whether or not someone develops traumatic stress is how they perceive the event and their ability to self manage or control the outcome (Saakvitne, Tennen, & Affleck, 1998). As early as 1925, Janet asserted that a contributing factor for post-traumatic stress was the inability to experience or perform any of the actions characteristic to the stage of mastery or triumph. In other words, it is the feelings of powerlessness or lack of control that contribute to the maintenance of traumatic

PTG, MINDFULNESS, TRAUMA

stress and PTSD. This perception usurps any potential for a sense of growth or resilience (Janet, 1925). Perceived powerlessness, coupled with the inability to manage or tolerate any accompanying physiological systemic dysregulation, provides the perfect breeding ground for continued dissociative tendencies and maladaptive coping strategies (Ogden & Minton, 2000; van der Kolk, 2006).

Experiencing a traumatic event impacts the entire person physiologically as well as psychologically (Ogden, Minton, & Pain, 2006; van der Kolk, Pelcovitz, Roth, Mandel, MacFarlane, & Herman, 1996). Often in traditional therapy, the focus is primarily on the regulation of cognitive and emotional states with little or no emphasis placed on the physiological experience of autonomic dysregulation. How, then, do we begin to shift the individual and professional focus to one that includes therapeutic interventions focused on strengthening coping mechanisms related to strength, growth, and resilience?

Mindfulness and Post Traumatic Growth

Over the past 20 years, several new and progressive therapeutic interventions for trauma recovery have debuted within the mental health field. Many of these are therapeutic interventions that utilize the findings of neuroscience, attachment theory, affect regulation, and cognitive processing as a means for a more complex and successful approach to trauma recovery. “Trauma study has yielded entirely new insights into the way extreme experiences may profoundly affect our memory, how our bodies as well as our minds respond to stress, our ability to regulate our emotions and our relationships to other people” (van der Kolk, 2006b, p. 10).

Calhoun and Tedeschi (2006) are credited with pioneering Post-traumatic Growth Theory (PTGT) based on the idea that traumatic experience does not necessarily need to dictate adverse outcomes or result only in traumatic stress. That indeed, positive growth can and does occur, and

PTG, MINDFULNESS, TRAUMA

with appropriate preparation or intervention can result in Post-traumatic Growth. In their work with individuals recovering from traumatic incidence, they identified five factors involved in delineating whether or not someone was experiencing psychological growth as a result of traumatic experience (Cann, Calhoun, Tedeschi, Kilmer, Gil-Rivas, Vishnevsky & Danhauer, 2009). The five domains identified in the PTGT assessment include:

- a) Relating to Others (having the event stimulate a greater intimacy and compassion for others),
- b) New Possibilities (allowing change and identifying new life roles and new people and support structures as a result of the crisis),
- c) Personal Strength (feeling personally stronger or empowered by the aspect of surviving the traumatic event),
- d) Spiritual Change (being more connected spiritually),
- e) and a deeper Appreciation of Life

PTGT does not deny that there is pain and discomfort involved with the experience of trauma or crisis, rather, the basic concept of PTGT is the idea that out of the ashes of a shattered worldview, which is a foundational part of traumatic experience, the individual manages to reconstruct a stronger psychological and physical outlook instigating a sense of well-being (Seligman, 2011). Much of the credit for this positive change is given to the ability to positively ‘ruminate’ over occurrences and outcomes and devise plans to effectively fortify one’s self, moving forward (Taku, Cahn, Tedeschi, & Calhoun, 2009). Historically, the act of ruminating has been relegated to adverse outcomes. Morris and colleagues (2010) identify that there are different ways to ruminate, some increase the potential for negative narrative and therefore increase traumatic stress, and some increase the potential for positive outcomes and therefore

PTG, MINDFULNESS, TRAUMA

increase traumatic growth. Intrusive rumination, as identified by Morris et al., tends to increase feelings of powerlessness and negative self-perception (2010). However, deliberate rumination or reflection on things like social support and benefits of outcomes or active engagement of problem-solving can increase the potential for positive growth. Seligman discusses the concept of deliberate rumination or reflection as the opportunity to identify 'the fork in the road' and create a narrative that instigates positive change or personal strength (2011). He expressly identifies the need to mindfully explore and deliberately identify the potential outcomes and occurrences, mining for nuggets of richness. Seligman's use of the term mindful invites exploration of the terms and concepts associated with mindfulness practices and uses them as the foundation for being able to develop the capacity for deliberate rumination.

Mindfulness is identified as “the ability to pay attention to and be aware of present moment experience” (Brown & Ryan, 2003; Kabat-Zinn, 1990). Being mindful includes the ability to observe and stay present with the moment to moment sensations, perceptions, thoughts, and feelings as they arise (Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006). The pioneering work of Jon Kabat-Zinn and the impact of mindfulness-based stress reduction (MBSR; Kabat-Zinn, 1990) on not only mental health but physical health as well has led to closer scrutiny and the inclusion of mindfulness training as part of instigating resilience (Grossman, Niemann, Schmidt, & Walach, 2004; Stanley, Schaldach, Kiyonaga, & Jha, 2011). Mindfulness training and the continued practice appears to increase cognitive flexibility, the ability to process more deeply the moment to moment thoughts and emotions that arise, and the regulation or increased tolerance of autonomic dysfunction (Coffey & Hartman, 2008; Shapiro, Carlson, Astin, & Freedman, 2006; Ogden, Minton, & Pain, 2000). The inclusion of identifying mindfulness

PTG, MINDFULNESS, TRAUMA

practice as a form of mitigating or tolerating autonomic dysregulation allows the discussion to include more integrated aspects of post-traumatic growth.

Mindfulness and Autonomic Dysregulation

It has been identified that some of the more successful approaches to recovery from traumatic stress or PTSD and the development of post-traumatic growth are integrated approaches that include neuroscience and the physiological aspects of traumatic stress (Zucker, Spinnazola, Baustein, & van der Kolk, 2006). It is an important component to identify that not only cognitive function is impacted by traumatic stress but also physiological functioning. While intrusive rumination can increase physiological distress, it has also been identified that autonomic dysregulation can stimulate intrusive rumination as an individual tries to make sense of the physiological sensations that randomly intensify with no apparent outward stimuli (Ogden, 2000; Seligman, 2011; Siegel & Solomon, 2003).

Autonomic dysregulation is a malfunction of the autonomic nervous system. The autonomic nervous system is comprised of sympathetic and parasympathetic responses and is an integral part of the fight or flight response as well as the all-clear signal. Dysregulation occurs when either the parasympathetic or sympathetic malfunctions and activates inappropriately. For individuals suffering from traumatic stress or PTSD, this can result in incongruously timed increases in the stress response resulting in the somatic sensations of danger or threat even when there is no cognitive connection or identification as such. As Seligman identifies, this is where individuals can begin the non-supportive rumination or narratives of disempowerment or distress (2010). Damasio (2010) discusses the value of identifying somatic or sensory states before attaching emotional identification, which can only be accomplished by cultivating the ability to delineate one from the other.

PTG, MINDFULNESS, TRAUMA

Mindfulness practices can play a big part in helping an individual identify autonomic dysregulation. Then participating in actions that help regulate or increase tolerance of the dysregulation. Ogden and colleagues identify that the use of mindfulness practices to uncouple somatic or sensory-based experiences (physical sensations) from the trauma-based emotions and identifications is invaluable (Ogden, 2003). Why is the identification and 'uncoupling' an important factor? This author surmises that to be a victim of one's continued autonomic dysregulation is to be a continued victim to the trauma that induced the dysregulation in the first place. Being unable to trust one's sensorimotor processing increases the feeling of powerlessness and sense of despair, which has been identified as a contributing factor in instances of traumatic stress and PTSD (Ogden & Minton, 2000; van der kolk, 2006). As skills are cultivated individuals can use Mindfulness practices to help increase auto and interactive regulatory skills and further increase their window of tolerance for stimulation. Autoregulation is the ability to contain and manage one's internal process without external guidance or assistance. Interactive regulation is the ability to utilize external resources, such as social support, relationships, and other available aid (McKay & Brantley, 2007; Ogden, et al., 2006). As individuals are trained in the skills of mindfulness, thereby increasing their ability to identify sensorimotor responses as well as increase cognitive flexibility and positive narrative, they can increase their potential for post-traumatic growth.

Literature Review

A brief review of some of the more current literature in the areas of post-traumatic growth, mindfulness, and resilience reveals that further research with varying demographics could be a boon to all involved. In a study conducted in 2011 by Bruce Smith and colleagues (2011) on urban firefighters, it was identified that mindfulness practices could have a positive

PTG, MINDFULNESS, TRAUMA

impact on coping mechanisms, mitigation of stress, and resilience. It was suggested the further research in the field of mindfulness for first responders would be a valuable asset to the professionals in that field. Borders, Earleywine, & Jajodia (2010) discuss the potential value of mindfulness to decrease anger, hostility, and verbal aggression by increasing the potential for "present-focused and intentional awareness" and replacing negative rumination. The authors identified two studies in particular, where the use of mindfulness practices within anger management programs had a positive impact on the decreased activity of aggressive and hostile behavior. They suggest that further research in the use of mindfulness to eliminate or decrease rumination and aggression would be a valuable area of study.

Brian Chopko (2007) and Ryan Dunnigan (2012), in separate dissertation projects, conducted training interventions with first responders that included mindfulness practices to instigate post-traumatic growth for individuals in professions that put them in a high degree of traumatic experience. Both dissertation conclusions demonstrated positive results and have culminated in ongoing training for both firefighters and law enforcement, identifying the need for further research in this area of traumatic growth.

Cryder and colleagues (2007) extended their study to the area of children and disaster recovery. Utilizing the PTGI, they identified factors for post-traumatic growth in children after the experience of national disaster hurricane Floyd. The findings were significant enough to warrant a call for further research into PTG and non-adults. This idea is further supported by work through the Hawn Foundations Mind-up program. Pilot programs consisting of mindfulness training and 4th through 6th graders in the Vancouver school system demonstrated significant improvement in children with attentional disorders and behavioral issues. Children in these programs report feeling more positive, happier, and optimistic. Administration reports

PTG, MINDFULNESS, TRAUMA

decreased incidents of oppositional or aggressive behavior and increased learning (Durlak, J.A., Weissberg, R.P., Dymnicki, A.G. Taylor, R.D. & Schellinger, K.B. 2011). Follette and colleagues discuss the implications for mindfulness in the treatment of trauma, discussing, in particular, the benefit of utilizing mindfulness practices for emotional regulation (2006). This concept is further supported by research conducted by LeDoux (2002), Siegel (1999, 2007), and Ogden and Fisher (2009), in which the role of mindfulness practices proved instrumental in the mitigation of dysregulation and restoration of autonomic stability.

Conclusion

Based on the above, limited, literature review and the compelling arguments for utilizing mindfulness practices to instigate a present moment focus and the ability to "urge surf" (Ostafin, et al, 2008) rather than succumb to the intolerance of autonomic dysregulation, it becomes clear that research in this area within a variety of demographics has the potential to reap great rewards. With the increasing prevalence of traumatic stress and PTSD, it is imperative to find lasting and effective interventions not only for the individuals suffering from trauma but also for the communities within which they reside as well as the socio-economic structure of the culture. Furthermore, the ability to use mindfulness practices to instigate post-traumatic growth within professionals that find themselves ever in the face of crisis, disaster, and traumatic occurrence will only enhance their ability to continue to be effective in their chosen professions without the negative psychophysiological repercussions.

References

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(1), 27-45. PMID:

16443717

- Baumeister, R.F. (2002) Ego depletion and self-control failure: an energy model of the self's executive function. *Self and Identity*, 1(2), 129-136. doi: 10.1080/152988602317319302
- Borders, A., Earleywine, M., & Jajodia, A. (2010). Could mindfulness decrease anger, hostility, and aggression by decreasing rumination? *Aggressive Behavior*, 36, 28–44. doi:10.1002/ab.20327
- Bowins, B. (2010). Repetitive maladaptive behavior: Beyond repetition compulsion. *American Journal of Psychoanalysis*, 70(3), 282-298. doi: 10.1057/ajp.2010.14
- Brewerton, T. D. (2004). Eating disorders, victimization and comorbidity: Principles of treatment. In T. D. Brewerton (Ed.), *Clinical handbook of eating disorders: An integrated approach* (pp. 509–545). New York: Marcel Dekker, Inc. 300 T. D. Brewerton
- 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), 822-48. PMID: 12703651
- Calhoun, L. G. & Tedeschi, R.G. (2004). The foundations of posttraumatic growth: new considerations. *Psychological Inquiry* 15(1), 93-102 Retrieved from <http://ptgi.uncc.edu/PTG%20New%20Considertrns%202004.pdf>
- Cann, A., Calhoun, L. G., Tedeschi, R.G., Kilmer, R.P., Gil-Rivas, V. Vishnevsky, T. & Danhauer, S. C.(2009). The core beliefs inventory: a brief measure of disruption in the assumptive world. *Anxiety, Stress & Coping*, 23(1), 19 -34. DOI: 10.1080/10615800802573013
- Chopko, B.A. & Schwartz (2009). The relation between mindfulness and posttraumatic growth: a study of first responders to trauma-inducing incidents. *Journal of Mental Health Counseling*, 31(4), 363-376. DOI: 10.1080/1478601X.2012.657905
- Chopko, B.A. (2007). The relationship between mindfulness and posttraumatic growth in law enforcement officers. Dissertation. The University of Akron. Retrieved from <http://etd.ohiolink.edu/send-pdf.cgi/Chopko%20Brian%20A.pdf?akron1191245686>
- Corrigan, F. M., Fisher, J.J., & Nutt, D.J. (2010) Autonomic dysregulation and the Window of Tolerance model of the effects of complex emotional trauma. *Journal of Psychopharmacology* 25(1), 17-25. doi: 10.1177/0269881109354930
- Cross, C.L. & Ashley, L. (2004). Police trauma and addiction: coping with the dangers of the job. *FBI Law Enforcement Bulletin*. Retrieved from <http://www.vtpoliceassociation.org/informer%20Articles/win2004/%28043%29%20trauma.pdf>

PTG, MINDFULNESS, TRAUMA

- Cryder, C. H., Kilmer, R. P., Tedeschi, R. G., & Calhoun, L. G. (2006). An exploratory study of posttraumatic growth in children following a natural disaster. *Journal of Orthopsychiatry*, 76,65-69. DOI: 10.1037/0002-9432.76.1.65
- Damasio, A. (2010). *Self comes to mind: constructing the conscious brain*. New York, NY: Vintage books
- Dunnigan, R. (2012). Emergency Responders' Trauma Symptoms Following the West Coast Post-Trauma Retreat Recovery Program. Dissertation; The California School of Forensic Studies. <http://www.wcpr2001.org/pdf/dissertation-ryan-dunnigan.pdf>
- Durlak, J.A., Weissberg, R.P., Dymnicki, A.G. Taylor, R.D. & Schellinger, K.B. (2011). The impact of enhancing students' social and emotional learning: a meta-analysis of school-based universal interventions. *Child Development*, 82(1), 474–501. Retrieved from: http://www.thehawnfoundation.org/sites/default/files/Durlak_Weissberg_Meta-analysis%20of%20SEL%20Programs_CD_2011.pdf
- Foa, E.B. & Rothbaum B.A. (1998). *Treating the trauma of rape: Cognitive behavioral therapy for PTSD*. New York, NY: Guilford Press
- Follette, V., Palm, K., & Pearson, A.N. (2006). Mindfulness and trauma: implications for treatment. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, 24(1), 45-61 DOI: 10.1007/s10942-006-0025-2 Retrieved: http://www.openground.com.au/articles/Mindfulness_%26_Trauma.pdf
- Kabat-Zinn, J. (1990). *Full catastrophe living*. New York, NY: Delta.
- Linley, P.A. & Joseph, S. (2004). Positive change following trauma and adversity: a review. *Journal of Traumatic Stress* 17(1), 11-21. DOI: 10.1023/B:JOTS.0000014671.27856.7e
- Maia, D. B., Marmar, C. R., Metzler, T., Nobrega, A., Berger, W., Mendlowicz, M. V. et al. (2007). Post-traumatic stress symptoms in an elite unit of Brazilian police officers: Prevalence and impact on psychosocial functioning and on physical and mental health. *Journal of Affective Disorders*, 97, 241-245. PMID:16859752
- McKay, M. & Brantley, J. (2007) *The dialectical behavior therapy skills workbook: practical dbt exercises for learning mindfulness, interpersonal effectiveness, emotion regulation, and distress tolerance*. Oakland, CA: New harbinger
- Morris, B.A. & Shakespeare-Finch, J. (2010). Rumination, post-traumatic growth, and distress : structural equation modeling with cancer survivors. *Psycho-Oncology* 20(11),1176-83. doi: 10.1002/pon.1827

PTG, MINDFULNESS, TRAUMA

- National Institute of Mental Health, 2012. Retrieved September 2012 from <http://www.nimh.nih.gov/health/topics/post-traumatic-stress-disorder-ptsd/index.shtml>
- Ogden, P. (2003). *From neurons to neighborhoods*. Powerpoint presentation presented at the 2nd annual conference, New Ways to Prevent and Heal Emotional Trauma in Children and Adults, May 17th & 18th, 2003. Los Angeles, CA
- Ogden, P. & Fisher, J. (2009) *Sensorimotor Psychotherapy*. Courtois, C., Ford, J.D., van der Kolk, B.A., & Herman, J.L. (Eds) *Treating Complex Traumatic Stress Disorders: An Evidence-Based Guide*. New York, NY; Guilford Press
- Ogden, P., & Minton, K. (2000). Sensorimotor psychotherapy: One method for processing traumatic memory, *Traumatology*, 6(3), 1–21.
- Ogden, P., Minton, K., & Pain, C. (2006). *Trauma and the body: a sensorimotor approach to psychotherapy*. Norton & Co.: New York
- Ostafin, B. D., & Marlatt, G. A. (2008). Surfing the urge: Experiential acceptance moderates the relation between automatic alcohol motivation and hazardous drinking. *Journal of Social and Clinical Psychology*, 27, 404–418. Retrieved from http://www.psych.ndsu.nodak.edu/bostafin/publications/Ostafin_Marlatt_JSCP_2008.pdf
- Ozer, E. J., Best, S. R., Lipsey, T. L., & Weis, D. S. (2008). Predictors of posttraumatic stress disorder and symptoms in adults: A meta-analysis. *Psychological Trauma: Theory, Research, Practice, and Policy*, 1, 3–36. doi:10.1037/1942-9681.S.1.3
- Saakvitne, K. W., Tennen, H., & Affleck, G. (1998). Exploring thriving in the context of clinical trauma theory: constructivist self development theory. *The Society for the Psychological Study of Social Issues*, 54(2), 279-299. DOI: 10.1111/j.1540-4560.1998.tb01219.x
- Siegel, D. & Solomon, M. (2003). *Healing Trauma: Attachment, Mind, Body, and Brain*. New York, NY: W.W. Norton
- Siegel, D. (2007). *The Mindful Brain: Reflection and Attunement in the cultivation of well-being*. New York, NY; W.W. Norton
- Smith, B.W., Ortiz, J.A., Steffen, L.E., Tooley, E.M., Wiggins, K.T., Yeater, E.A., Montoya, J.D., & Bernard, M.L.(2011) Mindfulness is associated with fewer ptsd symptoms, depressive symptoms, physical symptoms, and alcohol problems in urban firefighters. *Journal of Consulting and Clinical Psychology* 79 (5), 613–617 DOI: 10.1037/a0025189
- Taku, T., Cann, A., Tedeschi, R. Calhoun, L. (2007). Intrusive versus deliberate rumination in posttraumatic growth across US and Japanese samples. *Anxiety, Stress & Coping: An International Journal* 22 (2), 129-136. DOI:10.1080/10615800802317841

PTG, MINDFULNESS, TRAUMA

- van der Kolk, B.A. (2006). Clinical implications of neuroscience research in PTSD. *Annals of the New York Academy of Sciences*, p.1-17.
- van der Kolk, B.A. (2006b). In terror's grip: healing the ravages of trauma. *Cutting Edge*. Wickenburg, Arizona: The Meadows.
- van der Kolk, B.A., Pelcovitz, D., Roth, S., Mandel, F.S., McFarlane, A., & Herman, J.L. (1996). Dissociation, somatization, and affect dysregulation: The complexity of adaptation to trauma. *American Journal of Psychiatry*, 153(7), 83-93. Retrieved from <http://www.biomedsearch.com/nih/Dissociation-somatization-affect-dysregulation-complexity/8659645.html>
- Zucker, M., Spinazzola, J., Baustein, M., & van der Kolk, B. (2006). Dissociative Symptomatology in Posttraumatic Stress Disorder and Disorders of Extreme Stress. *Journal of Trauma & Dissociation*, 7(1): 19-31. doi:10.1300/J229v07n01_03