

11-2017

Building Blocks: A Multi-Theoretical Preventative Model to Promote Post-Traumatic Growth

Jared S. Becknell

California State University - San Bernardino, jxbecknell@gmail.com

Follow this and additional works at: <http://scholarworks.lib.csusb.edu/wie>

 Part of the [Counseling Commons](#), [Psychology Commons](#), and the [Social Work Commons](#)

Recommended Citation

Becknell, Jared S. (2017) "Building Blocks: A Multi-Theoretical Preventative Model to Promote Post-Traumatic Growth," *Wisdom in Education*: Vol. 7 : Iss. 2 , Article 3.

Available at: <http://scholarworks.lib.csusb.edu/wie/vol7/iss2/3>

This Article is brought to you for free and open access by CSUSB ScholarWorks. It has been accepted for inclusion in Wisdom in Education by an authorized editor of CSUSB ScholarWorks. For more information, please contact scholarworks@csusb.edu.

Building Blocks: A Multi-Theoretical Preventative Model to Promote Post-Traumatic Growth

Abstract

The following is an exploratory model to understand the factors that promote growth after traumatic events, also known as post-traumatic growth (PTG). Additionally, the hope is to inspire further research and create quantitative data regarding the effectiveness of these factors, add additional interventions and integrate into crisis/trauma paradigms during recovery. Therefore, clients would be more equipped to handle the possibility of another event. When PTG occurs, victims of trauma experience increased positive well-being, life satisfaction and regain a new compassion for meaning or purpose in their life. By utilizing the following interventions, victims of past traumatic events can live a more preferred life and promote coping skills from within their own interests. The three interventions to be examined are the use of gratitude, creative writing and efficacy of yoga practices. All three of which have been supported by data to either promote or correlate within the post-traumatic growth domain.

Keywords

Post-traumatic growth, trauma, cognitive behavioral therapy, gratitude, positive psychology, Narrative therapy

Author Statement

Jared Becknell is currently working towards creating a medium for therapy using video games and exploring masculinity issues

Building Blocks:

A Multi-Theoretical Preventative Model to Promote Post-Traumatic Growth

Jared Becknell, BA, MS (Expected 2018), California State University – San Bernardino

What is Post-traumatic Growth?

Posttraumatic growth (PTG) is the phenomenon of experiencing positive psychological changes following extreme stress or a traumatic event (Tedeschi & Calhoun, 2004). People cope with physical, mental and emotional traumatic events uniquely, whether they are children, adolescents, or adults (Briere, 2015). While rare, PTG typically occurs “in three areas of life: Perception of self, relationships with others, and life philosophy” (Calhoun & Tedeschi, 1998, p. 358). Examples include, but are not limited to becoming more reliant on oneself (confidence or competence), effectively coping with difficult life stressors, and challenges (high ego strength) (Briere, 2015; Tedeschi & Calhoun, 1996), giving greater meaning to interpersonal relationships (Tedeschi & Calhoun, 2008), and finding greater life satisfaction as a consequence of trauma challenging and reinforcing personal core beliefs (Lindstrom et al., 2013).

Tedeschi and Calhoun (2004) state PTG and distress are likely to occur simultaneously and growth is a result of coping with that event, rather than trauma. PTG has also been found to build with time, meaning any individual may experience more psychological stability and better coping ability over time (Powell, Gillson, & Collin, 2012; Powell, Ekin-Wood, & Collin, 2007). Though

there is still much to be learned about PTG, application in clinical, counseling, and psychiatric practice may shine new light on the potential impact clinicians may have on their clients’ psychological and physical well-being.

The Application

Studies show there are ways to promote or increase the likelihood of growth or optimal living after a traumatic experience. However, most trauma intervention or counseling provides a level of surviving, but not thriving. The main theme is creating interventions to prepare clients from future traumatic events and provide niche hobbies, factors or interventions that can promote growth after trauma. Numerous studies have examined broad characteristics, factors, elements or traits of those that exhibit posttraumatic growth (Powell, Gilson & Colin, 2012; Peterson et al., 2008; Cadell, Regher & Hemsworth, 2003). However, these studies have not tested or evaluated the effectiveness of the above in a controlled, longitudinal setting. Gratitude, mindfulness practices and creativity were shown to have η^2 effect sizes of around .03 to .04, when measured on the PTG inventory. The attributes that constitute a true causal relationship to PTG have yet to be found. Some of these characteristics, factors or traits can be related to interventions that have previously been

used in positive psychotherapy, cognitive behavioral therapy (CBT), mindfulness training, and narrative therapy such as gratitude journaling (CBT), creative writing of daily routines or letters to the event/problem (Narrative therapy) and yoga (Mindfulness & positive psychotherapy). After a client has gone through traditional trauma therapy, I suggest that utilizing these interventions during the recovery period could promote growth, as well as build resiliency for potential future traumatic events. By utilizing these interventions I suggest growth and future resiliency may increase through practice of the following applications.

Perception and Gratitude

Over the past few decades there has been substantial research on the impact of acknowledging positive emotions and emotional regulation on an individual's well being. Studies have shown that being able to regulate how an individual views negative events helps deal with the undesirable event but also help prepare them when dealing with an individuals future negative events (Vernon, Dillon & Steiner, 2009; Tugade & Fredrickson, 2007; Fredrickson, 1998). One protective factor that an individual can practice is having gratitude. The concept of gratitude can be seen as ability to perceive a positive personal outcome that was not earned or deserved, and is due to the actions/response of another person or thing (Emmons, McCullough, 2003). Gratitude can be seen in spiritual deepening or practice, observing value in ones own life or others, the end of suffering, or gratitude in avoidance of death or injury (Vernon, Dillon & Steiner, 2009).

How an individual copes with a negative situation is important for how large of an impact the situation will have on their lives. Fredrickson's broaden and

build theory suggests that positive emotions have adaptive cognitive functions in other domains (Tugade, Fredrickson, 2007). Negative emotions such as fear or anxiety can help an individual prepare for fight or flight. While positive emotions can help individuals expand their thoughts, actions, and build personal resources to help deal with future situations. Research done by Fredrickson has shown that when an individual adopts a positive emotion they are able to counteract the psychological and physiological effects of a negative emotion (Fredrickson, 1998).

Practicing this type of emotional regulation and acknowledgement can build resilience to future negative events. Folkman and Moskowitz (2000) stress the importance of how a situation is viewed. Positive reappraisal or self-evaluations is a coping strategy where an individual sees a situation in a constructive way. An optimistic viewing of a situation that may be negative helps the individual create a positive outlook on the event. The opposite has been seen within the concept of self-fulfilling prophecies or self-doubt. This positive outlook allows individuals to see value and meaning toward difficult times in their lives. Positive reappraisals can change painful negative experiences to something the individual sees as worthwhile and motivating. Gratitude can be seen as a positive emotion that causes individuals to reappraise situations in their life, this can have positive effects on an individuals well being.

Expressing gratitude can be helpful in increasing subjective well-being in daily life (Peterson et al., 2008). An individual's ability to be grateful about aspects in their daily life can create pleasant emotions such as happiness, pride, and contentment (Emmons & McCullough, 2003). Studies looking at individuals who kept journals about what they were grateful for showed that they were more optimistic, had fewer

physical complaints, and a reduction of negative affect (Pollack, 2010). These studies show the importance of being mindful of blessings can be on daily life. Expressing gratitude can be beneficial for fostering optimism and more positive emotions; the same effect can be seen with those who have experienced trauma.

Traumatic life events can have lasting consequences in an individual's life. The amount of gratitude an individual has can have an effect on how much Posttraumatic stress disorder (PTSD) affects them or in this case how much PTG can assist them. In a study looking at gratitude in Vietnam War veterans Kashdan et al. (2006) saw that veterans without PTSD had more gratitude than those who had PTSD. The study also found that gratitude in both PTSD and non-PTSD groups were positively associated with well-being.

The researchers suggest that gratitude may disrupt the trauma network, thus creating a protective factor that allowed gratitude to be an element that interrupted the negative effects of PTSD. In another study researchers found that gratitude and proactive coping were negatively associated with PTSD symptom level (Vernon, Dillon & Steiner, 2009). The study looked at college women who had experienced trauma in the past. The results suggested that women who reported having greater gratitude in response to trauma also reported less PTSD symptoms. The researchers suggest that gratitude may be a protective factor due to participants focusing on positive benefits instead of negative ones such as self-blame. This study was replicated with both male and female college students, and again post-trauma gratitude was negatively associated with PTSD symptoms (Vernon, Dillon & Steiner, 2009). These studies show the important part gratitude plays on protecting individuals from PTSD symptomology

and possibly promoting post-traumatic growth. The individuals who showed more gratitude towards events in their life were less likely to show the characteristics of people who suffer from PTSD.

Gratitude has been shown to play an important roll in Posttraumatic growth, or positive psychological changes after an individual experienced a traumatic event. Researchers looked at the relationship between gratitude and posttraumatic growth in women with breast cancer between the ages of 35 – 84 (Ruini, Vescovelli, 2012). The study examined the relationship between gratitude, posttraumatic growth, well-being, depression, anxiety, and hostility. The results suggested that gratitude was positively correlated with posttraumatic growth. This is an example of how gratitude plays an important role in how individuals cope and grow when they experience trauma.

The authors suggest that gratitude may help develop spirituality, meaning and appreciation of life, and better coping with negative events. Women, who had higher gratitude, also reported lower anxiety, depression and hostility. Gratitude's role in posttraumatic growth gives an individual the ability to reappraise the negative event and see positive aspects in their life. These positive reappraisals hold off some of the more difficult aspects of PTSD and allow the individual to cope better with the trauma. While gratitude is not the only way an individual should deal with traumatic life events, research shows that exercising gratitude can be beneficial for protecting one against negative life events. Clients would be recommended to journal/write three grateful experiences or memories weekly as shown to promote life satisfaction (Peterson, 2008).

Creative Writing

Forgeard (2013) investigated the relationship between self-reported post-traumatic growth and creativity, suggesting that creative people who have faced adversity may have used their experiences as a source of inspiration and motivation for their work. Self-reported post-traumatic growth measured through the PTGI (Post-Traumatic Growth Inventory) may be created through the perceptions of increased creativity or control. Forgeard claims that this study is the first study to empirically explore that relationship.

To examine the general population, Forgeard(2013) recruited 373 Internet users from Amazon Mechanical Turk and AuthenticHappiness.org. The participants were told the study was on life events, personality, and behavior. The 20-minute survey with seven questionnaires asked participants to envision their most difficult struggle as a reference for the questions, and the event was given a level of distress and categorized. The PTGI-42 and Creative Domains Questionnaire (CDQ) were used, and participants described rewards they had earned for their creative endeavors in a text box, rated by breadth, creativity, peak achievement scores and age at peak.

The results were that intrusive rumination (unintentionally thinking about the event) predicted all five areas of PTSD (post-traumatic depreciation), while deliberate rumination predicted perceived creative growth. All five PTG (post-traumatic growth) domains include interpersonal relationships, the perception of new possibility for one's life, personal strength, spirituality, and appreciation for life.

Forgeard's (2013) article mentions that distress or rumination leads cognitions that in turn create problem-solving and spotting patterns. Therefore, creativity is a predictor, but not a causal effect of

creative thinking. The key element distinguished by active imagination, and intellectual curiosity, as well as a willingness to try new things and experiences. The driving force being encouragement of mastery and strength within an individual to promote growth.

No causal relationships were proven, but the study suggests that there is a likely relationship between thriving after trauma and self-reported creativity. Forgeard's hypothesis that "perceptions of increased creativity constitute a manifestation of PTG" (2013, pg. 255) was confirmed, but more research must be done. Forgeard acknowledges that the study did not identify adversity as a prerequisite for creativity; however, people who have been exposed to exceptional challenges in their lives can heal, grow, and fulfill their creative potential (2013).

However, therapeutic documents or letter writing has shown great outcomes within the narrative therapy paradigm (Bjoroy, Madigan, & Nylund, D. 2016). The invention revolves around the therapist writing a letter explaining the changes seen and future questions unanswered towards the client. Additionally, the client has a physical document regarding their progress or conversations. Schools or paradigms cannot be rigid, but should be seen as portraits or externalizations of creativity for the client and therapist. The interventions or conversations should be relatable and understood through the client's interests (Keeney, 1991). The implication draws a conclusion for those who have experienced trauma to write creative documents to their experience or problem. Therefore, providing a physical document that measures change and provides a level of control over the event. The client would be recommended to write documents addressed to the problem. The structure of this intervention would include three stages —

what the problem has done or taken away, what strengths or growth has occurred since the event and finally, what relationship the client would like to have with the event. Therefore, the client would be able to consistently write to the problem or event and create a more preferred way of living through creativity.

The Efficacy of Yoga

Strategies for coping with stress and anxiety are valuable life skills when understanding the effects of trauma and physical activity. There are a variety of techniques used in positive psychotherapy, as well as alternative therapies, which have shown significant results in helping people build resilience and cope with trauma (Pollack, 2010; Van der Kolk, 2006; Wills, 2007). Mindfulness — a new, but widely accepted techniques — and yoga, an ancient technique, which has unique ways to build resiliency and have the possible potential to promote posttraumatic growth within the therapeutic realm (Van der Kolk, 2006).

Mindfulness includes the ability to accept and stay in the present moment of thought processes and physical feelings, without judgment (Kabat-Zinn, 2003). This is used as a tool to regulate emotions through intentional awareness and self-regulation (Berceli & Napoli, 2006; Thompson, Arnkoff, & Glass, 2011). The second component of mindfulness is acceptance of past and present events. Rumination and avoidance are discouraged in mindfulness-based practices due to the detrimental impact on overall well-being and promote negative stimuli (Kabat-Zinn, 2003).

In fact, research has indicated that trying to suppress intrusive thoughts actually creates the opposite effect; intrusive thoughts typically increase and often more difficult to suppress (Gross & Levenson, 1993). Acceptance is achieved by acknowledging the internal and

external experience openly and without judgment, whether it is positive or negatively experienced. Therefore, studies have shown that this active cognitive processing technique is not only helpful, but also necessary for posttraumatic growth to occur (Tedeschi & Calhoun, 2004).

One of the primary components of the Mindfulness-based Trauma Prevention Program (Berceli & Napoli, 2006) is mindful-breathing or more commonly applied in guided meditation sessions. During this time, the rhythm of the breath is observed and processed. Breathing does not need to be altered or regulated; the breaths need to be brought into awareness and actively monitored. Research supports mindfulness not only as a coping tool for those with PTSD, but also as a way to promote resiliency. Additionally, researchers have recently suggested that those who practice mindfulness may be less likely to experience posttraumatic symptoms following exposure to a traumatic event (Thomson et al., 2011). However, none of the above can be assumed to be a panacea within the clinical or crisis/trauma realm.

Yoga has been practiced for centuries in eastern cultures and has gained popularity in the United States during the past several decades. Yoga is a broad term that includes specific breathing techniques, poses (asanas), and meditation (Li & Goldsmith, 2012). Yoga shows promise as a therapeutic technique because it is both low-impact and low-cost, yet many health care providers fail to formally recognize the therapeutic benefits. Recent studies, however, show that yoga as an intervention for those with PTSD symptoms specifically generate an increase in positive well-being (Brown & Gerbarg, 2005). After completing a two-week program, which included asanas, pranayama (mindful breathing), and meditation, results suggested that

participants had a significant decrease in depression and anxiety compared to a control group (Kozasa et al., 2008). The researchers also suggested an increase in participant's well-being and ability to release tension or burden. Therefore, learning yogic or mindful breathing techniques is essential to create positive health and mental benefits. One way to practice yogic breathing is through pranayama; specifically, the 4/2/5/2 method. This is inhaling to a count of 4 seconds, holding for a count of 2, exhaling for 5, and holding 'empty' lungs for 2. This simple pranayama should be repeated for at least five cycles daily.

Conclusion

Researching the effectiveness of this application proves difficult due to lack of cross analysis and more specifically being a novel idea. Students do not have the tools or the skills to research trauma clients except in workshop related environments. However, if I were able to research a sample group of trauma clients, we would create four groups. The three experimental groups being gratitude, mindfulness based yoga, and creative writing, including one control group that is not given an intervention. The interventions would be researched to find recommended intervals that do not overwhelm the client and reduce the likelihood of an intervention losing effectiveness over time.

The clients would be measured on the Posttraumatic Growth Inventory (PTGI) (Tedeschi and Calhoun, 1996) via a longitudinal study on weekly intervals for the first three months and follow up

intervals every three months after for a total time period of a year. My goal is for these interventions to have the ability to become a part of one's lifestyle. The final step would be comparing the treatment group (Utilizing gratitude, physical activity and creative writing) and control group (Traditional trauma intervention or therapy).

Recently, there has been integration of existential elements and spirituality that supports growth after trauma. (Tedeschi, et al., 2016). However, this is solely an extension of the previous post-traumatic inventory and a complementary interaction surrounding spirituality, which is included in the original PTGI. There has been little research suggesting that clients will be given an opportunity to thrive after a traumatic experience using alternative interventions. The above is a multi-theory hypothetical intervention to give client a space to create growth after an event. I suggest further research of additional characteristics that improve, promote or create awareness regarding resiliency and promotion of PTG. Furthermore, there is little research on the most effective elements that cause or correlate with PTG. Additionally, factors that have not analyzed or researched in the traditional mental health umbrella and using "niche" traits or hobbies to discover if new interventions can be utilized in this application of post-trauma therapy. The outcomes of the effective interventions would be cataloged, thus, creating a large inventory of interventions to choose from to build resiliency for future traumatic events.

References

- Berceli, D., & Napoli, M. (2006). A proposal for a mindfulness-based trauma prevention program for social work professionals. *Complementary Health Practice Review, 11*(3), 153-165.
- Bjoroy, A., Madigan, S., & Nylund, D. (2016). The practice of therapeutic letter writing in narrative therapy. *The handbook of counselling psychology*. London, England: Sage Publications Ltd.
- Bolton, G., Howlett, S., Lago, C., & Wright, J. K. (2004). *Writing cures: an introductory handbook of writing in counselling and psychotherapy*. Hove, East Sussex: Brunner-Routledge.
- Bolton, G., Field, V., & Thompson, K. (2006). *Writing works: A resource handbook for therapeutic writing workshops and activities*. London: Jessica Kingsley Publishers.
- Briere, J., & Scott, C. (2015). *Principles of trauma therapy: a guide to symptoms, evaluation, and treatment* (2nd ed.). Thousand Oaks, CA: Sage Publications.
- Brown, R.P., & Gerbarg, P.L. (2005). Sudarshan Kriya yogic breathing in the treatment of stress, anxiety, and depression: Part II clinical applications and guidelines. *The Journal of Alternative and Complementary Medicine, 11*(4), 711-717.
- Cadell, S., Regehr, C., & Hemsworth, D. (2003). Factors contributing to posttraumatic growth: A proposed structural equation model. *American Journal of Orthopsychiatry, 73*(3), 279-287.
- Calhoun, L. G. & Tedeschi (1998). Beyond recovery from trauma: Implications for clinical practice and research. *Journal of Social Issues, 54*(2), 357-371. doi: 10.1111/j.1540-4560.1998.tb01223.x
- Emmons, R. A., & McCullough, M. E. (2003). Counting blessings versus burdens: An experimental investigation of gratitude and subjective well-being in daily life. *Journal of Personality and Social Psychology, 84*(2), 377-389. doi:http://dx.doi.org/10.1037/0022-3514.84.2.377
- Folkman, S., & Moskowitz, J. T. (2000). Positive affect and the other side of coping. *American psychologist, 55*(6), 647.
- Forgeard, M. J. C. (2013). Perceiving benefits after adversity: The relationship between self-reported posttraumatic growth and creativity. *Psychology of Aesthetics, Creativity, and the Arts, 7*(3), 245-264. doi:10.1037/a0031223
- Fredrickson, B. L., & Levenson, R. W. (1998). Positive emotions speed recovery from the cardiovascular sequelae of negative emotions. *Cognition and Emotion, 12*(2), 191-220.
- Gregerson, M. B. (J.). (2007). Creativity enhances practitioners' resiliency and effectiveness after a hometown disaster. *Professional Psychology: Research and Practice, 38*(6), 596-602. doi:10.1037/0735-7028.38.6.596
- Gross, J. J., & Levenson, R. W. (1993). Emotional suppression: physiology, self-report, and expressive behavior. *Journal of personality and social psychology, 64*(6), 970.
- Kabat- Zinn, J. (2003). Mindfulness-based interventions in context: past, present, and future. *Clinical psychology: Science and practice, 10*(2), 144-156.
- Kashdan, T. B., Uswatte, G., & Julian, T. (2006). Gratitude and hedonic and eudaimonic well-being in vietnam war veterans. *Behaviour Research and Therapy, 44*(2), 177-199. doi:http://dx.doi.org/10.1016/j.brat.2005.01.005

- Keeney, B. P. (1991). *Improvisational therapy: A practical guide for creative clinical strategies*. Guilford Press.
- Kozasa, E.H., Santos, R.F., Rueda, A.D., Benedito-Silva, A.A., Ornellas, F.L., & Leite, J.R. (2008). Evaluation of Siddha Samadhi Yoga for anxiety and depression symptoms: A preliminary study. *Psychological Reports, 103*, 271-274.
- Li, A.W., & Goldsmith, C.W. (2012). The effects of yoga on anxiety and stress. *Alternative Medicine Review, 17*(1), 21-35.
- Lindstrom, C. M., Cann, A., Calhoun, L. G., & Tedeschi, R. G. (2013). The relationship of core belief challenge, rumination, disclosure, and sociocultural elements to posttraumatic growth. *Psychological Trauma: Theory, Research, Practice, and Policy, 5*(1), 50-55. doi: 10.1037/a0022030
- Penn, P. (2001). Chronic illness: Trauma, language, and writing: Breaking the silence. *Family Process, 40*(1), 33-52. doi:http://dx.doi.org/10.1111/j.1545-5300.2001.4010100033.x
- Peterson, C., Park, N., Pole, N., D'Andrea, W., & Seligman, M. E. (2008). Strengths of character and posttraumatic growth. *Journal of Traumatic Stress, 21*(2), 214-217.
- Pollack, N. Warriors at peace. *Yoga Journal, 230*, 74-77.
- Powell, T., Gilson, R., & Collin, C. (2012). TBI 13 years on: factors associated with post-traumatic growth. *Disability and rehabilitation, 34*(17), 1461-1467.
- Powell, T., Ekin-Wood, A., & Collin, C. (2007). Post-traumatic growth after head injury: A long-term follow-up. *Brain Injury, 21*(1), 31-38. doi: 10.1080/02699050601106245
- Ruini, C., & Vescovelli, F. (2013). The role of gratitude in breast cancer: Its relationships with post-traumatic growth, psychological well-being and distress. *Journal of Happiness Studies, 14*(1), 263-274. doi:http://dx.doi.org/10.1007/s10902-012-9330-x
- Smyth, J. M., Hockemeyer, J. R., & Tulloch, H. (2008). Expressive writing and post-traumatic stress disorder: Effects on trauma symptoms, mood states, and cortisol reactivity. *British Journal of Health Psychology, 13*(1), 85-93. doi:http://dx.doi.org/10.1348/135910707X250866
- Stoller, C.C., Greuel, J.H., Cimini, L.S., Fowler, M.S., & Koomar, J.A. (2012). Effects of sensory-enhanced yoga on symptoms of combat stress in deployed military personnel. *The American Journal of Occupational Therapy, 66*, 59-68.
- Tedeschi, R. G., & Calhoun, L. G. (1996). The Posttraumatic Growth Inventory: Measuring the positive legacy of trauma. *Journal of traumatic stress, 9*(3), 455-471
- Tedeschi, R. G., & Calhoun, L. (2004). Posttraumatic growth: A new perspective on psychotraumatology. *Psychiatric Times, 21*(4), 58-60.
- Tedeschi, R. G. & Calhoun, L. G. (2004). Posttraumatic growth: Conceptual foundations and empirical evidence. *Psychological Inquiry, 15*(1), 1-18. http://www.jstor.org/stable/20447194
- Tedeschi, R. G. & Calhoun, L. G. (2008). Beyond the concept of recovery: Growth and the experience of loss. *Death Studies, 32*, 27-39. doi: 10.1080/07481180701741251

- Tedeschi, R. G., Cann, A., Taku, K., Senol-Durak, E., & Calhoun, L. G. (2017). The posttraumatic growth inventory: A revision integrating existential and spiritual change. *Journal Of Traumatic Stress*, doi:10.1002/jts.22155
- Thompson, R. W., Arnkoff, D. B., & Glass, C. R. (2011). Conceptualizing mindfulness and acceptance as components of psychological resilience to trauma. *Trauma, Violence, & Abuse*, 12(4), 220-235.
- Tugade, M. M., & Fredrickson, B. L. (2007). Regulation of positive emotions: Emotion regulation strategies that promote resilience. *Journal of Happiness Studies*, 8(3), 311-333.
- Van der Kolk, B.A. (2006). Clinical implications of neuroscience research in PTSD. *Annals of the New York Academy of Sciences*, 1071, 277-293. doi: 10.1196/annals.1364.022
- Vernon, L. L., Dillon, J. M., & Steiner, A. R. W. (2009). Proactive coping, gratitude, and posttraumatic stress disorder in college women. *Anxiety, Stress & Coping: An International Journal*, 22(1), 117-127. doi:http://dx.doi.org/10.1080/10615800802203751
- Wills, D.K. (2007) Heal life's traumas. *Yoga Journal*, 203, 41-44.