

# Meaning reconstruction in the face of terror: An examination of recovery and posttraumatic growth among victims of the 9/11 World Trade Center attacks

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## **ABSTRACT**

This study examines the relationship between meaning reconstruction with posttraumatic growth and depreciation in the aftermath of terrorist trauma and loss. A group of individuals (n = 118) who were personally affected by the September 11, 2001 terrorist attacks were surveyed about their experiences and administered the Posttraumatic Growth Inventory and Impact of Event scales. Subjects were volunteer docents at the Tribute World Trade Center Visitor Center. Results revealed that ability to make sense of one's 9/11 experience was related to recovery but not to posttraumatic growth, whereas ability to find some benefit in the experience was related to growth. In addition, location in downtown Manhattan on September 11, 2001 was related to higher levels of posttraumatic depreciation. Findings suggest that two aspects of meaning reconstruction are differentially related to recovery and posttraumatic growth.

Key words: September 11, terrorism, meaning reconstruction, recovery, posttraumatic growth, posttraumatic depreciation

## **INTRODUCTION**

The September 11, 2001 (9/11) terrorist attacks were witnessed firsthand by thousands of people living and working in Manhattan and its surrounding boroughs. Several studies have documented substantial psychological consequences (eg, posttraumatic stress disorder and depression) on the general New York population, <sup>1-3</sup> as well as specific segments such as rescue workers. <sup>4</sup> Recently, however, researchers have turned their interest to the role of posttraumatic growth (PTG) following exposure to terrorist

events<sup>5</sup> and the importance of finding meaning in the aftermath of trauma and loss as a path to healing.<sup>6</sup> The present study seeks to build on this research by examining meaning reconstruction as it relates to PTG and posttraumatic depreciation (PTD) among a sample of individuals personally affected by the 9/11 World Trade Center (WTC) attacks who volunteer at the Tribute WTC Visitor Center. The Tribute Center is a small museum located across the street from the WTC site that offers the general public a place where they can connect with people from the 9/11 community through walking tours, exhibits and programs. By surveying this unique population 12 years after the events took place, this research attempts to better understand factors that contribute to recovery and growth following terror exposure.

## Recovery from trauma

Research has shown that the way in which a person perceives a traumatic event and makes sense of it can be predictive of recovery. In the aftermath of traumatic loss, survivors' fundamental beliefs about themselves and their larger world are often challenged. For example, they may lose both a personal sense of meaning in their lives and assumptions about justice, fairness, control, and benevolence in the larger world. Healing from the loss therefore becomes a process of meaning reconstruction that involves piecing together the remaining fragments of one's "assumptive world" and ultimately rebuilding one that has purpose and meaning. 13

The trauma and loss literature identifies two forms of meaning reconstruction and suggests that they play independent roles in the adjustment

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process—sense making and benefit finding. 10,13,14 Sense making is defined as "the survivor's capacity to find some sort of benign explanation for the seemingly inexplicable experience," and benefit finding refers to "the survivor's ability to find a 'silver-lining' in the personal or social consequences of the loss. 13(p176) Sense making therefore relates to how the event makes sense or fits with one's view of the world, whereas benefit finding refers to the value or worth of the event for one's personal life. 10

Earlier studies suggested that sense making predicted adaptation to loss in the early period of bereavement and that benefit finding played a larger role as time progresses. 10,14 In other words, it was believed that a person should first try to make sense of the event and where it fits in their overall world view. Once they are able to do this, they may subsequently find some personal benefit or value in the experience. Research has found that sense making is the most robust predictor of adjustment for survivors of natural and violent losses. 13,15 For traumatic loss in particular—suicide, homicide, or fatal accident<sup>16</sup>—the event can create intense feelings of vulnerability and anxiety. The inability to make sense of the traumatic experience can lead to complications in grieving. 15 On the basis of the literature, I predict that for Tribute Center docents, the ability to make some sense of their 9/11 experience will be positively related to subjective perceptions of recovery.

# Growth from trauma

For some individuals, beyond recovery from trauma is the experience of PTG, defined as the positive psychological change experienced as a result of the struggle with highly challenging life circumstances. <sup>17,18</sup> Calhoun and Tedeschi<sup>19</sup> note that the possibilities for growth from adversity and suffering have long been recognized in philosophy, literature, and religion, but a systematic focus on trauma-related positive change using quantitative and qualitative research has only occurred in the last 15-20 years. The literature suggests that reports of growth experiences in the aftermath of traumatic events outnumber reports of psychiatric disorders. <sup>20</sup> PTG refers to positive changes in people after a traumatic event. This may include

a greater appreciation of life, a changed sense of priorities, closer and more intimate relationships, or new possibilities for one's life. <sup>19</sup> In a previous qualitative study of Tribute Center docents, Richardson<sup>21</sup> found that many volunteers reported a renewed and positive outlook as a result of participating in the walking tour program. On the basis of the literature, I predict that for Tribute Center docents the ability to find some benefit in their 9/11 experience will be positively related to PTG.

In response to criticism that scales to measure PTG solely focused on positive change, Baker et al.<sup>22</sup> created the PTG inventory to assess both PTG and PTD. Studies have shown that these two constructs when assessed in the same domain are not negatively related, but rather independent experiences predicted by different underlying variables. 22,23 People can report both growth and loss following a significant stressful life event. To contribute to this new stream of research, the current study will measure PTD among Tribute docents as well. It is likely that PTD may differ between individuals based on their exposure to the events of 9/11. When a terrorist attack occurs, victims include not only those present at the event but also first responders, family members who lose loved ones, individuals in the general vicinity at the time of the event, and those who volunteer to help with recovery efforts. Victims may therefore vary in their exposure to the actual event. In general, both direct and indirect exposure to terrorism is linked with psychological distress, especially the more direct the exposure and nearer to the time of exposure.<sup>1,2</sup> On the basis of the literature, I predict that Tribute Center docents who witnessed the 9/11 attacks firsthand will have higher perceptions of PTD as compared to those who did not.

## **Background**

The WTC Tribute Center opened in September 2006 (8 years before the National September 11 Memorial Museum opened). The space is a visitor and learning center with selected 9/11 artifacts, but the marquee attraction is the volunteer-led walking tours around the WTC site. Each volunteer docent was personally affected by the events of 9/11 in some

way—family members who lost loved ones, survivors from the WTC buildings and the Pentagon, downtown residents, rescue workers who responded that morning and those who worked during the recovery process, and individuals who volunteered with the Red Cross, Salvation Army, and other charities. Tours last about 75 minutes and are led by two docents: a lead and a support. Tour group size is limited to 25 people. Half of the tour content relates facts about the history of the site and historical events of 2001 and its aftermath. The other half of the content focuses on the docents' unique personal experiences of September 11. Volunteer guides participate in a comprehensive training period before leading or supporting tours.

#### **METHOD**

# **Participants**

I collected data via an online questionnaire. I sent an e-mail to 525 docents of the Tribute WTC Visitor Center that described the purpose of the research project and provided a URL link to the web-based survey. Of the 525 e-mails sent, 118 docents (22 percent) completed the anonymous survey. The questionnaire and study methodology were approved by the Pace University Institutional Review Board.

# Measures

Posttraumatic growth and depreciation. I used the paired format Posttraumatic Growth Inventory<sup>22</sup> to assess PTG. This scale includes 21 items from the original PTGI<sup>24</sup> and 21 matched but negatively worded items developed by Baker et al., 22 to measure PTD. Instructions indicate that items are presented in pairs and that both types of change can occur as the result of a highly stressful life experience. The participants were asked to indicate the degree to which they experienced the change described by each item using a six-point Likert scale ranging from 0 (I did not experience this change as a result of my crisis) to 5 (I experienced this change to a very great degree as a result of my crisis). The 21 positive items and 21 negative items are separately summed to create PTG and PTD composite scores ranging from 0 to 105. The scales have been found to have good validity and

reliability.<sup>23</sup> Internal consistency reliabilities for this study were 0.94 for PTG and 0.94 for PTD.

Recovery. I used the Impact of Events Scale (IES), Revised (IES-R<sup>25</sup>) to measure recovery. This scale includes 22 items to measure the subjective response to a specific traumatic event, including aspects of intrusion, avoidance, and hyperarousal. Responses were scored on a five-point Likert scale ranging from 0 (Not at all) to 4 (Extremely), with higher scores indicating the individual is still experiencing troubling thoughts related to the event and lower scores indicating recovery. The 22 items are summed to create the IES score ranging from 0 to 88. The scale has been found to have good validity and reliability.<sup>26</sup> Internal consistency reliability for this study was 0.84.

Sense making. On the basis of previous studies, <sup>10</sup> I measured sense making by asking participants to report "overall, how much sense would you say you have made of your experience and/or loss on 9/11/01?" Respondents were asked to indicate the degree to which they experienced sense making choosing from the following four categories: 1 (No sense), 2 (Very little sense), 3 (Some sense), and 4 (A good deal of sense).

Benefit finding. On the basis of previous studies,<sup>10</sup> I measured benefit finding by asking participants to report "overall, how much benefit have you been able to find related to your experience?" Respondents were asked to indicate the degree to which they experienced benefit finding choosing from the following four categories: 1 (No benefit), 2 (Very little benefit), 3 (Some benefit), and 4 (Great benefit).

Location on 9/11. I asked participants to report their location on September 11, 2001 by selecting from a drop-down box of the following options: Downtown NYC, Manhattan (but not downtown), Brooklyn, Queens, Bronx, Staten Island, Long Island, Westchester, New York State (other than listed above), New Jersey, Connecticut, Washington, DC area, or Other. Respondents who selected "Downtown NYC" were coded as 1, and all others were coded as

0 to create a dichotomous variable for "Location in Downtown Manhattan on 9/11."

Demographic variables. I also collected information on the following demographic variables: current age, gender (coded as 1 = male and 2 = female), docent category (eg, survivor, first responder, family member, volunteer, or downtown resident), and docent tenure (eg, number of years volunteering at the Tribute Center).

# Analyses

I entered all responses into SPSS 17.0 for Windows and calculated general descriptive statistics and correlations among the constructs, as well as Cronbach's alpha reliability coefficients for each of the scales. I tested the first two hypotheses with a one-way between subjects analysis of variance (ANOVA). First, I examined whether recovery scores differed among the four categories of sense making, and then I examined whether PTG scores differed among the four categories of benefit finding. Finally, I tested the third hypothesis with an independent samples t test to compare the average PTD scores for individuals in lower Manhattan on 9/11 versus those who were elsewhere.

#### **RESULTS**

# Demographics

The average age of respondents was 57 years and 54 percent were male (Table 1). They represented a cross section of the 9/11 Community: Survivor, 37 percent; First responder, 20 percent; Family members, 17 percent; Volunteers, 17 percent; and Downtown residents, 9 percent. They varied in their tenure as Tribute docents, with 19 percent volunteering for 6+ years, 7 percent for 5-6 years, 9 percent for 4-5 years, 14 percent for 3-4 years, 15 percent for 2-3 years, 17 percent for 1-2 years, and 19 percent for <1 year. On average, participants conducted two to three walking tours per month.

Hypothesis 1 predicted that sense making would be related to recovery. A one-way between subjects ANOVA was conducted to compare the relationship between sense making and perceptions of recovery for four conditions: no sense, very little sense, some sense, and a good deal of sense. There was a significant relationship between sense making and recovery at the p < 0.05 level for the four conditions [F(3, 92) = 2.88, p = 0.04]. Participants scored lower on the IES when they reported ability to make a good deal of sense from their 9/11 experience (M = 10.61, SD = 10.29) as

Table 1. Descriptive statistics and correlations* (n = 118)											
	Mean	SD	1	2	3	4	5	6	7	8	9
1. Age	57.3	9.7									
2. Gender	1.48	0.50	0.08								
3. Tenure	3.84	2.1	0.31	0.07							
4. Category	2.84	1.4	(0.08)	(0.06)	(0.08)						
5. Location on September 11, 2001	0.63	0.50	(0.05)	(0.09)	(0.02)	0.01					
6. Posttraumatic growth	56.04	22.9	(0.10)	0.19	0.12	(0.13)	(80.0)	0.94			
7. Posttraumatic depreciation	13.63	11.1	(0.29)	0.00	(0.05)	(0.22)	0.23	0.18	0.84		
8. Impact of events	16.43	15.3	(0.10)	(0.05)	(0.13)	(0.09)	0.06	0.30	0.49	0.94	
9. Sense making	2.77	1.1	0.05	0.10	(0.05)	0.03	0.02	0.08	(0.23)	(0.26)	
10. Benefit finding	3.11	0.8	0.13	0.16	0.07	(0.11)	0.03	0.34	(0.18)	(0.13)	0.39

Correlations greater than 0.20 are significant at the p < 0.05; alpha internal consistency reliability coefficients for scales appear on the main diagonal in **bold**.

compared to those who were only able to make some sense (M = 18.08, SD = 16.76), very little sense (M = 20.50, SD = 16.55), or no sense (M = 20.50, SD = 17.17). Taken together, these results suggest that IES scores were found to be significantly lower for those individuals who reported greater ability to make sense of their 9/11 experience, as shown in Table 2.

Hypothesis 2 predicted that benefit finding would be related to PTG. A one-way between subjects ANOVA was conducted to compare the relationship between benefit finding and perceptions of PTG for four conditions: no benefit, very little benefit, some benefit, and great benefit. There was a significant relationship between benefit finding and PTG at the p < 0.05 level for the four conditions [F(3, 92) = 6.12,p = 0.001]. Participants scored higher on the PTG scale when they reported they found great benefit from their 9/11 experience (M = 66.74, SD = 21.91) as compared to those who were only able to find some benefit (M = 52.11, SD = 21.52), very little benefit (M = 38.25, SD = 17.66), or no benefit (M = 54.25, SD = 25.75). Post hoc comparisons using the Tukey honest significance difference test indicated that the mean score for the "great benefit" condition (M = 66.74, SD = 21.91) was significantly different than the "some benefit" condition (M = 52.11, SD = 21.52) and "very little benefit" condition (M = 38.25, SD = 17.66). Taken together, these results suggest that PTG scores were found to be meaningfully higher for those individuals who reported greater ability to find some benefit in their 9/11 experience, as shown in Table 3.

Finally, hypothesis 3 predicted that PTD would be higher for those individuals who witnessed the 9/11 attacks firsthand. An independent samples t test was conducted to compare the average PTD scores for participants who were in downtown Manhattan as compared to those who were not. Results found that there was a significant difference in the scores at the p < 0.05 level [t(97) = 2.32, p = 0.02]. Participants reported greater PTD when they were located in lower Manhattan on September 11, 2001 (M = 15.67, SD = 12.46) as compared to those who were not (M = 10.46, SD = 8.00).

#### DISCUSSION

There is a growing body of literature testifying to the prevalence of positive life changes and personal growth following traumatic experiences. This study seeks to add to this literature by examining the relationship between meaning reconstruction and perceptions of PTG, PTD, and recovery among a sample of people directly affected by the 9/11 WTC attacks. Participants were volunteer docents from the Tribute WTC Visitor Center and represented the broad spectrum of the 9/11 Community: family members who lost loved ones, survivors who escaped from the buildings,

Table 2. ANOVA comparison of IES score means by Sense making score							
	Sum of squares	df	Mean square	F	Sig.		
Between groups	1,910.16	3	636.72	2.88	0.04		
Within groups	20,353.17	92	221.23				
Total	22,263.33	95					

Table 3. ANOVA comparison of PTG score means by Benefit finding score								
	Sum of squares	df	Mean square	F	Sig.			
Between groups	8,395.88	3	2,798.63	6.12	0.001			
Within groups	42,106.08	92	457.67					
Total	50,501.96	95						

downtown residents, first responders, and individuals who volunteered with recovery efforts in the aftermath of the attacks. By surveying this unique population 12 years after the events took place, this research attempts to better understand how meaning reconstruction, or the ability to make sense and find benefit from one's exposure to terrorism, is related to recovery, PTG, and PTD.

On the basis of existing literature, I predicted that the ability to make sense of one's 9/11 experience would be related to recovery. Findings suggested that this was indeed the case. Among the Tribute docents, those who reported they were able to make sense of the event through the passage of time were significantly less likely to experience troubling thoughts related to the attacks. This supports earlier research which found that sense making is the most robust predictor of adjustment for survivors of natural and violent losses. 13,15 I further examined the data to see whether there were any significant differences in recovery scores based on docent category (eg, family member, first responder, survivor, downtown resident, and volunteer) and found there were none. This suggests that among Tribute docents, no one category of victim was more or less likely to be able to make sense of the attacks over others.

An equally important aspect of meaning reconstruction in the aftermath of a traumatic event is the ability to find some benefit or "silver lining" from the experience. 10,13,14 On the basis of the existing literature, I predicted that the ability to find benefit from one's 9/11 experience would be related to perceptions of PTG. Findings suggested this to be true. Among Tribute docents, those who reported greater benefit were significantly more likely to report higher levels of PTG. Ability to make sense of the event, however, was not related to PTG (r = 0.08, p = 0.425). This suggests that benefit finding may be a more robust predictor of PTG. I further examined the data to see whether there were any significant differences in PTG based on docent category (eg, family member, first responder, survivor, downtown resident, and volunteer) and found there were none. This suggests that among Tribute docents, no one category of victim was more or less likely to experience PTG over another.

The findings also revealed that PTG was related to higher scores on the IES (r = 0.30, p < 0.01). This was consistent with other research that showed a positive relationship between PTG and posttraumatic stress disorder.<sup>27</sup> Based on studies conducted in New York following the September 11 attacks and in Israel during periods of violence and terrorism, Hobfoll et al.<sup>5</sup> found that PTG was related to psychological distress. It may be that those who experience the worse events are seeking more opportunities to grow and change. Findings from their studies also suggested that PTG may be a marker of positive adaptation when accompanied by action, as opposed to solely cognitive growth. Volunteering to give walking tours around the WTC site provides an avenue for action, and thereby action growth, for the victims of the 9/11 attacks.

To build upon the recent stream of literature on PTD,<sup>22,23</sup> I measured perceptions of PTD and found that it was higher for Tribute docents who were located in downtown Manhattan on September 11, 2001. These are volunteers who experienced the event firsthand and were therefore more likely to have direct exposure to some of the most troubling aspects of the day (eg, witnessing the planes hit the towers, escaping from buildings, and watching coworkers get injured or even die). Results also supported prior conceptions that PTD is not negatively related to PTG, but rather independent experiences. PTD was not significantly correlated with PTG (r = 0.18, p = 0.072) but it was highly correlated with the IES (r = 0.49, p <0.001), suggesting a strong relationship between PTD and IES. I further examined the data to see whether there were any significant differences in PTD based on docent category (eg. family member, first responder, survivor, downtown resident, and volunteer) and found there were none. This suggests that among Tribute docents, no one category of victim was more or less likely to experience PTD over another.

From a practitioner perspective, these findings provide evidence that individuals can have a positive reaction to trauma. By volunteering at Tribute, some docents are able to make better sense of their trauma experience which helped with their recovery. Volunteers gain a new understanding of the event by learning about others' experiences that day and by telling their

personal story with people who were not victims. This understanding may help to transform their perspective of the trauma from a personal tragedy to an important historical event. It is as if the docents engage in a form of narrative therapy each time they lead a tour. According to Tuval-Mashiach et al., narrative therapy involves helping trauma victims to locate those parts of their stories that hinder continuity and jointly create a new story, which results in a richer construction of one's life and identity. By participating in the volunteer program, docents work with Tribute staff to develop their tour story and practice it before conducting tours themselves. They also hear the stories of other docents which helps create a broader perspective and understanding of the trauma event.

The findings also provided evidence of PTG. According to Calhoun and Tedeschi, 19 PTG tends to be more likely when the individual engages in reflective and deliberate rumination. The tours provide the perfect opportunity for this deliberate rumination in a positive and productive setting. Tribute docents retell their stories over and over again to different groups of strangers which may help them to find benefit from the experience. This is not a support group that meets for 8 weeks and then disbands. It is a continuous cycle of sharing, learning, and healing. Although the trauma literature suggests that most coping happens within the first weeks and months following a traumatic event, 9 a contribution of this study is that the Tribute Center walking tours provide an important forum for meaning reconstruction even though many years have passed since the WTC attacks. Results suggest that it may never be too late to engage in meaning reconstruction, particularly if one is able to find a support group of individuals who shared similar experiences or who are interested in learning about the experience.

# Limitations and future directions

The current study examined perceptions of PTG, PTD, and recovery among a sample of individuals directly affected by the 9/11 terrorist attacks. However, results should be interpreted in light of the study limitations. The study only focuses on Tribute Center docents and is by no means exhaustive of the entire

9/11 Community. This sample, in particular, may be more likely to have experienced PTG and recovery as it is a group of individuals who actively volunteer with the WTC Tribute Center. In doing so, the docents discuss their personal stories of trauma and loss during walking tours they conduct around the WTC site. They may therefore be more likely to have the ability to make sense of their experience, since they talk about it on the tour. The results did show variability in perceptions of sense making and benefit finding, however. Future studies should attempt to examine these constructs among a matched sample of victims who do not volunteer with the Tribute Center.

In addition, the cross-sectional nature of the design limits causal implications. While results suggested that ability to make sense of one's 9/11 experience was related to recovery, it is possible that the opposite is true. Perhaps victims who no longer have troubling thoughts related to the attacks are able to finally look more objectively at the day and are better able to make some sense of it from a world-view perspective. Also, the data were collected 12 years after the events took place. It is likely that levels of PTG, PTD, and recovery may have been different at different periods of time post-9/11. To obtain a better understanding of the relationship between these variables over time, future studies are needed to assess these constructs at varying longitudinal intervals.

The findings do reveal that over a decade after the 9/11 attacks occurred, some victims are still dealing with disturbing thoughts and memories of that day and the days afterward. By volunteering at the Tribute Center, docents are taking action to become members of a community that may provide the social support and means necessary to not only recover but also experience growth from their adversity. Recovery is not about bouncing back to pre-September 11 states. Rather, as noted by  $Walsh^{28(p35)}$  6 months after the attacks took place, "When events of this magnitude occur, we cannot return to 'normal' life as we knew it before September 11. There is no going back. A more apt metaphor ... might be 'bouncing forward' to face an uncertain future." Results from this study suggest that meaning reconstruction is an important part of that process.

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#### **REFERENCES**

- 1. Galea S, Ahern J, Resnick H, et al.: Psychological sequelae of the September 11 terrorist attacks in New York City. *N Engl J Med*. 2002: 346: 982-987.
- 2. Galea S, Vlahov D, Resnick H, et al.: Trends of probable post-traumatic stress disorder in New York City after the September 11 terrorist attacks. *Am J Epidemiol*. 2003; 158(6): 514-524.
- 3. Hobfoll SE, Tracy M, Galea S: The impact of resource loss and traumatic growth on probably PTSD an depression following terrorist attacks. *J Trauma Stress*. 2006; 19(6): 867-878.
- 4. Daly ES, Gulliver SB, Zimering RT, et al.: Disaster mental health workers responding to ground zero: One year later. J Trauma Stress. 2008; 21: 227-230.
- 5. Hobfoll SE, Hall BJ, Canetti-Nisim D, et al.: Refining our understanding of traumatic growth in the face of terrorism: Moving from meaning cognitions to doing what is meaningful. *Appl Psychol Int Rev.* 2007; 56(3): 345-366.
- 6. Gillies J, Neimeyer RA: Loss, grief, and the search for significance: Toward a model of meaning reconstruction in bereavement. *J Constr Psychol*. 2006; 19: 31-65.
- 7. Currier J, Holland J, Neimeyer RA: Sense-making, grief, and the experience of violent loss: Toward a meditational model. *Death Stud.* 2006; 30: 403-428.
- 8. Ehlers A, Steil R: Maintenance of intrusive memories in post traumatic stress disorder: A cognitive approach. *Behav Cogn Psychother*. 1995; 231: 217-249.
- 9. Tuval-Mashiach R, Freedman S, Bargai N, et al.: Coping with trauma: Narrative and cognitive perspectives. *Psychiatry*. 2004; 67(3): 280-293.
- 10. Davis CG, Nolen-Hoeksema S, Larson J: Making sense of loss and benefiting from the experience: Two construals of meaning. *J Pers Soc Psychol.* 1998; 75(2): 561-574.
- 11. Janoff-Bulman R: Shattered Assumptions: Toward a New Psychology of Trauma. New York: Free Press, 1992.
- 12. Parkes CM: Psycho-social transitions: A field for study. Soc Sci Med. 1971; 5: 101-115.
- 13. Holland JM, Currier JM, Neimeyer RA: Meaning reconstruction in the first two years of bereavement: The role of sense-making and benefit-finding. *Omega.* 2006; 53(3): 175-191.

- 14. Janoff-Bulman R, Frantz CM: The impact of trauma on meaning: From meaningless world to meaningful life. In Power M, Brewin CR (eds.): *The Transformation of Meaning in Psychological Therapies*. New York: Wiley, 1997: 91-106.
- 15. Currier J, Holland J, Coleman R, et al.: Bereavement following violent death: An assault on life and meaning. In Stevenson R, Cox G (eds.): *Perspectives on Violence and Violent Death*. Amityville, NY: Baywood, 2006.
- 16. Norris FH: Epidemiology of trauma: Frequency and impact of different potentially traumatic events on different demographic groups. *J Consult Clin Psychol*. 1992; 60: 409-418.
- 17. Calhoun LG, Tedeschi RG: Facilitating Posttraumatic Growth: A Clinician's Guide. Mahwah, NJ: Lawrence Erlbaum Associates, Inc., 1999.
- 18. Calhoun LG, Tedeschi RG: Posttraumatic growth: The positive lessons of loss. In Neimeyer RA (ed.): *Meaning Reconstruction and the Experience of Loss*. Washington, DC: American Psychological Association, 2001: 157-172.
- 19. Calhoun LG, Tedeschi RG: The foundations of posttraumatic growth: An expanded framework. In Calhoun LG, Tedeschi RG (eds.): *Handbook of Posttraumatic Growth*. Mahwah, NJ: Lawrence Erlbaum Associates, 2006: 3-23.
- 20. Tedeschi RG, Calhoun LG: Posttraumatic growth: Conceptual foundations and empirical evidence. *Psychol Inq.* 2004; 15(1): 1-18.
- 21. Richardson KM: Sharing stories of the 9/11 experience: An exploratory study of the Tribute Walking Tour program. *J Loss Trauma*. 2015; 20(1): 22-33.
- 22. Baker JM, Kelly C, Calhoun LG, et al.: An examination of post-traumatic growth and posttraumatic depreciation. *J Loss Trauma*. 2008: 13: 450-465.
- 23. Cann A, Calhoun LG, Tedeschi RG, et al.: Posttraumatic growth and depreciation as independent experiences and predictors of well-being. *J Loss Trauma*. 2010; 15(3): 151-166.
- 24. Tedeschi RG, Calhoun LG: The Posttraumatic Growth Inventory: measuring the positive legacy of trauma. J Traum Stress. 1996; 9(3): 455-471.
- 25. Brown LM, Hyer K: How to try this: The impact of event scale-revised: A quick measure of a patient's response to trauma.  $Am\ J\ Nurs.\ 2008;\ 108(11):\ 60-68.$
- 26. Sundin EC, Horowitz MJ: Impact of event scale: Psychometric properties. *Br J Psychiatry*. 2002; 180: 205-209.
- 27. Pat-Horenczyk R, Brom D: The multiple faces of post-traumatic growth. *Appl Psychol Int Rev.* 2007; 56(3): 379-385.
- 28. Walsh F: Bouncing forward: Resilience in the aftermath of September 11. Family Process. 2002; 41: 34-36.