

Posttraumatic Stress Disorder, Guilt, Depression, and Meaning in Life among Military Veterans

Gina P. Owens¹
Michael F. Steger²
Allison A. Whitesell¹
Catherine J. Herrera¹

¹ Department of Psychology, University of Tennessee, Knoxville, TN
² Department of Psychology, Colorado State University, Fort Collins, CO

Correspondence to Gina P. Owens, Ph.D., Department of Psychology, University of Tennessee, 1404 Circle Dr., Knoxville, TN 37996-0900; gowens4@utk.edu, Ph: 865-974-2204

Veterans of various service eras ($N=174$) completed an internet survey about combat exposure, posttraumatic stress disorder (PTSD) symptoms, depression, guilt, and meaning in life. Results of a hierarchical regression indicated that younger age; higher levels of combat exposure, depression, and guilt; and lower meaning in life predicted greater PTSD severity. The interaction between meaning in life and depression also was significant, with a stronger inverse relation between meaning and PTSD at lower levels of depression. Meaning in life may be an important treatment concern for veterans with PTSD symptoms, particularly at higher levels of functioning.

Posttraumatic Stress Disorder, Guilt, Depression, and Meaning in Life among Military Veterans

Combat veterans commonly report guilt and depression following stressful military experiences. More depressed veterans often report higher levels of PTSD (Dohrenwend et al., 2006). Guilt also appears to be a distress-related response, potentially increasing both avoidant coping and PTSD (Henning & Frueh, 1997; Street, Gibson, & Holohan, 2005), potentially worsening prognosis and treatment response (Kubany et al., 1995; Owens, Chard, & Cox, 2008). Understanding the multiple influences on PTSD is a pressing priority, particularly with current military deployments.

Cognitive restructuring models of coping (e.g., Park & Ai, 2006) may explain why PTSD develops in some trauma survivors and not others. PTSD is believed to result when a traumatic event shatters core beliefs that enable people to establish meaning in life (Janoff-Bulman, 1992). If people cannot cognitively restructure traumatic events, regain meaning in life, and rebuild core beliefs, depression and guilt may develop. People who report better cognitive restructuring coping experience lower levels of depression and PTSD post-trauma (Frazier, Conlon, & Glaser, 2001; Updegraff, Silver, & Holman, 2008). A primary form of restructuring traumatic events is referred to as meaning-making. Recent work has emphasized the benefits of meaning-making after traumatic events for facilitating psychological adjustment (Park & Ai, 2006). Meaning in life is considered an important outcome of the meaning-making process (Park, Edmondson, Fenster, & Blank, 2008). Research has shown that veterans with meaning loss tend to seek VA-specific care (Fontana & Rosenheck, 2005). However, meaning in life may precede and aid coping efforts, potentially reducing risk of PTSD directly (Steger, Frazier, & Zacchanini, 2008), or serving to buffer against the effects of traumatic stress on depression (Krause, 2007). Thus, meaning may protect people from the impact of psychological distress (i.e., depression, guilt) on post-trauma functioning (i.e., PTSD). Limited research has examined meaning in life in veterans' coping with traumatic stress (exceptions: Fontana & Rosenheck, 2005; Schok, Kleber, Elands, & Weerts, 2008; Southwick, Gilmartin, McDonough, & Morrissey, 2006).

The current study examined interrelations among guilt, depression, and meaning in life in the context of PTSD. Depression and guilt were thought to worsen PTSD, controlling for combat exposure. Meaning in life was thought to play a protective role (e.g., Krause, 2007), buffering against the influence of depression and guilt on PTSD severity.

METHOD

Participants

Military veterans ($N=174$) completed the online survey for the current study. The sample was largely male (91%) and Caucasian (93%). Mean participant age was 57.1 years ($SD = 10.6$); 36% reported some college, 32% college degree, 20% graduate/professional degree, and 12% high school degree or less. Service eras included World War II (3%), Korean War (3%), between Korean and Vietnam Wars (12%), Vietnam (75%), post-Vietnam (33%), Gulf War I (19%), Iraq (8%), and Afghanistan (5%).

Measures

Combat Exposure Scale (Keane et al., 1989). The Combat Exposure Scale is a 7-item scale designed to measure severity of combat exposure. Responses are rated from 1 to 5 with item-specific anchors. Internal consistency reliability for the present study was .87.

PTSD Checklist-Military version (PCL-M; Weathers, Litz, Herman, Huska, & Keane, 1993). The PCL-M uses 17 items to measure PTSD symptomatology. Directions for the PCL-M describe items as potential responses to stressful military experiences. Items are rated from 1 (*not at all*) to 5 (*extremely*). Internal consistency reliability for the current study was .98.

Depression scale of Depression Anxiety Stress Scales-21 (DASS-21; Lovibond & Lovibond, 1995). The DASS-21 Depression subscale is a 7-item scale designed to measure depression severity over the past week. Items are rated from 0 (*did not apply to me at all*) to 3 (*applied to me very much*). Internal consistency reliability for the current study was .95.

Guilt Inventory – Trait Scale (Kugler & Jones, 1992). The 20-item Guilt Inventory was designed to measure tendency towards feelings of guilt. Items are rated from 1 (*strongly disagree*) to 5 (*strongly agree*). Internal consistency reliability in the present study was .92.

Meaning in Life Questionnaire (MLQ; Steger, Frazier, Oishi, & Kaler, 2006). The MLQ Presence subscale consists of five items and was developed to measure perceptions that one's personal life is meaningful. Items are rated from 1 (*absolutely untrue*) to 7 (*absolutely true*). Internal consistency reliability for the present study was .91.

Procedure

Participants were recruited via email announcements sent to veteran listserves and advertisements in military publications. Participants accessed the firewall-protected, secure website and were given informed consent information. Participants could enter a drawing for online gift certificates as an incentive.

RESULTS

Means, standard deviations, and correlations among independent and dependent variables are presented in Table 1. Younger veterans reported less severe PTSD. More severe PTSD was reported by people reporting more combat exposure, depression, and guilt, and less meaning in life.

Hierarchical linear regression was performed to predict PTSD severity, using variables with significant bivariate relations. To examine whether meaning in life buffered the relation between guilt or depression and PTSD, meaning, guilt, and depression scores were mean-centered; centered values were multiplied to obtain interaction terms (Aiken & West, 1991). Step one was used to control for age and combat exposure. Depression, guilt, and meaning were entered simultaneously in step two; interaction terms were entered in step three. To interpret the interaction between meaning in life and depression, high and low categories of meaning in life and depression were calculated and plotted by using points one standard deviation above and below the mean (Aiken & West, 1991). Multicollinearity was not problematic for multivariate analyses.

Table 2 displays significant predictors of PTSD. Age, combat exposure, depression, guilt, meaning in life – and the interaction between meaning and depression – were significant predictors of PTSD severity. The interaction between meaning and depression is displayed in Figure 1. It can be seen that at low and moderate levels of depression, meaning in life was associated with lower levels of PTSD. This effect was not apparent at high depression levels, where people at low, medium, and high levels of meaning reported the same levels of PTSD.

DISCUSSION

Depression and guilt have been identified as exacerbating factors in PTSD severity; in contrast, meaning in life is associated with lower PTSD severity. The present study examined these variables together in a sample of military veterans, obtaining results consistent with prior research (Dohrenwend et al., 2006; Henning & Frueh, 1997). Our research indicates that guilt and depression remain significant concerns for some veterans and may

be important treatment issues. Conversely, our results suggest that establishing a sense of meaning in life may be beneficial, even beyond the influence of depression and guilt.

We also hypothesized that meaning buffered against the deleterious effects of psychological distress on PTSD severity. This hypothesis was maintained for depression, but not guilt. For veterans with low to moderate levels of depression, meaning in life was associated with lower levels of PTSD. However, for veterans with high levels of depression, meaning in life did not seem to affect PTSD severity. It may be that for those with high depression severity, symptoms may overwhelm the benefits of experiencing life as meaningful.

The cross-sectional design of the current study does not allow determination of the direction of influence among variables. The constructs studied here are likely to be mutually related over time (e.g., higher depression severity may foster higher PTSD, which may foster more severe depression, and so forth). The model proposed here is that meaning in life precedes – and buffers the effects of – emerging depressive symptoms. However, meaning also might be influenced by the interplay of depression and PTSD over time. Longitudinal research, ideally including pre-stressor measurement of meaning, is necessary to bolster confidence in the buffering role of meaning in the dynamics between depression and PTSD.

Results have several treatment implications for the veteran population. Guilt remains a significant issue for some veterans and may be important in successful treatment of PTSD. Clinicians may also wish to focus on bolstering healthy attitudes about meaning in life as veterans process traumatic experiences, particularly among those with lower levels of depression symptoms.

Despite consistency with previous findings, conclusions based on this study should be tempered by several limitations. Participants were all volunteers, therefore there is no way of assessing differences between respondents and non-respondents. Veterans who participate in veteran-relevant listserves on the internet may differ from those who do not. Respondents may have been more interested in mental health issues, stress, or have higher levels of symptoms than those who decided not to participate. An alternate possibility is that internet access may be more common among higher functioning veterans. For example, this sample has relatively high education levels. These factors, and the largely Caucasian composition of the sample, limit generalizability to all veterans. Thus, additional research with a larger, more diverse sample is recommended.

As efforts continue to mitigate the effects of traumatic stress, the present study adds to what is known about vulnerabilities like depression and guilt, and highlights the potential benefits of meaning in life in the context of PTSD.

References

- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Thousand Oaks, CA: Sage.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum.
- Dohrenwend, B. P., Turner, J. B., Turse, N. A., Adams, B. G., Koenen, K. C., & Marshall, R. (2006). *The psychological risks of Vietnam for U.S. veterans: A revisit with new data and methods*. *Science*, 313, 979-982.
- Fontana, A., & Rosenheck, R. (2005). *The role of loss of meaning in the pursuit of treatment for posttraumatic stress disorder*. *Journal of Traumatic Stress*, 18, 133-136.
- Frazier, P., Conlon, A., & Glaser, T. (2001). *Positive and negative life changes following sexual assault*. *Journal of Consulting and Clinical Psychology*, 69, 1048-1055.
- Henning, K. R., & Frueh, B. C. (1997). *Combat guilt and its relationship to PTSD symptoms*. *Journal of Clinical Psychology*, 53, 801-808.
- Janoff-Bulman, R. (1992). *Shattered assumptions: Towards a new psychology of trauma*. New York: Free Press.
- Keane, T. M., Fairbank, J. A., Caddell, J. M., Zimering, R. T., Taylor, K. L., & Mora, C. A. (1989). *Clinical evaluation of a measure to assess combat exposure*. *Psychological Assessment*, 1, 53-55.
- Krause, N. (2007). *Evaluating the stress-buffering function of meaning in life among older people*. *Journal of Aging and Health*, 19, 792-812.
- Kubany, E. S., Abueg, F. R., Owens, J. A., Brennan, J. M., Kaplan, A. S., Watson, S. B. (1995). *Initial examination of a multidimensional model of trauma-related guilt: Applications to combat veterans and battered women*. *Journal of Psychopathology and Behavioral Assessment*, 17, 353-376.
- Kugler, K. & Jones, W.H. (1992). *On conceptualizing and assessing guilt*. *Journal of Personality & Social Psychology*, 62, 318-327.
- Lovibond, S. H., & Lovibond, P. F. (1995). *Manual for the depression anxiety stress scales*.

Sydney: Psychology Foundation.

- Owens, G. P., Chard, K. M., & Cox, T. A. (2008). *The relationship between maladaptive cognitions, anger expression, and posttraumatic stress disorder among veterans in residential treatment. Journal of Aggression, Maltreatment, and Trauma, 17, 439-452.*
- Park, C. L., & Ai, A. L. (2006). *Meaning making and growth: New directions for research on survivors of trauma. Journal of Loss and Trauma, 11, 389-407.*
- Park, C. L., Edmondson, D., Fenster, J. R., Blank, T. O. (2008). *Meaning making and psychological adjustment following cancer: The mediating roles of growth, life meaning, and restored just-world beliefs. Journal of Consulting and Clinical Psychology, 76, 863-875.*
- Schok, M. L., Kleber, R. J., Elands, M., & Weerts, J. M. P. (2008). *Meaning as mission: A review of empirical studies on appraisals of war and peacekeeping experiences. Clinical Psychology Review, 28, 357-365.*
- Southwick, S. M., Gilmartin, R., McDonough, P., & Morrissey, P. (2006). *Logotherapy as an adjunctive treatment for chronic combat-related PTSD: A meaning-based intervention. American Journal of Psychotherapy, 60, 161-174.*
- Steger, M. F., Frazier, P., Oishi, S., & Kaler, M. (2006). *The Meaning in Life Questionnaire: Assessing the presence of and search for meaning in life. Journal of Counseling Psychology, 53, 80-93.*
- Steger, M. F., Frazier, P., & Zacchanini, J. L. (2008). *Terrorism in Two Cultures: Stress and growth following September 11th and the Madrid train bombings. Journal of Loss and Trauma, 13, 511-527.*
- Street, A. E., Gibson, L. E., & Holohan, D. R. (2005). *Impact of childhood traumatic events, trauma-related guilt, and avoidant coping strategies on PTSD symptoms in female survivors of domestic violence. Journal of Traumatic Stress, 18, 245-252.*
- Updegraff, J. A., Silver, R. C., & Holman, E. A. (2008). *Searching for and finding meaning in collective trauma: Results from a national longitudinal study of the 9/11 terrorist attacks. Journal of Personality and Social Psychology, 95, 709-722.*
- Weathers, F. W., Litz, B. T., Herman, D. S., Huska, J. A., & Keane, T. M. (1993, October). *The PTSD checklist: Reliability, validity, and diagnostic utility. Paper presented to the International Society for Traumatic Stress Studies, San Antonio, TX.*