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BRIEF REPORT

**Examining the Unique Role of Pre-Military Religious Commitment in
Posttraumatic Symptomatology among Post 9/11 Veterans**

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Abstract

Religion can influence recovery from the many stressors and traumas that may occur in the context of war-zone service. On the one hand, religious faith might provide an array of resources for healthy coping and relational connections. However, military trauma can also affect veterans spiritually in ways that lead to conflict and struggles in this cultural domain. In this brief report, a sample of 225 war-zone veterans from the Post-9/11 era who screened positive for spiritual struggle completed Worthington et al.'s (2003) Religious Commitment Inventory (RCI) on the basis of religious beliefs, practices, and relationships before serving in the military and according to the present time. In addition, veterans completed validated assessments of symptomatology related to posttraumatic stress disorder (PTSD), moral injury, and spiritual struggles. Present religious commitment was not associated with any of these posttraumatic outcomes at the time of the study. In contrast, veterans' pre-military religious commitment was uniquely linked with worse outcome across bivariate and multivariate analyses. Other analyses revealed a general weakening of religious commitment. In combination, these findings underscore the value of assuming a process-oriented view in conceptualizing religious identity in veterans who are struggling to heal emotionally, relationally, and spiritually from war-related traumas. Looking ahead, research will ideally disentangle the role of religious approaches to spirituality and dynamics of changes in religious identity among war-zone veterans.

Keywords: religion, spirituality, military veteran, PTSD, moral injury, spiritual struggle

Religion represents an important source of cultural identity that might promote well-being among military veterans who served in war-zone environments after the terrorist attacks on September 11, 2001 (for review, see Smith-MacDonald et al., 2017). Recent findings from a nationally representative sample indicated the majority of this newest generation of veterans (85%) were religiously affiliated and/or engaged in religious activities and/or practices on a weekly or more frequent basis (e.g., prayer, service attendance; Sharma et al., 2017). In such cases, participating in a religious community might promote social connection and proscribe maladaptive forms of coping (e.g., substance abuse) that often engender problems for veterans contending with posttraumatic stress disorder (PTSD) and other trauma-related issues. Veterans may also value a relationship with God or Higher Power and/or incorporate prayer or meditative practices for connecting with the sacred and/or experiencing positive emotions (e.g., peace, joy). Further, research suggests religious beliefs can foster forgiveness of oneself and others after acts of perceived wrongdoing as well as re-appraise the meaning of traumatic events in ways that promote recovery and growth (Harris et al., 2015; Park et al., 2016; Wortmann et al., 2017).

With this said, religious commitment might contribute to posttraumatic symptomatology amid the myriad of traumas that might occur in war-zone service. Spiritual struggles have been linked with worse symptom severity of PTSD and moral injury with veterans from multiple eras (e.g., Currier et al., 2014, 2019). Other findings indicate military traumas can disrupt religious commitment in a manner that may hinder posttraumatic recovery (Currier et al., 2014, 2019; Fontana & Rosenheck, 2004). When considering moral challenges of serving in asymmetrical warfare contexts such as conflicts in Iraq and Afghanistan, military personnel often need to make decisions and/or engage in actions in high stakes situations that violate deeply held moral beliefs and/or witness others do so (for review, see Litz et al., 2009). Given the role of Christianity and other religions in shaping moral beliefs in the U.S. (Graham & Haidt, 2010), researchers have asserted that religiously committed veterans might draw upon religious beliefs, practices, and/or relationships in coming to terms with potentially morally injurious events (e.g., Harris et al., 2015, Wortmann et al., 2017). However, depending on their spiritual orienting systems (e.g.,

faith maturity, religious orientation; Pargament, 2007) and severity of traumatic exposures, religiously committed persons may struggle emotionally, relationally, and spiritually.

To our knowledge, only one study has examined the role of pre-military religious commitment in PTSD, moral injury, and/or spiritual struggle. Drawing on a retrospective approach to assessing religious faith and/or spirituality before serving in the military and at present with two community-based samples of war-zone veterans, secondary findings of a latent profile analysis revealed those with worse issues related to moral injury and spiritual struggles were more likely to endorse stronger pre-military religious commitment (Currier et al., 2018). In contrast, present religious commitment was not reliably linked with these issues. Given possible implications for spiritually integrated mental health care, we conducted this brief report to replicate these findings with improvements in sampling and measurement. First, because most of Currier et al.'s (2018) participants did not endorse outcomes related to moral injury or spiritual struggle, we utilized a purposive strategy in targeting post-9/11 war-zone veterans who endorsed a screening item for spiritual struggle. Second, rather than relying on single-item measures, we implemented Worthington et al.'s (2003) Religious Commitment Inventory to assess religious commitment at pre-military and the time of the study. With these improvements in mind, we hypothesized pre-military religious commitment would again emerge as a salient correlate of greater severity of posttraumatic issues at the time of the study.

Method

Participants and Procedures

A total of 225 post-9/11 war-zone veterans who screened positive for spiritual struggle were recruited via an online survey distributed by Qualtrics (Provo, Utah) to specialized panels of individuals who had served with the U.S. military. Focusing on persons who self-identified as military veterans in background questionnaires when joining a research panel with Qualtrics, we incorporated further screening criteria to affirm their military service and identify those who: (1) served in a combat operational role in Iraq and/or Afghanistan since September 11, 2001; and (2) were experiencing struggles with religious faith and/or spirituality. Specifically, participants

were presented with a series of two “yes” or “no” questions about these criteria; persons who answered “no” to either item were excluded. So as to ensure quality of the data, responses to military background of persons who responded “yes” to both items were then reviewed for consistency (e.g., years of service, deployment history, military branch). Veterans received a variety of incentives from Qualtrics Panels for completing the study survey (e.g., gift cards) with amounts varying on the basis of the groups from which they were recruited.

The average age in this sample was 35.55 years ($SD = 9.09$) and one-quarter were women. In total, two-thirds were married or living with a domestic partner. Although two-thirds identified with Caucasian backgrounds (67.4%), African American (19.7%), Hispanic (8.8%), and Asian American (3.1%) persons were represented as well. Participants served in the U.S. Army (64.4%), Marine Corps (16.7%), Air Force (12%), and/or Navy (10.7%) in support of combat operations in Iraq (70.2%), Afghanistan (57.3%), and/or the Global War on Terror in general (69.8%). Numbers of war-zone deployments ranged from one = 15.1%, two = 39.6%, three = 26.7%, to four or more = 18.2%. The most common religious affiliations in the sample were Roman Catholic (44.4%), Christian Protestant (41%), Jewish and other minority groups (13.9%) and atheistic or agnostic (7.1%). When asked about the nature of their beliefs, over half (56.4%) of the sample described themselves as spiritual and religious, 26.7% as spiritual but not religious, 13.8% as religious but not spiritual, and 3.1% as neither religious nor spiritual.

Measures

The ten-item Religious Commitment Inventory (RCI-10; Worthington et al., 2003) was used to measure levels of religious commitment at pre-military and present. Items were rated on a five-point scale in which 1 = *Not at all true of me* to 5 = *Totally true of me*, such that higher scores indicated greater religious commitment. The RCI was administered twice to address the aims of this brief report. Namely, participants first answered the ten items retrospectively on the basis of their religious commitment before serving in the military (e.g., “Before serving in the military, I often spent time trying to grow in my understanding my faith”) and then based on the present time (e.g., “At the present time, I often spend time trying to grow in my understanding

my faith”). The RCI yielded a Cronbach’s alpha of .93 or greater across the two iterations. In an effort to test unique associations between religious commitment and posttraumatic issues, we used the total RCI score at pre-military and present time as separate independent variables.

Participants also completed three measures to gauge emotional and spiritual issues that often emerge after exposures to military trauma: PTSD Checklist for DSM-5 (PCL-5; Wortmann et al., 2016), Expressions of Moral Injury Scale – Military version (EMIS-M; Currier et al., 2017), Religious and Spiritual Struggles Scale (Exline et al., 2014). Specifically, the 20-item PCL-5 was used to assess veterans’ distress over the past month associated with symptoms of PTSD on the basis of events occurring in their war-zone service. Next, focusing again on their military-related experiences, veterans completed the 17-item EMIS-M to capture emotions, beliefs/attitudes, and behaviors that align with possible moral injury outcomes (e.g., “Because of things that I did/saw in the military, I am no longer worthy of being loved,” “No matter how much time passes, I resent people who betrayed my trust during my military service”). Lastly, veterans completed five of the six RSS subscales: struggles with God or divine (5 items; e.g., “Questioned God’s love for me”), morality (4 items; e.g., “Felt guilty for not living up to my moral standards), ultimate meaning (4 items; e.g., “Had concerns about whether there is any ultimate purpose to life or existence), interpersonal issues (5 items; e.g., “Had conflicts with other people about religious or spiritual matters”), and doubting (4 items; e.g., “Worried about whether my beliefs about religion/spirituality were correct”). Internal consistencies were .94 or greater across the PCL-5, EMIS-M, and RSSS. Due to issues with multicollinearity, we used the three outcome measures as separate indicators of “posttraumatic issues” in a latent variable modeling procedure for the primary analysis.

Analysis Plan

Prior to conducting the preliminary analyses, participant authenticity and parametric assumptions were initially evaluated. Descriptive statistics, mean comparisons, and correlational statistics were conducted using IBM SPSS version 26. Primary analyses were conducted using structural equation modeling (SEM) via Mplus version 8.4 with maximum likelihood estimator

with robust standard errors (MLR; Muthén & Muthén, 2018). The global fit of models were evaluated using fit indices and local fit was evaluated following best practices detailed by Goodboy and Kline (2017) by inspecting normalized correlation residuals.

Results

Preliminary Analyses

We retained participants who passed attention and validity checks, yielding no missing responses. Non-normal distributions were detected, warranting the use of MLR for the analyses. Additional analyses indicated the presence of multicollinearity among the three criterion variables; correlations between the PCL-5, EMIS-M, and RSSS ($r > .70$) and collinearity diagnostics (i.e., variance proportions of two variables exceeding .50) suggested that parameter estimates would be degraded due to multicollinearity. Thus, a single latent variable was observed with total scores from these measures. Regarding the detection of three univariate outliers on study variables ($z = \pm 3.0$, $p < .01$), their removal did not sway any conclusions. Moreover, Mahalanobis distances did not indicate the presence of any multivariate outliers in the sample.

In total, 80% of this sample exceeded the threshold for probable caseness of PTSD on the PCL-5 (total score of 32 or greater). When subtracting participants' overall pre-military religious commitment from their mean score on the RCI based on the present time, results indicated that 68.4% reported no change to varying levels of a weakening of religiousness. Further, results of a paired samples t-test revealed the mean score on the RCI was higher at pre-military ($M = 39.16$, $SD = 8.32$) than at the time of the study ($M = 35.18$, $SD = 11.09$), $t(224) = 5.40$, $p < .001$. Present religious commitment was not associated with PTSD, moral injury, or spiritual struggles. In contrast, pre-military religious commitment was positively linked with post-military religious commitment, $r = .38$, $p < .001$, and each posttraumatic outcome, $rs = .29$ to $.35$, $ps < .001$.

Primary Analyses

Item parceling procedures (Little et al., 2002) were used to form latent variables for pre-military RCI and present time RCI. The criterion latent variable, posttraumatic issues (PTI), was observed with total scores from the PCL-5, EMIS-M, and RSSS. Using SEM, the measurement

model provided an excellent fit to the data, $\chi^2(24) = 36.78, p = .046$; CFI = .992; TLI = .988; RMSEA = .05, 90% CI [.007, .078]; SRMR = .03. The measurement model also yielded no misfit at the local fit level, and standardized factor loadings for observed variables and parcels ranged from .843 to .955. Bivariate correlations in the measurement model indicated that pre-military RCI ($r = .38, p < .001$) was positively associated with PTI. However, present time RCI was not significantly associated with PTI at the time of the study, $p = .053$.

Regarding the structural model, pre-military and current religious commitment predicted PTI suggested by excellent model fit, yielding the same fit results as the measurement model (see Figure 1). Moreover, pre-military RCI significantly predicted worse PTI, $b = 8.44, SE b = 1.49, \beta = .43, p < .001$. However, present time RCI again did not emerge as a predictor of PTI, $p = .111$.

Discussion

The purpose of this brief report was to examine the role of pre-military religious commitment in posttraumatic outcomes among Post-9/11 veterans who were struggling with faith and/or spirituality following their war-zone service. In keeping with other cross-sectional results on the PTSD-spiritual struggle link (Currier et al., 2014), 80% of this sample exceeded the clinical threshold on the PCL-5. Bivariate analyses also indicated veterans generally reported higher religious commitment before serving in the military compared to the time of the study. These results align with theoretical (e.g., Harris et al., 2015; Park et al., 2016) and empirical (e.g., Currier et al., 2014; Fontana & Rosenheck, 2004) work regarding a weakening of religiousness that occurs for many veterans struggling to resolve emotional and/or spiritual issues related to military trauma. Further, present religious commitment was not linked with PTSD, moral injury, or spiritual struggle in any of the analyses. In contrast, whether analyzed in a bivariate manner or when accounting for present religious commitment, veterans who endorsed stronger pre-military religious commitment had worse posttraumatic outcomes at the time of the study. This latter pattern of findings supports the study hypothesis and replicates earlier work with war-zone veterans (Currier et al., 2018).

When viewed together, this overall pattern supports the value of assuming a process-

oriented view in conceptualizing religious identity in veterans and other trauma-exposed groups. Beyond assessing the substance of current beliefs, practices, and relationships, Pargament (2007) asserted clinicians and researchers should seek to understand a person's overall location in their spiritual journey and process of searching for sacredness, transcendence, or ultimate meaning in life. When veterans internalized a stable and existentially satisfying faith system before serving in the military, many will assimilate their traumas in a manner that does not threaten religious commitment (Park et al., 2016). However, particularly when PTSD, moral injury, or other issues are present, others might struggle to conserve their religious beliefs and/or ways of connecting with God or other religious sources of sacredness. In turn, possibly due to their orientation to religion or other factors related to psychospiritual development (Harris et al., 2015), these persons might then disaffiliate with a religious tradition and/or no longer engage in religious relationships and practices that once supported a sense of ultimate meaning. In such cases, Pargament emphasized a need to understand a person's religious commitment before encountering their traumas and any marked changes that ensued with religious identity. From a clinical standpoint, these findings suggest having historical knowledge might hold greater utility for informing spiritually integrated care than only focusing on the current substance of faith.

Several limitations should be highlighted alongside these possible implications of findings. For example, reliance on a cross-sectional design restricts the ability to discern temporal associations between religious commitment and posttraumatic outcomes. We also exclusively focused on self-report measures in a manner that limited the ability to gauge diagnoses of PTSD and validity of other variables. In particular, we relied on a retrospective approach for assessing veterans' religious commitment before serving in the military. In cases of combat-related PTSD or other posttraumatic issues, it has long been observed that war-zone veterans might over-estimate their pre-military functioning (e.g., Futterman & Pumpian-Mindlin, 1951). Given high levels of PTSD symptomatology in this sample, veterans possibly struggled to accurately appraise pre-military religious commitment. Lastly, we recruited veterans via specialized niche panels from Qualtrics that required an email address and panel membership. As

such, we likely excluded veterans without Internet access and lacked a way of verifying military service backgrounds and presence of spiritual struggles with full confidence. Notwithstanding these limitations, this brief report highlights the need for further research on the variegated role of faith and dynamics of changes in religious identity in the newest generation of veterans.

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Figure 1

Pictorial representation of the structural equation model with standardized estimates

Note. Error terms are presented, which represent the proportion of unexplained variance for each parcel or observed variable. RCI = Religious Commitment Inventory. RCI pre = pre-military RCI. RCI post = present time RCI. PTI = posttraumatic issues. PCL-5 = PTSD Checklist for DSM-5. EMIS-M = Expressions of Moral Injury Scale – Military version. RSSS = Religious and Spiritual Struggles Scale. Values in parentheses indicate standard error for estimates. The dashed line indicates a non-significant estimate. * $p < .001$.