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Spiritual Functioning Among Veterans Seeking Residential Treatment for PTSD: A Matched Control Group Study

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A total of 788 persons completed the Brief Multidimensional Measure of Religiousness and Spirituality (BMMRS; Fetzer Institute/NIA, 1999), comprising 2 primary comparisons: (1) Vietnam veterans presenting for residential treatment for PTSD in the Veterans Affairs (VA) Heath Care System (PTSD; $n = 194$) versus demographically matched men from the 1998 General Social Survey (GSS; $n = 194$); and (2) veterans from the Iraq/Afghanistan Wars seeking PTSD residential treatment outside of the VA ($n = 200$) versus a younger group of demographically matched controls from the GSS ($n = 200$). When compared to their control group counterparts, veterans from the 2 clinical samples endorsed weaker spirituality across nearly all dimensions assessed in the study (daily spiritual experiences, forgiveness, private practices, religious coping, organizational religiousness, values). Results of other comparisons further revealed that veterans from these 2 eras largely did not differ from one another in their spiritual functioning, and that the 2 PTSD treatment groups reported weaker spiritual functioning with respect to controls from the other age group as well. Spirituality factors were also generally correlated with PTSD symptom severity at the start of treatment and multivariate results found that greater forgiveness problems were uniquely linked with more symptomatology across both eras. Although this design limits our ability to assess changes in spirituality, these findings support the need for spiritually integrative therapeutic models and additional research on the spiritual/existential implications of combat trauma. The article concludes with a case illustration and discussion of clinical applications related to empirical findings.

Keywords: military veterans, trauma, posttraumatic stress disorder, spirituality, religion

Spirituality is a multifaceted construct that often provides a powerful meaning framework for negotiating the reality and consequences of trauma (e.g., via beliefs and values, relational support from one's community, incorporating practices and rituals, possible relationship with G-d or Higher Power; for reviews, see Park, 2005 and Silberman, 2005). As such, it has

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become increasingly necessary to consider specific aspects of this domain of functioning with respect to coping with trauma-related concerns. Research on combat trauma in particular has documented consistent associations between several indices of spiritual struggle and mental health problems among military veterans (e.g., Ogden et al., 2011; Tran, Kuhn, Walser, & Drescher, 2012; Witvliet, Phillipps, Feldman, & Beckham, 2004). For example, cross-sectional studies have linked negative religious coping (Ogden et al., 2011; Witvliet et al., 2004), negative concepts of G-d (Tran et al., 2012), and problems with forgiveness (Witvliet et al., 2004) with greater risk for posttraumatic stress disorder (PTSD). In addition, there is longitudinal evidence with non-veteran samples that these possible spiritual struggles can predict a more symptomatic course of PTSD among survivors over time (Harris et al., 2012; Wortmann, Park & Edmondson, 2011). Drawing on clinical samples of veterans from Vietnam and Iraq/Afghanistan Wars, this article attempted to replicate and extend these findings using a multidimensional approach to assessing spiritual functioning.

Above and beyond the manner in which certain spiritual factors can hinder posttraumatic adjustment, there is also some suggestion that intensity of spirituality may buffer against mental health difficulties and/or even promote recovery from combat-related PTSD for some veterans. For instance, findings from a meditation-based intervention study by Bormann and colleagues (2012) revealed that greater spiritual well-being (as defined by meaning in life and sense of faith) was associated with greater reductions in PTSD symptoms among the 66 veterans who received this spiritually integrative treatment. Recent descriptive findings from over 24,000 active duty personnel also revealed that higher spirituality was negatively correlated with PTSD and depression; however, other results indicated that these associations were moderated by severity of combat exposure (Hourani et al., 2012). Although the majority of service members reported moderate (49%) to high (23%) levels of religious and/or spiritual beliefs, Hourani et al. failed to find that spirituality had protective benefits among persons with more extreme combat stressors. Given other evidence on the mental health consequences of extreme war-zone stressors (e.g., taking a life; Maguen et al., 2009, 2010; acts of abusive violence against civilians and/or noncombatants; Currier et al., 2014), these findings underscore the possible stressfulness of serving in modern wars and how certain types of combat experiences can be quite difficult to anticipate and/or accommodate in psychological and/or spiritual terms.

Other research also indicates that military combat and other possible traumas can precipitate a loss of faith or other negative spiritual changes among many survivors. Cross-sectional studies with survivors of the 9/11 attacks (Seirmarco et al., 2012) and other traumatic stressors (Falsetti et al., 2003) documented that 10% to 16.7% reported becoming less spiritual. In addition, other findings from these studies indicated that these alterations in spirituality were linked with greater PTSD symptoms and other psychiatric problems in both groups (Falsetti et al., 2003; Seirmarco et al., 2012).[1] Focusing on another clinical sample of Vietnam veterans, Fontana and Rosenheck (2004) similarly found higher rates of mental health service utilization among those who had reported a weakening of religious faith and/or guilt over combat-related experiences, above and beyond PTSD and social problems. In a second study with a community sample of veterans from the Vietnam era, Fontana and Rosenheck (2005) also found that those who experienced a loss of meaning following war-zone deployments were more likely to seek help from religious professionals and mental health clinicians. In general, these findings suggest that combat trauma might weaken aspects of spiritual functioning in some cases and that many veterans may seek to revise and /or restore their sense of spirituality as part of the recovery process.

Moral injury is an emerging construct to better account for the constellation of shame, guilt, and inner conflict associated with these types of clinical concerns (for review of a moral injury model, see Litz et al., 2009). According to Litz and colleagues (2009), a moral injury can result from witnessing and/or committing acts of ex-

[1] It should be noted that Seirmarco et al. (2012) and Falsetti et al. (2003) found evidence for near equal rates of positive changes in spirituality in their studies. However, Seirmarco et al. (2012) found that these survivors had less psychiatric distress and Falsetti et al (2003) merged this group with those who reported negative changes for their analyses.

treme violence that entail human suffering and possible death and transgress veterans' deeply held values/beliefs about self, others, and possibly G-d (e.g., incidents involving betrayal, disproportionate violence, mistreatment of civilians, within-rank violence). When compared to common combat stressors that can threaten one's life and/or safety (e.g., engaging in a fire fight, completing dangerous operation), these types of morally injurious experiences have been uniquely predictive of suicidality and other mental health problems in veterans from the wars in both Vietnam (e.g., Currier et al., 2014) and Iraq (e.g., Currier, Holland, Drescher, & Foy, 2013; Maguen et al., 2012). Until recently, accounts of the moral/existential concerns of combat trauma were largely historical and/or theoretical in nature (Grossman, 2009; Shay, 1995). However, recent qualitative research with both clinical experts (Drescher et al., 2011) and Vietnam veterans (Flipse Vargas et al., 2013) converged in finding that self-depreciation and spiritual distress were among the most commonly reported warning signs of a moral injury in this population.

Although formal research on moral injury is just beginning, multiple treatments have been developed for addressing these types of concerns (e.g., Gray et al., 2011; Harris et al., 2011). Harris et al. (2011) recently supported the helpfulness of Building Spiritual Strength in alleviating combat-related PTSD in a pilot trial with a diverse group of veterans with PTSD. Building Spiritual Strength is a manualized, 8-session intervention designed to facilitate the resolution of negative changes in spirituality, forgiveness problems, and other types of spiritual struggles frequently reported among trauma survivors. The material can accommodate a wide range of faith identifications, and does not aim to change religious commitments or affiliations. Rather, the principal goal of Building Spiritual Strength is to support trauma survivors to resolve spiritual struggles that may contribute to PTSD and to make more effective use of possible faith resources for restoring a sense of meaning in life and possibly healing a damaged relationship with one's Higher Power. The BSS program provides opportunities to share faith histories, identify and resolve areas of conflict or lost relationship with a Higher Power construct, increase awareness/communication skills with one's Higher Power in a manner that is consistent with the survivor's faith affiliation (e.g., conversational prayer or meditation practices), address issues of theodicy (i.e., the role of evil), build skills for effective understanding and implementation of forgiveness processes, and develop natural community resources for spiritual support following the completion of the intervention (Harris et al., 2011).

Study Aims

More research is needed to promote hypotheses and inform clinical approaches for addressing spiritual struggles associated with combat-related PTSD. As such, the purpose of this study was twofold: (1) examine differences in spiritual functioning between veterans from the Vietnam and Iraq/Afghanistan eras presenting for PTSD residential treatment and groups of demographically matched persons from a large community-based study, and (2) assess specific aspects of spirituality that were uniquely associated with PTSD symptom severity at the start of treatment across these two clinical samples. Given prior findings (e.g., Fontana & Rosenheck, 2004, 2005; Ogden et al., 2011; Tran et al., 2012; Witvliet et al., 2004), we hypothesized that: (1) combat-related PTSD groups would endorse weaker spirituality than their non-veteran counterparts across the multiple dimensions in the study; and (2) forgiveness problems and negative religious coping (i.e., indices of spiritual struggle) would each emerge as being particularly robust correlates of PTSD symptomatology among these groups of veterans. We conclude this article by considering clinical implications of the study findings and introduce a clinical case from Harris et al.'s (2011) Building Spiritual Strength in which spiritual struggles were a central part of the veteran's inability to recover from PTSD.

Method

Participants and Procedures

The four study groups included 194 Vietnam veterans beginning a residential PTSD treatment program at a large hospital in the Veteran's Administration Health Care System (between 2003 and 2007), 200 veterans from Iraq and/or Afghanistan Wars beginning a residential PTSD program with a smaller non-VA in-

stitution (between 2008 and 2012), 194 middle-aged men (i.e., ages 45 to 65 years) who participated in the 1998 General Social Survey (GSS), and 200 younger-aged men who also participated in the GSS that same year. Participants in the two non-veteran groups were selected from the GSS if they had a similar demographic profile—in terms of gender, age, ethnicity, and education—with a veteran from a PTSD treatment group. So as not to bias the results, researchers were blind to spirituality scores when developing these four study groups. Please refer to Table 1 for descriptive information for the four study groups.

Veterans' admissions to the residential rehabilitation programs were based on referrals for individuals with clinical PTSD diagnoses who had not improved sufficiently via outpatient treatment options. Exclusion criteria for each program included the following: (a) active psychotic symptoms, (b) unwillingness to discontinue substance use, and (c) medical conditions that would hinder or prevent engagement in treatment. Study information was obtained via self-report instruments administered during the first weeks of the programs. In instances where veterans had more than one admission, only data from the first admission was used in this study. Each of these programs had nearly exclusively focused on men such that inclusion of female veterans was not possible in this study. All clinical data had been de-identified and deemed exempt by the human subjects review boards of the affiliated institutions.

The GSS is a nationally representative household survey that samples English-speaking persons in the United States older than 18 years of age (Davis, Smith, & Marsden, 2003). The GSS has been conducted annually since 1972 for studying social characteristics of adults living in the United States. Consistent with the two clinical programs that provide the basis for this study, nine assessments of spiritual functioning from the Brief Multidimensional Measure of Religion and Spirituality (BMMRS; Fetzer Institute/NIA, 1999) were also implemented by the University of Chicago's National Opinion Research Center (NORC) with approximately 1,445 participants in 1998. This group included about 50% of the persons sampled for the GSS that year, which predominantly consisted of women (57%), married individuals (49%), and Caucasians (76%). The average age and years of education among these participants were 47 and 14 years, respectively. The GSS participants selected for the two non-veteran groups

Table 1
Demographic Characteristics by Study Groups

	PTSD–Vietnam (n = 200)	GSS–middle adult (n = 200)	PTSD–Iraq/Afghanistan (n = 194)	GSS–younger adult (n = 194)
Age [*M* (*SD*)]	55.38 (3.62)	53.62 (6.11)	30.50 (6.19)	31.34 (5.88)
Years of education	13.09 (2.30)	13.51 (3.07)	12.80 (1.77)	13.27 (2.25)
Ethnicity				
Caucasian	84.0%	84.0%	67.5%	67.5%
African American	11.9%	11.9%	5.5%	18.0%
Other minority	4.1%	4.1%	27.0%	14.5%
Marital status				
Married	47.2%	70.1%	36.7%	34.5%
Separated	9.8%	3.1%	11.6%	4.5%
Divorced	35.2%	18.6%	19.6%	7.0%
Widowed	1.0%	1.5%	0.5%	2.5%
Single	6.7%	6.7%	31.7%	52.0%
Religious affiliation				
Protestant	34.5%	59.3%	17.0%	48.5%
Roman Catholic	17.5%	23.2%	1.4%	26.0%
Jewish	0.5%	4.1%	0.7%	1.5%
Other	23.2%	1.0%	63.1%	20.4%
None	24.2%	11.9%	17.7%	20.4%

Note. GSS = General Social Survey. Persons in "Other Minority" category predominantly included Hispanic and Asian American persons. In accordance with the GSS, persons in the "Other" category for religious denominations would include non-Judeo Christian groups (e.g., Buddhism).

represent 27% of this subsample from the overall GSS sample that was collected in 1998.

Measures

The Brief Multidimensional Measure of Religiousness and Spirituality (BMMRS; Fetzer Institute/NIA, 1999; Idler et al., 2003) was utilized to provide a broad-based picture of spiritual functioning across the four study groups. The BMMRS was developed by the Fetzer Institute and National Institute on Aging (NIA) for assessing spirituality in behavioral health research (for additional details, please see Fetzer Institute/NIA, 1999 and Idler et al., 2003). This instrument includes a 6-item version of Underwood and Teresi's (2002) Daily Spiritual Experiences Scale (DSE) for assessing ordinary lived experiences of spirituality (e.g., beauty, peace, and joy). Forgiveness was measured with three questions pertaining to self-forgiveness, interpersonal forgiveness, and forgiveness from G-d (adapted from Mauger et al., 1992). Private religious practices were assessed with two items assessing engagement in prayer and meditation. Two items were implemented for capturing possible religious doubts or common spiritually oriented values for people (i.e., belief in G-d, concern about alleviating suffering in the world). We also incorporated 3-item scales for assessing positive (e.g., seeking spiritual support, collaboration with G-d in solving a specific problem, positive religious appraisals about problem) and negative (e.g., interpersonal religious discontent, questioning G-d's powers, appraisal of the problem as G-d's punishment) forms of religious coping based on the work of Pargament and his colleagues (1998, 2000). Organizational religiousness was measured with two items assessing involvement in a church and/or other formal religious group (Pargament, Tyler, & Steele, 1979; Strawbridge, Cohen, Shema, & Kaplan, 1997; Wingrove & Alston, 1974). Finally, participants completed general ratings of the degree to which they had considered themselves to be a religious and/or a spiritual person. In keeping with original scaling methods devised by the BMMRS researchers, responses on these assessments were each based on a numeric scale such that higher scores indicated lower levels for each spirituality factor in this study.

Veterans in the two clinical samples also completed self-report assessments of their war-zone experiences. Veterans in the PTSD−Vietnam Group had completed Keane et al.'s (1989) Combat Experiences Scale (CES) as part of the VA program. The CES is a well-established assessment of seven general types combat activities and stressors (e.g., taking incoming fire, firing weapon, danger of injury or death). CES items were scored on a five-point scale; anchor points ranged from 1 (*Never*) to 5 (*51 + times*), such that higher scores indicated more severe exposures to war-zone stressors. Iraq/Afghanistan veterans completed an early 18-item version of the Combat Exposure Scale (CES) from King et al.'s (2006) Deployment Risk and Resilience Inventory (DRRI) that was adapted for use in the non-VA program prior to the publication of the official version of the instrument. This measure assesses a range of general combat activities and stressors (e.g., being under enemy fire, witnessing the death or injury of others, being wounded, firing weapon), along with additional items for capturing special circumstances associated with serving in recent wars (e.g., being attacked by civilians and terrorists). Rather than relying on the dichotomous manner in which the DRRI-CES is typically scored, veterans in the PTSD − Afghanistan/Iraq Group responded to items on a four-point, continuous scale with anchor points of 0 (*Never*) to 3 (*More than 5 times*).

Veterans from the two residential programs also completed the Posttraumatic Stress Disorder Checklist−Military Version (PCL-M; Blanchard, Jones-Alexander, Buckley, & Forneris, 1996; Weathers & Ford, 1996) for capturing the severity of PTSD symptomatology associated with their war-zone experiences. The PCL-M is another widely used self-report instrument assessing distress for each of the 17 symptoms of PTSD over the past month. The PCL-M yields an overall symptom score across the domains of PTSD: re-experiencing (5 items), avoidance (7 items), and hyperarousal (5 items). Veterans rated items on a five-point scale, with anchor points of 1 (*not at all*) to 5 (*extremely*), such that higher scores indicated greater symptom severity.

Results

Differences in Spiritual Functioning by Study Groups

To examine differences in spirituality across the four study groups, we first conducted a MANCOVA with age, ethnicity (non-Cauca-

sian = 0, Caucasian = 1), marital status (Unmarried = 0, Married = 1), and education as covariates. Results indicated a statistically significant effect for the group factor, Wilks' $\lambda = 0.42$, $F(27, 2255.28) = 29.29$, $p < .001$, which indicated the need for further examination of differences in spiritual functioning across the four study groups.

Results for ANCOVAs revealed main effects for each spirituality dimension: daily spiritual experiences $F(3, 780) = 23.04$, $p < .001$, forgiveness, $F(3, 780) = 113.92$, $p < .001$, private religious practices, $F(3, 780) = 3.08$, $p = .027$, positive religious coping, $F(3, 780) = 9.40$, $p < .001$, negative religious coping, $F(3, 780) = 18.93$, $p < .001$, values, $F(3, 780) = 8.83$, $p < .001$, organizational religiousness, $F(3, 780) = 196.81$, $p < .001$, religious−overall, $F(3, 780) = 20.60$, $p < .001$, and spiritual−overall, $F(3, 780) = 3.34$, $p = 019$. Please refer to Table 2 for the marginal means and homogeneous subgroups across the spirtuality factors.

When comparing the Vietnam group with their matched controls, Fisher's LSD test revealed that these veterans had less daily spiritual experiences, $p < .001$, more forgiveness problems, $p < .001$, lower positive religious coping, $p = .017$, greater engagement in negative religious coping, $p < .001$, less organizational religiousness, $p < .001$, and lower ratings on their sense of being religious, $p < .001$ (see Table 2). Differences in these spiritual factors were also found when comparing Vietnam veterans with the GSS−Younger Adult Group, all ps $< .046$. In addition, veterans from the Vietnam era also indicated greater negative religious coping than Iraq/Afghanistan veterans, $p = .004$.

As presented in Table 2, veterans from Iraq/Afghanistan had weaker spirituality than their community counterparts: daily spiritual experiences, $p < .001$, forgiveness, $p < .001$, private religious practices, $p < .001$, positive religious coping, $p < .001$, negative religious coping, $p = .001$, values, $p < .001$, organizational religiousness, $p < .001$, and sense of being religious, $p < .001$. When focusing on marginal means for older non-veterans in the study, Iraq/Afghanistan veterans also reported lower daily spiritual experiences, $p = .001$, forgiveness, $p < .001$, positive religious coping, $p = .050$, organizational religiousness, $p < .001$, and ratings of being religious, $p = .011$.

Examining Associations Between Spirituality and PTSD Symptom Severity

The average levels of PTSD symptomatology were 62.16 ($SD = 11.71$) and 65.68 ($SD = 14.15$) among the Vietnam and Iraq/Afghanistan veterans, respectively. As one may anticipate for persons seeking residential PTSD treatment, over 80% of both groups exceeded a clinical threshhold score of 50 on the PCL-M (Weathers & Ford, 1996). As presented in Table 3, veterans' severity of PTSD symptomatology

Table 2
Adjusted Means and Standard Errors for Spirituality Factors

	PTSD– Vietnam		GSS–middle adult		PTSD–Iraq/ Afghanistan		GSS–younger adult	
	M	*SE*	*M*	*SE*	*M*	*SE*	*M*	*SE*
Daily spiritual experiences	4.06^{a}	.151	3.43^{b}	.141	4.24^{a}	.144	3.28^{b}	.139
Forgiveness	2.76^{a}	.079	1.81^{b}	.073	2.57^{a}	.075	1.62^{b}	.072
Private religious practices	$5.23^{a,b}$	.246	$5.11^{a,b}$	.227	5.37^{a}	.235	4.71^{b}	.225
Positive religious coping	2.86^{a}	.097	2.64^{b}	.089	2.95^{a}	.093	2.54^{b}	.089
Negative religious coping	2.92^{c}	.072	$3.36^{a,b}$	.067	3.28^{b}	.069	3.51^{a}	.066
Spiritual values	2.18^{a}	.083	$2.10^{a,b}$	.076	2.26^{a}	.079	1.88^{b}	.076
Organizational religiousness	6.64^{a}	.155	4.47^{b}	.143	7.07^{a}	.148	4.36^{b}	.142
Overall rating–religious	3.00^{a}	.102	2.52^{b}	.094	2.94^{a}	.097	2.38^{b}	.093
Overall rating–spiritual	2.61^{b}	.108	$2.52^{a,b}$	.100	$2.50^{a,b}$	.103	2.23^{b}	.099

Note. M = group mean; *SE* = standard error of the mean; PTSD = posttraumatic stress disorder; GSS = General Social Survey.
[a,b,c] denote homogenous subsets or statistically equivalent groups of means. Higher scores indicated lower spirituality for each spirituality factor.

Table 3
Bivariate Correlations Between Spiritual Factors and PTSD Among Veteran Groups

	PTSD–Vietnam	PTSD–Iraq/ Afghanistan
Age	−.11	−.06
Ethnicity (0 = non-Caucasian, 1 = Caucasian)	.09	.02
Years of education	−.13	−.06
Marital status (0 = non-married, 1 = married)	.13	.07
Combat exposure	.11	.11
Daily spiritual experiences	.20*	.16*
Forgiveness	.35***	.24**
Private religious practices	.15*	.13
Positive religious coping	.11	.12
Negative religious coping	−.22**	−.15*
Spiritual values	.12	.17*
Organizational religiousness	.18**	.10
Overall rating–religious	.14*	.02
Overall rating–spiritual	.19**	.17*
PTSD symptom severity [*M* (*SD*)]	62.16 (11.71)	65.68 (14.15)

Note. Spirituality factors were assessed such that higher scores indicated lower levels of the construct.
* $p < .05$. ** $p < .01$. *** $p < .001$.

did not differ according to demographic factors or combat exposure (see Table 3). However, with the exception of positive religious coping, each of the aspects of spiritual functioning yielded significant correlations with PTSD symptom severity in one or both of the clinical samples.

So as to examine which factors were uniquely linked with PTSD, we conducted two multivariate regression analyses in which PTSD was regressed onto the variables that were significantly correlated with this outcome in previous bivariate analyses. The first analysis focused on PTSD symptom severity in the Vietnam Group. As presented in Table 4, the eight spirituality factors generated a statistically significant model for this group, $R^2 = .14$, $F(8, 185) = 3.71$, $p < .001$. Of the individual predictors, Vietnam veterans who had indicated forgiveness problems were also more symptomatic at the beginning treatment, $p < .001$. When viewed as a whole, spiritual functioning variables similarly accounted for differences in PTSD among the Iraq/Afghanistan veterans at

Table 4
Multivariate Regression Analyses With Spirituality Dimensions Predicting PTSD Symptom Severity

	PTSD–Vietnam			PTSD– Iraq/Afghanistan		
Predictor	*B*	*SE* B	β	*B*	*SE* B	β
Daily spiritual experiences	0.21	1.08	.02	−0.83	1.47	−.08
Forgiveness	5.48***	1.52	.34	3.60*	1.61	.21
Private religious practices	−0.27	0.56	−.05	0.07	0.73	.01
Negative religious coping	−1.05	1.24	−.07	−2.58*	1.22	−.15
Spiritual values	−1.10	1.61	−.07	1.87	1.58	.13
Organizational religiousness	0.24	0.66	.03	1.01	1.20	.07
Overall rating–religious	−0.55	1.27	−.05	3.39*	1.50	.23
Overall rating–spiritual	0.97	1.12	.08	1.97	1.39	.15

Note. Higher scores indicated lower spirituality for each spirituality factor.
* $p < .05$. ** $p < .01$. *** $p < .001$.

the start of treatment in the non-VA program, $R^2 = .11$, $F(8, 191) = 2.99$, $p = .004$. In addition, less forgiveness, $p = .026$, greater reliance on negative religious coping strategies, $p = .035$, and not considering oneself a particularly religious person, $p = .025$, were uniquely associated with more PTSD symtpoms in this younger group.

Discussion

These results provide preliminary evidence for weaker spirituality among veterans seeking residential treatment for PTSD when compared to individuals from the community. With the exceptions of engagement in prayer and/or meditation, spiritually oriented values, and viewing oneself as a "religious person," Vietnam veterans indicated lower spiritual functioning than demographically similar persons from the GSS. In addition, besides reports about being a "spiritual person," Iraq/Afghanistan veterans indicated lower spiritual functioning across the remaining eight dimensions on the BMMRS when compared to their respective controls. The majority of these differences also held when comparing the two combat trauma groups with the younger or older age group from the GSS. Besides Vietnam veterans endorsing greater negative religious coping than those who served in the Iraq/Afghanistan wars, other results revealed that veterans from each of these eras reported commensurate levels of spiritual functioning at the start of treatment. Although research has not yet directly tested differences in spiritual functioning among treatment-seeking groups of veterans versus non-veterans (to our knowledge), these results converge with prior research with this population (Fontana & Rosenheck, 2004, 2005) and other trauma-exposed groups (Falsetti et al., 2003; Seirmarco et al., 2012) regarding a possible weakening of spirituality that may accompany exposure to trauma and chronic posttraumatic symptoms.

The second set of findings also aligns with previous research on spirituality and PTSD among veterans and other military populations (e.g., Bormann et al., 2012; Hourani et al., 2012; Ogden et al., 2011; Tran et al., 2012; Witvliet et al., 2004). With the exception of positive religious coping, bivariate analyses revealed associations between the dimensions of spiritual functioning assessed in the study and distress related to war-zone experiences. In keeping with Witvliet et al.'s (2004) results with another treatment-seeking group of Vietnam veterans, our hypothesis was supported in that problems with forgiveness emerged as being a particularly robust correlate of PTSD symptomatology in these two clinical samples. Namely, veterans who indicated less self-forgiveness, forgiveness of others, and/or a sense of divine forgiveness were more symptomatic. Although Vietnam veterans indicated greater reliance on negative forms of religious coping, multivariate results also suggested that this dimension was uniquely predictive of PTSD for younger men who served in Iraq/Afghanistan. In keeping Hourani et al.'s (2012) findings with active duty personnel, we also found that Iraq/Afghanistan veterans who endorsed a general sense of religiousness were less symptomatic in the multivariate analysis. However, unlike effects for forgiveness and negative religious coping, this association only emerged in the presence of the other study variables and endorsement of spirituality (rather than religiousness) actually yielded the greater effect in bivariate analyses.

Several limitations should be considered with these findings. First, we exclusively relied on self-report measures for assessing spirituality and PTSD. As a related point, the BMMRS subscales were based on short forms of existing measures and lacked the depth/sophistication found in other spirituality assessments. We also lacked prospective information on spiritual functioning among the veterans. As a way of testing the possible impact of combat-related PTSD, we included clinical samples from multiple military eras and selected demographically matched controls from a community-based study. However, we lacked pre-war assessments of spiritual functioning and cannot conclude that combat experiences and/or PTSD actually led to alterations in spirituality among these veterans. For example, given the comorbidity between chronic PTSD and depression, many veterans possibly experienced a weakening of spirituality due to helplessness, social disengagement, and other depressive symptomatology. Although we identified near exact matches for all veterans, there was also an underrepresentation of Hispanic and Asian men in the GSS compared to the PTSD−Iraq/Afghanistan Group. We addressed this specific concern in

the matching procedure by substituting African Americans with comparable ages and education levels (i.e., largest non-Caucasian group in this subset of the 1998 GSS).

Several concerns should also be mentioned regarding sampling and the generalizability of study findings. First, we exclusively focused on men seeking intensive treatment for PTSD and conclusions about differences in spiritual functioning might not generalize to women or nonclinical groups of veterans. In addition, historical and geographical effects may partly explain differences in spirituality between 1998 GSS participants and veterans from Vietnam (assessed between 2003 and 2007) and Iraq/Afghanistan (assessed between 2008 and 2012). Evidence in fact suggests a generally increasing percentage of U.S. adults who do not affiliate with traditional religious groups (for review, see Ellison & McFarland, 2013), which might have led to a lower probability of religiousness among veterans sampled later in time. However, although we ideally would have been able to simultaneously recruit the veteran and nonveteran groups, it was notable that percentages of those who indicated no religious affiliation were comparable across the four study groups. In addition, a slightly higher proportion of persons in the GSS Younger Adult group did not endorse a religious affiliation than Iraq/Afghanistan veterans. Another sampling concern is that two veteran groups were assessed at residential programs on the West Coast whereas the GSS focused on the entire U.S. population, such that differences in spiritual functioning could reflect regional differences as well. In addition to historical changes, this concern may partly explain why nearly two thirds of Iraq/Afghanistan veterans indicated a preference for groups not affiliated with a Judeo-Christian tradition (e.g., Buddhism). Future research on this topic will do well to further investigate this trend with sampling strategies that may yield a more representative group of veterans.

Clinical Implications

Notwithstanding these caveats, study findings suggest several clinical implications for addressing spiritual struggles associated with PTSD among veterans. First and foremost, given that the clinical samples likely consisted of many longer-term PTSD sufferers, clinicians should recognize that negative religious coping and forgiveness problems might have a prominent role in the severity of PTSD symptoms and chronicity over time in some cases. These results may also suggest that ostensibly secular events and symptoms of traditional mental health disorders could be appraised in spiritual terms and infused with spiritual significance. When such spiritual meaning making assumes a negative character, such as the below example of Ralph's ruptured relationship with G-d and issues with divine forgiveness will illustrate, clinicians should have the therapeutic tools/skills to address spiritual dimensions of posttraumatic adjustment. From an intervention standpoint, this may include adapting current evidence-based therapies for PTSD with attention to spiritual matters. For example, clinicians might inquire about maladaptive cognitions about one's Higher Power or spiritual tradition/community in restructuring exercises, honor spiritually oriented values in planning in vivo exposure interventions that may promote reconnection with one's tradition/community, or inquire about spiritual meanings of traumatic experiences after imaginal exposure exercises (e.g., "Where do you believe G-d might have been when this event occurred?). Consistent with Bormann et al.'s (2012) research on meditation, clinicians may also consider directly drawing upon spiritual practices for treating trauma and related problems (e.g., forgiveness/purification rituals). We will now conclude with a case illustration from Harris et al.'s (2011) Building Spiritual Strength—a spiritually integrative intervention for PTSD that has elements of both of these approaches.

Case Illustration

Consider this case example from a Vietnam veteran who had sought help for spiritual struggles in the context of a Building Spiritual Strength (BSS) group:

Ralph was a 61-year-old, African American who struggled with disabling PTSD and depression since his return from Vietnam over 30 years ago. He was referred by another VA therapist, who was concerned that unresolved spiritual distress—in domains of negative religious coping and forgiveness—were contributing to Ralph's challenges to benefit from trauma-focused psychotherapy. Although many pursue

Harris et al.'s model as a stand-alone intervention and increasing/repairing spirituality should not be viewed as a necessary precursor to effective trauma treatment, Ralph opted to join a group as an adjunctive treatment and continued to meet with his individual therapist while participating in the group over the next two months.

At the outset of the group, Ralph indicated that his goal was to restore a "friendship with G-d." He had been raised in an abusive family and had learning disabilities that made him feel unsuccessful in school. He also felt that the only effective "parenting" he had received was from Sunday school teachers at a local Baptist church in his small, rural town. As such, Ralph grew up with a belief that, no matter how much his parents beat him, and no matter how much his teachers and peers in school mocked and mistreated him, as long as he maintained a prayerful relationship with G-d and did his best to do what was right in life, in the long run everything would go well for him. He volunteered to serve in the U.S. Marines Corps as soon as he was of age, welcoming the opportunity to leave difficult social environments at home and at school and to serve his country in Vietnam.

Ralph was very successful in Vietnam and quickly progressed into a leadership position. As a way of dealing with the many dangers and stressors of war, he required that those in his unit routinely gather for prayer before missions, expecting that this would protect his men. Indeed, his unit had a lower-than-expected casualty rate, and most individuals in the unit shared Ralph's attribution of divine intervention. But one night Ralph's base was overrun by Viet Cong troops, and over half of those serving in his unit were killed. As Ralph recounted this story at the start of this treatment, he shared intense anger at G-d who seemed to have no regard for his devotion and failed to protect his men. At that point in his life, he stopped all prayer practices, never returned to church, and concluded "G-d is not my friend." He also described becoming similarly hostile toward others and altogether withdrawing from intimate relationships from this point onward.

In the Building Spiritual Strength group, Ralph was surprised to find that many of the veterans also reported a weakening of spirituality and leaving their faiths since returning from war. Where Ralph expected rejection, he found deep understanding and support for his spiritual struggles. This proved to be important as he began to explore his own relationship with G-d as well. Ralph felt that he and G-d had abandoned one another after the war, and initially could not conceive of a G-d who would be willing to accept his anger about the tragedy that struck his unit, or his long-term lack of relationship with G-d or other people.

Ralph was willing to discuss this sense of confusion and betrayal with G-d throughout this treatment, beginning with an imaginal dialogue in the presence of the other group members. As the other veterans witnessed Ralph's performance of his spiritual struggles and anger toward G-d, they wondered about a G-d who might be willing to talk about his anger and reestablish the warm, friendly relationship that was present before his unit was overrun. In addition, group members also shared about G-d's compassion and possible grief over Ralph's attempts to distance himself. Ralph's responses to this feedback were initially quite ambivalent; he was angry that a G-d who had betrayed him might still want to be his friend, and at the same time, wanting to be able to reengage in this relationship. As Ralph discussed trying to start a prayer log at this point in the group, he began to realize that he also needed to find a way to forgive G-d for the deaths of his comrades. However, he struggled mightily with the idea of forgiving a Being that should be perfect and not need his forgiveness.

Other members of the group were also helpful to Ralph in sessions devoted to the topic of theodicy. As the group considered several theological explanations for traumas, other members suggested that Ralph may be holding G-d responsible for an event that was actually determined by persons acting against G-d's will. Others discussed a belief that finite beings can never know why traumas may occur but that G-d might still be working to bring healing and redemption in their aftermath. Although Ralph began to consider these views as ways to authentically relate to G-d again, he still predominantly felt abandoned and punished by G-d for feeling this way and struggled to discern a way forward.

Sessions on forgiveness then provided Ralph with a cognitive structure that made this restorative process more possible. First, forgiveness was reconceptualized as a way to resolve pain-

ful feelings that keep a person from functioning well, rather than as a moral requirement or a gift for the recipient of the act. As Ralph began to see forgiveness as being a process that may foster healing and restore meaning in his life, it became easier for him to turn around and change his distancing posture toward G-d. As such, he began to recognize that ignoring the hurt was not a viable way to restore and/or maintain a relationship with G-d, and pretending that there was no anger with G-d would be no longer be viable as well. After drawing the conclusion that it would be acceptable to have a rancorous relationship with G-d as they worked through unresolved pain and questions of theodicy, Ralph was able to pray for the first time in decades.

Ralph then shared a "turning point" with other veterans that had occurred while he was on a brief vacation at a cabin in a wooded area near a lake. After a long, tearful prayer session in which he was able to share his anger and the intensity of his longing for his previous, secure "friendship" with G-d, Ralph looked up and saw an eagle flying quite close to him. He interpreted this as a sign that G-d honored his efforts to rebuild a relationship, and committed himself to continue to try to pray and no longer distance himself from G-d and potentially loving others. He also described a surprising change in the dark hopelessness and constant anxiety that had been his companion since that fateful day in Vietnam at this time.

Although Ralph had not fully resolved his spiritual struggles when the group was over, he had clear plans for continuing to engage in relationships with G-d and other veterans. He also indicated that he intended to keep a prayer log over the years to come. Furthermore, he began looking for a community of faith that might be a source of support and place of worship for him. He did not expect to find such a community quickly or easily, but based on his experience of finding acceptance among the other veterans in the group, he now had hope that he could possibly find spiritual acceptance and deeper connections in other contexts as well.

In a follow-up meeting several weeks after the completion of the group, the individual therapist reported that while Ralph was still contending with PTSD symptomatology regarding the incident that he recounted in the opening session, he was showing signs of improvement and working to reconnect with family and others in his community. In addition, Ralph had seemed to become more comfortable and trusting in their relationship and had recently found motivation and courage to process his war-zone traumas in a more systematic and in depth manner in his individual therapeutic work as well.

We do not share this case to suggest that every trauma survivor will recognize a salient religious or spiritual dimension in their suffering and that clinicians working with traumatized clients inevitably need to increase spiritual beliefs and behaviors. However, the empirical and clinical information presented here highlights the need for expanded bio-psycho-social-*spiritual* models of trauma that can account for both the adaptive role of religion/spirituality and address spiritual struggles in the recovery process for persons like Ralph.

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