JOURNAL OF **PSYCHOLOGY & THEOLOGY**
2012, Vol. 40, No. 4, 313–322

The Relationship between Religiosity, PTSD, and Depressive Symptoms in Veterans in PTSD Residential Treatment

Christy T. Tran, Eric Kuhn, Robyn D. Walser, and Kent D. Drescher

Veterans who have experienced traumatic events may develop posttraumatic stress disorder (PTSD) and depression. These traumatic experiences and their sequelae can lead Veterans to question their religious and spiritual faith. Studies with community samples have identified positive and negative associations between religiosity and depression; however, research on religiosity is lacking in the area of PTSD. Our study aimed to evaluate the relationship between religiosity, PTSD, and depressive symptoms in Veterans enrolled in PTSD residential treatment. Significant associations between religiosity, PTSD, and depressive symptoms were observed. Contrary to our hypothesis, *higher* levels of extrinsic-social religious motivation were associated with lower severity of PTSD and depressive symptoms. A more negative concept of God was associated with higher severity of PTSD and depressive symptoms, whereas, a more positive concept of God was associated with lower severity of depressive symptoms and was not significantly associated with PTSD symptoms. Evaluating religiosity in patients may be an important area to address in PTSD and depression treatment. These findings and clinical implications are addressed.

Introduction

The association between traumatic events experienced by military personnel during war and posttraumatic stress disorder (PTSD) has been well established (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995; Tanielian & Jaycox, 2008). Estimates of prevalence of PTSD following war service has been estimated to be 15% for male and 8% for female Vietnam Veterans (Kulka et al., 1990), 12% for Gulf War Veterans (Kang, Natelson, Mahan, Lee, & Murphy, 2003), and 22% for Operation Iraqi Freedom/Operation Enduring Freedom Veterans (Seal et al., 2009). These PTSD rates are higher than those found in the general population (6.8%; Kessler, Chiu, Demler, Merikangas, & Walters, 2005). Veterans with PTSD experience a number of negative consequences and other life problems related to their symptoms, including poor physical health (Schnurr, Spiro, & Paris, 2000; Spiro, Hankin, Mansell, & Kazis, 2006), impaired relationships (Cook, Riggs, Thompson, Coyne, & Sheikh, 2004; O'Donnell, Cook, Thompson, Riley, & Neria, 2006), and increased suicidal ideation (Sher, 2009).

In addition to these difficulties, many Veterans report guilt and shame related to the traumatic military experiences (Fontana & Rosenheck, 2004; Litz et al., 2009). These emotional responses are understandable given the extremely challenging circumstances of war, such as being required to kill other human beings (Maguen et al., 2009). As well, guilt and shame are often related to actions taken or witnessed during war that are directly opposed to personal values and/or personal spiritual and religious assumptions. Indeed, many survivors seem to be morally "wounded" by their traumatic military experience. Litz and colleagues (2009) suggest that experiences in war, such as witnessing and perpetrating violence, facing ethical situations without knowing how to respond, and lacking the ability to help those in need can contradict deeply held moral beliefs that may be directly tied to personal religiosity. The Veteran trauma survivor may struggle to make meaning out of the experiences, by either trying to

reconcile the trauma with their current beliefs or by changing their beliefs as a result. In addition, guilt and shame may trigger distressing intrusive recollections of the moral transgression, and consequently lead to avoidance of trauma reminders and general withdrawal from others (Litz et al., 2009). These traumatic experiences may shatter the Veterans faith in a "just" God, alter spiritual and religious systems or even challenge meaning and purpose in life (Wilson & Moran, 1998).

Definitions of Religiosity

Religiosity is defined in various ways in the literature and several domains encompassing different aspects of religiosity have emerged including religious beliefs, motivations, behaviors, and coping. Religious beliefs are commonly measured by religious affiliation (e.g., Protestant or Buddhist), importance of religion or spirituality in a person's life, and personal concept of God. Personal concept of God refers to the type of God in which a person believes. A factor analysis has revealed 11 primary God concept factors: benevolent, wrathful, omni, guiding, false, stable, deistic, worthless, powerful, condemning, and caring (Schaefer & Gorsuch, 1992). These factors have been found to be associated with different mental health outcomes; for instance, one's personal concept of God viewed as wrathful predicts poorer mental health outcomes as compared to God viewed as benevolent (Gorsuch & Miller, 1999).

Religious motivation refers to the intrinsic or extrinsic reasons underlying religious commitments (Gorsuch & McPherson, 1989). Intrinsic religious motivation is an inherent purpose for religious participation that is guided by the person's religious beliefs. For example, an individual may be motivated to do community work as a result of his or her religious belief that helping others is "good" and instantiates a religious principle. Extrinsic religious motivation, in contrast, is based on personal gain and social benefits. Examples of extrinsic-social motivation include attending religious services to see or make friends or to increase social status. Lastly, extrinsic-personal motivation refers to efforts to gain peace of mind or personal solace through religious prayer or attendance.

Religious behaviors tap into actual activities related to engaging religiosity. Commonly measured behaviors include such activities as frequency of religious service attendance and prayer. Moreover, the ways that people use religion or spirituality to cope may also be considered a religious behavior. Religious coping has been defined as "the use of religious beliefs or behaviors to facilitate problem-solving to prevent or alleviate the negative emotional consequences of stressful life circumstances" (Koenig, Pargament, & Nielsen, 1998, p. 513). Parliament, Koenig, & Perez (2000) have outlined 21 positive and negative methods of religious coping. Examples of positive coping strategies include benevolent religious reappraisal, defined as "redefining the stressor through religion as benevolent and potentially beneficial" (p. 522); religious forgiveness, defined as "looking to religion for help in shifting from anger, hurt, and fear associated with an offense to peace" (p. 524); and seeking support from clergy or members. Negative coping strategies include punishing God reappraisal, defined as "redefining the stressor as a punishment from God for the individual's sins" (p. 522); passive religious deferral, defined as "passively waiting for God to control the situation" (p. 522); and spiritual discontent, defined as "expressing confusion and dissatisfaction with God's relationship to the individual in the stressful situation" (p. 523). Positive and negative religious coping styles have been associated with positive and negative psychological adjustment to stress, respectively (Ano & Vasconcelles, 2005).

Religiosity and Trauma

Several studies examining the relationship between religiosity and PTSD are beginning to illuminate the associations between these issues. For example, Falsetti, Resick, and Davis (2003) found that after experiencing their first trauma, individuals who developed PTSD were more likely to report changes in religious beliefs than those who did not develop PTSD. Drescher and Foy (1995) reported that 74% of Vietnam Veterans enrolled in PTSD residential treatment had difficulty reconciling their religious beliefs with the traumatic events they had experienced in Vietnam. Finally, Fontana & Rosenheck (2004) found that traumatic combat experiences, mediated by guilt, weakened the religious faith of Veterans.

These studies support the notion that trauma and PTSD can impact one's experience of religiosity. However, there is limited research on the way existing personal religiosity predicts traumatic stress, specifically as it relates to PTSD. Chen and Koenig's (2006) review of the traumatic stress and religion literature yielded eleven studies that found varied results between different dimensions of religiosity and PTSD. Of the eleven studies only two used samples of Veterans with PTSD. Witvliet, Phipps, Feldman, and Beckham (2004) found that the inability to forgive and negative religious coping were positively associated with PTSD and depressive symptom severity. Fontana and Rosenheck (2004) did not find an association between a

change in religious faith and PTSD. The varied results of the eleven studies, including the two studies done with Veterans, highlight the multi-faceted nature of religiosity. Depending on which dimensions are being studied, religiosity can be negatively, positively, or unrelated to mental health outcomes.

The relationship between PTSD and religiosity becomes even more complicated when one begins to examine other responses to traumatic experience. For instance, approximately 80% of treatment-seeking Veterans with PTSD have comorbid depression (Spiro et al., 2006). Fortunately, the literature on religiosity and depressive symptoms is more extensive than is that of religiosity and PTSD. Both positive and negative relationships between multiple dimensions of religiosity and depressive symptoms have been consistently reported. Extrinsic motivation (Smith, McCullough, & Poll, 2003) and negative religious coping (Ano & Vasconcelles, 2005; Smith, et al., 2003) have been associated with higher severity of depression. In contrast, intrinsic motivation (Smith et al., 2003), religious service attendance (Maselko, Gilman, & Buka, 2008), and positive religious coping (Ano & Vasconcelles, 2005; Smith et al., 2003) have been associated with lower severity of depression. Notably, the relationships between religiosity and depressive symptoms have been primarily investigated in patients with physical illnesses, such as cancer (Bussing, Fischer, Ostermann, & Matthiessen, 2008; Mystakidou, Tsilika, Parpa, Smyrnioti, & Vlahos, 2006; Sherman, Simonton, Latif, Spohn, & Tricot, 2005), chronic pain (McCauley, Tarpley, Haaz, & Bartlett, 2008; Moreira-Almeida & Koenig, 2008), and other medical illnesses (Koenig, George, & Titus, 2004; Pargament, Koenig, Tarakeshwar, & Hahn, 2001; Pargament, Koenig, Tarakeshwar, & Hahn, 2004).

Finally, mental health treatment has traditionally eschewed addressing religious matters, regardless of the diagnosis, despite evidence suggesting that religious issues are intimately tied to psychological well-being (Moreira-Almeida, Neto, & Koenig, 2006). Additionally, Fontana and Rosenheck (2004) found that the primary motivation for Veterans with PTSD to seek treatment was the weakening of their religious faith and guilt rather than the severity of their PTSD symptoms and poor social functioning. Clearly, religiosity plays a role in personal health and well-being. It is essential, then, to further understand how religious beliefs, motivations, and behaviors predict mental health outcomes, specifically in the area of traumatic stress.

The purpose of our study was to assess the relationships among religiosity, PTSD, and depressive symptoms in Veterans, as a means to better understand how to begin to address religiosity in mental health treatment. Specifically, it was predicted that 1) intrinsic religious motivation would be associated with lower severity of PTSD and depressive symptoms, whereas, extrinsic religious motivation (both social and personal) would be associated with higher severity of PTSD and depressive symptoms; 2) a positive concept of God would be associated with lower severity of PTSD and depressive symptoms, whereas, a negative concept of God would be associated with higher severity of PTSD and depressive symptoms; and 3) increased religious service attendance would be associated with lower severity of PTSD and depressive symptoms.

Method

Participants

Study participants (N = 449) were male (n = 395) and female (n = 54) Veterans who have experienced military-related trauma, and were currently enrolled in a VA PTSD residential treatment program. The average age of participants was 51.9 (SD = 5.8). Participants' ethnic/racial background was 59.7% Caucasian, 18.5% African American, 13.1% Hispanic/Latino, 3.6% mixed ethnicity, 2.0 % Native American, 1.8% Asian/Pacific Islander, and 1.3% other.

Procedure

Data for this study were collected from the years 2000 to 2003 in a PTSD residential treatment program. Admission to the program required participants to be non-psychotic and substance-free for at least 14 days before admission, and to have received previous outpatient PTSD treatment and still be struggling with military-related trauma. Participants received a clinician referral to the program. Upon admission to the program, participants filled out a battery of questionnaires, which included the present study measures. All study participants consented to allow their data to be used for research purposes. All study procedures were reviewed and approved by the affiliated university IRB and the local VHA Office of Research & Development.

Measures

Religiosity. The Religious Background Questionnaire was adapted from Gorsuch and Miller's (1999) chapter on measuring spirituality. It includes questions that assess current religious affiliation, belief in God,

importance of religion, importance of spirituality, religious motivation, personal concept of God, and religious service attendance. There were 17 options for current religious affiliation, which were categorized into 4 groups: Protestant, Catholic, other, or no religious preference. Belief in God was assessed by asking participants "What do you believe about God?": 1) Heavenly Father, who can be reached by prayers, 2) Idea, not being, 3) Impersonal creator, 4) Don't know, 5) Do not believe in God or universal spirit. Religious importance and spirituality importance were rated on a 9-point scale ranging from 1 ("not at all important") to 9 ("extremely important"). The 14-item Age Universal Religious Orientation scale (Gorsuch & McPherson, 1989) was used to measure intrinsic and extrinsic motivation. Extrinsic motivation includes two subscales: extrinsic-social motivation and extrinsic-personal motivation. Internal consistency (Cronbach's alpha) of the intrinsic motivation subscale was 0.59, extrinsic-social motivation was 0.77, and extrinsic-personal motivation was 0.76. For personal concept of God (Gorsuch, 1968; Schaefer & Gorsuch, 1992), participants were asked to rate a list of six adjectives (three negative and three positive) on a 5-point scale ranging from 1 ("Strongly Disagree") to 5 ("Strongly Agree"). Positive and negative items were summed to create two subscales: negative concept of God and positive concept of God. To assess religious service attendance, participants were asked to check the frequency of their religious service attendance: 1) less than several times a year, 2) several times per year to once a month, 3) several times a month, 4) once a week, and 5) more than once a week.

PTSD. The PTSD Checklist Military Version (PCL-M; Weathers, Litz, Herman, Huska, & Keane, 1993) is a 17-item scale that measures PTSD symptoms in response to military stressors. Items are rated on a 5-point scale ranging from 1 ("not at all") to 5 ("extremely"). Scores are summed to get a total score representing PTSD symptom severity. The cut-off score of 50 has been suggested to predict PTSD diagnosis in a combat Veteran population (Weathers et al., 1993). The PCL-M has good internal consistency (.97) and test-retest reliability (.96).

Depression. The Beck Depression Inventory (BDI-I; Beck, Steer, & Carbin, 1988; Groth-Marnat, 1990) is a clinically derived 21-item self-report measure of depressive symptoms. Its internal consistency is .86 for psychiatric samples. Mean correlations of above .70 are frequently reported with other measures of depression. Cut-off scores for the BDI in populations with affective disorders are < 10 for no or minimal depression, 10–18 for mild to moderate depression, 19–29 for moderate to severe depression, and 30–63 for severe depression (Beck, et al., 1988).

Results

Participant religious affiliation was 36.4% ($n = 163$) Protestant, 25.7% ($n = 115$) Catholic, 37.7% ($n = 169$) other, and 0.2% ($n = 1$) none. When asked, "What do you believe about God?" 68.6% ($n = 308$) said that they believed God was a "Heavenly Father, who can be reached by prayers" (see Figure 1). Although most endorsed this belief in God, the distribution for importance of religion was a U curve. Participants either regarded religion as "not at all important" (17.6%, $n = 79$) or "extremely important" (18%, $n = 81$) (see Figure 2). In contrast, only 8% ($n = 36$) considered spirituality as "not at all important," and more than a quarter of participants (29.6%, $n = 113$) said it was "extremely important" (see Figure 3). Frequency of religious service attendance was low, with 53% ($n = 240$) of participants reporting attending religious services less than several times a year (see Figure 4). Regarding mental health symptoms, participants had severe PTSD symptoms (PCL, $M = 66.01$, $SD = 10.40$) and moderate to severe depressive symptoms (BDI, $M = 27.43$, $SD = 10.44$).

Multiple regression analyses were conducted for each dependent variable (PTSD and depressive symptom severity) to evaluate whether responses to religiosity measures (intrinsic religious motivation, extrinsic-social motivation, extrinsic-personal motivation, negative concept of God, and positive concept of God) significantly predicted these outcomes (hypothesis 1 and 2; see Table 1 and 2). Age, gender, and ethnicity were entered as covariates. Several significant associations were found. Extrinsic-social motivation predicted lower severity of PTSD and depressive symptoms. Negative concept of God predicted higher severity of PTSD and depressive symptoms. Lastly, positive concept of God predicted lower severity of depressive symptoms, but was not significantly associated with PTSD symptoms.

A MANOVA was conducted to assess differences in PTSD and depressive symptom severity based on religious service attendance (hypothesis 3). Again, age, gender, and ethnicity were controlled in these analyses. No significant differences were found in PTSD and depressive symptom severity, $F^{8,806} = 0.65, p < 0.74$, based on religious service attendance.

FIGURE 1

How important is your religion to you? (n = 442). This bar graph describes the frequency for how participants rate the importance of religion in their life.

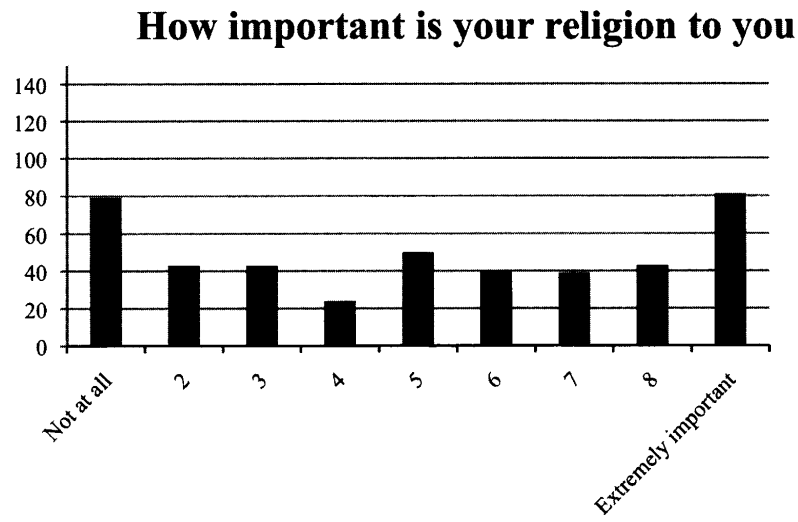
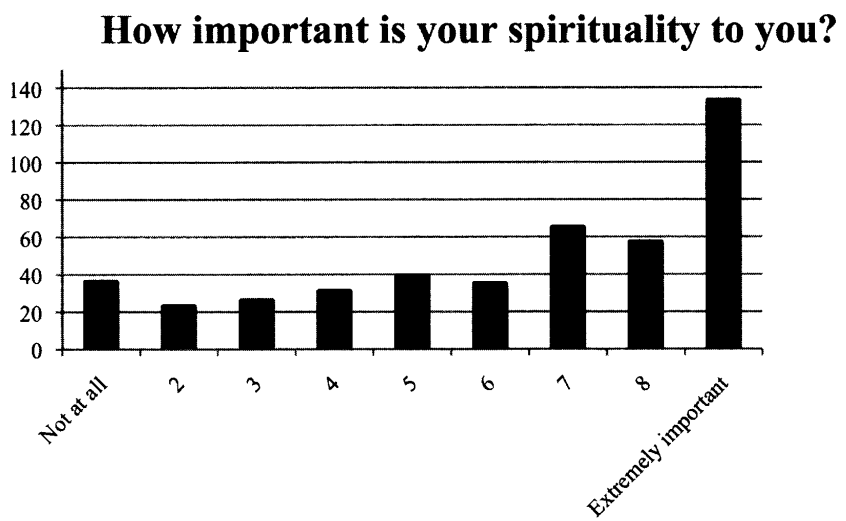


FIGURE 2

How important is your spirituality to you? (n = 445). This bar graph describes the frequency for how participants rate the importance of spirituality in their life.



Discussion

This study aimed to further explore the relationship between religiosity and traumatic distress in a Veteran sample. The role of religiosity in mental health functioning is important to understand and address, especially as religious beliefs, motivation, and behavior may be protective or important to recovery. Veterans diagnosed with PTSD and depression may have had their religious beliefs, motivation, and behavior challenged in number of ways following their trauma experience.

FIGURE 3

Check the number of religious services you attend (n = 442). This bar graph describes the frequency of religious service attendance.

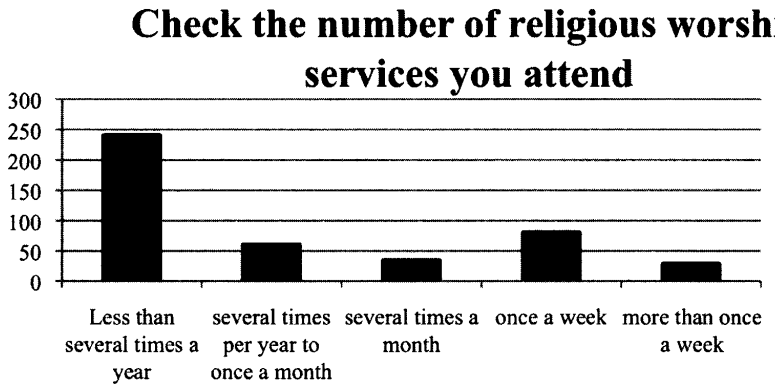
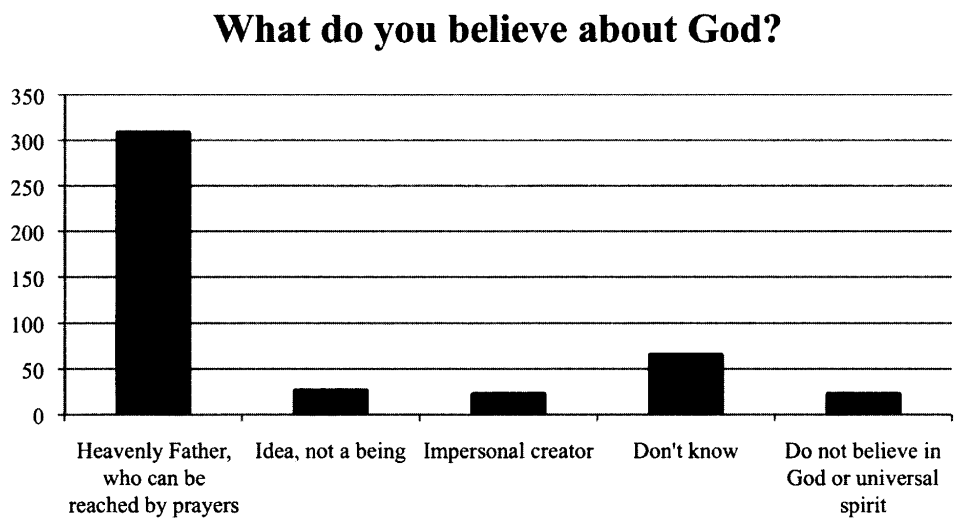


FIGURE 4

What do you believe about God? (n = 443). This bar graph describes the religious belief of participants.



Our findings suggest that religiosity and its impact on mental health is a complex issue. For instance, we hypothesized that intrinsic motivation would significantly predict better mental health outcomes. This was not supported and is contrary to previous findings (Smith et al., 2003).

We did find that those who were motivated to engage in religion for social benefits (e.g., attending religious services to make friends) had lower severity of PTSD and depressive symptoms. Although this was not what we expected based on extant literature, this finding demonstrates the benefits of being socially motivated. Extrinsic-social motivation may counteract the social isolation that individuals with PTSD and depression often report, perhaps, through the social support gained by participating in religious social activities. Social support has been shown to be a protective factor for PTSD and depression (Pietrzak et al., 2009; Schnurr, Lunney, & Sengupta, 2004). It should be noted, however, that the motivation to engage in religious activities was a predictor of better mental health outcomes, whereas, the actual behavior of attending re-

TABLE 1

Pearson Correlations of Mental Health, Demographic, and Religiosity Variables.

	1	2	3	4	5	6	7	8	9	10
BDI	—	.53***	−.12**	−.07	−.02	−.03	−.14**	−.03	.15**	−.10*
PCL	—	—	−.08	.04	.04	.04	−.07	.07	.16***	.00
Age	—	—	—	.48***	−.02	−.05	.06	.03	−.11*	−.01
Gender	—	—	—	—	.10*	−.12*	.04	.00	.03	−.11*
Ethnicity	—	—	—	—	—	.16***	.02	.18***	.12*	.16***
Intrinsic motivation	—	—	—	—	—	—	.28***	.49***	−.13**	.58***
Extrinsic -social motivation	—	—	—	—	—	—	—	.37***	−.02	.160***
Extrinsic -personal motivation	—	—	—	—	—	—	—	—	−.058	.513***
Negative concept of God	—	—	—	—	—	—	—	—	—	−.134**
Positive concept of God	—	—	—	—	—	—	—	—	—	—

*$p < .05$. **$p < .01$. ***$p < .001$.

TABLE 2

Multiple Regression Standardized Beta Coefficients for PTSD and Depression Variables (N=352)

	PTSD symptoms			Depressive symptoms		
	B	*SE B*	β	*B*	*SE B*	β
Model 1		$F(3,349) = 1.69$			$F(3,349) = 1.90$	
Age	−.22	.11	−.13*	−.21	.11	−.12*
Gender	3.05	1.92	.10	−.35	1.90	−.01
Ethnicity	.50	1.15	.02	−.51	1.13	−.02
Model 2		$F(8,344) = 2.47$**			$F(8,344) = 3.09$**	
Age	−.18	.11	−.10	−.15	.11	−.09
Gender	2.92	1.93	.09	−.91	1.89	−.03
Ethnicity	−.36	1.18	−.02	−.81	1.15	−.04
Intrinsic motivation	.11	.11	.07	.12	.11	.07
Extrinsic—social motivation	−.48	.23	−.12*	−.64	.23	−.16**
Extrinsic—personal motivation	.38	.21	.12	.25	.21	.08
Negative concept of God	.52	.18	.15**	.45	.18	.14*
Positive concept of God	−.15	.21	−.05	−.36	.21	−.11*

Note. For PTSD symptoms, $R^2 = .01$ for Step 1, ($R^2 = .04$ for Step 2. For depressive symptoms, $R^2 = .02$ for Step 1, ($R^2 = .05$ for Step 2. *$p < .05$. **$p < .01$. ***$p < .001$

ligious services was not. This indicates that simply attending religious services without motivation to engage may not be enough to positively impact mental health.

A more negative concept of God was related to higher severity of PTSD and depressive symptoms, whereas, a more positive concept of God was related to lower severity of depressive symptoms. Because personal concept of God and religious coping are correlated (Maynard, Gorsuch, & Bjorck, 2001), it may be posited that these findings are consistent with research showing that negative and positive religious coping is associated with negative and positive psychological adjustment to stress, respectively (Ano & Vasconcelles, 2005). When trauma survivors perceive God as cruel, stern, and wrathful, then they may view their suffering as a punishment from God and as something they deserve. This negative attribution may promote helpless-

ness and inhibit motivation to get well. Whereas, viewing God as loving and forgiving may be protective and allow the Veteran to work through guilt and shame.

Although religious service attendance, a commonly used measure of religious behavior, has been reported to be negatively related to mental health for traumatized Veterans (Chang, Skinner, & Boehmer, 2001; Chang, Skinner, Zhou, & Kazis, 2003), we did not find this in our sample. This may be due to the low reported religious service attendance and the truncated range in mental health symptoms. The PTSD and depressive symptoms scores were high and had a narrow distribution, decreasing our ability to compare religious service attendance to other levels of PTSD and depression. Attendance may have been low for other reasons. It may be the result of being away from home while staying in a residential treatment program or, given the relationship between symptoms and negative concept of God, attending church may be viewed as punishing. Additionally, if church attendance is based on social benefits, much of those benefits may have been fulfilled in the inpatient setting, where social support is readily accessible.

There are several limitations to the current study. First, these data are cross-sectional and correlational so cause cannot be implied. We do not know for instance, if PTSD reduces religiosity experience or if religiosity experience increases risk for PTSD. Second, these findings are based on Veterans in PTSD residential treatment, which may limit generalizability. Third, the use of a single-item measure of religious constructs may result in lower validity. Additionally, scales measuring the religious motivation and personal concept of God were validated with primarily religious civilian samples and therefore may not apply as well to this Veteran sample. We attempted to address the low reliability of the intrinsic motivation subscale ($\alpha = .59$) by deleting an item that was reducing the reliability and reconducted the stated analyses. Despite this approach, results were unchanged. Future longitudinal research is needed to create a more psychometrically sound intrinsic motivation scale for use with the Veteran population. Finally, although several religiosity variables significantly predicted mental health outcomes, they only accounted for a small percentage of variance. Future research should explore religious social support as a mediator in the negative relationship between religiosity and PTSD and depressive symptoms.

Our findings highlight the need for further research, but may also suggest clinical topics for mental health providers and spiritual leaders (e.g., VA or military chaplains) to address. For instance, extrinsic-social motivation in this sample was low; however, it did predict lower levels of PTSD. The low extrinsic-social motivation was expected since those with PTSD often engage in social isolation and withdrawal as a means to avoid trauma reminders. Nevertheless, it might be helpful to thoughtfully discuss the meaning of religious attendance as a means to connect with one's religious community and increase social connection. Importantly, it may not be enough for the Veteran to simply attend religious services; the motivation behind religious participation may be key to reducing distress. Exploring motivation for these purposes may prove useful. Additionally, many treatments for PTSD encourage Veterans to process their negative cognitions and attributions related their trauma. The way Veterans view God or another universal spirit may reflect their attributions and coping mechanisms. In treatment, processing the Veteran's concept of God and the underlying reasons for their religious attributions may be an important part of the way Veterans reframe their view the traumatic experience.

Conclusion

This study evaluated religiosity and mental health outcomes in Veterans with PTSD and depression in an effort to further clarify the relationship between the two. The findings were mixed and continue to point to the complex relationship between religiosity and mental health. Additional research is needed to better understand how religiosity influences personal emotional and psychological functioning. Regardless, the findings give us more confidence in expressing the need for religiosity to be addressed in PTSD and depression treatment, especially as it may relate to a Veteran's current understanding of his or her personal suffering.

References

Ano, G., & Vasconcelles, E. (2005). Religious coping and psychological adjustment to stress: a meta-analysis. *Journal of Clinical Psychology, 61*(4), 461–480.

Beck, A. T., Steer, R. A., & Carbin, M. G. (1988). Psychometric properties of the Beck Depression Inventory: Twenty-five years of evaluation. *Clinical Psychology Review, 8*(1), 77–100.

Bussing, A., Fischer, J., Ostermann, T., & Matthiessen, P. F. (2008). Reliance on God's help, depression and fatigue in female cancer patients. *The International Journal of Psychiatry in Medicine, 38*(3), 357–372.

Chang, B. H., Skinner, K., & Boehmer, U. (2001). Religion and mental health among women veterans with sexual assault experience. *International Journal of Psychiatry in Medicine, 31*(1), 77–95.

Chang, B. H., Skinner, K., Zhou, C., & Kazis, L. E. (2003). The relationship between sexual assault, religiosity, and mental health among

male veterans. *International Journal of Psychiatry in Medicine, 33*(3), 223–239.

Chen, Y. Y., & Koenig, H. G. (2006). Traumatic stress and religion: Is there a relationship? A review of empirical findings. *Journal of Religion and Health, 45*(3), 371–381.

Cook, J. M., Riggs, D. S., Thompson, R., Coyne, J. C., & Sheikh, J. I. (2004). Posttraumatic stress disorder and current relationship functioning among World War II ex-prisoners of war. *Journal of Family Psychology, 18*(1), 36–45.

Drescher, K., & Foy, D. (Winter 1995). Spirituality and trauma treatment: Suggestions for including spirituality as a coping resource. *NCP Clinical Quarterly, 5*(1), 4–5.

Falsetti, S. A., Resick, P. A., & Davis, J. L. (2003). Changes in religious beliefs following trauma. *Journal of Traumatic Stress, 16*(4), 391–398.

Fontana, A., & Rosenheck, R. (2004). Trauma, change in strength of religious faith, and mental health service use among veterans treated for PTSD. *Journal of Nervous and Mental Disease, 192*(9), 579–584.

Gorsuch, R. L. (1968). The conceptualization of God as seen in adjective ratings. *Journal for the Scientific Study of Religion, 7,* 56–64.

Gorsuch, R., & McPherson, S. (1989). Intrinsic/extrinsic measurement: I/E-Revised and single-item scales. *Journal for the Scientific Study of Religion, 28*(3), 348–354.

Gorsuch, R. L., & Miller, W. (1999). Assessing Spirituality. In W. Miller (Ed.), *Integrating spirituality into treatment: Resources for practitioners* (pp. 19–46). Washington, DC: American Psychological Association.

Groth-Marnat, G. (1990). *Handbook of Psychological Assessment* (2 ed.). New York: John Wiley & Sons.

Kang, H., Natelson, B., Mahan, C., Lee, K., & Murphy, F. (2003). Post-traumatic stress disorder and chronic fatigue syndrome-like illness among Gulf War veterans: A population-based survey of 30,000 veterans. *American Journal of Epidemiology, 157*(2), 141–148.

Kessler, R. C., Chiu, W. T., Demler, O., Merikangas, K. R., & Walters, E. E. (2005). Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry, 62*(6), 617–627.

Kessler, R. C., Sonnega, A., Bromet, E., Hughes, M., & Nelson, C. B. (1995). Posttraumatic stress disorder in the National Comorbidity Survey. *Archives of General Psychiatry, 52*(12), 1048–1060.

Koenig, H. G., George, L. K., & Titus, P. (2004). Religion, spirituality, and health in medically ill hospitalized older patients. *Journal of the American Geriatrics Society, 52*(4), 554–562.

Koenig, H. G., Pargament, K. I., & Nielsen, J. (1998). Religious coping and health status medically ill hospitalized older adults. *Journal of Nervous and Mental Disease, 186*(9), 513–521.

Kulka, R. A., Schlenger, W. A., Fairbanks, J. A., Hough, R. L., Jordan, B. K., Marmar, C. R., et al. (1990). *Trauma and the Vietnam War generation: Report of findings from the National Vietnam Veterans Readjustment Study.* New York: Brunner/Mazel.

Litz, B., Stein, N., Delaney, E., Lebowitz, L., Nash, W., Silva, C., et al. (2009). Moral injury and moral repair in war veterans: A preliminary model and intervention strategy. *Clinical Psychology Review, 29*(8), 695–706.

Maguen, S., Metzler, T., Litz, B., Seal, K., Knight, S., & Marmar, C. (2009). The impact of killing in war on mental health symptoms and related functioning. *Journal of Traumatic Stress, 22*(5), 435–443.

Maselko, J., Gilman, S. E., & Buka, S. (2008). Religious service attendance and spiritual well-being are differentially associated with risk of major depression. *Psychological Medicine,* 1–9.

Maynard, E. A., Gorsuch, R. L., & Bjorck, J. P. (2001). Religious coping style, concept of God, and personal religious variables in threat, loss, and challenge situations. *Journal for the Scientific Study of Religion, 40*(1), 65–74.

McCauley, J., Tarpley, M. J., Haaz, S., & Bartlett, S. J. (2008). Daily spiritual experiences of older adults with and without arthritis and the relationship to health outcomes. *Arthritis and Rheumatism, 59*(1), 122–128.

Moreira-Almeida, A., & Koenig, H. G. (2008). Religiousness and spirituality in fibromyalgia and chronic pain patients. *Current Pain and Headache Reports, 12*(5), 327–332.

Moreira-Almeida, A., Neto, F. L., & Koenig, H. G. (2006). Religiousness and mental health: a review. *Revista Brasileira de Psiquiatria, 28*(3), 242–250.

Mystakidou, K., Tsilika, E., Parpa, E., Smyrnioti, M., & Vlahos, L. (2006). Assessing spirituality and religiousness in advanced cancer patients. *The American Journal of Hospice & Palliative Care, 23*(6), 457–463.

O'Donnell, C., Cook, J. M., Thompson, R., Riley, K., & Neria, Y. (2006). Verbal and physical aggression in World War II former prisoners of war: Role of posttraumatic stress disorder and depression. *Journal of Traumatic Stress, 19*(6), 859–866.

Pargament, K. I., Koenig, H. G., & Perez, L. M. (2000). The many methods of religious coping: Development and initial validation of the rcope. *Journal of Clinical Psychology, 56*(4), 519–543.

Pargament, K. I., Koenig, H. G., Tarakeshwar, N., & Hahn, J. (2001). Religious struggle as a predictor of mortality among medically ill elderly patients: a 2-year longitudinal study. *Archives of Internal Medicine, 161*(15), 1881–1885.

Pargament, K. I., Koenig, H. G., Tarakeshwar, N., & Hahn, J. (2004). Religious coping methods as predictors of psychological, physical, and spiritual outcomes among medically ill elderly patients: a two-year longitudinal study. *Journal of Health Psychology, 9*(6), 713–730.

Pietrzak, R. H., Johnson, D. C., Goldstein, M. B., Malley, J. C., Rivers, A. J., Morgan, C. A., et al. (2009). Psychosocial buffers of traumatic stress, depressive symptoms, and psychosocial difficulties in veterans of Operations Enduring Freedom and Iraqi Freedom: The role of resilience, unit support, and postdeployment social support. *Journal of Affective Disorders, 120*(1–3), 188–192.

Schaefer, C. A., & Gorsuch, R. L. (1992). Dimensionality of religion: Belief and motivation as predictors of behavior. *Journal of Psychology and Christianity, 11*(3), 244–254.

Schnurr, P. P., Lunney, C. A., & Sengupta, A. (2004). Risk factors for the development versus maintenance of posttraumatic stress disorder. *Journal of Traumatic Stress, 17*(2), 85–95.

Schnurr, P. P., Spiro, A., & Paris, A. H. (2000). Physician-diagnosed medical disorders in relation to PTSD symptoms in older male military veterans. *Health Psychology, 19*(1), 91–97.

Seal, K., Metzler, T., Gima, K., Bertenthal, D., Maguen, S., & Marmar, C. (2009). Trends and risk factors for mental health diagnoses among iraq and afghanistan veterans using department of veterans affairs health care, 2002–2008. *American Journal of Public Health, 99*(9), 1651–1658.

Sher, L. (2009). A model of suicidal behavior in war veterans with posttraumatic mood disorder. *Medical Hypotheses, 73*(2), 215–219.

Sherman, A. C., Simonton, S., Latif, U., Spohn, R., & Tricot, G. (2005). Religious struggle and religious comfort in response to illness: health outcomes among stem cell transplant patients. *Journal of Behavioral Medicine, 28*(4), 359–367.

Smith, T. B., McCullough, M. E., & Poll, J. (2003). Religiousness and depression: evidence for a main effect and the moderating influence of stressful life events. *Psychological Bulletin, 129*(4), 614–636.

Spiro, A., Hankin, C., Mansell, D., & Kazis, L. (2006). Posttraumatic stress disorder and health status: the veterans health study. *The Journal of Ambulatory Care Management, 29*(1), 71–86.

Tanielian, T., & Jaycox, L. (2008). *Invisible Wounds of War: Psychological and Cognitive Injuries, Their Consequences, and Services to Assist Recovery*. Santa Monica, CA: RAND Corporation.

Weathers, F., Litz, B., Herman, D., Huska, J., & Keane, T. (1993, October). *The PTSD Checklist (PCL): Reliability, Validity, and Diagnostic Utility*. Paper presented at the Annual Convention of the International Society for Traumatic Stress Studies.

Wilson, J. P., & Moran, T. A. (1998). Psychological trauma: Posttraumatic stress disorder and spirituality. *Journal of Psychology and Theology, 26*(2), 168–178.

Witvliet, C. V. O., Phipps, K. A., Feldman, M. E., & Beckham, J. C. (2004). Posttraumatic mental and physical health correlates of forgiveness and religious coping in military veterans. *Journal of Traumatic Stress, 17*(3), 269–273.

Author Information

TRAN, CHRISTY T. *Address:* National Center for PTSD, VA, Palo Alto Health Care System, 795 Willow Rd (NC-PTSD), Menlo Park, CA 94025. *Title:* Health Care Specialist. *Degrees:* BA (Psychology) UC Berkeley.

KUHN, ERIC. *Address:* National Center for PTSD, VA Palo Alto Health Care System, 795 Willow Rd (NC-PTSD), Menlo Park, CA 94025. *Title:* Health Science Specialist. *Degrees:* PhD (Clinical Psychology) University at Albany, State University of New York.

WALSER, ROBYN D. *Address:* National Center for PTSD, VA Palo Alto Health Care System, 795 Willow Rd (NC-PTSD), Menlo Park, CA 94025. *Title:* Associate Director for Education. *Degrees:* PhD (Clinical Psychology) University of Nevada, Reno.

DRESCHER, KENT D. *Address:* National Center for PTSD, VA Palo Alto Health Care System, 795 Willow Rd (NC-PTSD), Menlo Park, CA 94025. *Title:* Health Science Specialist. *Degrees:* PhD (Clinical Psychology) Fuller Graduate School of Psychology.