Spirituality in Clinical Practice
2015, Vol. 2, No. 1, 25–35

2326-4500/15/$12.00 http://dx.doi.org/10.1037/scp0000052

Validation of the Functional Assessment of Chronic Illness Therapy–Spiritual Well-Being Scale in Veterans With PTSD

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The purpose of this study was to examine the factor structure of 2 versions of the Functional Assessment of Chronic Illness Therapy–Spiritual Well-Being (FACIT-Sp) scale in a sample of Veterans diagnosed with posttraumatic stress disorder (PTSD). The FACIT-Sp has 12- and 23-item versions that have been factor analyzed in other populations with mixed factor solutions. Spiritual well-being is of growing interest in military and veteran populations; valid and reliable measures are needed for research with these groups. A sample of 146 Veterans diagnosed with PTSD was selected for this analysis. Confirmatory factor analysis was used to test competing factorial structures for the 12-item FACIT-Sp. Both a 2-factor and 3-factor model were compared. For the 12-item FACIT-Sp, a more plausible model of spiritual well-being was found with the 3-factor model, separating Meaning from Peace and including Faith subscales. The addition of 11 more items in the 23-item FACIT-Sp did not improve model fit to any substantial degree. Therefore, the 12-item FACIT-Sp with a 3- rather than 2-factor solution (e.g., subscales of Peace, Meaning, and Faith) is recommended as the most accurate representation of the spiritual well-being components in this study of veterans with PTSD

Keywords: 12-item FACIT-Sp, 23-item FACIT-Sp, posttraumatic stress disorder, quality of life, spiritual well-being

Projections are that the total veteran population in the United States will reach 21 million by 2015 (U.S. Department of Veterans Affairs, Office of the Actuary, 2014). Of those, military personnel who served in Afghanistan and Iraq will constitute more than 30% of all veterans. The prevalence of PTSD among this population is rising, as high as 25% thus far reported (Schell & Marshall, 2008; Veterans Health Administration, Office of Public Health & Environmental Hazards, 2014). This represents as much as a threefold increase in new cases of PTSD in soldiers who served in the conflicts of Operation Iraqi Freedom (OIF) and Operation

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The views in this article are those of the authors and do not necessarily represent the views of the Department of Veterans Affairs or the United States Government. Portions of this study were presented as a podium presentation at the 2014 Western Institute of Nursing Conference on April 11, 2014, in Seattle, WA. This study was registered with clinicaltrials.gov, identifier NCT00120627: http://www.clinicaltrials.gov/ct2/show/NCT00120627?term=Mantram+repetition&rank=1.

This study was funded by Department of Veterans Affairs, Office of Research and Development, Nursing Research Initiative (04-041), and supported with resources from the VA San Diego Center of Excellence for Stress and Mental Health (CESAMH).

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Enduring Freedom (OEF) in Afghanistan, and Operation New Dawn (OND) (Khusid, 2013). Efforts to understand the dynamics of this disorder, and ways of enhancing their spiritual well-being, are increasingly central concentrations of inquiry for investigators.

Well-being has been found to be a vital marker of quality of life, as well as a key predictor of morbidity and mortality (Lundgren-Nillson, Jonsdottir, Ahlborg, & Tennant, 2013). The concept has been defined in terms of possession of an affective component (positive and negative affects), as well as a cognitive-evaluative component (satisfaction with life) (Wnuk & Marcinkowski, 2012). In one study, four factors of well-being emerged: self-acceptance, mastery and competence, positive relations engagement, and growth (Mehrotra, Tripathi, & Banu, 2013). One important dimension of well-being is spirituality (the quest for purposefulness and meaning in life; Pargament & Sweeney, 2011), and spiritual well-being.

Spiritual well-being has also been studied in several instruments, most notably the 12- and 23-item Functional Assessment of Chronic Illness Therapy–Spiritual Well-Being (FACIT-Sp) scales. These scales have been broadly used in cancer research (Canada, Murphy, Fitchett, Peterman, & Schover, 2008; Murphy et al., 2010), and only recently in veteran populations (Bormann, Liu, Thorp, & Lang, 2012). The FACIT-Sp 12- and 23-item versions have been factor analyzed in other populations with mixed factor solutions. The aim of this study was to examine the factor structure of the 12- and 23-item versions of the FACIT-Sp in a sample of Veterans diagnosed with posttraumatic stress disorder (PTSD).

The original scale was designed to evaluate spiritual components of well-being in cancer and HIV patients, particularly issues of harmony, purpose in life, meaning, peacefulness, and faith/assurance. There is the original 12-item version and another version that adds an additional 11 items for a 23-item version. The response format on both versions ranges from 0 (*not at all*) to 4 (*very much*). The total scores on the 12-item version range from 0 to 48. On the 23-item version, total scores range from 0 to 92. Higher scores on each version indicate greater spiritual well-being. The original validation study with the 12-item instrument on HIV and cancer patients demonstrated two principal factors: Meaning/Peace (defined as a sense of harmony and purpose in one's life, whereby meaning reflects a cognitive feature and peace suggest an affective feature), and Faith (defined as the perception of the association between a person's spiritual beliefs and his or her illness (Peterman, Fitchett, Brady, Hernandez, & Cella, 2002). A later analysis of the 12-item version revealed three distinct factors instead of two: Meaning, as separate from, Peace, and Faith (as trust in the divine for coping with illness; Murphy et al., 2010). Convergent validity has been demonstrated by significant Pearson correlations between measures of quality of life, mood, and religious growth (Brady, Peterman, Fitchett, Mo, & Cella, 1999; Peterman et al., 2002). In a study of oncology patients, Cronbach's alpha was .87 for the FACIT-Sp Total (Brady et al., 1999), and in a study of veterans the Cronbach's alpha was .94 for the 12-item version (Bormann et al., 2012).

The 23-item FACIT-Sp has demonstrated internal consistency reliability, but not test–retest reliability in studies of adults with HIV (Cotton et al., 2006; Bormann et al., 2006). Another study compared four groups of patients with HIV or cancer who resided in either the Caribbean or the United States using the 12-item version. A two-factor model emerged, and the Comparative Fit Index (CFI), Normed Fit Index (NFI), and Tucker-Lewis Index (TLI) all exceeded the acceptable fit of .90. Further, it was found that the Meaning and Peace scales shared 36% to 77% of their reliable variance, were highly correlated with each other, and the range of correlation coefficients was from .61 to .87. The authors concluded that the Peace scale alone contributes more than the Meaning scale to the prediction of essential health outcomes (Peterman et al., 2014).

Method

Sample

Data for the present study came from volunteers at a Veterans Affairs (VA) PTSD outpatient clinic in southern California. Human subject approvals were obtained from the VA Healthcare System and associated university. Subjects were recruited for the study using flyers and brochures. In addition, the study manager attended PTSD clinic group orientations to

solicit study volunteers. These volunteer subjects were compensated up to $80 for their travel expenses and time. A total of 146 subjects agreed to participate.

The study staff procured informed written consent of subjects. Study participants consisted of outpatient veterans who reported experiencing trauma during a tour of duty. The inclusion criteria consisted of a confirmed diagnosis of PTSD via the Clinician Administered PTSD Scale (CAPS; Weathers et al., 2001), age 18 or higher at the time of the study, self-report of a minimum of two months sobriety confirmed by staff medical providers, and ability to read and write in English.

Volunteers for the study were excluded if they reported imminent suicidal thoughts as determined by the Mini-International Neuropsychiatric Interview (MINI; Sheehan et al., 1998), presence of dementia, mania, or psychosis during the previous 12 months. Patient records were accessed to ensure that participants were on adequate stabilizing doses of psychotropic agents for a minimum of two months before the study onset.

Measures

A Demographic Questionnaire was used to obtain information on variables including age, gender, ethnicity, level of education, years in military service, months of combat, years of PTSD symptoms, marital status, employment, whether wounded during military service, currently prescribed medications for anxiety and depression, and present psychiatric diagnoses of dysthymic disorder, obsessive-compulsive disorder, and generalized anxiety disorder, and whether the subjects identified as religious or spiritual. In this study, religious or spiritual was assessed with a yes or no question: "Do you identify with being religious? Do you identify as being spiritual?" (*yes*/*no*)

Functional Assessment of Chronic Illness Therapy–Spiritual Well-Being (FACIT-Sp) Scale

As previously indicated, the FACIT-Sp has been broadly used to study spiritual well-being in persons with cancer, HIV, and other disorders. The items on both the 12-item and the 23-item version are a Likert scale format from *very much* (4) down to *not at all* (0), except two items which are reverse coded because of negative wording. Subjects were administered both the 12-item and 23-item versions and were instructed to rate each item based on the last week. Higher scores suggest greater levels of overall spiritual well-being. The FACIT-Sp has only 1 item (#11) with the word "illness," which is "My illness has strengthened my faith or spiritual beliefs." This item was modified to state, "My PTSD has strengthened my faith or spiritual beliefs."

Results

Subject Characteristics

Table 1 presents characteristics of subjects in the study. The sample was made up of 146 subjects, of whom 97% were males, and the mean age of the participants was 57 years old, 51% of whom were married at the time of the study. Regarding ethnicity, 58% were white, 25% African American, 10% Hispanic, and 7% identified as other. The sample had an average of 8 years of service in the military, with most serving in Korea, Vietnam, or Iraq (Operation Desert Storm; 97%), and 5% served in Afghanistan or Iraq (Operations Iraqi Freedom, New Dawn, and Enduring Freedom). They had an average of 13 months of combat time, and average years of PTSD symptoms was 32, with 44% reporting that they were wounded while serving in the military. The majority of subjects were unemployed (61%) or had some employment (20 hours per week or more) (39%). Most identified as religious (80%), and 77% identified as spiritual. Most of the subjects were on antidepressant medication (83%), and a smaller number were on antianxiety agents (10%). In addition to PTSD, other psychiatric diagnoses included major depression (80%), dysthymic disorder (62%), obsessive-compulsive disorder (34%), and generalized anxiety disorder (56%).

Factor Analysis

Confirmatory factor analysis (CFA) was used to test competing factorial structures for the $k = 12$ item FACIT instrument in Mplus 7.11. Both a 3-factor (Peace, Meaning and Faith) and 2-factor (Peace combined with Meaning, and Faith) were compared, and then a 4- (Peace,

Table 1
Subject Characteristics (n = 146)

Characteristic	*M*	*SD*	Range Actual
Age	57	10.10	23–84
Years of education	14	2.13	7–21
Years in the military[a]	8	7.33	1–30
Months of combat[a]	13	9.94	0.5–84
Years of PTSD symptoms	32	11.95	0.5–63
	n	%	
Gender			
Males	142	97	
Females	4	3	
Ethnicity			
White	85	58	
African American	36	25	
Hispanic	14	10	
Other	11	7	
Marital/partner status			
Not married/partnered	71	49	
Married/partnered	75	51	
Employment[a]			
None	86	61	
Some	56	39	
"Yes" answers to:			
Wounded[a]	63	44	
On prescribed anti-anxiety	14	10	
On prescribed anti-depressants	121	83	
Identifies as religious[a]	114	80	
Identifies as spiritual	109	77	
Diagnosis			
Current major depression	117	80	
Dysthymic disorder	90	62	
Obsessive-compulsive disorder	49	34	
Generalized anxiety disorder	82	56	

Note. Some percentages do not add to 100 because of rounding.
[a] Variable with missing data ($n = 142$).

Meaning, Faith, and Spiritual) versus 3-factor (Peace combined with Meaning, Faith, and Spiritual) model were compared for the $k = 23$ item instrument. By examining and testing the relationship between the manifest indicators (i.e., individual items) and the latent constructs, evidence can be furnished as to the psychometric integrity of this instrument (Brown, 2006; Thompson, 2004; Kline, 2005; Kaplan, 2000).

Adjusting the quality of model fit is not without controversy (Barrett, 2007), with many divergent opinions as to what constitutes acceptable model fit (Williams & O'Boyle, 2011; Nye & Drasgow, 2011). Given the plethora of fit statistics that are produced by the variety of software, much research has been conducted examining the behavior of these statistics under various conditions, such as model misspecification, non-normality, and level of measurement (Boomsma & Hoogland, 2001), with many agreeing that a holistic approach should be taken to assessing model fit (Fan & Sivo, 2005; Mulaik, 2009). Even though there has been an accumulation of research comparing fit indices and offering preliminary (and at times, conflicting) guidelines for cutoffs (Hu & Bentler, 1999; Marsh, Hau, & Wen, 2004), the indices that have, to date, maintained favorable properties will be reported here. Those include the chi-square (χ^2) test, of which a fail to reject decision is preferred (i.e., $p > .05$; though this exact statistic is impacted, in part, by sample size), an error of approximation index: the root mean square error of approximation (RMSEA), incremental fit indices: the Tucker-Lewis index (TLI) and the comparative fit index (CFI), and

the standardized root mean residual (SRMR). Though cutoffs have been suggested (Chen, Curran, Bollen, Kirby, & Paxton, 2008; West, Taylor, & Wu, 2012) a more conservative approach will be used with this psychometric assessment insofar CFI and TLI $>$ .95, SRMR $<$ .05 and RMSEA $<$ .08 will be preliminary evidence of acceptable fit. Moreover, though examination of local fit statistics, such as the standardized residuals, as well as modification indices may shed insight into alternative specification of the model (e.g., correlate errors of the manifest variables, add or delete variables, impose equality constraints, etc.). For this research just the postulated model will be reviewed, hence data-driven changes to the model will be deferred for future replications.

There are a variety of estimation techniques (Bentler & Bonnett, 1980; Chou & Bentler, 1995; Zhang, 2008) that depend on the variable metrics (e.g., binary, multinomial, ordinal), model complexity, or distributional properties. The default of many programs is maximum likelihood (ML), which assumes multivariate normality. However, all of the variables in this CFA are either non-normal or of an ordinal nature, which entails the analysis of polychoric correlations and, if sample size is sufficiently large, an asymptotic covariance matrix (Jöreskog & Sörbom, 1996; Muthén & Kaplan, 1985). Many advances have been made in the estimation of models with ordinal variables, non-normal distributions, and/or small sample sizes (Flora & Curran, 2004; Nevitt, & Hancock, 2004). The Mplus software (Muthén & Muthén, 2012) has particularly been on the cutting edge of providing estimators for categorical and/or non-normal data. Thus, along with reporting the results when using ML for continuous data (which assumes multivariate normality), the robust likelihood estimator (MLR) will be reported and, when the data are stipulated to be ordered categorical (i.e., ordinal variables), the weighted least squares mean variance (WLSMV) will also be reported (Lei & Wu, 2012; Savalei & Rhemtulla, 2013). For the latter estimator only the overall fit statistics will be provided; hence, if interested the primary author can be contacted for the table of parameter estimates for the WLSMV estimator.

As well, information theoretic indices such as the Akaike information criterion (AIC) and Bayesian information criterion (BIC) will be examined for purposes of model selection such that the model with the lower value indicates relatively better fit (Burnham & Anderson, 1998). Full information maximum likelihood (FIML) will be used as the missing data technique, which assumes the mechanism of missingness is Missing At Random (Enders, 2010), though there was only one value missing for one item (for one participant), resulting in $n = 146$ analyzable cases. A chi-square difference test (χ^2_{diff}) was computed for each of the nested models when using the ML estimator (Satorra & Bentler, 2001). However, for the MLR estimator, the Satorra-Bentler scaled difference χ^2_{diff} test (TRd) was computed. All indices of model fit as well as the parameter estimates are appended in the attached Excel worksheet.

12-Item FACIT-Sp Model

As we see in Table 2 (for both ML and MLR estimators) a slightly better fit is obtained for the 3-factor model, with CFI = .894, TLI = .863, and RMSEA = .119 when compared with the 2-factor model (CFI = .877, TLI = .846, RMSEA = .125). As well a lower AIC and BIC is obtained for the 3-factor model, and the chi-square difference test is significant for both ML and MLR. However, overall model fit is still not within the range of values that would be considered to be supportive of favorable fit.

Interestingly, when casting the variables as ordered categorical (i.e., using WLSMV estimator), though again the exact test statistic is significant for both the 3-factor, $\chi^2(51) = 224.14$, $p < .05$, and 2-factor model, $\chi^2(53) = 235.36$, $p < .05$, the incremental fit indices slightly improve: TLI = .899, and CFI = .922 for the 3-factor model (WRMR = 1.046 which is the weighted root mean residual and $<$1.0 is preferred) and TLI = .897, and CFI = .918 for the 2-factor model. However, the RMSEA has increased for the 3-factor (RMSEA = .148) and 2-factor model (RMSEA = .149). Generally, larger sample sizes are warranted when using WLSM.

For this analysis, a confirmatory approach was chosen; however, certain data-driven (i.e., model generating) suggestions derived from the modification indices may improve model fit for the 12-item instrument. For example, correlating the residuals for certain pairs of items, such as FACIT9 “Comfort in my Faith” and

Table 2
Comparisons of Three-Factor and Two-Factor Models for the 12-Item Version of the FACIT Instrument (n = 146)

Model	χ^2	*df*	χ^2_{diff} (*df*)	RMSEA	CFI	TLI	SRMR	AIC	BIC	cd	TRd
ML											
12-item: 3-factor	161.41	51		0.119	0.894	0.863	0.098	4899.240	5017.680		
12-item: 2-factor	181.28	53	19.870 (2)***	0.125	0.877	0.846	0.098	4915.110	5027.480		
MLR											
12-item: 3-factor	152.47	51		0.114	0.875	0.838	0.098	4899.240	5017.680		
12-item: 2-factor	169.15	53	11.846 (2)**	0.119	0.857	0.821	0.098	4915.110	5027.480	1.408	11.847
WLMSV											
12-item: 3-factor	224.14	51									
12-item: 2-factor	235.36	53									
WRMR											
12-item: 3-factor				0.148	0.922	0.899	1.124				
12-item: 2-factor				0.149	0.918	0.897	1.170				

Note. ML = maximum likelihood; RMSEA = the root mean square error of approximation; CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; SRMR = standardized root mean residual; AIC = Akaike information criterion; BIC = Bayesian information criterion; cd = difference testing scaling correction; TRd = Satorra-Bentler scaled difference χ^2_{diff} test; MLR = robust likelihood estimator; WLSMV = weighted least squares mean variance; WRMR = weighted root mean residual.
** $p = .003$ (difference in χ^2 based on formula for MLR). *** $p < .001$.

FACIT10 "Strength in my Faith" both faith-based items, improved model fit. Moreover, correlating the residuals for FACIT8_R ("Life Lacks Meaning") and FACIT4_R ("Trouble Feeling Peace of Mind") culminate in an improvement in model fit for both the 3-factor model (CFI = .913, TLI = .885, RMSEA = .108) and 2-factor model (CFI = .895, TLI = .866, RMSEA = .125). However, whenever residuals are free to covary, there should be theoretical justification to do so (as opposed to it being a solely data-driven exercise) and should be cross-validated.

23-Item FACIT-Sp Model

For both ML and MLR estimators a slightly better fit is obtained for the 4-factor model, with CFI = .81, TLI = .785 and RMSEA = .116 when compared with the 3-factor model (CFI = .802, TLI = .779, RMSEA = .118). As well a lower AIC and BIC is obtained for the 4-factor model. However, overall model fit is still well below what would generally point to adequate model fit. Hence, incorporating the 11 spiritual items did not substantively improve model fit.

Tables 3 and 4 show the parameter estimates (unstandardized and standardized) and r^2 value for the 4- and 3-factor model when using the MLR estimator. Some of the items have relatively low r^2 values (e.g., FACIT8_R, FACIT7) which may, in part, explain part of local model misfit.

Discussion

The well-being of veterans with PTSD represents a growing focus of inquiry for researchers. Germane to these endeavors is the careful choice of the most appropriate measures for ideally capturing the well-being construct. In the present study, both a 3-factor model (Peace, Meaning, and Faith), and 2-factor model (Peace combined with Meaning, and Faith) were compared, followed by a 4-factor (Peace, Meaning, Faith, and Spiritual) versus 3-factor (Peace combined with Meaning, Faith, and Spiritual) model for the 23-item instrument. Additionally, for the 12-item instrument, we compared both a 2-factor model (Peace combined with Meaning, and Faith subscales) and 3-factor model (Peace, Meaning, and Faith subscales). Results showed that a 3-factor model was the best fit for the 12-item version of the FACIT-Sp, and for the 23-item version a 4-factor model proved the best fit. In other words, Peace and Meaning appear to be separate constructs in both versions. However, the addition of 11 more items did not improve model fit to any substantial degree. Hence, the 12-item FACIT-Sp with a 3-factor solution (e.g., subscales of Peace, Meaning, and Faith)

Table 3
Unstandardized Loadings (Standard Errors) and Standardized Loadings for 3-Factor Confirmatory Model for the 12-Item Version of the FACIT Instrument Using the MLR Estimator (n = 146)

	Meaning		Peace		Faith		
Item	Unstandardized (*SE*)	Standardized	Unstandardized (*SE*)	Standardized	Unstandardized (*SE*)	Standardized	r^2
FACIT2	1 (—)	0.769					0.532
FACIT3	1.03 (0.083)	0.774					0.591
FACIT5	1.19 (0.094)	0.897					0.599
FACIT8_R	0.338 (0.147)*	0.247					0.041
FACIT1			1 (—)	0.729			0.804
FACIT4_R			0.312 (0.151)*	0.202			0.641
FACIT6			1.15 (0.153)	0.801			0.795
FACIT7			1.32 (0.147)	0.891			0.061
FACIT9					1 (—)	0.923	0.851
FACIT10					1.05 (0.048)	0.961	0.924
FACIT11					0.667 (0.077)	0.603	0.364
FACIT12					0.479 (0.083)	0.496	0.246

Note. Dash (—) indicate the standard error was not estimated. All significance at the $p < .01$ level unless noted else, or *ns* = not statistically significant.
* $p < .05$.

was represented in this sample of veterans with PTSD. Other researchers have also shown that the 3-factor model of the 12-item FACIT-Sp was more explanatory in studies of well-being on female cancer survivors, with all factors having moderate to strong associations to mental health (Canada et al., 2008). Thus, it appears that the 12-item, 3-factor structure is more representative of the dimensions reflected in the recovery process from PTSD, as well as other illnesses.

The present study's examination of the model explored correlating residuals for certain pairs of items. This is consistent with previous research on this measure. We found that for the 12-item, 3-factor model, the largest change to the model would be by freeing up the residual covariance for FACIT9 "Comfort in my Faith" and FACIT10 "Strength in my Faith" both faith-based items. By letting the residuals covary the fit is improved.

One of the advantages of this study is that the 12- and 23-item FACIT-Sp scales have been well used in other research, and original studies had a sizable number of subjects with broad demographic representation. Our study also had a diverse population in terms of ethnicity, marital status, degree of employment, amount of education, and years served in the military. However, the number of female veterans was low (3%). The results may have proven different if more females or younger veterans had been included in the sample, as there may be aspects of well-being that are more gender or age-related and could yield different findings in a factor analytic study. This raises the larger issue of the conceptualization of well-being, as well as spirituality and spiritual outcomes. Hence, in the future, assuming sufficient sample size, a multigroup confirmatory factor analysis (MG-CFA) may be considered, testing increasingly more restrictive tests of invariance (e.g., configural invariance, metric invariance, scalar invariance, etc.). Moreover, so as to test and ascertain the stability of the constructs/measures over time, a more dynamic approach via longitudinal confirmation factor analysis may also shed further insight into the psychometric properties.

The 12-item FACIT-Sp conceptualizes spiritual well-being in terms of the constructs of Peace, Meaning, and Faith. Any attempt to measure these constructs will inevitably wind up measuring feelings about these concepts. For example, "I feel peaceful," and "I feel loved" may have nothing to do with a sense of spirituality in those who define themselves as atheists. Even with defining spirituality as a search for purpose and meaning, there still

Table 4
Unstandardized Loadings (Standard Errors) and Standardized Loadings for 4-Factor Confirmatory Model for the 23-Item Version of the FACIT Instrument Using the MLR Estimator (n = 146)

	Meaning		Peace		Faith		Spiritual		
Item	Unstandardized (*SE*)	Standardized	Unstandardized (*SE*)	Standardized	Unstandardized (*SE*)	Standardized	Unstandardized (*SE*)	Standardized	r^2
FACIT2	1 (—)	0.793							0.529
FACIT3	1.003 (0.080)	0.782							0.629
FACIT5	1.126 (0.089)	0.875							0.611
FACIT8_R	0.345 (0.142)*	0.261							0.040
FACIT1			1 (—)	0.727					0.766
FACIT4_R			0.311 (0.150)*	0.200					0.634
FACIT6			1.150 (0.148)	0.796					0.805
FACIT7			1.335 (0.143)	0.897					0.068
FACIT9					1 (—)	0.922			0.850
FACIT10					1.048 (0.043)	0.960			0.922
FACIT11					0.672 (0.078)	0.607			0.368
FACIT12					0.485 (0.085)	0.503			0.253
FACIT13							1 (—)	0.576	0.331
FACIT14							1.095 (0.166)	0.722	0.522
FACIT15							1.286 (0.196)	0.771	0.594
FACIT16							1.291 (0.186)	0.808	0.654
FACIT17							1.001 (0.142)	0.626	0.392
FACIT18							0.902 (0.164)	0.589	0.347
FACIT19							1.222 (0.148)	0.763	0.582
FACIT20							1.243 (0.160)	0.821	0.674
FACIT21							1.098 (0.168)	0.804	0.647
FACIT22							1.139 (0.149)	0.729	0.531
FACIT23							1.087 (0.150)	0.695	0.483

Note. Dash (—) indicate the standard error was not estimated. All significance at the $p < .01$ level unless noted else, or *ns* = not statistically significant.
* $p < .05$.

leaves the issue of well-being as an ethereal concept rather than a pragmatic one. Hence, further research correlating spiritual well-being with well-being as a general construct could be useful, as well as correlation of spiritual well-being with variables of coping style, self-identity and self-efficacy, could help researchers tighten the concept of spiritual well-being to a practical translation to providing care. Longitudinal analyses of the spiritual well-being of veterans is an additional area of future research which would be beneficial to explore. Specifically, how the nature of spirituality changes over time when a person has been exposed to the terrors of combat and the possibility of losing their own life. Exploration of spiritual coping strategies, participation in religious services, and the role of their faith community in recovery from their symptoms would be of particular value in both assessment and treatment.

Treatment of veterans with PTSD should include evaluation of their spiritual well-being as part of their overall plan of care and recovery. Early detection of lowered spiritual well-being and psychotherapeutic interventions targeted toward this issue may help in preventing comorbid psychiatric disorders in the future. Recovery models focusing on spiritual health and well-being as an important target of treatment would be a valuable asset in the care of veterans after administration of the FACIT-Sp and additional measures of coping, self-identity, and self-efficacy.

Some studies have shown there is a high comorbidity between PTSD and other psychiatric disorders. For example, Campbell et al. (2007) found that 60% of veterans with PTSD also met criteria for an anxiety disorder. As well, the Anxiety and Depression Association of America (2014) reports that approximately 20% of military personnel returning from Afghanistan or Iraq have symptoms of depression and/or PTSD. Results of the present study found that 80% of the subjects carried a diagnosis of major depression and 62% carried a diagnosis of dysthymic disorder, with 83% being on antidepressant medications. This should alert clinicians and researchers to the possibility that depression may be very high among veteran samples and underreported, and/or that this is a variable that requires particular attention in the statistical evaluations of sample populations. Also with regard to comorbidity, it has also been demonstrated that in the OIF/OEF/OND conflicts that possibly as many as 20% suffer from traumatic brain injury and as many as 20% or more from PTSD (U.S. Department of Veterans Affairs, 2014), which may certainly serve as a trigger and subsequent comorbidity with PTSD. This study did not assess for the presence/absence of traumatic brain injury, but future studies may wish to take this into account when studying veteran populations.

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Received September 17, 2014
Revision received December 31, 2014
Accepted January 20, 2015 ■