



The FACIT-Sp spiritual wellbeing scale: a factor analysis in patients with severe and/or life-limiting medical illnesses

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Background: The Functional Assessment of Chronic Illness Therapy-Spiritual Well-Being Scale (FACIT-Sp) is a widely used measure of spiritual wellbeing. However, consensus on the best factor structure for this measure has not been reached. Both a 2-factor (Meaning/Peace, Faith) and a 3-factor (Meaning, Peace, Faith) structure are reported in the literature. In this study, we examined the factorial structure of the FACIT-Sp in a population of patients with severe and/or life-limiting medical illnesses.

Methods: The present study is a part of a larger study that validated the National Institute of Health-Healing Experiences of All Life Stressors (NIH-HEALS), a measure of psycho-social-spiritual healing developed by the Pain and Palliative Care Service at the National Institutes of Health Clinical Center (NIH-CC). The sample included 200 subjects who were recruited from the NIH Clinical Center inpatient units and outpatient clinics with severe and/or life limiting illnesses (cancer, non-genetic conditions, genetic conditions, blood dyscrasias). FACIT-Sp is a 12-item questionnaire scored on a 5-point Likert scale (0 = not at all; 4 = very much). Exploratory factor analysis (EFA) and principal component analysis (PCA) were used to analyze results and to identify the number of latent constructs and underlying factor structure.

Results: The results supported the 3-factor (Meaning, Peace, and Faith) model of the FACIT-Sp and accounted for the most variability (74.20%), followed by the 2-factor solution (64.95%). The identified factors related to Faith, Peace, and Meaning and were consistent with previously reported 3-factor model.

Conclusions: This study confirmed the 3-factor structure of FACIT-Sp. This information can inform interventions aimed at improving quality of life and spiritual wellbeing in clinical and palliative care settings.

Keywords: Factor analysis; spiritual wellbeing; meaning; peace; faith

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Introduction

Research has shown the importance of spiritual wellbeing in a wide range of physical and mental health conditions including a positive impact on quality of life (QoL) (1). The World Health Organization (WHO) describes spirituality as an essential domain of QoL, especially in

those diagnosed with life-threatening illnesses (2). Assessing and supporting spirituality has become an important therapeutic consideration in palliative care (3). Spiritual wellbeing can impact an individual's interpersonal, religious and spiritual relationships (1). Spirituality and religion can provide guidance and structure, and further enhance coping and a sense of meaning in difficult times (4). It can also

improve stress management and has been linked to immune, cardiovascular, endocrine, and nervous system functions (5,6).

The 12-item Functional Assessment of Chronic Illness Therapy-Spiritual Well-Being Scale (FACIT-Sp) is a widely used measure of spirituality (7). This measure was developed and added to a larger and more comprehensive instrument popular in cancer research, the Functional Assessment of Cancer Therapy-General (FACT-G) (1). When assessing health-related QoL by FACT-G, the relationship between spirituality and coping mechanisms in terminal illness became evident and led to the development of FACIT-Sp to assess spiritual wellbeing in patients from varying religious and spiritual backgrounds (8,9). FACIT-Sp has been utilized across a range of patient populations (e.g., cancer, elderly, heart failure) (10-13) from different religions and cultures (e.g., Brazil, Italy, Japan, United States) (14-17), as well as with individuals who identify as spiritual but not religious. It has been found that populations that do not have a religious affiliation score lower on the faith factor (8,18).

Since its development, FACIT-Sp has been used as a stand-alone measure of spirituality (1). It has been used as the gold standard (8) and as validation of other tools assessing spirituality and related concepts (13,18,19). Several efforts to define religion and spirituality (20-22) are underway and highlight the importance of this aspect of wellbeing and simultaneously highlight the importance of effective measurement of these constructs. For example, assessment of spirituality has become a key dimension of wellbeing in palliative care (23), addiction research (24), and psychedelic-assisted research in cancer and posttraumatic stress disorder (PTSD) (25). Renewed interest in psychedelic-assisted therapies in cancer patients to address depression, anxiety, and existential distress has provided promising results (25,26). One advantage of the FACIT-Sp instrument is that it provides a measure of spirituality without referring to a particular religious belief system or existence of God (8). The wide use and interest in FACIT-Sp has prompted further studies to understand its qualities including studies of its factorial structure (27).

The original factor analysis of the FACIT-Sp supported two factors: (I) Meaning/Peace and (II) Faith (8). Eight items constituted the Meaning/Peace factor assessing meaning, peace, and purpose in life. The remaining four items constituted the Faith factor assessing the effectiveness of one's spiritual beliefs in the context of serious illness. In contrast to the original 2-factor structure, recent studies support a 3-factor structure identifying Faith, Meaning, and Peace as three factors (10,16,27). Consensus regarding the

factorial structure of the tool has not yet been determined. However, Murphy and Canada (10) have found that the 3-factor structure is psychometrically superior to the 2-factor structure because it allows for a more in-depth understanding of the impact of spiritual wellbeing.

Further understanding of the FACIT-Sp and its factor structure is of interest when assessing spirituality because of its impact on overall health related QoL and the potential for interventions that could be directed at spiritual health and wellbeing. The current study aims to examine the factorial structure of the FACIT-Sp with a population of patients with severe and/or life-limiting medical illnesses, and to report on their FACIT-Sp responses and findings.

Methods

The present study is a part of a larger study that validated the National Institute of Health-Healing Experiences of All Life Stressors (NIH-HEALS), a measure of psycho-social-spiritual healing developed by the Pain and Palliative Care Service at the NIH Clinical Center. We utilized FACIT-Sp in the study to assess NIH-HEALS' convergent validity (19). These participants were approached by research associates, Pain and Palliative Care Service clinicians or volunteers who described the study, asked for their consent, and if provided, administered the packet of questionnaires which included FACIT-Sp. The assessment package was a one-time event and those who consented completed the assessment within the same day. The present study is focused on a separate analysis of FACIT-Sp data.

Subjects and procedure

The sample included 200 subjects who were recruited from the NIH Clinical Center inpatient and outpatient clinics. These patients were involved with various clinical trials at the NIH for treatment of severe and/or life-limiting medical illnesses. They were 53% female and 47% male; no other gender identification was made. The age of the participants ranged from 18 to 89 years, with mean of 50.2 ± 15.5 years old. The majority (70%) of patients had cancer. Other conditions included severe and/or rare non-genetic conditions, severe and/or rare genetic conditions, blood dyscrasias, and acquired immunodeficiency syndrome (AIDS). The median estimated duration of the participants' illness was 4 years. Additional demographic and disease-related characteristics of the participants can be found in *Table 1*.

Table 1 Demographics and clinical characteristics of patients

Characteristics (available n)	Subcategory	N (%)*
Sex (n=193)	Women	103 (53.4)
	Men	90 (46.6)
Age, years (n=184) (mean \pm SD, range)	–	50.2 \pm 15.5, 18–89
Race (n=192)	American Indian/Alaska Native	1 (0.5)
	Asian	13 (6.8)
	Black or African American	30 (15.6)
	Caucasian	139 (72.4)
	Mixed/other	9 (4.7)
Ethnicity (n=189)	Hispanic/Latinx	13 (6.9)
	Not Hispanic/Latinx	176 (93.1)
Marital status (n=192)	Single	42 (21.9)
	Married	116 (60.4)
	Divorced/separated/widowed	28 (14.6)
	Living with partner, other	6 (3.1)
Religious affiliation (n=190)	Christianity	126 (66.3)
	Islam	3 (1.6)
	Hinduism	2 (1.1)
	Buddhism	2 (1.1)
	Judaism	5 (2.6)
	Agnostic	10 (5.3)
	Atheist	11 (5.8)
	Not affiliated	23 (12.1)
Education (n=193)	Other	8 (4.2)
	High school or less	26 (13.5)
	Vocational training or other	7 (3.6)
	Some/completed college	108 (56.0)
	Advanced degree	52 (26.9)
Medical diagnosis (n=182)	Cancer (advanced/metastatic)	128 (70.3)
	Severe and/or rare non-genetic conditions	20 (11.0)
	Blood dyscrasias	17 (9.3)
	Severe and/or rare genetic conditions	16 (8.8)
	AIDS	1 (0.5)
Estimated duration of illness, years (mean \pm SD, median, range) (n=176)	–	8 \pm 10, 4, 1–50

*, data are frequencies and rounded percentages based on available responses, unless otherwise specified. Percentages may not total 100% due to rounding. SD, standard deviation; AIDS, acquired immunodeficiency syndrome.

The study was conducted in accordance with the Declaration of Helsinki (as revised in 2013). The study was approved by the NIH Office of Human Subject Research Protection (OHSRP, No. 16CC0056). Participation was voluntary. The OHSRP waived signed written consent because the collected survey data were de-identified. Additional information on the larger study is detailed elsewhere (19).

Measure

FACIT-Sp is a 12-item questionnaire scored on a 5-point Likert scale (0 = not at all; 4 = very much). Internal consistency for the FACIT-Sp and its 2/3 factors are: α of 0.87 for Faith factor (4 items), α of 0.88 for combined Meaning/Peace factor (8 items), α of 0.78 for Meaning alone (4 items), α of 0.83 for Peace alone (4 items), and α of 0.89 for total FACIT-Sp (12 items) (8,27).

Statistical analysis

Frequencies (percentages) and simple descriptive statistics (mean \pm standard deviation) are reported on patient characteristics and FACIT-Sp scale results. Exploratory factor analysis (EFA) and principal component analysis (PCA) of the FACIT-Sp responses were used to identify the number of latent constructs and underlying factor structure. The EFA did not impose preconceived, established, structures on the FACIT-Sp, and explored the latent constructs of the 12 items by testing no factor requirement, 2-factor, 3-factor, and 4-factor requirements. EFA used an orthogonal rotation and varimax method and utilized factor loading thresholds of >0.30 for the no factor model, but otherwise they were based on thresholds of >0.40 for retention. Pearson's correlation coefficient was used for item correlations. Cronbach's α measured internal consistency. Kaiser's measure of sampling adequacy (MSA) was also computed. Data were analyzed using SAS v9.4 (SAS Institute, Inc., Cary, NC, USA).

Results

Demographic and patient characteristics are listed in *Table 1*. Of the enrolled 200 patients, 192 (96%) responded to FACIT-Sp questions in its entirety. The correlation structure of the 12 items is listed in *Table 2*. The standardized Cronbach α measuring internal consistency of the FACIT-Sp was good ($\alpha=0.78$) and overall MSA was

0.850. The EFA results for the no-, 2-, 3-, and 4-factor loading models are listed in *Table 3*. Our results supported the 3-factor (Meaning, Peace, and Faith) model of the FACIT-Sp. Of the models tested, the 3-factor solution accounted for the most variability (74.20%), followed by the 2-factor solution (64.95% variance explained). The no factor requirement led to the same factor structure as the 3-factor requirement model. The 4-factor solution did not yield an eigenvalue greater than the accepted 1.0, and thus was not considered to be a valid model; the identified factor structure yielded the same 3-factor loading as the no- and 3-factor models.

A comparison of the established 2-factor (8) and 3-factor models of the FACIT-Sp (27) confirmed that the item loadings in our population of patients with severe and/or life-limiting medical illnesses matched the same factors as the established models (*Table 3; Figure 1A,1B*). The responses to individual FACIT-Sp questions, the factors, and the total scores from the patients in our study are shown in *Table 4*. Our results showed that the Faith, Peace, and Meaning factors had mean scores of 10.3 (± 5.2), 10.3 (± 3.7), and 13.1 (± 3.2), respectively, giving an overall total mean score of 33.7 (± 10.0).

Discussion

The aim of this study was to explore the factor structure of the FACIT-Sp in a group of 200 patients with severe and/or life-limiting medical illnesses of whom 192 completed the FACIT-Sp. The present study provided evidence that the 3-factor model of FACIT-Sp offers better factorial validity and internal consistency compared to the 2-factor model proposed in the original study. The 3-factor model accounted for greater variability (74.20% compared to the 2-factor total variability of 64.95%). The FACIT-Sp as a 3-factor model could provide valuable insights into the role of spirituality in coping with long-term illnesses. The 3-factor model can be more informative than the 2-factor model of the FACIT-Sp measure, because it delineates Meaning and Peace as distinct dimensions in spirituality (28).

These results support Meaning, Peace, and Faith as the three factors that can impact emotional and spiritual wellbeing and may influence clinical interventions to improve QoL (10,27,29). This delineation may influence clinical interventions aimed at increasing meaning in life or finding a sense of peace for patients who suffer from severe and/or life-limiting medical illnesses (28).

Spirituality is identified as a vital coping resource

Table 2 Correlations between the 12 items of the FACIT-Sp items

Item	Pearson's correlation coefficient (P value)											
	1	2	3	4	5	6	7	8	9	10	11	12
1. I feel peaceful		0.42 (<0.001)	0.44 (<0.001)	-0.52 (<0.001)	0.52 (<0.001)	0.63 (<0.001)	0.68 (<0.001)	-0.43 (<0.001)	0.36 (<0.001)	0.35 (<0.001)	0.34 (<0.001)	0.51 (<0.001)
2. I have a reason for living			0.52 (<0.001)	-0.22 (0.002)	0.69 (<0.001)	0.40 (<0.001)	0.50 (<0.001)	-0.51 (<0.001)	0.32 (<0.001)	0.33 (<0.001)	0.40 (<0.001)	0.41 (<0.001)
3. My life has been productive				-0.27 (<0.001)	0.62 (<0.001)	0.43 (<0.001)	0.48 (<0.001)	-0.52 (<0.001)	0.30 (<0.001)	0.30 (<0.001)	0.32 (<0.001)	0.33 (<0.001)
4. I have trouble feeling peace of mind					-0.34 (<0.001)	-0.39 (<0.001)	-0.49 (<0.001)	0.41 (<0.001)	-0.14 (0.061)	-0.13 (0.078)	-0.15 (0.039)	-0.33
5. I feel a sense of purpose in my life						0.58 (<0.001)	0.62 (<0.001)	-0.58 (<0.001)	0.31 (<0.001)	0.30 (<0.001)	0.37 (<0.001)	0.46 (<0.001)
6. I am able to reach down deep into myself for comfort							0.84 (<0.001)	-0.30 (<0.001)	0.34 (<0.001)	0.34 (<0.001)	0.35 (<0.001)	0.55 (<0.001)
7. I feel a sense of harmony within myself								-0.38 (<0.001)	0.34 (<0.001)	0.34 (<0.001)	0.34 (<0.001)	0.59 (<0.001)
8. My life lacks meaning and purpose									-0.24 (0.001)	-0.23 (0.001)	-0.30 (<0.001)	-0.30 (<0.001)
9. I find comfort in my faith or spiritual beliefs										0.98 (<0.001)	0.85 (<0.001)	0.51 (<0.001)
10. I find strength in my faith or spiritual beliefs											0.84 (<0.001)	0.53 (<0.001)
11. My illness has strengthened my faith or spiritual beliefs												0.55 (<0.001)
12. I know that whatever happens with my illness, things will be okay												

Total n=192 with complete data. FACIT-Sp, Functional Assessment of Chronic Illness Therapy-Spiritual Well-Being Scale.

especially for those suffering from chronic or terminal diseases (30). Various measures have been developed to assess spirituality (31). The importance of investigating and understanding interventions with a spiritual focus in regards to healing is a growing body of literature (32). Measurement of spirituality and a more in-depth understanding of its components allows for the development of targeted and focused interventions and supportive care plans.

Psychedelic research is a burgeoning field that has begun to utilize the FACIT-Sp to track changes in spiritual QoL (25,26,33). Optimizing a deeper understanding of this measure would allow for a more effective assessment of the spiritual changes occurring through

psychedelic therapy. The delineation of the measure as a 3-factor structure also encourages interventions to focus separately on the development of meaning and peace as underlying mechanisms of spiritual wellbeing. Thus, with the knowledge of the 3-factor structure, psychedelic interventions can tailor preparatory and integration therapeutic sessions to bring out the elements of meaning, peace, and faith.

With the use of the 3-factor model of FACIT-Sp, clinicians can decipher which dimensions, specifically between meaning and peace, of spiritual QoL require strengthening and can provide care accordingly. For example, with a low scoring meaning factor, meaning-

Table 3 Exploratory factor analysis of the FACIT-Sp

Model requirement	Identified factors	Eigenvalues of the correlation matrix	Cumulative variance explained	Final communality estimate
No factor*	1 factor of 12 items	5.84	0.4867	8.90
2-factor	Factor 1: 1, 2, 3, 4, 5, 6, 7, 8, [12] Factor 2: 9, 10, 11, 12	1.95	0.6495	7.79
3-factor	Factor 1 (Faith): 9, 10, 11, [12] Factor 2 (Peace): 1, 4, 6, 7, 12 Factor 3 (Meaning): 2, 3, 5, 8	1.11	0.7420	8.90
4-factor*	Did not identify 4 factors	0.81	0.8095	8.90
Established 2-factor (Peterman <i>et al.</i> 2002)	Meaning/Peace: 1, 2, 3, 4, 5, 6, 7, 8 Faith: 9, 10, 11, 12	N/A	N/A	N/A
Established 3-factor (Canada <i>et al.</i> 2008)	Faith: 9, 10, 11, 12 Peace: 1, 4, 6, 7, [12] Meaning: 2, 3, 5, 8	N/A	N/A	N/A

Total n=192 with complete data. *, the no factor and 4-factor requirements each led to the same 3-factor loadings as the 3-factor model. [12] was item 12 of FACIT-Sp that loaded with overlap between two factors. FACIT-Sp, Functional Assessment of Chronic Illness Therapy-Spiritual Well-Being Scale; N/A, not available.

centered psychotherapy can be advised by palliative care specialists. Meaning-centered psychotherapy targets the loss of spiritual wellbeing, diminished sense of meaning in life and increased existential dread that is often associated with life-limiting illness diagnoses (34,35). If the peace factor is low scoring, palliative care specialists can suggest interventions that focus on strengthening reflection, introspection, resilience and trust (36,37). For patients that have a stronger spiritual connection, meditative practices have been found to be highly effective in creating a greater sense of peace over time (38). It is important to note that that these dimensions of spiritual QoL are not discrete constructs. Recommending interventions to target and strengthen one will often result in strengthening the other because they are related concepts that contribute to the experience of spiritual healing and coping.

In the original study, Peterman *et al.* (8) conducted EFA, with varimax rotation, which operates under the assumption that the factors are not correlated. Their report resulted in a 3-factor solution, in which the third factor consisted of the two negatively worded items. The commonality of phrasing, rather than the content of the items, seemed to be the reason for the separation of the third factor. These items were grouped together with the Meaning/Peace factor, ultimately supporting the 2-factor model of the

measure (8). When reverse-worded items were removed from the analyses in the study done by Canada *et al.* (27), the data supported the 3-factor model.

Our findings regarding the EFA and orthogonal and varimax rotation, resulted in three distinct factors (Table 3). The results demonstrate an acceptable internal consistency, with measure of Cronbach's alpha ($\alpha=0.78$). A high loading of an item indicates more commonality between the factors. Loadings above 0.71 are considered excellent, while loading below 0.32 are considered poor (27). In the present population, the highest reliability items were FACIT-Sp item 9 ('I find comfort in my faith or spiritual beliefs'), FACIT-Sp item 10 ('I find strength in my faith or spiritual beliefs'), and FACIT-Sp item 11 ('My illness has strengthened my faith or spiritual beliefs'), with loadings of 0.95, 0.95, and 0.89, respectively. While certain items had poor reliability for the factors they did not load, they were almost entirely excellent for the factor they loaded (Figure 1B).

The 3-factor model initially proposed by Canada *et al.* (27) was mostly retained by our results. The study conducted by Canada *et al.* (27) was administered strictly to women who were diagnosed with cervical cancer, breast cancer, Hodgkin's disease or non-Hodgkin's lymphoma. We were able to replicate these results amongst male (47%) and female (53%) patients who were involved with various

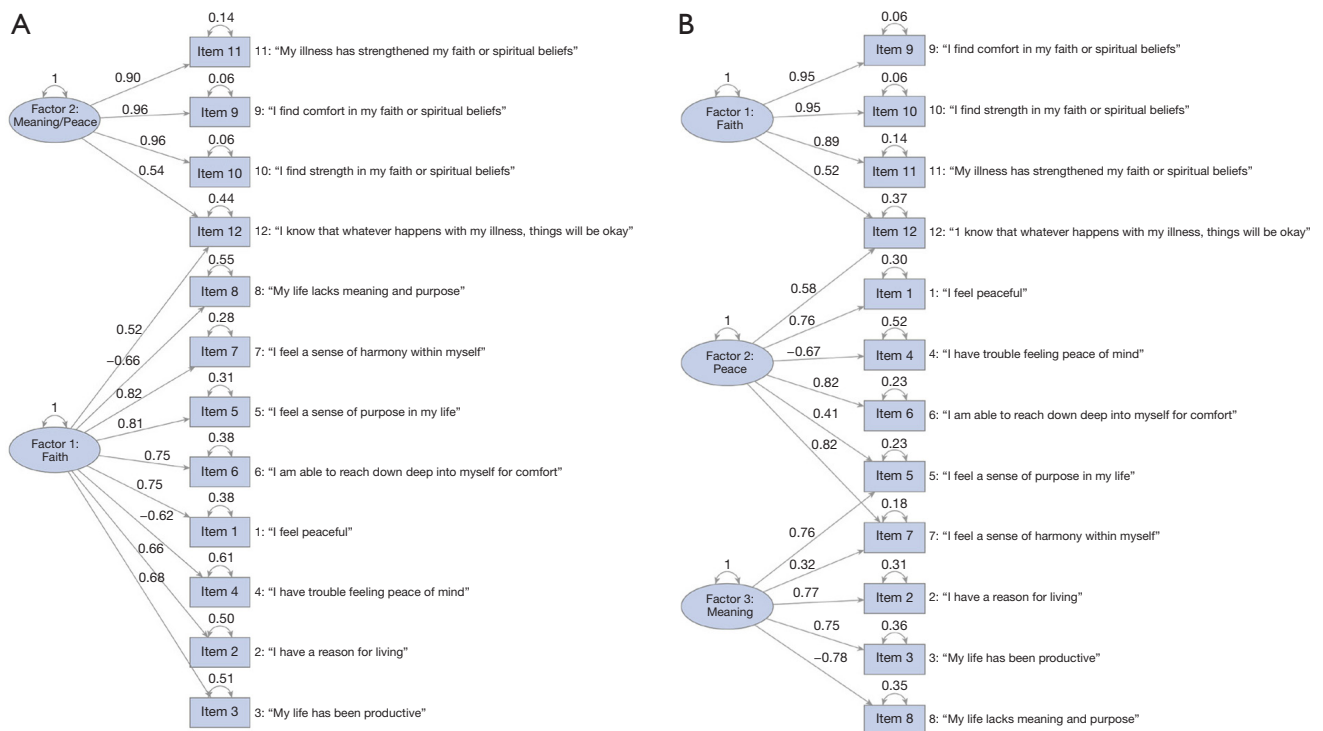


Figure 1 Path diagram of standardized coefficients from rotated factor patterns of the FACIT-Sp in a population of 200 patients with severe and/or life-limiting illnesses. All values were <0.40 for retention, except item 7 (0.32). The pattern of the relations between the factors and specific items from FACT-Sp are indicated by the straight arrows. They show the factor loadings and their corresponding links. The numbers on these straight arrows represent the strengths and directions of the correlations between factor and item from the factor analysis. The curved double-headed arrows represent factor or error variances for each variable from the models. (A) 2-factor model with 64.95% cumulative variance explained. (B) 3-factor model with 74.20% cumulative variance explained. FACIT-Sp, Functional Assessment of Chronic Illness Therapy-Spiritual Well-Being Scale.

clinical trials at the NIH for severe and/or life-limiting illnesses. Our findings, we believe, strengthens previous findings and lends continued support to a 3-factor structure of FACIT-Sp.

For both studies, the Meaning factor consisted of the same four items (items 2, 3, 5, 8). In the 3-factor model proposed by Canada *et al.* (27), the Peace factor consisted of four items (items 1, 4, 6, 7) as did the Faith factor (items 9, 10, 11, 12). In our results (Table 3; Figure 1A,1B), item 12 ('I know that whatever happens with my illness, things will be okay') overlapped between our Peace and Faith factors, however with better reliability with the Peace factor; thus, our Peace factor consisted of five items (items 1, 4, 6, 7, 12) and Faith factor consisted of three items (items 9, 10, 11). Canada *et al.* (27) also had found an overlap of item 12 with the Peace and Faith factors, but in their study, item 12 loaded more reliably with the Faith factor. Subsequent

factor analyses have confirmed this item loading pattern for each of the three dimensions (10,39). While our path diagram (Figure 1B) suggests an overlap between items 5 ('I feel a sense of purpose in my life') and 7 ('I feel a sense of harmony within myself'), their loadings were clearly superior for each of Meaning and Peace factors, respectively.

The only difference, albeit based on a difference of 0.06 standardized coefficients, in our item loadings compared to the established 3-factor structure proposed by Canada *et al.* (27) may be due to differences in our study populations. The similarities in our item loading compared to the established model can likely be explained the similarities in our study populations, as well. The participants in the report by Canada *et al.* (27) were female, long-term cancer survivors who were being assessed for the effects of cancer treatment on fertility. The women were between the ages

Table 4 Total and factor-specific results of the FACIT-Sp

FACIT-Sp	Mean ± SD	Median (IQR)	Range
Individual items			
1. I feel peaceful	2.5±1.1	3.0 (2.0–3.0)	0–4
2. I have a reason for living	3.5±0.8	4.0 (3.0–4.0)	0–4
3. My life has been productive	3.1±1.0	3.0 (2.0–4.0)	0–4
4. I have trouble feeling peace of mind	1.4±1.2	1.0 (0–2.0)	0–4
5. I feel a sense of purpose in my life	3.0±1.1	3.0 (2.0–4.0)	0–4
6. I am able to reach down deep into myself for comfort	2.6±1.1	3.0 (2.0–3.0)	0–4
7. I feel a sense of harmony within myself	2.6± 1.1	3.0 (2.0–3.5)	0–4
8. My life lacks meaning and purpose	0.6±1.0	0 (0–1.0)	0–4
9. I find comfort in my faith or spiritual beliefs	2.6±1.5	3.0 (1.0–4.0)	0–4
10. I find strength in my faith or spiritual beliefs	2.6±1.5	3.0 (1.0–4.0)	0–4
11. My illness has strengthened my faith or spiritual beliefs	2.3±1.6	3.0 (1.0–4.0)	0–4
12. I know that whatever happens with my illness, things will be okay	2.7±1.2	3.0 (2.0–4.0)	0–4
Factors			
Faith (items 9, 10, 11)	10.3±5.2	12.0 (5.0–15.0)	0–16
Peace (items 1, 4, 6, 7, 12)	10.3±3.7	11.0 (8.0–13.0)	0–16
Meaning (items 2, 3, 5, 8)	13.1±3.2	14.0 (11.0–16.0)	3–16
Total score	33.7±10.0	35.0 (27.0–42.0)	6–48

The possible range for each individual item was 0–4; for each factor, it was 0–16; for the total score, it was 0–48. FACIT-Sp, Functional Assessment of Chronic Illness Therapy–Spiritual Well-Being Scale; SD, standard deviation; IQR, inter-quartile range (25th–75th percentile).

of 14 and 40 years at the time of diagnosis. Our study population consisted of majority cancer patients, both male (53%) and female (47%), ranging from ages 18 to 89 years. Cancer diagnoses are often associated with an increased desire for religious and spiritual consolation (40). Use of the FACIT-Sp can illuminate which dimension of religious and spiritual consolation is relied on when suffering from distress due to illness. The distinction between Meaning and Peace as separate dimensions can be informative in this respect.

Our study strengths include the large sample of patients with severe and/or life-limiting medical illnesses, who completed the FACIT-Sp. While our study produced comparable results to the Canada *et al.*'s (27) study, our population lacked diversity relative to the general population. Therefore, our results are generalizable only to a similar population. The performance of the scale should be examined in more diverse patient populations, as well as healthy populations to confirm the factorial structure.

In addition, future research could build upon this work by utilizing this tool with the family members and/or caregivers of patients diagnosed with life-limiting illnesses to investigate the role of spirituality in coping within social support networks of patients. As with general FACIT-Sp limitations, it is based on self-reported data, moreover, the instrument does not encapsulate every central aspect of spirituality (e.g., forgiveness, generosity, love) (8), and lacks elements such as “connection” or “acceptance” which are central to spirituality. Acceptance may be an especially important factor in people with life-threatening illnesses and may be a focus of their spirituality (19,41).

In conclusion, our study confirmed the 3-factor structure of FACIT-Sp as previously observed. Our findings in a large sample of patients with severe and/or life-limiting illnesses closely identified the same 3-factor structure of Faith, Peace, and Meaning. Our data supports that 3-factors were a more informative fit than the 2-factor structure. Knowing this information can help inform potential interventions

focused on improving spiritual health and wellbeing.

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Footnote

Data Sharing Statement: Available at <https://apm.amegroups.com/article/view/10.21037/apm-22-692/dss>

Conflicts of Interest: All authors have completed the ICMJE uniform disclosure form (available at <https://apm.amegroups.com/article/view/10.21037/apm-22-692/coif>). AB serves as an unpaid editorial board member of *Annals of Palliative Medicine* from February 2022 to January 2024. The other authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. The study was conducted in accordance with the Declaration of Helsinki (as revised in 2013). This study was approved by the NIH Office of Human Subject Research Protection (OHSRP, No. 16CC0056). Participation was voluntary and written informed consent was waived by OHSRP owing to the deidentified nature of data collection.

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