

Original Article

Spiritual Well-being Among Palliative Care Patients With Different Religious Affiliations: A Multicenter Korean Study



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Abstract

Context. Spiritual well-being (SWB) is very important in palliative care patients.

Objectives. The aim of this study was to investigate the SWB among palliative care patients in Korea with different religious affiliations and to identify the correlates of SWB.

Methods. This study is a cross-sectional, multicenter study involving hospitalized patients seen by palliative care teams. We collected data on basic clinicodemographic characteristics, factors related to religion (meaningful religious events, religious activities such as attending worship, individual spiritual activities such as prayer), overall quality of life, and SWB. SWB was measured using Functional Assessment of Chronic Illness Therapy–Spirituality 12. We examined the differences in SWB among patients who reported themselves as Protestants, Catholics, Buddhists, and having no religious affiliations.

Results. Among the 202 patients enrolled, 69 (34.2%), 48 (23.8%), 43 (21.3%), and 42 (20.8%) persons were Protestants, were Catholics, were Buddhists, and had no religious affiliation, respectively. The Functional Assessment of Chronic Illness Therapy–Spirituality 12 was highest among Protestants, followed by Catholics, Buddhists, and those without religious affiliation (29.8 vs. 27.0 vs. 23.2 vs. 16.3, $P < 0.001$). The faith subscale (12.4 vs. 10.4 vs. 7.7 vs. 2.5, $P < 0.001$) showed similar distributions. Christians reported higher SWB in the meaning and the peace subscale than patients without a religious affiliation. In the multivariate analysis, religious affiliation ($P < 0.001$), individual spiritual activities ($P < 0.001$), and quality of life ($P < 0.001$) were significantly related to a greater SWB. Age was inversely associated with the meaning subscale ($P = 0.002$).

Conclusion. Although faith practices may be particularly helpful to improve spiritual well-being among Christians, further research is needed to determine what individual spiritual activities can support non-Christians. J Pain Symptom Manage 2018;56:893–901. © 2018 American Academy of Hospice and Palliative Medicine. Published by Elsevier Inc. All rights reserved.

Key Words

Spirituality, religiosity, palliative care, cancer

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Introduction

The World Health Organization has defined palliative care as an approach that improves the quality of life (QOL) of patients and their families facing life-threatening illness. The World Health Organization documented that palliative care should integrate the psychological and spiritual aspects of patient care.¹ Spiritual well-being (SWB) is closely related to the QOL of patients with advanced illnesses.² Poor SWB is also associated with hopelessness and a desire for hastening death, and this association is independent of depression.³ By contrast, high SWB is associated with less depression, less anxiety,^{4–6} and better self-reported physical health of patients.⁷

In an international conference, spirituality was defined as “the aspect of humanity that refers to the way individuals seek and express meaning and purpose and the way they experience their connectedness to the moment, to self, to others, to nature, and to the significant or sacred.”⁸ Religious factors are also an important aspect of spirituality.^{9,10} A previous study reported that dying patients without religious affiliations craved connectedness to transcendental existence.¹¹ Patients’ responses to pain or suffering may be heavily influenced by their religious and cultural background.^{12,13} Religiosity and the level of religious support available may also positively or negatively impact treatment decisions at the end of life.^{6,14,15}

Spiritual well-being and religious affiliation are closely related, but the relationship is highly complex. Individuals may be spiritual without being religious. However, there is a paucity of studies to examine how patients without religious affiliation (i.e., agnostics/atheists) perceive their spiritual well-being, particularly those with advanced illnesses. Moreover, few studies have examined how SWB differs among individuals with different religious affiliations. A previous study investigated the SWB of lung cancer patients using Functional Assessment of Chronic Illness Therapy–Spirituality 12 (FACIT-Sp 12). In this study, the scores of meaning/peace domain in SWB did not differ between those with and without a religion. However, scores in the faith domain of SWB were significantly higher in patients with a religious affiliation.¹⁶ In another study of patients with end-stage cancer or acquired immunodeficiency syndrome, higher religiosity was associated with higher SWB, although Jewish patients’ SWB was lower than that of patients with other religions.¹⁷ Similarly, Protestants showed the highest SWB and Jewish/atheist showed the lowest SWB in a study developing FACIT-Sp 12.¹⁸ However, all the aforementioned studies were conducted in predominately Christian countries.

South Korea is a multireligious country where Protestants, Catholics, and Buddhists are distributed

relatively evenly, and atheists/agnostics also constitute a sizable proportion.¹⁹ This distribution provides a unique opportunity to examine whether SWB differs among patients of different religions in South Korea, which may allow us to identify other opportunities to further improve the SWB for individuals of different religious affiliations as well as atheists/agnostics. Therefore, the aim of this study was to investigate the SWB among palliative care patients in Korea with different religious affiliations. Our secondary objective was to identify the correlates of SWB.

Methods

Subjects

This is a preplanned secondary analysis of a prospective study to examine SWB among Korean patients seen by the palliative care services in various hospitals. We previously investigated whether spirituality was related to survival in advanced cancer patients.²⁰ The participants included 204 advanced cancer inpatients admitted to seven palliative care units (PCUs) in South Korea from May 2015 until August 2016. Inclusion criteria included the following: 1) advanced cancer patients receiving palliative care; 2) adults aged over 18 years; 3) patients who voluntarily agreed to participate in the study; and 4) communicable ability as judged by investigators (i.e., capable of explicit and complex communication based on one item in the Communication Capacity Scale).²¹ Exclusion criteria included the following: 1) patients who did not agree to participate; 2) patients who were undergoing chemotherapy or radiotherapy; and 3) patients who were incommunicable due to disease progress or complications. Approval was obtained for the protocol of this study by the institutional review board of each institution.

Data Collection and Study Design

This study is a cross-sectional observational study. Investigators collected data through a combination of direct interview and self-report with patients. Direct interview was performed for variables related to religiosity and spirituality (religious affiliation, frequency of religious activities such as attending worship services, frequency of individual spiritual activities such as prayers/meditation/reading bible or scriptures by oneself, and meaningful religious events such as Baptism, receiving a Christian name, receiving the commandments of Buddhism, receiving a Buddhist name). The investigators also recorded age, gender, and the sites of primary cancer and performance status of each subject. SWB and QOL were assessed using self-administered questionnaires completed by the patients.

SWB was measured using FACIT-Sp 12, which was developed to measure the spiritual aspects of patients with chronic or life-threatening diseases. It has been widely used in various studies as well as the palliative care field. There are a total of 12 items. Each item is assessed according to a five-point Likert response scale from 0 to 4, where a higher score indicates better SWB.¹⁸ Cronbach's alpha of FACIT-Sp 12 was 0.801 in this study. We retrieved the Korean translation from the web site of the questionnaire developer. While the Korean version has not been psychometrically validated, it has been linguistically translated and used in several domestic studies.^{5,22} It is originally composed of two subscales: meaning/peace domain and faith domain. Eight items belong to meaning/peace domain while four items comprise faith domain. After development of FACIT-Sp 12, several articles have since been published describing the superiority of the three-factor model that separates the meaning/peace subscale into two four-item subscales—one for meaning and one for peace.^{23–25} Thus, we reported the three-factor approach in this study.

Overall, QOL was measured using the European Organization for Research and Treatment of Cancer Quality of Life Questionnaire Core 15 for Palliative Care (EORTC QLQ-C15-PAL).²⁶ It is a well-validated tool, and a shortened version of EORTC QLQ-C30 is available for palliative patients. A higher score indicates better overall QOL. We used the Korean validation version of EORTC QLQ-C15-PAL.²⁷ We used total points of EORTC QLQ-C15-PAL to represent QOL for analyses (range: 0–100).

The performance status of patients was assessed according to the Palliative Performance Scale (PPS). The PPS was adapted from the Karnofsky performance scale and was developed specifically to assess the performance status of palliative patients.²⁸

Statistical Analysis

We excluded two subjects from statistical analysis because they were affiliated with specific denominations of religion other than those examined in this study; however, they comprise a very small portion of the total number (2/204, 0.98%). A total of 202 subjects therefore underwent statistical analysis. One-way analysis of variance tests or chi-square tests were performed to investigate the differences in the basic characteristics according to religion (i.e., Protestants, Catholics, Buddhists, and no declared religion). The differences among the items of FACIT-Sp 12, the total score of FACIT-Sp 12, the meaning domain, the peace domain, the faith domain, and the religious characteristics according to religion were investigated by performing analysis of covariance tests after adjusting for performance status or chi-square tests. Independent t-tests or one-way analysis of variance tests were

used to investigate the differences of SWB according to the participation in meaningful religious events, the frequency of participation in religious activities (once a week vs. less than once a week), frequency of individual spiritual activities (everyday vs. less than everyday), gender, and PPS in subjects with religions. Pearson's correlation test was conducted to determine the relationship between SWB, age, and QOL. Multiple regression analyses were performed to determine the factors related to SWB. The total score of FACIT-Sp 12, the meaning domain, the peace domain, and the faith domain were considered as dependent variables. For the independent variables, we included the significant factors proven from univariate analyses. All statistical analyses were performed using the Statistical Package for Social Science (SPSS) for Windows version 22 (IBM, Armonk, NY). The significance level was set at $P < 0.05$ in univariate analyses, and the significance level with Bonferroni correction was set at $P < 0.0125$ in multivariate analyses.

Results

Table 1 shows the basic clinicodemographic characteristics of subjects. No significant differences were found among age, gender, site of primary cancer, PPS, and QOL according to religion. Median survival of the participants was 19.5 (95% CI: 23.5–30.6) days.

Subjects affiliated with a religion showed a significantly higher total score of FACIT-Sp 12 than subjects without a religious affiliation ($P < 0.001$). The total score of FACIT-Sp 12 for Christians (Protestants and Catholics) was significantly higher than that for Buddhists ($P < 0.001$). Christians showed a higher score in the meaning and peace domains compared to patients without a religious affiliation ($P = 0.025$ and $P = 0.009$, respectively). The faith domain score of Christians was significantly higher than that of Buddhists ($P < 0.001$). Subjects associated with a religion showed a significantly higher score in the faith domain than subjects not associated with a religion ($P < 0.001$, Table 2).

We analyzed the mean of each item in the meaning and peace domain of FACIT-Sp 12 according to religion. The means of Questions 2 (I have a reason for living), 5 (I feel a sense of purpose in my life), 6 (I am able to reach down deep into myself for comfort), and 7 (I feel a sense of harmony within myself) were significantly higher in subjects with religious affiliation compared to that of subjects without a religious affiliation ($P = 0.03, 0.04, 0.02, 0.002$, respectively). The means of all items in the faith domain were significantly lower in subjects without a religious affiliation compared to that of subjects with a religious affiliation ($P < 0.001$, Table 2).

Table 1
Basic Characteristics of Participants According to Religion (N = 202)

Characteristics	Protestants (n = 69)	Catholics (n = 48)	Buddhists (n = 43)	No Religion (n = 42)	PValue
Age (yrs)	62.32 ± 15.66	65.46 ± 10.67	67.72 ± 11.58	64.19 ± 11.81	0.186
Male	33 (47.8)	24 (50.0)	21 (48.8)	25 (59.5)	0.660
Site of primary cancer					
Lung	14 (20.3)	14 (29.2)	10 (23.3)	11 (26.2)	0.722
Stomach	10 (14.5)	4 (8.3)	8 (18.6)	4 (9.5)	0.436
Colon/rectal	15 (21.7)	10 (20.8)	7 (16.3)	9 (21.4)	0.906
Ovary/cervical	4 (5.8)	6 (12.5)	3 (7.0)	2 (4.8)	0.473
Liver/biliary tract	8 (11.6)	7 (14.6)	6 (14.0)	8 (19.0)	0.756
Pancreas	7 (10.1)	7 (14.6)	6 (14.0)	5 (11.9)	0.887
Esophagus	1 (1.4)	1 (2.1)	1 (2.3)	0 (0.0)	0.811
Head and neck	2 (2.9)	1 (2.1)	1 (2.3)	0 (0.0)	0.758
Kidney/bladder	1 (1.4)	1 (2.1)	2 (4.7)	0 (0.0)	0.470
Others	14 (20.3)	6 (12.5)	4 (9.3)	7 (16.7)	0.413
Palliative Performance Scale					0.130
≥60	38 (56.7)	26 (55.3)	15 (35.7)	22 (52.4)	
30–50	25 (37.3)	18 (38.3)	26 (61.9)	20 (47.6)	
10–20	4 (6.0)	3 (6.4)	1 (2.4)	0 (0.0)	
EORTC QLQ-C15 (range: 0–100)	55.56 ± 30.07	53.13 ± 30.10	52.71 ± 30.41	42.24 ± 23.36	0.333
Meaningful religious events (yes)	51 (76.1)	47 (97.9)	7 (6.7)	NA	<0.001
Frequency of religious activities (once a week)	50 (75.8)	33 (37.9)	4 (4.6)	NA	<0.001
Frequency of individual spiritual activities (everyday)	45 (68.2)	28 (60.9)	12 (37.5)	NA	0.014

EORTC QLQ-C15 = quality of life was measured by the European Organization for Research and Treatment of Cancer (EORTC) Quality of Life Questionnaire Core 15 for Palliative Care; NA = not applicable.

Data were expressed as mean ± SD or n (%). P-values were obtained by using the one-way ANOVA test or chi-square test.

Meaningful religious events: baptism, receiving Christian name, receiving the commandments of Buddhism, receiving Buddhist name. Religious activities include attending worship services and social activities in religious institutions. Individual spiritual activities include prayer, meditation, and reading the religious scriptures by oneself.

Table 3 shows the relationships of SWB to the various factors in subjects with a religious affiliation. Subjects who attended meaningful religious events showed a significantly higher total score of FACIT-Sp 12 ($P < 0.001$), score of meaning domain, peace

domain, and faith domain compared to subjects who did not attend such events ($P < 0.001$, $P = 0.047$, $P = 0.034$, and $P < 0.001$, respectively). Age had a significantly negative correlation with score of meaning domain and faith domain ($P = 0.029$ and

Table 2
Relationships Between Religion and SWB (N = 202)

Spiritual Well-Being	Protestants (n = 69)	Catholics (n = 48)	Buddhists (n = 43)	No Religion (n = 42)	PValue
FACIT-Sp 12					
Q1: I feel peaceful	2.70 ± 1.23	2.40 ± 1.36	2.37 ± 1.33	2.14 ± 1.20	0.092
Q2: I have a reason for living	2.59 ± 1.31 ^a	2.43 ± 1.26 ^a	2.33 ± 1.43 ^a	1.81 ± 1.04 ^b	0.030
Q3: My life has been productive	2.64 ± 1.14	2.57 ± 1.21	2.42 ± 1.35	2.02 ± 1.20	0.073
Q4: I have trouble feeling peace of mind	1.22 ± 1.51	1.38 ± 1.28	1.35 ± 1.33	1.48 ± 1.35	0.660
Q5: I feel a sense of purpose in my life	2.54 ± 1.25 ^a	2.42 ± 1.29 ^a	2.14 ± 1.41 ^a	1.88 ± 1.21 ^b	0.041
Q6: I am able to reach down deep into myself for comfort	2.27 ± 1.36 ^a	2.13 ± 1.27 ^{a,b}	1.95 ± 1.43 ^{a,b}	1.64 ± 1.36 ^b	0.020
Q7: I feel a sense of harmony within myself	2.28 ± 1.37 ^a	2.17 ± 1.16 ^{a,b}	1.90 ± 1.43 ^{a,b,c}	1.40 ± 1.11 ^c	0.002
Q8: My life lacks meaning and purpose	1.20 ± 1.43	1.17 ± 1.21	1.05 ± 1.27	1.43 ± 1.29	0.680
Q9: I find comfort in my faith or spiritual beliefs	3.25 ± 1.14 ^a	2.69 ± 1.32 ^b	1.88 ± 1.40 ^c	0.43 ± 0.89 ^d	<0.001
Q10: I find strength in my faith or spiritual beliefs	3.16 ± 1.24 ^a	2.65 ± 1.44 ^b	1.95 ± 1.51 ^c	0.26 ± 0.70 ^d	<0.001
Q11: My illness has strengthened my faith or spiritual beliefs	2.93 ± 1.34 ^a	2.48 ± 1.54 ^b	1.63 ± 1.45 ^c	0.19 ± 0.46 ^d	<0.001
Q12: I know that whatever happens with my illness, things will be okay	3.03 ± 1.30 ^a	2.60 ± 1.25 ^{a,b}	2.23 ± 1.45 ^b	1.60 ± 1.42 ^c	<0.001
SWB	29.82 ± 8.16 ^a	27.04 ± 8.73 ^b	23.19 ± 9.22 ^c	16.29 ± 5.43 ^d	<0.001
Meaning	8.89 ± 3.01 ^a	8.56 ± 3.17 ^a	8.02 ± 3.44 ^{a,b}	7.14 ± 2.47 ^b	0.025
Peace	8.40 ± 3.00 ^a	8.11 ± 3.04 ^a	7.55 ± 3.22 ^{a,b}	6.67 ± 2.83 ^b	0.009
Faith	12.35 ± 4.32 ^a	10.42 ± 4.92 ^b	7.70 ± 4.82 ^c	2.48 ± 2.35 ^d	<0.001

SWB = spiritual well-being was measured by total score of FACIT-Sp 12; FACIT-Sp 12 = Functional Assessment of Chronic Illness Therapy–Spirituality 12; Meaning = sum of Q2, Q3, Q5, and Q8; Peace = sum of Q1, Q4, Q6, and Q7; Faith = sum of Q9 through Q12.

Data were expressed as mean ± SD or n (%). P-values were obtained by using the analysis of covariance test after adjusting for performance status. The different superscripts ^{a,b,c,d} refer to significantly different groups.

Table 3
Relationships Among Religious/Basic Characteristics and SWB in Subjects With Religious Affiliations ($N = 160$)

Characteristics	SWB		Meaning		Peace		Faith	
	Mean $\pm$ SD or Correlation Coefficient	PValue	Mean $\pm$ SD or Correlation Coefficient	PValue	Mean $\pm$ SD or Correlation Coefficient	PValue	Mean $\pm$ SD or Correlation Coefficient	PValue
Meaningful religious events								
Yes ($n = 105$)	29.14 $\pm$ 8.06	<0.001	9.00 $\pm$ 2.83	0.047	8.55 $\pm$ 2.77	0.034	11.59 $\pm$ 4.70	<0.001
No ($n = 52$)	23.58 $\pm$ 9.56		7.82 $\pm$ 3.61		7.34 $\pm$ 3.45		8.44 $\pm$ 4.97	
Frequency of religious activities								
Once a week ($n = 87$)	29.57 $\pm$ 8.39	0.001	8.94 $\pm$ 3.07	0.074	8.27 $\pm$ 2.98	0.842	12.23 $\pm$ 4.27	<0.001
Less than once a week ($n = 61$)	24.52 $\pm$ 9.10		7.95 $\pm$ 3.42		8.17 $\pm$ 3.18		8.49 $\pm$ 4.89	
Frequency of individual spiritual activities								
Everyday ($n = 85$)	30.57 $\pm$ 7.64	<0.001	8.99 $\pm$ 2.78	0.128	8.92 $\pm$ 2.78	0.002	12.63 $\pm$ 3.78	<0.001
Less than everyday ($n = 59$)	24.56 $\pm$ 8.77		8.14 $\pm$ 3.41		7.21 $\pm$ 3.28		9.21 $\pm$ 4.84	
Gender								
Male ($n = 78$)	26.50 $\pm$ 9.44	0.344	8.57 $\pm$ 3.15	0.969	7.87 $\pm$ 3.20	0.392	10.09 $\pm$ 5.28	0.288
Female ($n = 82$)	27.85 $\pm$ 8.54		8.55 $\pm$ 3.23		8.30 $\pm$ 2.95		10.93 $\pm$ 4.69	
Palliative Performance Scale								
≥ 60 ($n = 79$)	29.28 $\pm$ 8.00 ^a	0.003	8.82 $\pm$ 3.14	0.412	8.87 $\pm$ 2.75 ^b	<0.001	11.62 $\pm$ 4.53 ^a	0.013
30–50 ($n = 69$)	24.79 $\pm$ 9.26 ^b		8.26 $\pm$ 3.33		7.04 $\pm$ 3.11 ^c		9.34 $\pm$ 5.22 ^b	
10–20 ($n = 8$)	31.88 $\pm$ 8.24 ^{a,b}		9.50 $\pm$ 3.34		10.25 $\pm$ 2.43 ^{a,b}		12.13 $\pm$ 3.83 ^{a,b}	
Age	–0.123	0.122	–0.177	0.029	0.081	0.313	–0.156	0.049
EORTC QLQ-C15	0.357	<0.001	0.182	0.025	0.473	<0.001	0.246	0.002

SWB = spiritual well-being was measured according to a total score of FACIT-Sp 12; EORTC QLQ-C15 = quality of life was measured by EORTC Quality of Life Questionnaire Core 15 for Palliative Care.

P-values were obtained by independent-samples t-test, one-way ANOVA test, or Pearson's correlation test. The different superscripts ^{a,b} mean significantly different groups according to Scheffe's post hoc test.

Meaningful religious events: baptism, receiving Christian name, receiving the commandments of Buddhism, receiving Buddhist name. Religious activities include attending worship services and social activities in religious institutions. Individual spiritual activities include prayer, meditation, and reading religious scriptures by oneself.

$P = 0.049$, respectively). QOL had a significantly positive correlation with the total score of FACIT-Sp 12, score of meaning domain, peace domain, and faith domain ($P < 0.001$, $P = 0.025$, $P < 0.001$, and $P = 0.002$, respectively).

The results of multivariate analysis are shown in Table 4. Frequency of individual spiritual activities ($\beta = 0.261$, $P < 0.001$), overall QOL ($\beta = 0.295$, $P < 0.001$), and having a religious affiliation ($\beta = 0.406$ and $P < 0.001$, $\beta = 0.263$ and $P = 0.003$, and $\beta = 0.208$ and $P = 0.003$, for Protestantism, Catholicism, and Buddhism, respectively) are significantly associated with the total score of FACIT-Sp 12. In addition, the relationships between these variables and SWB were proportionate. The score for meaning domain and peace domain was not related to religious affiliation. As age increased, the score for the meaning domain reduced ($\beta = -0.227$, $P = 0.002$). The score for the faith domain was positively associated with frequency of individual spiritual activities ($\beta = 0.287$, $P < 0.001$), QOL ($\beta = 0.151$, $P = 0.004$), and having a religious affiliation ($\beta = 0.518$ and $P < 0.001$, $\beta = 0.346$ and $P < 0.001$, and $\beta = 0.293$ and $P < 0.001$ for Protestantism, Catholicism, and Buddhism, respectively). The adjusted R^2 of the model for the total scores of FACIT-Sp 12, the meaning domain, the peace domain, and the faith domain were 0.453, 0.099, 0.281, and 0.547, respectively.

Discussion

Our study findings reveal that SWB was significantly higher in patients with a religious affiliation compared to those with no religious affiliation. In addition, these differences were more apparent in the faith domain than in the meaning and peace domain. Other significant factors related to SWB were the frequency of individual spiritual activities, overall QOL, and age. We found that SWB measured by FACIT-Sp 12 was positively associated with individual spiritual activities and overall QOL. On the contrary, score of the meaning domain was inversely related to age.

In this study, patients with a religious affiliation showed higher SWB than those without a religious affiliation. Advanced cancer inpatients of Korean ethnicity who were admitted to PCUs showed approximately equal numbers for the three religions and having no religion. Therefore, our study population is well suited for an investigation of the association of religious affiliation with SWB. The difference can be explained as follows. First, the faith domain of FACIT-Sp 12 includes religious contents; thus, having religious affiliations may increase the total FACIT-Sp scores through the domain. This finding is consistent with that in previous studies.^{5,16} The meaning and peace domain was developed to assess spirituality rather than religiosity, as derived from its use in the original study.¹⁸ Religious subjects were able to find comfort and strength in their faith, as suggested by the items of the faith domain.

Table 4
Multivariate Analysis of Factors Related to Spiritual Well-being in Total Subjects (N = 202)

Outcome	Predictors	β	t-Value	P-Value
SWB	Frequency of individual spiritual activities	0.261	3.748	<0.001
	Frequency of religious activities	0.077	1.019	0.309
	Age	-0.128	-2.297	0.023
	PPS	0.048	0.878	0.381
	EORTC QLQ-C15	0.295	5.145	<0.001
	Religion (ref: none)			
	Protestantism	0.406	4.247	<0.001
	Catholicism	0.263	3.039	0.003
	Buddhism	0.208	3.006	0.003
Meaning	Frequency of individual spiritual activities	0.059	0.651	0.516
	Frequency of religious activities	0.085	0.857	0.393
	Age	-0.227	-3.121	0.002
	PPS	-0.027	-0.380	0.704
	EORTC QLQ-C15	0.214	2.871	0.005
	Religion (ref: none)			
	Protestantism	0.139	1.128	0.261
	Catholicism	0.088	0.789	0.431
	Buddhism	0.084	0.936	0.351
Peace	Frequency of individual spiritual activities	0.227	2.834	0.005
	Frequency of religious activities	-0.094	-1.069	0.287
	Age	0.014	0.209	0.834
	PPS	0.049	0.785	0.434
	EORTC QLQ-C15	0.437	6.575	<0.001
	Religion (ref: none)			
	Protestantism	0.135	1.218	0.225
	Catholicism	0.080	0.806	0.421
	Buddhism	0.028	0.354	0.724
Faith	Frequency of individual spiritual activities	0.287	4.583	<0.001
	Frequency of religious activities	0.131	1.909	0.058
	Age	-0.105	-2.075	0.039
	PPS	0.070	1.410	0.160
	EORTC QLQ-C15	0.151	2.898	0.004
	Religion (ref: none)			
	Protestantism	0.518	5.962	<0.001
	Catholicism	0.346	4.406	<0.001
	Buddhism	0.293	4.658	<0.001

SWB = spiritual well-being was measured according to the total score of the Functional Assessment of Chronic Illness Therapy–Spirituality 12; PPS = Palliative Performance Scale; EORTC QLQ-C15 = quality of life was measured by EORTC Quality of Life Questionnaire Core 15 for Palliative Care.

P-values were obtained using multiple regression analysis (enter method). The adjusted R^2 of the model for the SWB, the meaning domain, the peace domain, and the faith domain was 0.453, 0.099, 0.281, and 0.547, respectively.

Religious activities include attending worship services and social activities in religious institutions. Individual spiritual activities include prayer, meditation, and reading religious scriptures by oneself.

Second, having a religious affiliation would increase a subject's participation in individual spiritual activities and would thus enhance SWB. Individual spiritual activities included prayer, meditation, and reading bibles or scriptures. These activities can be easily applicable to the activities of inpatients. We believe having a religious affiliation is not the only important factor because spiritual support from a multidisciplinary team would also be important.^{14,15} This component was not included in our investigation, rendering the need for additional studies.

Our study further highlights the subtle differences in how patients of different religions viewed their SWB as assessed by FACIT-Sp 12. Protestants had higher scores in the meaning and peace domain than Buddhists, especially in items representing their reason for living, purpose in life, and a sense of harmony. In addition, Christians had higher scores in the faith domains than Buddhists. We therefore suggest that,

rather than directly comparing the SWB of subjects of different faiths, future studies should compare how the subjects of the different faiths perceived the items of FACIT-Sp 12 differently. Each religion has a unique doctrine, with a specific pathway to spiritual enlightenment and means of coping with suffering. Unfortunately, scant publications have been presented on SWB according to the three religions in advanced cancer patients. Two studies have shown that SWB was lower in Jewish subjects than in subjects of other religions.^{17,18} Another study reported that Catholics expressed spiritual pain to be related to internal conflict such as regret or hopelessness rather than to sacred matters. In that study, the expression of spiritual pain differed according to the religion.²⁹ Korean Buddhism emphasizes Buddhahood is attained by showing mercy.³⁰

Furthermore, Korean culture and society are heavily influenced by Confucianism, in which ancestors are

worshipped.³⁰ Since FACIT-Sp 12 was developed in the USA (which has a 75% Christian demographic), the items are likely to be skewed toward Christian-based values. Therefore, the characteristics aforementioned pertinent to Koreans are not included in FACIT-Sp 12 and even in expanded version of FACIT-Sp³¹; this might be a barrier to reflecting the actual SWB of Buddhists and patients with no religious affiliation in our study. This may partly explain our observation that Buddhists and patients without a religious affiliation showed very low scores in items within the faith domain (comfort in faith, strength in faith, and faith strengthened by illness). It is important to understand how we should approach different religious groups to enhance SWB at the end of life. An assessment tool for SWB needs to be developed, which is adapted for Korean culture, whereby new items reflect the characteristics of Buddhism and Confucianism.

Even after adjusting for differences in religious affiliations, we identified several key variables that might impact SWB. Subjects who attended meaningful religious events showed a significantly higher SWB compared to those of subjects who did not attend such events. Examples of meaningful religious events were all primarily events such as baptism. We assume attending meaningful religious events may relate to depth of belief in religious affiliation; however, depth of belief in religious affiliation could be associated with SWB, and vice versa.

Individual spiritual activities such as reading bibles/meditation/prayer were significantly related to SWB in terms of total score, peace domain, and faith domains. On the contrary, no significant relationships were found between religious activities such as attending worship and SWB in multivariate analyses. Religious activities can be regarded as extrinsic religiosity, while individual spiritual activities can be interpreted as intrinsic religiosity.³² Our study findings are consistent with a previous study which showed that only intrinsic religiosity related to hope and positive mood.³² Possible explanations behind this phenomenon are as follows. Patients may desire improvement of disease or relief from symptoms through their individual spiritual activities. Alternatively, they could be comforted by considering historical characters in religion who had more severe pain than themselves. Individual spiritual activities of advanced cancer patients may be closely related to gaining inner peace and strength. In addition, these activities could help them to realize the meaning of their lives by enabling them to benefit from quiet time for themselves. According to the preceding studies, individual spiritual activities such as prayer or meditation influenced the QOL of inpatients more than being visited by pastors in hospitals.³³ This suggests that individual spiritual activities can

enhance SWB. However, another study reported that the frequency of prayer by an individual patient was related to higher depression scores.³⁴ Further research in this area would benefit from investigating the aims and contents of individual spiritual activities in detail. Various methods have previously been proven to help patients to look back on their lives to find meaning, such as dignity therapy and short-term life review.^{35,36} We suggest that priests in hospitals assist each patient by combining these programs and enhancing individual spiritual activities to meet an individual's spiritual needs. The significant relationship found between SWB and individual spiritual activities but not between SWB and religious activities could also be a byproduct of the fact that patients who were doing poorer physically were able to engage in individual spiritual activities but not religious activities.

In our study, QOL was significantly related to SWB after adjustment for various factors (individual spiritual activity, religious activity, age, performance status, and having religious affiliation). This finding accords with many preceding studies.² However, age was negatively related to score for the meaning domain in this study, and this was not found in other studies.^{5,37} Most family members who are responsible for older patients also take care of their elderly parents in Korea. In Korea, caring for the older members of one's family is considered a filial duty and one of the essential virtues.³⁸ Elderly patients might have a low SWB especially in aspect of meaning and purpose in life as they consider themselves to be a burden to their children. Unfortunately, data on these factors were unavailable, indicating a need for future research in this area.

This study has some limitations. 1) While this is a multicenter study, all subjects were inpatients of PCUs in South Korea and our results cannot be confidently applied to other countries. However, a study showed that FACIT-Sp 12 was useful to assess spirituality in Japanese cancer patients, although more than half of the subjects were not religious.³⁹ Thus, we believe that FACIT-Sp 12 is valid in Asian populations. 2) In the statistical models in the present study, the power of explanation of the total score for FACIT-Sp 12 was 44.1% and that for faith domains was 54.1%. However, the power of explanation for meaning and peace was as low as 9.9% and 20.4%, respectively. Thus, further investigations need to include other variables related to meaning and peace, especially in patients without a religious affiliation. 3) We were unable to determine whether the smallest magnitude of difference in FACIT-Sp 12 is associated to a clinically significant effect. In the previous article suggesting minimally important difference (MID) in FACIT scales, general MID guideline for cancer-specific

FACIT subscales is 0.3 to 0.4 points per items.⁴⁰ Thus, we can set MID for each subscales of FACIT-Sp 12 as 1.2 to 1.6 points. We can confirm that statistically significant differences of subscales of FACIT-Sp 12 among different religious affiliations are also significant in the aspect of MID. We assume that religion may affect clinical outcomes through SWB or QOL, according to our analysis. Further longitudinal research on a larger scale is needed. 4) A formal psychometric validation of FACIT-Sp 12 in Korean was not performed. However, we observed concordant validity of FACIT-Sp 12 with EORTC QLQ-PAL-C15 and it also showed discrimination between patients with a religious affiliation and without a religious affiliation. Further studies are needed to officially validate the use of FACIT-Sp 12 in Korean populations. 5) We grouped the subjects only by religious affiliation. However, there is often more within-group variability than across group by cultural variables.⁴¹ We did not investigate any cultural characteristics of the subjects. Further studies are needed to compare SWB among groups divided by both religious and cultural variables.

This study found that overall FACIT-Sp 12 and faith subscale, but not peace and meaning subscales, were lower among Buddhists and patients without a religious affiliation. This study does not suggest that palliative care patients without religious affiliation should start to find faith; instead, it underscores how we need to better assess and support the spiritual needs of non-Christians. In the era of personalized medicine, clinicians need to tailor their recommendations based on individual preferences. Although faith practices may be particularly helpful to improve spiritual well-being among Christians, further research is needed to determine what individual spiritual activities can support non-Christians. The interdisciplinary palliative care team should also pay particular attention to elderly patients because they may be at risk of low SWB.

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