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ORIGINAL ARTICLE

Improving spiritual well-being among cancer patients: implications for clinical care

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Abstract

Purpose This study aimed to explore the associated factors of spiritual well-being among cancer patients and the relationship between spiritual well-being (SWB) and quality of life (QOL).

Methods This cross-sectional study was conducted in 200 Chinese cancer patients in a tertiary cancer hospital. Functional Assessment of Cancer Therapy-General (FACT-G) and the Functional Assessment of Chronic Illness Therapy-Spiritual Well-being (FACIT-Sp) were used to measure SWB and QOL levels of participants. Multiple regression analyses were performed to determine the relationship between SWB and QOL.

Results The mean score of QOL was 59.8 (SD 13.1) with a range of 27–106. The mean score of SWB was 24.4 (SD 6.5), with a range of 8–48. Hospitalization frequency was the only variable associated with SWB. In terms of the relationship between SWB and QOL, the meaning and peace subscales were significantly related to overall QOL. It was also observed that the meaning subscale was positively related to social/family well-being, emotional well-being, and functional well-being. The peace subscale was related to the physical well-being, social/family well-being, and functional well-being. Faith was negatively related to physical and emotional well-being, but it had a positive effect on functional well-being.

Conclusions Given that the meaning and peace subscales are related to a higher QOL level, it is important to find ways to improve these dimensions of spiritual well-being among cancer inpatients during treatment.

Keywords Oncology · Spirituality · Well-being · Spiritual care · Quality of life

Introduction

World Health Organization has indicated that spiritual well-being (SWB) is listed as an important element of health [1]. For cancer patients, it plays an ever-increasing role for patients before diagnosis and within 10 years after diagnosis [2]. As one element for the health of individuals, spirituality can be seen as a universal trait by which individuals look for hope and meaning in their life [3]. Spirituality has been conceptualized as a framework which can be divided into various components: meaning, peace, and faith [4]. Meaning and peace are mainly used to measure the cognitive and affective dimensions of spirituality. Faith is used to measure the relationship of illness with one's belief and spiritual belief [4]. Three dimensions have different roles during the course of treatment of cancer patients [5].

After being diagnosed with cancer, the cancer patients often show physical, psychological, social, and spiritual changes that may be related to anxiety, depression, and meaningless, and they even have suicide attempts [6]. Existing studies have confirmed that spirituality is an important strength and coping resource for cancer patients with adjustment to their disease [5, 7, 8]. The patients who are religious usually pray to God to find a connection with the Supreme Soul, so as to get comfort and strengthen the willing of actively seeking treatment [9]. For non-religious patients, it's equally important to seek evidence that spirituality in general is related to secular concepts such as humanism and existentialism [10, 11]. It has been reported that cancer patients with higher SWB level have

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greater satisfaction with their decision-making and less decisional conflict [12] and experience less decisional regret [13]. Additionally, better SWB is related to lower levels of anxiety and depression [7, 14, 15]. It also serves a protective role against feeling isolated, resulting in better psychological well-being [16, 17]. Further, SWB is an important factor that may influence different aspects of health-related quality of life (QOL) in patients. A study has proved that spirituality is positively associated with the functional dimension of QOL [18]. Better emotional and cognitive functions are also reported in patients with better SWB [14]. Another study also reports that meaning and peace are positively related with overall QOL and physical and mental health [19]. Based on these results, it's important to assess the spiritual dimension of cancer patients.

However, addressing spiritual issues has not been a priority among nurses who carry out cancer treatment [20], which may be due to their confusion related to spirituality and religiosity. While the majority of studies have been conducted in medical institutions in a religious society [16, 21], the present study was conducted in the context where formal religion is not developed.

Given shifting trends of medical model in China, SWB has attracted more and more attention from health care providers and researchers. There is an increasing recognition among oncology providers to improve the SWB of cancer patients. A better understanding of the effect of patients' SWB on health-related QOL may help tailor the use of spiritual interventions, but little is known about SWB among patients who are spiritual but not religious. The present study was conducted to explore the effect of SWB in cancer patients and analyze the relationship between SWB and QOL.

Methods

Design

This study was a cross-sectional investigation of SWB of cancer patients receiving inpatient care in a culture where religion is not a priority.

Participants and setting

Participants were recruited from all types of cancer patients who were admitted to a tertiary cancer hospital for treatments (surgery and/or chemotherapy and/or radiotherapy and/or hormonotherapy and/or Chinese traditional treatment, etc.) through convenience sampling. The tertiary cancer hospital is a provincial cancer center that treats cancer patients from all over the province, including both rural and urban areas. Data were collected between March and April 2017. Cancer patients who met the following criteria were asked to participate in the study: (1) age ≥ 18 years with competent language communication ability, (2) mentally stable, (3) informed of his/her disease.

Measures

General information questionnaire

Information such as participants' demographics (year of schooling, self-perceived religiosity, marital status, residence area, and household monthly income) and clinical characteristics (disease stage, time since confirmed diagnosis, hospitalization frequency, whether having comorbidities) was collected.

Functional Assessment of Cancer Therapy-General

Functional Assessment of Cancer Therapy-General (FACT-G) is a self-reported scale used to measure QOL of participants. It has four subscales which can measure one's physical well-being, emotional well-being, social/family well-being, and functional well-being. All items were scored on a 5-point scale from 0 (not at all) to 4 (very much). The range of the total score was 0–108. Higher scores indicated better well-being. The FACT-G demonstrated good internal consistency in Chinese population ($\alpha = .884$, .867, .821, and .835 for each subscale) [22].

Functional Assessment of Chronic Illness Therapy-Spiritual Well-being

Spiritual well-being was assessed by Functional Assessment of Chronic Illness Therapy-Spiritual Well-being (FACIT-Sp), which is a 12-item scale widely used in cancer patients. The scale was developed to measure important aspects of spirituality, such as a sense of meaning in one's life, harmony, peacefulness, and a sense of strength and comfort from one's faith. It is divided into three dimensions such as faith, meaning, and peace. All items have the following response options: "not at all," "a little bit," "somewhat," "quite a bit," and "very much." The score ranges from 0 to 4. The total score is the sum of scores of subscales, which ranges from 0 to 48, with a higher score signifying greater SWB [4, 23]. The Chinese version of scale has showed sound psychometric properties ($\alpha = .831$ for total scale and .711~.920 for each dimension) [24].

Data collection

All paper questionnaires were delivered by two trained investigators. All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and 1964

Helsinki Declaration and its later amendments or comparable ethical standards. A total of 200 participants were recruited in this study after informed consent, and it took 15–20 min for them to complete the questionnaires without interruption from the other, so as to ensure the accuracy of the information.

Data analysis

All data were inputted to the computer and analyzed in SPSS Statistics software Version 19.0. The sociodemographic and medical characteristics of cancer patients were described as frequencies and percentages. Their SWB and QOL scores were also computed. Multiple linear regression analysis was performed to determine the relationships between three different types (meaning, peace, and faith) of SWB and QOL (physical well-being, emotional well-being, social/family well-being, functional well-being) in the regression model. Different dimensions of QOL were set as dependent variables; meanwhile, the demographic and clinical characteristics and different dimensions of spirituality were set as independent variables. A p value of $< .05$ was considered statistically significant.

Results

Sociodemographic and medical characteristics

A total of 200 cancer patients were recruited into the investigation, of whom 185 filled out the questionnaires. Sociodemographic and medical characteristics are presented in Table 1. As demonstrated in Table 1, there are more female patients than male patients. The average age of patients was 48.94 years. Most of the patients (69.7%) had less than 9 years of schooling. The majority of the patients were non-religious. Other details are shown in Table 1.

Table 1 Sociodemographic and medical characteristics

Variables	*n* (%)
Sociodemographic variables	
Gender	
Male	87 (47.0)
Female	98 (53.0)
Age	
18~40	53 (28.6)
40~65	106 (57.3)
≥ 65	26 (14.1)
Years of schooling	
≤ 9 years	129 (69.7)
> 9 years	56 (30.3)
Self-perceived religiosity	
Not religious	145 (78.4)
Religious	40 (21.6)
Marital status	
Not married	21 (11.4)
Married/cohabitation	160 (86.5)
Divorced/widow	4 (2.2)
Residence area	
Urban	66 (35.7)
Rural	119 (64.3)
Household monthly income	
< 1000 Yuan/month	40 (21.6)
1001–2000 Yuan/month	53 (28.6)
2001–3000 Yuan/month	41 (22.2)
3001–4000 Yuan/month	32 (17.3)
> 4001 Yuan/month	19 (10.3)
Medical variables	
Disease stage	
Stage I	22 (11.9)
Stage II	84 (45.4)
Stage III	70 (37.8)
Stage IV	9 (4.9)
Time since confirmed diagnosis	
≤ 6 months	141 (76.2)
6 months~1 year	28 (15.1)
≥ 1 year	16 (8.6)
Hospitalization frequency	
1	62 (33.5)
2~5	87 (47.0)
> 5	36 (19.5)
Whether receiving chemotherapy	
No	77 (41.6)
Yes	108 (58.4)

Spiritual well-being and quality of life in the participants

The mean scores of SWB and QOL are presented in Table 2.

Associated factors of spiritual well-being of cancer patients

Multiple linear regressions were analyzed to explore the associated factors of SWB. Hospitalization frequency (B ($95\%CI$) = 1.791 (.503–3.080), $\beta = .199$, $p = .007$) was the only variable related to SWB, which explained 3.9% of the total variation. The result of F-test ($F = 7.522$, $df = 1$, $p = .007$) indicated that the multiple linear regression equation fitted the data well.

The relationship between spiritual well-being and quality of life

Multiple linear regressions were performed with the total score and the each dimension (physical well-being, emotional well-being, social/family well-being, functional well-being) of QOL as dependent variables. Five stepwise linear regression equations were computed, all of which fitted the data well. Table 3 demonstrated the results of multiple linear regression analysis. The results demonstrated that meaning and peace were significantly related to QOL as a whole. Meaning was positively related to social/family, emotional, and functional well-being. Faith was negatively related to physical and emotional well-being, but it was positively related to

Table 2 Mean scores of spiritual well-being and quality of life

Variables	Mean ± SD	Range
Spiritual well-being	24.4 ± 6.5	8–48
Meaning	8.4 ± 2.7	2–16
Peace	8.0 ± 2.4	2–16
Faith	8.0 ± 3.4	0–16
Quality of life	59.8 ± 13.1	27–106
Physical well-being	16.3 ± 4.6	4–28
Emotional well-being	13.6 ± 4.1	1–24
Social/family well-being	15.8 ± 5.5	0–28
Functional well-being	14.3 ± 5.3	0–28

functional well-being. Peace was positively related to physical, social/family, and functional well-being.

Discussion

It was demonstrated that the total score of SWB in the participants in this study was lower than that in another study which also explored spirituality in patients with all types and stages of cancer during various treatments [14], which indicated that due attention should be paid to SWB in cancer patients. The possible reasons may be that SWB does not evoke much attention in such a secular society and it is more likely to be neglected by health care providers. Secondly, spiritual care has not been implemented to cancer patients due to various reasons, although spiritual care has been recommended as essential elements of care. This may also be related to a lower SWB level. Thirdly, the existing study has implied that the SWB level may be lower among populations who are not highly religious [25]. All these above reasons contribute to a lower SWB level in this sample.

In China, the majority of people do not adhere to any religion, and they are also different from patients who are not religious in other counties, because the Chinese population is influenced by Chinese traditional culture such as Confucianism, Taoism, and Buddhism, which advocate establishing good moral character, acting morally, and getting rid of all greed, anger, and delusion. In this culture, Chinese people attempt to discover the true meaning of life, find self-worth in the world, and even explore the essence of being human. The highest level of spirituality is expressed as "Man being an integral part of nature," which means that only when man

Table 3 Results of multiple linear regression analysis of associated factors of QOL for patients with cancer ($n = 185$)

Variables	*B*	95%CI	*SE*	*β*	*p*
Total score of QOL as dependent variable[1]					
Meaning	1.819	1.117~2.520	.355	.380	< .001
Peace	1.909	1.093~2.726	.414	.343	< .001
Physical well-being as dependent variable[2]					
Peace	.589	.304~.874	.144	.300	< .001
Faith	− .364	− .560~− .168	.099	− .269	< .001
Social/family well-being as dependent variable[3]					
Meaning	.653	.325~.981	.166	.324	< .001
Peace	.663	.280~1.045	.194	.282	.001
Emotional well-being as dependent variable[4]					
Meaning	.562	.354~.769	.105	.373	< .001
Faith	− .181	− .347~− .015	.084	−.150	.033
Functional well-being as dependent variable[5]					
Meaning	.678	.393~.963	.145	.347	< .001
Faith	.477	.297~.657	.091	.305	< .001
Peace	.496	.153~.840	.174	.218	.005

[1] $R = .659$, $R^2 = .434$, $F = 69.913$, $p < .001$

[2] $R = .335$, $R^2 = .112$, $F = 11.521$, $p < .001$

[3] $R = .552$, $R^2 = .305$, $F = 39.892$, $p < .001$

[4] $R = .376$, $R^2 = .141$, $F = 14.962$, $p < .001$

[5] $R = .665$, $R^2 = .442$, $F = 47.805$, $p < .001$

can find his own proper position in the universe, he can form a harmonious relationship with nature. The current study contributes to a deep understanding of spirituality in cancer patients in the unique background, and it also provides a new perspective on spirituality in addition to religiosity.

In the present study, a higher hospitalization frequency was related to a higher SWB level. This could be due to the fact that patients with a lower hospitalization frequency, especially those who were admitted into hospital for the first time, suffered from more anxiety, depression, or distress. Moreover, after being admitted into the hospital, the patients received regular psychological interventions and thus they could easily get professional help from oncology providers, who made the patients felt less anxiety or depression. In addition, the family caregivers of patients could get help easily especially when they had difficulty in providing physical or emotional supports for patients; thus, the burdens of the family caregivers would be decreased, which was proved to be related to a better emotional state in the patients [26]. Lower levels of anxiety and depression of patients were often related to a lower SWB level [14, 15]. The present result was totally contradictory to those in other studies. Different characteristics and cultural backgrounds of the participants may lead to different results. A study conducted in Portugal reported that the time of illness is the only factor related to SWB and spiritual distress in elderly cancer patients [27]. The results of another study involving advanced cancer patients in an Italian home palliative care setting showed that better SWB level was found in patients with less impaired Karnofsky performance status and fully participating in religious rituals [25]. In the present study, there was only one associated factor identified, and other variables which were proved to be relevant in other studies were not observed. As the regression equation only explained 3.9% of the variation in SWB, there may exist other potential associated factors that were not detected in the present study. In present study, we mainly explored the relationships of sociodemographic and medical characteristics with SWB, and the psychological or social factors were not included. Therefore, further researches were needed to explore the effect of psychological or social factors.

In terms of the relationship between SWB and QOL, previous studies had demonstrated that SWB was significantly related to QOL [18, 25]. In our study, we explored the effects of different dimensions of SWB on various components of QOL. The results showed that higher levels of meaning and peace were related to better QOL, which is in accordance with the results in other studies [14, 19]. A previous study indicated that meaning and peace have a greater association with QOL [28], which was also validated in our study. Additionally, the faith was proved to be not associated with QOL, and this result was consistent with the findings in a study [19], but it was totally inconsistent with the findings in another study, in which it was found that the faith emerged as the only component of spirituality that was related to QOL in cancer patients who were close to death [29]. The different relationship may be due to the fact that these patients had different characteristics that might affect their spirituality and QOL. We also found that the faith had different effects on each dimension of QOL. It had significant negative associations with physical well-being and emotional well-being, but had a positive association with functional well-being. However, this result was not consistent with that in another study in which it was found that the faith was positively associated with emotional well-being and social/family well-being [30].

Strengths and limitations

There are several limitations of this study. The current study is a cross-sectional descriptive study which only investigates the spirituality and explores the association of spirituality with clinical factors and QOL at a certain point in time. A longitudinal study is needed to observe the variation of SWB among cancer patients during the treatment and post-treatment and explore its relationships with outcomes (mortality), readmissions due to complications, risk of complications, and other clinical factors. Additionally, the representativeness of the sample was limited. A multi-center investigation is needed to explore the SWB in patients with a larger sample size to help us understand the effect of spirituality in Chinese cancer patients comprehensively and objectively. In spite of these limitations, the present study has some notable advantages. Although many studies focus on spirituality of cancer patients, fewer studies are conducted to explore the spirituality in the context where formal religion is not developed. This study contributes to a comprehensive understanding of spirituality from a non-religious perspective.

Clinical implications: integration of spiritual care into cancer care

A better understanding of SWB and its effect on health-related QOL may help tailor the use of spiritual interventions. Spiritual care, which is usually given in a one-to-one relationship, is completely person centered and makes no assumptions about personal conviction or life orientation, which is not necessarily religious [31]. It can be concluded from this study that spiritual care is an essential element of care for cancer patients. However, there are still many issues to be settled, for example, how and when is the spiritual care delivered to non-religious cancer patients? Who will be the main intervener and what is the role of medical staff?

The evidence proved that spiritual therapy interventions such as relaxation, meditation, control, identity, and prayer therapy are effective in improving spiritual well-being and quality of life [32]. What's more, reminiscence, life story, creative activities, meaningful rituals, presence, and listening

[33] are beneficial to "meaning making" and "life review," which are important in spiritual process [34]. Further studies are needed to verify the effects of these measurements among non-religious cancer patients. However, one thing is for certain: we should accept the patients while remaining true to ourselves and make it clear how non-religious patients develop their spirituality before delivering spiritual care [3].

Apart from the spiritual interventions, the person who delivers the interventions is also important. Although the role of all health care professionals in spirituality is acknowledged, it's not clear what their duties are yet. In China, we still do not know who is the most appropriate people to be engaged in the management of spirituality such as assessment, screening, and intervention, and the best time for delivering spiritual care is also uncertain. In religious context, spiritual care was provided by chaplains. However, most of patients with seriously illness would like to discuss their religious/spiritual beliefs with chaplains, while the minority of patients would like to discuss their religious/spiritual beliefs with medical staff [35]. Therefore, before spiritual care is delivered, researchers need to investigate what kind of spiritual care is preferred by non-religious patients and whom the patients want to discuss their religious/spiritual beliefs with.

It's necessary for us to learn how to enable the medical staff to be competent in spiritual care. Training should be carried out to enhance the ability of health care professionals to deliver spiritual care consistent with their knowledge, skills and actions, and the ability [36]. To our best knowledge, there is not any training curriculum available for oncology providers to be competent for spiritual care in China. In other countries and regions of the world, there is a lack of researches in this area.

Conclusions

In conclusion, the hospitalization frequency is the only influencing factor related to SWB. Strong associations exist between different aspects of SWB and QOL (physical well-being, emotional well-being, social/family well-being, functional well-being). Further studies should be carried out to identify whether the interventions targeting on SWB, especially meaning and peace, is effective in improving QOL in cancer patients.

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Compliance with ethical standards

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

Conflict of interest The authors declare that they have no conflict of interest.

References

1. Dezutter J, Dewitte L, Thauvoye E, Vanhooren S (2016) Meaningful coping with chronic pain: exploring the interplay between goal violation, meaningful coping strategies and life satisfaction in chronic pain patients. Scand J Psychol 58(1):29–35
2. Costanzo ES, Ryff CD, Singer BH (2009) Psychosocial adjustment among cancer survivors: findings from a national survey of health and well-being. Health Psychol Off J Div Health Psychol Am Psychol Assoc 28(2):147–156
3. Smith AR (2017) How do I care for the spiritual but not religious person? J Christ Nurs 34(3):196
4. Canada AL, Murphy PE, Fitchett G, Peterman AH, Schover LR (2008) A 3-factor model for the FACIT-Sp. Psycho-Oncology 17(9):908–916
5. Jimenez-Fonseca P, Lorenzo-Seva U, Ferrando PJ, Carmona-Bayonas A, Beato C, García T, Mu Oz MDM, Ramchandani A, Ghanem I, Rodríguez-Capote A, Jara C, Calderon C (2018) The mediating role of spirituality (meaning, peace, faith) between psychological distress and mental adjustment in cancer patients. 26(5): 1411–1418
6. Roland KB, Rodriguez JL, Patterson JR, Trivers KF (2013) A literature review of the social and psychological needs of ovarian cancer survivors. Psychooncology 22(11):2408–2418
7. Gonzalez P, Castañeda SF, Dale J, Medeiros EA, Buelna C, Nuñez A, Espinoza R, Talavera GA (2014) Spiritual well-being and depressive symptoms among cancer survivors. Support Care Cancer 22(9):2393–2400
8. Paredes AC, Pereira MG (2017) Spirituality, distress and posttraumatic growth in breast cancer patients. J Relig Health 57(5):1606–1617
9. Sheppard VB, Walker R, Phillips W, Hudson V, Xu H, Cabling ML, He J, Sutton AL, Hamilton J (2018) Spirituality in African-American breast cancer patients: implications for clinical and psychosocial care. J Relig Health 57(5):1918–1930
10. Cour PL, Ausker NH, Hvidt NC (2012) Six understandings of the word 'spirituality' in a secular country. Arch Psychol Relig 34(1):63–81
11. La CP, Hvidt NC (2010) Research on meaning-making and health in secular society: secular, spiritual and religious existential orientations. Soc Sci Med 71(7):1292–1299
12. Mollica MA, Underwood W, Homish GG, Homish DL, Orom H (2016) Spirituality is associated with better prostate cancer treatment decision making experiences. J Behav Med 39(1):161–169
13. Mollica MA, Underwood W, Homish GG, Homish DL, Orom H (2017) Spirituality is associated with less treatment regret in men with localized prostate cancer. Psycho-Oncology 26(11):1839–1845
14. Chaar EA, Hallit S, Hajj A, Aaraj R, Kattan J, Jabbour H, Khabbaz LR (2018) Evaluating the impact of spirituality on the quality of life, anxiety, and depression among patients with cancer: an observational transversal study. Support Care Cancer 26(8):2581–2590

15. Stutzman H, Abraham S (2017) A correlational study of spiritual well-being and depression in the adult cancer patient. Health Care Manag 36(2):164–172
16. Davis LZ, Cuneo M, Thaker PH, Goodheart MJ, Bender D, Lutgendorf SK (2018) Changes in spiritual well-being and psychological outcomes in ovarian cancer survivors. Psychooncology 27(2):477–483
17. Gaskin-Wasson AL, Walker KL, Shin LJ, Kaslow NJ (2016) Spiritual well-being and psychological adjustment: mediated by interpersonal needs? J Relig Health 57(4):1–16
18. Al-Natour A, Momani SMA, Qandil AMA (2017) The relationship between spirituality and quality of life of Jordanian women diagnosed with breast cancer. J Relig Health 56(6):1–13
19. Bai M, Lazenby M (2015) A systematic review of associations between spiritual well-being and quality of life at the scale and factor levels in studies among patients with cancer. J Palliat Med 18(3):286–298
20. Phelps AC, Lauderdale KE, Alcorn S, Dillinger J, Balboni MT, Wert MV, Vanderweele TJ, Balboni TA (2012) Addressing spirituality within the care of patients at the end of life: perspectives of patients with advanced cancer, oncologists, and oncology nurses. J Clin Oncol 30(20):2538–2544
21. Frost MH, Novotny PJ, Johnson ME, Clark MM, Sloan JA, Yang P (2013) Spiritual well-being in lung cancer survivors. Support Care Cancer 21(7):1939–1946
22. Chonghua W, Meng Q, Tang X, Zhang C, Luo J, Zhang X (2006) Evaluation of Chinese version of Functional Assessment of Cancer Therapy—General. J Pract Oncol 21(1):77–80 [Article in Chinese]
23. Peterman AH, Fitchett G, Brady MJ, Hernandez L, Cella D (2002) Measuring spiritual well-being in people with cancer: the Functional Assessment of Chronic Illness Therapy-Spiritual Well-Being Scale (FACIT-Sp). Ann Behav Med 24(1):49–58
24. Xiangyu L, Wei D, Chen Y, Cheng Q, Liang S, Xu X, Zhang M (2016) Reliability and validity of the Chinese version of the functional assessment of chronic illness therapy—spiritual well-being in cancer patients. Chin J Nurs 51(09):1085–1090 [Article in Chinese]
25. Martoni AA, Varani S, Peghetti B, Roganti D, Volpicella E, Pannuti R, Pannuti F (2017) Spiritual well-being of Italian advanced cancer patients in the home palliative care setting. Eur J Cancer Care 26(4): e12677
26. Soto-Rubio A, Perez-Marin M, Tomas Miguel J, Barreto Martin P (2018) Emotional distress of patients at end-of-life and their caregivers: interrelation and predictors. Front Psychol 9:2199
27. Caldeira S, Carvalho ECD, Vieira M (2014) Between spiritual wellbeing and spiritual distress: possible related factors in elderly patients with cancer. Rev Lat Am Enfermagem 22(1):28–34
28. Whitford HS, Olver IN, Peterson MJ (2010) Spirituality as a core domain in the assessment of quality of life in oncology. Psycho-Oncology 17(11):1121–1128
29. Bovero A, Leombruni P, Miniotti M, Rocca G, Torta R (2016) Spirituality, quality of life, psychological adjustment in terminal cancer patients in hospice. Eur J Cancer Care 25(6):961–969
30. Salsman JM, Yost KJ, West DW, Cella D (2011) Spiritual well-being and health-related quality of life in colorectal cancer: a multi-site examination of the role of personal meaning. Support Care Cancer 19(6):757–764
31. Mowat H, O'Neill M (2013) Spirituality and ageing: implications for the care and support of older people. IRISS Insights 9:1–16
32. Jafari N, Farajzadegan Z, Zamani A, Bahrami F, Emami H, Loghmani A, Jafari N (2013) Spiritual therapy to improve the spiritual well-being of Iranian women with breast cancer: a randomized controlled trial. Evid Based Complement Alternat Med 2013(1): 353262
33. Caldeira S, Timmins F, de Carvalho EC, Vieira M (2017) Spiritual well-being and spiritual distress in cancer patients undergoing chemotherapy: utilizing the SWBQ as component of holistic nursing diagnosis. J Relig Health 56(4):1489–1502
34. Mackinlay E, Trevitt C (2010) Living in aged care: using spiritual reminiscence to enhance meaning in life for those with dementia. Int J Ment Health Nurs 19(6):394–401
35. Arutyunyan T, Odetola F, Swieringa R, Niedner M (2018) Religion and spiritual care in pediatric intensive care unit: parental attitudes regarding physician spiritual and religious inquiry. Am J Hosp Palliat Care 35(1):28–33
36. Gordon T, Mitchell D (2004) A competency model for the assessment and delivery of spiritual care. Palliat Med 18(7):646–651