

Correlation between Spiritual Well-Being and Level of Fatigue among Patients Suffering from Breast Cancer

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Abstract

Cancer-related fatigue has been shown to be a significant side effect that influences a person's wellbeing, during treatment, and after treatment. It is recorded that cancer patients have also been shown experiencing spiritual distress. The study aims to determine the connection between spiritual well-being and cancer-related fatigue among patients suffering from breast cancer during chemotherapy treatment. 112 patients who were undergoing chemotherapy treatment were recruited in this study using a correlational design. The instruments used in assessing spiritual well-being and fatigue are Functional Assessment of Chronic Illness Therapy - Spirituality (FACIT-Sp) and FACIT-Fatigue Scales. Data were analyzed using the Spearman Correlation analysis. Mean spiritual well-being score was 35.91 (SD = 6.89), and the mean fatigue score was 33.04 (SD = 9.58). There were a moderate and significant correlation between fatigue scores and spiritual well-being ($r = .364, p < 0.001$). Breast cancer patients who had higher spiritual well-being that means they would alleviate fatigue symptoms. Therefore, nurses should consider that increasing spiritual well-being would reduce fatigue and vice versa.

Keywords: Breast cancer, chemotherapy, fatigue, spiritual well-being, treatment.

Introduction

Breast cancer patients with a complicated stage suffer from the threat of death, uncertainty, and various symptoms because of the disease and its treatment (fatigue, pain, weakness, dry mouth, constipation, decreased energy, taste change, and depression) (Sari, 2019). All these symptoms are reported to impact on a cancer patient's functional status and wellbeing status (Dodd, Cho, Cooper, & Miaskowski, 2010). Spiritual distress can occur due to suffering of being terminally ill (Lestari, Nuraeni, & Setyorini, 2018; Loh, 2004; Villagomez, 2005). Patients with spiritual distress have stated that they see the meaning of their life, their illness, death and suffering as a punishment. Such patients may well be unstable emotionally, sad, withdrawn, apathetic, and in denial (Komariah, Adriani, Indrayani, & Gartika, 2020; Loh, 2004). Having a complicated breast cancer diagnosis, or other life-threatening conditions, could change a person's perception about life (Komariah, Adriani, et al., 2020; Manning-Walsh, 2005), and put such an individual in danger for altered spiritual well-being that changes within the person's wellness, symptoms of their disease and treatment.

Moreover, many studies have reported that the impact of advanced breast cancer patients enduring cancer-related-fatigue (CRF) is extensive (Hsieh et al., 2019; Kinkead et al., 2018; Zimmaro et al., 2019)). Most cancer patients reside with CRF because of their cancer treatment and diagnosis. A number of advanced breast cancer patients might have physical and psychological comorbidities that may augment fatigue and complicate its management (Bower, 2008; Loh, 2004). Fatigue symptoms are also the common side effect of patients who are admitted to the chemotherapy unit in Indonesian hospitals (Nurhasanah, 2014). According to the National Comprehensive Cancer Network (2009), fatigue experienced by cancer patients is a state of persisting weakness, where the sensations felt are very personal, as well as the type of fatigue that is not relieved by rest. Fatigue can affect patients in an immensely negative way. It impacts on the spiritual well-being due to feelings of uncertainty, helplessness and

fears about death. Thus, it results in patients experiencing set-backs in a chemotherapy treatment schedule (Borneman, Irish, Sidhu, Koczywas, & Cristea, 2014).

Fatigue is a general term used to describe the different feelings with a diversity of terminologies indicating alleviated either physical, mental, emotional, or social capacity, and it is also indicate distress (Lewis, Salins, Rao, & Kadam, 2014). Fatigue is the paramount prevailing symptom among cancer patients receiving radiation therapy and cytotoxic chemotherapy. CRF is an experience subjective to the individual cancer patient, and it is affected by various determinants, such as physical, psychological, and spiritual factors. Physically, fatigue can result from the direct effects of cancer, cancer-related symptoms, and therapy effects; psychologically, fatigue can result from the emotional distress stimulated by cancer and its effects; and spiritually, fatigue can result from the spiritual dryness due to cancer. Not only a few cancer patients feel like religion or spirituality becomes their comfort, which in several occasions, it is associated to positive psychological result and depletion in distressful symptoms (Lewis et al., 2014). Spirituality is said to higher quality of life because it provides social support, enhances the connection with the spouse, and provides interpretation, and decreases self-focus and anxiety (Garssen, Umland-Sikkema, & Visser, 2015). Studies also showed that, in contrast to those who only involved less in spiritual activities, patients with certain illness but holding a great principle to spirituality seem to have a finer adaptation, undergo the higher level of well-being and quality of life, and encounter lower degree of distress (Garssen et al., 2015). This study examines spiritual well-being and fatigue in patients suffering from breast cancer who undergo chemotherapy and determines presence of interconnection between fatigue and spiritual well-being in breast cancer stage III.

Concept of spiritual well-being is defined as an expression (Wilding, Muir-Cochrane, & May, 2006), a person's mental spiritual measure, which is built by two domains, namely religion and spirituality. Clay, Talley, and Young (2010) defined spiritual well-being as the capability to foster expectation

and take interpretation from life experiences and feel the life force in dealing with self, God, family, and life elements that help empower themselves. Spiritual well-being is instrumental in health and healing process. According to Ellison (2006), the spiritual well-being is defined as the process of elaborating the nature of the dynamic bond between the person and the Creator, whose harmonious relationship is dependent on the deliberate self-development, usually on the basis of the appropriateness between experiencing a meaningful life, the goals and values of personal life. This self-development is also made as a personal challenge, done by meditation or contemplation leading to an inner state of happiness.

Gomez and Fisher (2003) explain spiritual well-being as a concept describing the innate state, with an element of motivation or inner drive to find the purpose of life, which is naturally dynamic and subjective. Further, it is focused on something distinctive, which then is believed to be the truth. Spiritual well-being contains a real act of dealing with the essence of existence, certain inner experience and belief. All of them provide a goal, meaning and values for a quality of life, e.g., by giving thanks to God, loving others, and learning from previous life experiences (Gomez & Fisher, 2003). Spiritual well-being has some components, such as, feelings of harmony, peace, the meaning and purpose of life, and the power of faith (Bredle, Salsman, Debb, Arnold, & Cella, 2011). Faith is an important aspect that contributes to the spiritual well-being of the person. Various studies have pointed out that faith, especially faith in God, helps the cancer patient to live well amidst the pain and suffering from cancer. There are many ways in which the persons with advanced breast cancer express their faith in God and how belief in God helps them to cope with cancer. Some of them express faith in God through prayers asking for strength and spiritual well-being (Komariah, Hatthakit, & Boonyoung, 2020).

Regarding sense of spiritual well-being, in a Muslim country, Ahmad, binti Muhammad, and Abdullah (2011) used a qualitative study to explore religious practice and spirituality and coping among three Malay Muslim females with advanced breast cancer. They

figured that life-threatening diseases, for instance breast cancer, can be a spiritual encounter and a deeply emotional experience as they cope and find the way toward healing. Therefore, it can be concluded that spiritual well-being in this study reflects the extent to which patients live in harmony with regard to the meaning, purpose, and values of life amidst suffering from cancer (Komariah, Hatthakit, et al., 2020). This component is important in the treatment process of cancer to increase hopeful health results. In Indonesia, two studies tested about the level of spiritual well-being among breast cancer patients, they stated that moderate level of spiritual well-being among all cancer survivors (Suara, Mardiyono, & Anggorowati, 2017) but poor level of spiritual well-being among breast cancer patients undergoing chemotherapy (Wahyuningsih, Sofro, & Dwidiyanti, 2019).

Additionally, several studies have shown that 80% to 90% of patients suffering from breast cancer experiencing fatigues during undergoing chemotherapy (Schmidt et al., 2015). Fatigue symptoms were consistently documented for above 50% of various types of cancer therapy (Naraphong, Lane, Schafer, Whitmer, & Wilson, 2015). Research study regarding fatigue among breast cancer in Indonesia reported that majority of the breast cancer patients developed fatigue in moderate level (50%) and , severed level 61 (42.4%) whereas only few (7.6%) of them had mild level of fatigue (Dahlia, Karim, & Damanik, 2019).

The chemotherapy regimen can cause fatigue; for instant, breast cancer patients who received 5Fluoroacil, Doxorubicin and Cyclophosphamide chemotherapy had muscle weakness caused by stimulation cell oxidative reactions from peroxidation lipids and protein carbonyl. They are released from doxorubicin and delivered to C2C12 myotubes which will activate caspases enzymes and proteolysis and which result in muscle cell apoptosis. It causes reduced muscle mass and contraction ability as the originator of the complaint of fatigue (Gilliam & St. Clair, 2011). When cancer threatens the meaning of an individual life, religion and spirituality are often important coping strategies (Lewis et al., 2014). Fatigue can impact all dimensions of a person's life

including physical, psychological, social and spiritual well-being. This study assesses the correlation between spiritual well-being and level of fatigue among patients suffering from breast cancer undergoing chemotherapy treatment.

Method

This is a cross sectional study appraising fatigue and spiritual well-being in breast cancer patients undergoing chemotherapy. A total of 112 breast cancer selected using consecutive sampling who receiving chemotherapy between January and June 2018 at Chemotherapy unit in a teaching hospital, if they satisfied the selection criteria and gave consent to participate. Inclusion criteria consisted of aged more than 18 years old, have a diagnosis of stage III newly or recurrently, cognitively intact without mental illness. The participants who satisfying the selection criteria and willingness to participate in this study imparted the following self-report questionnaires to examine fatigue and spiritual well-being. Fatigue and spiritual well being were assessed using the functional assessment of chronic illness therapy (FACIT) measurement system, which is a collection of QOL questionnaires aimed to the management of chronic illness such as cancer. The tools are validated and permission for use was obtained following registration (www.facit.org). It is a cross sectional study where the patients were screened at a certain point of time during their active cancer chemotherapy medicaments. The researcher did the screening after obtaining patients informed consent for the same. The study was authorized by Intuitional review board of the Faculty of Nursng, Prince of Songkla University, Thailand, number 2017 NST-Qn 054.

The Functional Assessment of Chronic Illness Therapy (Fatigue) (FACIT-F) was utilized to estimate the level of fatigue. The questionnaire consists of 13 items in the form of statements. The total score of FACIT-F should be in the range of 0-52. If the score was < 30, this indicates that the patient is having severe fatigue. The higher score of FACIT-F demonstrates a low-stage

of fatigue, whereas a lower outcome of FACIT-F indicates a high level of fatigue. The original instrument showed reliability of alpha Cronbach 0.95 and the validity test 0.88 (Yellen, Cella, Webster, Blendowski, & Kaplan, 1997) while the Indonesian version reported 0.88 for reliability test and alpha Cronbach .95 (Aisyah, 2017).

The Functional Assessment of Chronic Illness Therapy (Spiritual) (FACIT-Sp). The measurement of spiritual well-being was assessed by the FACIT-Sp which was established by Cella et al. (1993). The FACIT-Sp is a 12-item scale with 2 subscales (meaning/peace and faith); 8 items of meaning/peace (items 1, 2, 3, 4, 5, 6, 7, 8), and 4 items of faith (items 9, 10, 11, 12). Using Likert-type scales (absolutely not = 0, a bit = 1, slightly = 2, quite a lot = 3, very much = 4). A higher score indicates a higher stage of spiritual well-being. Reliability was announced for the total FACIT-Sp and subscales. The internal consistency varied from 0.81 to 0.88. The possible scores of the FACIT-Sp stretched from 0 – 48. The instrument had a Cronbach's alpha coefficient of .87.

Data was registered in Microsoft excel and evaluated using statistical package for social science version 16 (IBM corporation). A Bivariate Spearman's correlation analysis was carried out between independent and dependent variables.

Results

A total of 112 breast cancer patients undergoing chemotherapy were included in the study. Average age of patients who participated in the study was 47.2 ± 8.2 years. Among the patients studied 32.1% had stage IIIa, 60.7% had stage IIIb, and 7.2% had stage IIIc illness (Table 1). Based on the demographic data crosstab analysis, the study resulted that only the education had a significant relationship with spiritual well-being. While the occupation and family income had significant relationship with fatigue (Table 2).

Bivariate relationships were chosen between dependent and independent variables using Spearman's correlation analysis. There

was a notable connection between fatigue scores with spiritual well being (P < 0.001), (Table 3).

Table 1 General Data on the Breast Cancer Patients Undergoing Chemotherapy

| General Data | Categories | Frequency | Percentage (%) |
|------------------------|-----------------|-----------|----------------|
| Age (Year) | Mean : 47.2 | - | - |
| | SD : 8.2 | - | - |
| | Range : 27 – 64 | - | - |
| Education | Primary | 63 | 56.3 |
| | High School | 41 | 36.6 |
| | University | 8 | 7.1 |
| Marital Status | Single | 4 | 3.8 |
| | Married | 89 | 79.2 |
| | Widow | 19 | 17 |
| Breast Cancer Staging | IIIa | 36 | 32.1 |
| | IIIb | 68 | 60.7 |
| | IIIc | 8 | 7.2 |
| Chemotherapy treatment | FAC | 90 | 80.4 |
| | TAC | 13 | 11.6 |
| | AC+paclitaxel | 9 | 8.0 |
| Chemotherapy/cycle | 1 | 42 | 37.5 |
| | 2 | 35 | 31.3 |
| | 3 | 16 | 14.3 |
| | 4 | 19 | 16.9 |

Tabel 2 Crosstab of Demographic Data, Spiritual Well-Being, and Fatigue

| Demographic data | Spiritual well-being | Fatigue |
|------------------|----------------------|---------|
| Education | 0.023* | 0.087 |
| Occupation | 0.322 | 0.009* |
| Family income | 0.335 | 0.014* |

Chi Square, *p < 0.05

Table 3 Means, Standard Deviation and Correlations of Spiritual Well-Being and Fatigue

| Variables | N | Mean Value | SD | Correlation | p |
|----------------------|-----|------------|-----|-------------|--------|
| Spiritual well-being | 112 | 35.91 | 6.9 | . | |
| Fatigue | 112 | 33.04 | 9.6 | .364 | 0.000* |

Discussion

The study reported that there is a positive association between spiritual well-being and fatigue; it means that higher spiritual well-being would alleviate the fatigue symptoms. In other words, the nurses should consider

that by increasing spiritual well-being, it would potentially reduce fatigue and vice versa.

These associations could also mean that spiritual well-being would suggest more connectedness in life that would aid them endeavor to positive health behaviors such as

being physically and socially active, going for walks in nature etc., This could give them a purpose and meaning in life and reduce distressful symptoms. Indian study on spiritual well-being in advanced lung cancer showed that there was statistically notable association between spiritual well-being and depression, anxiety, five domains of QOL (fatigue, distress and sadness, mood, work, relationship with others) and enjoyment of life (Kandasamy, Chaturvedi, & Desai, 2011). Spiritual wellbeing is a complex dynamic state which has a significant impact on clinical outcomes (Komariah & Ibrahim, 2019; Nuraeni, Nurhidayah, Hidayati, Sari, & Mirwanti, 2015).

Cancer related fatigue is an immense perception of exhaustion physically, mentally, emotionally which occurs secondary to the disease or due to disease related treatment. It can persevere over time and interferes with daily routines and varies from the tiredness of everyday life, which is normally nonpermanent and diminished by rest. Cancer treatment-related fatigue usually enhances following therapy is done; nevertheless several levels of fatigue may continue for months or years after the treatment. Research specifies that for at least a subset of patients, fatigue may be a conspicuous matter long into survivorship.

According to Lewis et al. (2014), fatigue is a general term used to describe the different feelings with a diversity of terminologies indicating alleviated either physical, mental, emotional, or social capacity, and it is also indicate distress. Fatigue is the most prevailing symptom among cancer patients receiving radiation therapy and cytotoxic chemotherapy. Fatigue symptoms were consistently documented for more than 50% of various types of cancer therapy (Naraphong et al., 2015).

Health related QOL is the degree to which average or predicted physical, emotional and social wellbeing are influenced by a medical condition or its treatment. Its evaluation demands for attention to several measurements, which include physical concerns (e.g. symptoms), functional ability, family well-being, emotional well-being, spiritual well-being, sexuality and social functioning. Hence in cancer treatment

multidimensional, multifaceted approach is quintessential for successful treatment outcomes. In cancer patients, the focal point is usually aimed at treatment and treatment related matters, regulating physical symptoms and comorbidities. Psychological, interpersonal and spiritual well-being matters are seldom evaluated and addressed (Nuraeni, Ibrahim, & Rizmadewi, 2013; Nuraeni et al., 2015). This study brings out the importance of spiritual well-being in cancer patients and its impact and correlation on fatigue which is one of the most distressing and difficult to treat symptom.

According to Bredle et al. (2011), spiritual well-being has some components, such as, feelings of harmony, peace, the meaning and purpose of life, and the power of faith. Faith is an important aspect that contributes to the spiritual well-being of the person. Various studies have pointed out that faith, especially faith in God, helps the cancer patient to live well amidst the pain and suffering from cancer. There are many ways in which the persons with advanced breast cancer express their faith in God and how belief in God helps them to cope with cancer. Some of them express faith in God through prayers asking for strength and spiritual well-being (Komariah, Hatthakit, et al., 2020).

A study done by Taylor in patients with recurrent cancer with various clinical subtypes showed that the symptom distress was inversely related to spiritual well-being (Taylor, 1993). A similar kind of study done in breast cancer patients showed that lower amount of symptom burden and distress was associated with a better spiritual well-being (Manning-Walsh, 2005). Likewise, demographic data, namely education was significantly related to spiritual well-being, it was inconsistent with previous study indicated that education unrelated to spiritual well-being (Suara et al., 2017). In the present study, occupation and family income were significantly unrelated to spiritual well-being, however they have a significantly related to fatigue.

The findings of this present study support that the nursing interventions to increase the patients' spiritual well-being can reduce their fatigue. So, this research can be used as an evaluation and input to enhance the quality

services, particularly the provision of holistic nursing care among patients with breast cancer undergoing chemotherapy.

Conclusion

To sum up, based on the findings of this study concluded that spiritual well-being has significant relationship with fatigue among persons suffering from breast cancer undergoing chemotherapy. In addition, the education level has significant relationship with spiritual well-being, whereas the occupation and family income have significant relationship with fatigue.

Furthermore, since this study applied convenience sampling and the population included only the Indonesian women with breast cancer undergoing chemotherapy, conducting similar studies using random sampling in other wards and other chronic disease centers is recommended.

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