

Spiritual Well-Being and Optimism as Contributing Factors that Influence the Subjective Well-Being of Cancer Patients

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ABSTRACT

Background: Cancer is a serious stressor that induces spiritual distress, loss of optimism, and dissatisfaction with subjective well-being. This study aims to determine that spiritual well-being (SWB) and optimism as factors that contribute to influencing the subjective well-being of cancer patients.

Methods: This study had a cross-sectional design. A total of 88 cancer patients from public health centers in Surabaya and the Indonesian Cancer Foundation of East Java were selected to be sampled by consecutive sampling in 4 months. The Instruments used were valid and reliable throughout the test, comprising of the spiritual well-being scale, the 9-item version of the personal optimism scale, self-efficacy optimism scale, and satisfaction with life scale. The ethical feasibility was declared ethical. Data were analyzed using Pearson Product Moment Correlation Test and Linear Regression Test with $p < 0.05$.

Results: The demographic data show that the mean age of 52.5 years, female gender (84%), being married (78.4%), having cervical cancer (52.3%), having stage-III cancer (55.7%), having cancer therapy (surgery, chemotherapy, and radiotherapy) (37.5%), and patients newly diagnosed from 6 months to 1 year (33%). The mean score of SWB was 99.67 (high SWB), optimism 20.03 (high optimism), and subjective well-being 24.18 (good subjective well-being). Pearson Product Moment Correlation Test between SWB and optimism showed $p < 0.001$, indicating that SWB had a significant relationship with optimism; patients with high SWB will have high optimism. From the Linear Regression Test, there was a significant effect of SWB on subjective well-being ($r^2 = 0.982$ and $p < 0.001$) and optimism on subjective well-being as well ($r^2 = 0.988$ and $p < 0.001$), meaning that patients with high SWB and high optimism tended to have good subjective well-being.

Conclusions: Cancer patients who have high scores of SWB become more optimistic, which has a positive effect on the high score of subjective well-being as well.

INTRODUCTION

Severe stress after a cancer diagnosis can cause trauma and stress disorders [1]. Another study explained that of 37 cancer patients, the majority had spiritual disorders, from low, moderate, to severe, with the most common disturbance occurring in the spiritual dimension of life balance distress [2]. Depression and anxiety in cancer patients have a negative correlation with spiritual well-being, which can worsen the quality of life [3]. Another study also revealed that patients were angry with God and asked God to take responsibility for the illness and all of the bad things they experienced [4]. Patients with chronic diseases such as cancer were most susceptible to spiritual distress and regarded it as

unimportant for the spiritual need to pray or to participate in religious rituals [5]. However, many cancer patients decide to get closer to God by increasing repentance, prayer, and religious activities to gain better peace of mind and readiness to face death. A study about women with breast cancer revealed that spirituality was an important factor in the coping process and a resource in awakening their ability to fight [6].

The prevalence of cancer in the USA in 2019 was 1,762,450 cases (870,970 cases in males and 891,480 cases in females). Meanwhile, the number of deaths reached 606,880 cases consisting of 321,670 deaths in males and 285,210 deaths in females [7]. The prevalence of cancer in Indonesia which was recorded in 2018 reached 1.79% while in East Java, it was 2.2%. Cancer

in Indonesia occurs in all age groups, and most of them are more than 45 years old, reaching 16.01%. Most cancer patients in East Java undergo surgery as a treatment (65.13%), followed by chemotherapy (24.85%), radiation (14.05%), and other therapies (20.6%) [8]. Stress is a major problem found in patients diagnosed with cancer; it will even continue to persist until the cancer treatment period is completed [9]. In addition to stress, other psychological disorders such as fear and barriers to social relations with other people are also experienced by patients diagnosed with cancer [10]. Cancer patients have significant emotional problems such as anxiety, depression, fear, physiological problems, and family problems [11]. Patients perceive cancer disease as an unpredictable and indestructible enemy; they also express fear of closeness to death and the possibility of dying [12]. Other studies revealed that cancer patients had a high desire to die as a result of the physical, psychological, and social changes they experienced [13]. Spiritual distress was experienced by a patient with a negative condition [14]. Patients who feel lonely and have disturbed interpersonal relationships can have a spiritual crisis [15]. More than 40% of newly diagnosed and relapsed cancer patients exhibit a significant level of spiritual distress [16]. Distress conditions in cancer patients cause hopelessness which has an impact on their poor quality of life [17]. The study of colorectal cancer patients found that patients with lower optimism, poorer social support, more negative cognitive assessments, and younger age had a worse correlation with subjective well-being [18]. A study of 97 breast cancer patients stated that the majority of patients felt high pessimism and decreased their quality of life during illness [19]. Patients who had cancer for a longer period showed lower scores for life goals and lower scores for willingness to live [20]. However, in another study, physical disorders experienced by cancer patients can improve the spiritual aspect by increasing surrender and submission to God. A qualitative study of 21 cancer patients stated that the spiritual well-being of cancer patients was inner harmony, sharing feelings with others, overcoming better final life thoughts, and seeking faith as inner support [21]. This study aimed to determine SWB and optimism as factors that contribute to influencing the subjective well-being of cancer patients.

METHODS

This cross-sectional study involved 100 cancer survivors registered in the public health centers in Surabaya and the Indonesia Cancer Foundation of East Java. A total of 88 cancer patients with various types were selected by consecutive sampling between March and June 2020. All the instruments were valid and reliable; the SWB

scale with $R = 0.651-0.909$ and Cronbach's $\alpha = 0.975$ was used while optimism was measured using the 9-Item Version of The Personal Optimism Scale and Self Efficacy Optimism Scale with $R = 0.847-0.956$ and Cronbach's $\alpha = 0.974$. The subjective well-being was measured using a life-scale satisfaction instrument with $R = 0.837-0.969$ and Cronbach's $\alpha = 0.936$. Research explanations were given to all respondents, and those who were willing to become the respondents were asked to sign the informed consent. After the questionnaires had been filled in by the respondents, scoring was carried out. All the questionnaires used the Likert scale. The Spiritual Well-Being Scale consists of 20 questions with a score ranging from 20 to 120; the higher score indicates high SWB. The 9-Item Version of The Personal Optimism Scale and Self Efficacy Optimism Scale consist of 9 questions with a score ranging from 0 to 27; the higher score indicates high optimism. For satisfaction, the Life Scale consists of 5 questions with a score ranging from 5 to 35; the higher score indicates good subjective well-being. The Shapiro-Wilk test was used to analyze the normality of the distributed data; the p-values of SWB, optimism and subjective well-being were 0.065, 0.113, and 0.276, respectively. The Pearson Product Moment Correlation Test ($p < 0.05$) was used to determine the relationship between SWB and optimism while the Linear Regression Test ($p < 0.05$) was used to determine the influence of SWB and optimism on subjective well-being.

RESULT

Based on **Table 1**, the average age of the respondents was 52.5 years, dominated by females (84%). More than half of the total respondents had been married (78.4%). Most respondents had cervical cancer (52.3%) and were at stage 3 (55.7%). Most respondents received surgery therapy combined with chemo-radiotherapy (37.5%). Based on the duration of suffering from cancer, most respondents were newly diagnosed patients, ranging from 6 months to 1 year (33%).

Based on **Table 3**, it can be explained that both independent variables (SWB and optimism) have an association with a p-value < 0.001 . The Pearson Product Moment correlation of 0.992, means that the relationship of both variables was very strong and unidirectional, thus the higher SWB will be followed the higher the optimism as well.

Based on **Table 4**, SWB has an effect of 98.2% on subjective well-being; each increased score of SWB causes an increase of 0.536 points on subjective well-being. Meanwhile, optimism has an effect of 98.8% on subjective well-being, and each increased score of optimism causes an increase of 1.202 points on subjective well-being as well.

Table 1. Demographic data of respondents at Public Health Center Surabaya and Indonesia Cancer Foundation of East Java Indonesia (n = 88)

Demographic Characteristics	N	%
Age		
(years) (Mean + SD)	52.5 + 9.30	
Gender		
Female	74	84
Male	14	16
Marital status		
Single	5	5.7
Married	69	78.4
Widow	12	13.6
Widower	2	2.3
Cancer types		
Cervical cancer	46	52.3
Breast cancer	15	17
Nasopharyngeal cancer	5	5.7
Lung cancer	9	10.2
Colon cancer	3	3.4
Endometrial cancer	4	4.6
Hodgkin	3	3.4
Prostate cancer	3	3.4
Cancer stage		
Stage 1	3	3.4
Stage 2	29	33
Stage 3	49	55.7
Stage 4	7	7.9
Cancer therapy		
Chemotherapy	16	18.2
Radiotherapy	3	3.4
Chemo-radiotherapy	25	28.4
Surgery, Chemo-radiotherapy	33	37.5
Surgery, Radiotherapy	2	2.3
Surgery, Chemotherapy	8	9.1
Surgery	1	1.1
Length of cancer diagnosed		
< 6 months	20	22.7
6 months–1 year	29	33
1–3 years	19	21.6
4–6 years	16	18.2
> 6 years	4	4.5

Table 2. Descriptive statistic of spiritual well-being, optimism, and subjective well-being

Variable	N	Min–Max	Mean	SD
SWB	88	84–118	99.67	8.290
Optimism	88	12–27	20.03	3.709
Subjective Well-Being	88	14–33	24.18	4.484

SWB, Spiritual well-being

Table 3. The relationship between SWB and optimism

	SWB	
	Pearson Product Moment Correlation	P
Optimism	0.992	< 0.001

Table 4. The influence of SWB and optimism on subjective well-being

Variable	Subjective Well-Being				
	R	r2	B	95% CI-b	p-value
SWB	0.991	0.982	0.536	0.520–0.552	< 0.001
Optimism	0.994	0.988	1.202	1.174–1.230	< 0.001

SWB, Spiritual well-being

DISCUSSION

It was found that most respondents had a high score of SWB, which indicated that most of them had high SWB. This might be caused by marital status and gender. Most respondents were female and married. The family has a role as protector of the family members to get good SWB [22], and cancer patients undergoing chemotherapy with high SWB scores were female [23]. Spirituality is an important factor to increase hope for cancer patients to undergo the treatment process, be ready to face disease recurrence, and even be ready to face death [24]. Even cancer patients experiencing intense pain still have high SWB scores [25]. Cancer patients define SWB as a valuable life condition, have a sense of belonging in a community, and have a feeling of being close to nature [26]. A study of 96 cancer patients who were undergoing chemotherapy stated that there was a significant relationship between prayer and an increase in life expectancy because prayer can increase self-confidence towards healing and a better future [27].

Based on this study, there were a few respondents who had lower SWB scores than others, which might be caused by the fact that the respondents were still newly diagnosed with cancer in less than 6 months, so the focus of attention was only on how to treat cancer and relieve the symptoms through the treatment process in the hospital. A study confirmed that at the beginning of a cancer diagnosis, hopelessness dominates, and patients only concentrate on themselves and feel the fear of cancer cells that will be spread and the symptoms getting worse [28]. Early diagnosis of a chronic disease can cause an individual to fall into a denial state. This was as described in the previous studies conducted on patients with one of the chronic diseases, multiple

sclerosis, in which, during the first six months of diagnosis, high levels of anxiety were found and only decreased in the first year but continued with an increase in the depression phase until 20 months [29].

Based on the results of this study, most respondents had high optimism scores. It is presumably caused by the marital status because most of the respondents who were married had a better support system than those without marital ties. This is because the support system provided by the family can help build patient confidence which can have an impact on growing optimism. A similar result was also stated in a study that the involvement of families in assisting cancer patients caused significant changes to increase patient optimism and changes in good coping [30]. Another study explained that cancer did not reduce optimism and self-confidence because it can increase the patient's ability to adapt to the condition of the disease [31].

However, this study found that respondents' lower optimism scores might be caused by the length of cancer diagnosis, which was < 6 months. This statement was supported by another study that cancer patients diagnosed for less than 1 year and living alone are more likely to experience pessimism and increase mortality [32]. Respondents who obtained a low score of optimism in this study were unmarried women and widows. Women tend to be more pessimistic than men; 97 women who suffer from breast cancer and gynecological cancer have a high level of pessimism which has an impact on increased anxiety and decreased quality of life [19].

Respondents of this study had a high score of subjective well-being score. Most of them were early elderly to elderly (> 46 years old) while the younger ones had a lower score of subjective well-being. A study provided a statement that being diagnosed with cancer at a young age has a high risk of having a poor score on expectation, life satisfaction, and quality of life [33], but a total of 99 stage IV (end-stage) cancer patients stated that patients who had positive thoughts tend to experience a better level of subjective well-being [34].

The results showed that there was a significant influence between SWB and optimism. A study explained that cancer patients undergoing chemotherapy who had good spiritual health with a transcendental connection between humans and God can develop a sense of self-worth [35]. Cancer patients also stated that the patient's belief in God made them feel stronger than before, raising new hope and a sense of optimism for a better life [36].

The finding of this study declared that both SWB and optimism had a significant influence on the subjective well-being of cancer patients of 98.2% and 98.8%, respectively. SWB refers to well-being in relationship with God and strengthening of values and life goals-meaning in life [37]. Good SWB causes patients to feel more comfortable, which can encourage better

subjective well-being. Similar results were presented in a study showing that good spirituality influences good health behavior and can directly improve psychological well-being [38]. The findings of this study are supported by the results of a study stating that the highest spirituality of cancer patients is a sense of positivity, gratitude, hope, and peace, all of which have been shown to improve global health status [39]. Improving health status is a determining factor for increasing subjective well-being [40]. A study conducted on 164 cancer patients explained that good spiritual well-being could increase hope, quality of life, and optimism for the future [41]. Optimism is a positive variable that is important in dealing with illness and can increase a person's happiness, hope, and survival [42]. Optimism is a predicting factor in assessing subjective well-being in cancer patients. Increasing optimism has an impact on increasing subjective well-being as well [43]. High optimism can significantly reduce hopelessness and improve the quality of life [44], happiness, and subjective well-being [45]. Another study that also had a similar result was that hope and emotion were the strongest predictors of subjective well-being [46]. Optimism has a direct effect on adaptive coping strategies and increases positive mood, which has an impact on well-being [47].

The limitation of this study is that the type of cancer was not selected due to the pandemic situation during the research process, resulting in not many available respondents. Thus, the study required a longer time. However, to overcome this, the researchers included in detail the types of cancer in the demographic data.

CONCLUSIONS

Cancer suffered by the patient did not diminish spiritual well-being, and the high score of SWB induced optimism about the healing of the disease. These become a strength for patients to obtain better subjective well-being. However, female patients with newly diagnosed cancer who do not have sufficient support systems tend to be spiritually less prosperous and pessimistic, resulting in less optimal subjective well-being.

DECLARATIONS

Ethics Approval

This study has been reviewed for ethical feasibility. Ethics approval was done by Medical Faculty Widya Mandala Catholic University Surabaya, Indonesia, and has been declared ethical based on certificate No. 086/WM12/KEPK/DOSEN/T/2020. Research ethics procedures were conducted by explaining the research purposes, benefits, procedures, risks, and confidentiality to all respondents, then the respondents signed an informed consent if they agreed as respondents.

Competing of Interest

I declare that I do not have any competing interests, especially with the study funder.

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