ปัจจัยทำนายความผาสุกทางจิตวิญญาณของผู้ป่วยมะเร็งเต้านมระยะท้าย
Factors Predicting Spiritual Well-being among Terminally Ill Patients with Breast Cancer

นิพนธ์ต้นฉบับ

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Original Article

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บทคัดย่อ

วัตถุประสงค์: เพื่อศึกษาปัจจัยทำนายความผาสุกทางจิตวิญญาณของผู้ป่วยมะเร็งเต้านมระยะท้าย ได้แก่ การรับรู้ความรุนแรงของโรค ความหวัง การมองโลกในแง่ดี และแรงสนับสนุนทางสังคม **วิธีการศึกษา:** การทดสอบความสัมพันธ์เชิงทำนายมีกลุ่มตัวอย่างเป็นผู้ป่วยมะเร็งเต้านมระยะท้าย ที่แผนกผู้ป่วยนอกรังสีรักษาและแผนกผู้ป่วยนอกเคมีบำบัด โรงพยาบาลมะเร็ง-ชลบุรี คัดเลือกตัวอย่างโดยการสุ่มอย่างง่าย 94 คน รวบรวมข้อมูลส่วนบุคคล และใช้แบบประเมินการรับรู้ความรุนแรงของโรค ความหวัง การมองโลกในแง่ดี แรงสนับสนุนทางสังคม และความผาสุกทางจิตวิญญาณ รวบรวมข้อมูลในเดือนมกราคมถึงเมษายน พ.ศ. 2565 วิเคราะห์ข้อมูลโดยใช้สถิติถดถอยพหุคูณแบบขั้นตอน **ผลการศึกษา:** ผู้ป่วยมะเร็งเต้านมระยะท้ายมีความผาสุกทางจิตวิญญาณอยู่ในระดับปานกลาง (mean = 81.37 $\pm$ 13.57 คะแนน) ปัจจัยที่สามารถทำนายความผาสุกทางจิตวิญญาณของผู้ป่วยมะเร็งเต้านมระยะท้ายอย่างมีนัยสำคัญทางสถิติ คือ การรับรู้ความรุนแรงของโรค (β = -0.655) ความหวัง (β = 0.387) และแรงสนับสนุนทางสังคม (β = 0.249) (P-value < 0.001 ทั้งหมด) โดยสามารถร่วมกันทำนายความผาสุกทางจิตวิญญาณของผู้ป่วยมะเร็งเต้านมระยะท้ายได้ร้อยละ 55.1 (R^2= 0.551, $F_{3,93}$ = 36.745, P-value < 0.001) การมองโลกในแง่ดีไม่สามารถทำนายความผาสุกทางจิตวิญญาณ **สรุป:** พยาบาลและบุคลากรทางสุขภาพสามารถใช้ผลการวิจัยครั้งนี้เป็นข้อมูลพื้นฐานในการพัฒนารูปแบบเพื่อเสริมสร้างความผาสุกทางจิตวิญญาณให้กับผู้ป่วยมะเร็งเต้านมระยะท้าย โดยการเสริมสร้าง ความหวัง การสนับสนุนทางสังคม และการให้ข้อมูลที่เหมาะสมเกี่ยวกับความรุนแรงของโรคนี้

คำสำคัญ: ความผาสุกทางจิตวิญญาณ; การรับรู้ความรุนแรงของโรค; ความหวัง; การมองโลกในแง่ดี; การสนับสนุนทางสังคม

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Abstract

Objective: To determine factors influencing spiritual well-being including perceived severity of the disease, hope, optimism, and social support. **Method:** This predictive correlation research was conducted in terminally ill patients with breast cancer who received treatment at the radiotherapy outpatient department and the chemotherapy outpatient department, Chonburi Cancer Hospital. 94 participants were recruited by simple random sampling. Six 6 questionnaires were used to assess demographic characteristics, perceived severity of the disease, hope, optimism, social support, and spiritual well- being, from January to April 2022. Stepwise multiple regression was used to test the associations. **Results:** Spiritual well-being was at a moderate level (mean = 81.37 $\pm$ 13.57 points). Severity of the disease (β = -0.655), hope (β = 0.387) and social support (β = 0.249,) jointly predicted spiritual well–being (P-value < 0.001 for all) with 55.1% of the variance of spiritual well-being explained (R^2 = 0.551, $F_{3,93}$ = 36.745, P-value < 0.001). Optimism did not influence spiritual well-being. **Conclusion:** Nurses and health professional could apply the results as a baseline information to develop intervention to enhance spiritual well-being of terminally ill patients with breast cancer through promoting hope, and social support through information regarding severity of the disease.

Keywords: spiritual well-being; perceived severity of the disease; hope; optimism; social support

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Introduction

Cancer is a major public health problem worldwide with breast cancer as the most cause of cancer among women. According to the report of the World Health Organization, 2.26 million women were diagnosed with breast cancer and 685,000 deaths globally.[1] In the United States, 284,200 people had breast cancer accounting for 30% of all cancer patients.[2] In Thailand, according to the Cancer Registry Report of the National Cancer Institute, there were 616 new breast cancer patients and 143 of them were in stage 3 breast cancer accounting for 23.2%; and 148 are in stage 4 breast cancer accounting for 23.7% of all new female cancer patients.[3] The statistics from Chonburi Cancer Hospital also indicated that there were 684 new breast cancer patients accounting for 24.2% of all new female cancer patients. Moreover, 170 people were in stage 3 breast cancer accounting for 24.9%, and 56 people were in stage 4 breast cancer, accounting for 8.2% of all new breast cancer patients.[4]

A variety of treatments have been used to treat patients with stage 3 and stage 4 of breast cancer, such as radiation, chemotherapy, targeted drugs and hormone therapy to reduce the spread of cancer cells and increase patients' survival. Treatments of breast cancer patients also cause side effects such as fatigue, anxiety, loss of appetite, dry mouth, insomnia, and bone marrow suppression.[5] In addition, cancer is a chronic disease that requires treatment over a long period of time. It affects the physical, mental, social, and spiritual aspects of patients,[6] resulting in feelings of despondency and hopelessness. The severity of the symptoms caused by the disease may also have an impact on the patients' spiritual well-being.

Palliative care is a form of care that aims to help people with life-threatening diseases or conditions and their families to have a good quality of life by preventing and alleviating physical, mental, social and spiritual sufferings.[7] It is apparent that approximately 56.8 million patients require palliative care each year. Most of them live in low- or middle-income countries.[1] Patients who enter the terminal stage of life often express their spiritual suffering in the form of lack of hope, love, faith, encouragement, and inner strength, not daring to face problems and not having life goals.[8.] Therefore, it is necessary to care for terminally ill patients with breast cancer and their families so that they can face the terminal stage of life without fear and worry, accept the illness, receive care with human dignity, be able to live for the remaining time with a good quality of life, have encouragement and inner strength, live a valuable and meaningful life, do what they want to do during the last part of life,[9] be able to live a normal life, have spiritual well-being and die peacefully, and their families will not suffer from the loss.[10]

According to Paloutzian and Ellison (1982), spiritual well–being of terminally ill patients with breast cancer is the inner feeling of individuals recognizing beliefs, faith, and spiritual anchors, making them have encouragement and inner strength, able to face problems and live a normal life with life goals.[11] Spiritual well-being is connected to the supernatural or God and faith in religion, making cancer patients more confident, conscious, focused, calm, recognize their self-worth, and able to interact well with others. It is obvious that spiritual well-being is important among terminally ill patients with breast cancer. Since cancer causes patients to experience spiritual distress, when entering the terminal stage, they have more perceived severity of the disease, causing loss of hope and optimism. The severity of the disease also significantly decreases perceived spiritual well-being among cancer patients.

Previous studies on the factors related to spiritual well-being among terminally ill cancer patients revealed that perceived severity of the disease was negatively related to spiritual well-being of terminally ill patients with cancer and chronic diseases. Social support and religious practice were significantly and positively associated with spiritual well-being among terminally ill cancer patients.[12] Perceived severity of the disease, religious practice and social support were significantly and positively related to spiritual needs among palliative cancer patients.[13] From the literature review, studies on spiritual well-being among chronically ill and terminally ill patients, elderly cancer patients and caregivers of cancer patients were conducted. However, no studies have been found on spiritual well-being among terminally ill patients with breast cancer. Spiritual well-being of patients with different diseases is different according to their beliefs and culture. Therefore, the selected factors that might predict the spiritual well-being among terminally ill patients with breast cancer, namely perceived severity of the disease, hope, optimism and social support were studied.

Perceived severity of the disease is the patient's understanding of the seriousness of the situation caused by the illness and disease severity levels that threaten and cause difficulty in living life. As the severity of the disease increases, it will have a greater impact on the spiritual well-being of terminally ill patients with breast cancer.[14.] Therefore, perceived severity of the disease is a factor that influences the spiritual well-being of terminally ill patients with breast cancer. Hope of terminally ill patients with breast cancer is a feeling within a person's mind whether the prognosis is good or not. Cancer patients with high levels of hope show better stress tolerance than hopeless patients and have confidence that they will be able to overcome the situation they are currently facing.[15,16] Based on Seligman (1990), optimism can enhance emotional and mental adjustment, making it possible for people to recover from bad events and start a new life again.[17] As a result, terminally ill patients with breast cancer with good mental and emotional health will have spiritual well-being. According to Schaefer and colleagues (1981), social support is the recognition of receiving emotional, informational, and instrumental support.[18] Breast cancer patients receiving good social support, love, care and help in terms of health and

finance will have trust and feel self-worth. Therefore, it may affect their spiritual well-being.

According to the literature review, it can be seen that the study on the predictive power of the internal stimulating factors, namely perceived severity of the disease, hope, and optimism and the external stimulating factor, which is social support, on spiritual well-being among terminally ill patients with breast cancer during treatment has not been conducted. Therefore, the researcher was interested in studying the factors predicting spiritual well-being among terminally ill patients with breast cancer undergoing treatment at Chonburi Cancer Hospital, including perceived severity of the disease, hope, optimism and social support. Since Chonburi Cancer Hospital is a tertiary cancer hospital that provides treatment for cancer patients in 8 provinces in the eastern region of Thailand, most breast cancer patients receiving treatment are in the extensive stage. The results from this research will enhance nurses with the knowledge and understanding of the factors affecting the spiritual well-being of terminally ill patients with breast cancer and can be used as basic information to plan appropriate care for terminally ill patients with breast cancer and develop models or programs to enhance the spiritual well-being of these patients. Specifically, this present study aimed to determine spiritual well-being and its predicting factors including perceived severity of the disease, hope, optimism and social support among terminally ill patients with breast cancer.

Regarding conceptual framework, the theory of spiritual well-being of Paloutzian and Ellison (1982) was employed in this research.[11] Paloutzian and Ellison stated that spiritual well-being is a feeling of inner strength of a person resulting from the relationship with other people, God or supernatural power that helps a person to live a normal life, have life goals and find happiness and the meaning of life. Spiritual well-being consists of two components. The existential well-being is a sense of purpose and direction, affecting a person's feelings and giving a person hope as well as accepting the changes and being satisfied and happy with own life. The religious well-being is a close relationship with God or sacred things that one believes in. It shapes life and creates culture and social expression. It determines the value of a person in society and helps promote a person's confidence in overcoming obstacles.

In this research, the existential well-being, including perceived severity of the disease, hope, and social support and the religious well-being, namely optimism were the selected factors that may independently predict spiritual well-being among terminally ill patients with breast cancer (Figure 1).

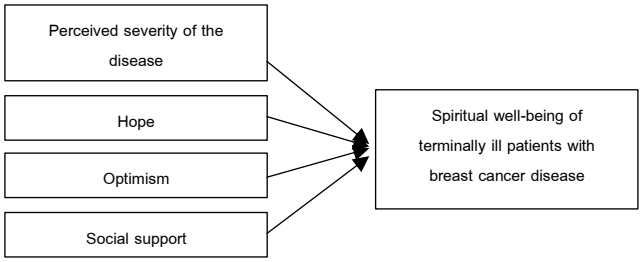

Figure 1 Conceptual framework.

Methods

In this predictive correlation research, the study population was breast cancer patients diagnosed by cancer specialists as patients with stage 3 and stage 4 breast cancer, receiving treatment at the Radiotherapy Outpatient Department and the Chemotherapy Outpatient Department at Chonburi Cancer Hospital. The sample was selected by simple random sampling without replacement. To be eligible, the individuals had to be female breast cancer patients diagnosed by cancer specialists as patients with stage 3 and stage 4 breast cancer, be 18 years old or over, have good consciousness and being able to communicate well in Thai and have normal vital signs. The exclusion criteria included breast cancer patients having complications during data collection, such as shortness of breath, severe pain, nausea, vomiting, and weakness on the day of data collection.

The sample size was calculated using the software program G*Power analysis. The power analysis was performed according to multiple regression statistics. With a moderate effect size (i.e., 0.15), a type I error of 5%, and a power of 80%, a total of 85 participants were needed.[19] To compensate for a potential 10% incomplete data collected, a total of 94 participants were recruited.[20]

Research instruments

The questionnaire was used to collect demographic and clinical characteristics including age, education level, family income (baht/month), marital status, occupation, medical treatment rights, caregivers, underlying diseases, types of surgery in the past year, organs where the disease has spread, date of diagnosis, current treatment and all given treatments.

Perceived severity of illness was assessed using the questionnaire developed by Noipiang.[21] The questions include perceived disease severity covering physical, mental, social, and spiritual aspects. The questionnaire had a good content validity with a content valid index (CVI) of 0.90. Internal consistency reliability was found to be acceptable with a Cronbach's alpha coefficient of 0.82.[21] In this research, internal consistency reliability was also acceptable (Cronbach's alpha coefficient of 0.89). There are 18 questions specifically 3 negatively worded questions (items 9,14, and 17), and 15 positively worded questions (items 1 – 8, 10 – 13, 15, 16, 18 and 19). The response was on a 5-point rating scale ranging from 1 (strongly disagree) to 5 (strongly agree). The scores of negatively worded questions were reversed before summing up. With the possible total score of 18 - 90 points, perceived severity was categorized as low, moderate and high (18 – 41, 42 – 65, and 66 - 90 points, respectively).

Hope was evaluated using the Herth Hope Index of Herth (1992):[22] It was translated into Thai by back translation by Wattanabenjasopa (2000). The scale had an acceptable content validity (CVI of 0.81) and an acceptable internal consistency reliability (Cronbach's alpha coefficient of 0.82). In this present research, an acceptable internal consistency reliability was found (Cronbach's alpha coefficient of 0.82). The scale had 12 questions specifically 2 negatively worded questions (items 3 and 6), and 10 positively worded ones (items 1, 2, 4, 5, and - 12). The response was a 4-point rating scale ranging from 1 (strongly disagree) to 4 (strongly agree). The scores of negatively worded questions are reversed before summing up. With the possible total score of 12 - 48 points, levels of hope were categorized as low, moderate and high (12.00 - 24.59, 24.60 - 36.59, and 36.60 - 48.00 points, respectively).

Optimism scale was developed as guided by the Optimism Test of Seligman (1990):[17] The Thai scale was developed by Saenpunya (2010).[24] Content validity was acceptable (CVI of 0.81) and internal consistency reliability was also acceptable (Cronbach's alpha coefficient of 0.72).[24] In this present research, internal consistency reliability was good (Cronbach's alpha coefficient of 0.83). There were 15 questions specifically 4 negatively worded questions (items 4, 10, 14 and 15), and 11 positively worded ones (items 1, 2, 3, 5 - 9, and 11 - 13). The response was a 4-point rating scale ranging from 1 (absolutely not true) to 4 (absolutely true). The scores of negatively worded questions were reversed before summing up. With the possible total scores of 15 - 60 points, levels of optimism were categorized as low, moderate and high (15.00 - 30.00, 30.01 - 45.00, and 45.01 - 60.00 points, respectively).

Social support was assessed using the scale based on the Social Support Questionnaire of Schaefer et al (1981):[18.] This scale was translated into Thai by Lueboonthawatchai (2006).[25] It was used among 300 breast cancer patients. Internal consistency reliability was acceptable for thedomains of emotional support, informational support and instrumental support (Cronbach's alpha coefficients of 0.91, 0.88, and 0.87, respectively).[25] In this present research, the overall reliability was acceptable (Cronbach's alpha coefficient of 0.84). It consisted of 16 positively worded questions. The response was a 5-point rating scale ranging from 1 (least social support), to 5 (most social support). With the possible total scores of 16 – 80 points, levels of social support were categorized as high, moderate and low (mean + SD, mean – SD to mean + SD, and mean – SD, respectively).

Lastly, spiritual well-being was measured using the Spiritual Well-Being Scale originally developed by Paloutzian and Ellison (1982)[11] and translated and adapted to Thai by Noipiang (2002).[21] It had a good content validity (CVI of 0.86) and acceptable internal consistency reliability (Cronbach's alpha coefficient of 0.81).[21] In this present research, the reliability was also acceptable (Cronbach's alpha coefficient of 0.83). There were 20 questions specifically 9 negatively worded questions (items 1, 2, 5, 6, 9, 12, 13, 16 and 18), and 11 positively worded ones (items, 4, 7, 8, 10, 11, 14, 15, 17, 19 and 20). The response was a 6-point rating scale ranging from 1 (strongly disagree) to 6 (strongly agree). The scores of negatively worded questions were reversed before summing up. With the possible total scores of 20 - 120 points, levels of spiritual well-being were categorized as low, moderate and high (20 – 40, 41 – 99, and 100 - 120 points, respectively).

Protection of the participants' rights

This research obtained ethical approval from the Human Research Ethics Committee, Research and Innovation Administration Division, Research Standards and Ethics, Burapha University (approval number: IRB3-115/2021; approval date: November 26, 2021) and the Human Research Ethics Committee of Chonburi Cancer Hospital (approval number: 018/2021; approval date: January 13, 2022). The researcher strictly conducted every step of the research in accordance with the principles of research ethics.

Data collection procedure

Upon participant ethical protection was approved, the researcher approached the Chonburi Cancer Hospital for data collection. The Deputy Director of Nursing, the Head of the Nursing Academic Department, the Head of the Outpatient Nursing Department, the Head of Radiotherapy Department and the Head of Chemotherapy Department were approached for assistance. The researcher randomly selected prospective participants who came for an appointment from Monday to Friday, 8:00 a.m. - 4:00 p.m. The participants were selected from the medical records according to the inclusion criteria. Simple random sampling was done on the patient's hospital number. The prospective participants were approached and provided with study objectives, process, and anonymity and voluntary nature of the study. They could deny participation and withdraw from the study at any time with no negative consequences on health care services. Written informed consent was obtained. The data were collected by the researcher while the patients were waiting for medical examination in a private area. The questionnaire took about 40 minutes to complete.

Data analysis

Descriptive statistics including mean with standard deviation and frequency with percentage were used to summarize demographic and clinical characteristics and study variables. The association between spiritual well-being with independent variables were tested using stepwise multiple regression analysis. The assumptions of multicollinearity, linearity, normal distribution, homoscedasticity, and autocorrelation for multiple regression analysis were met. Statistical significance was set at a type I error of 5%. All statistical analyses were performed using the software program SPSS version 20.

Results

Of the 94 participants, the majority were in their 41 - 50 years of age (40.40%) with the average age of 51.06 ± 10.60 years old Their education level was grades 1 – 6 (30.90%). The monthly family income was mostly between 10,001 - 30,000 baht (56.30%). The income was sufficient for family expenses (69.10%). Most of them were married (75.63%). They mostly had the right to medical treatment according to social security (54.22%). They also had underlying diseases (26.60%). The majority had high blood pressure (58.00%). During the past year, they mostly had undergone surgery (68.10%), most of which had total mastectomy (86.53%). The lungs were the most common organ for the cancer to spread to (50.41%). They were mostly cared by the husband (44.75%). Most of them were company employees (42.55%). The duration of the illness was in the range of 0 - 6 months (39.41%). All treatments received were radiotherapy, chemotherapy and surgery (36.17%). As for current treatment, radiotherapy was found among 69 participants (73.40%). Moreover, 76 participants (80.85%) had stage 4 breast cancer.

The overall spiritual well-being was 81.37 ± 13.57 points by average, which was at a moderate level. While religious well-being was at a moderate level (mean = 42.04 ± 7.48 points), existential well-being was at a low level (mean = 39.33 ± 6.59 points) (Table 1).

Table 1 Levels of spiritual well-being (N = 94).

Variables	Actual range	Possible range	Mean	*SD*	Level
Spiritual well-being	67 - 119	20 - 120	81.37	13.57	Moderate
- Religious well-being	12 - 54	10 - 60	42.04	7.48	Moderate
- Existential well-being	12 - 40	10 - 60	39.33	6.59	Low

Most predicting factors were at a moderate level, except hope which was at a high level (Table 2).

Table 2 Scores of predicting factors (N = 94).

Factors	Range		Mean	SD	Levels
	Actual	Possible			
Perceived severity of the disease	36 - 90	18 - 90	58.80	10.35	Moderate
Hope	27 - 48	12 - 48	37.07	4.97	High
Optimism	27 - 58	15 - 60	41.81	6.60	Moderate
Social support	41 - 80	16 - 80	61.60	9.66	Moderate

All three predictive factors could significantly jointly explani55.10% of the variance of spiritual well-being % (R^2 = 0.551, P-value < 0.001). Perceived severity of the disease was the most predictive factor of spiritual well-being among terminally ill patients with breast cancer (β = -0.655, P-value < 0.001), followed by hope (β = .387, P-value < 0.001) and social support (β = 0.249, P-value < 0.001) (Table 3).

Table 3 Factors predicting spiritual well-being by multiple linear regression (N = 94).

Factors	*b*	*S.E.(b)*	β	*t*	P-value
Constant	65.054	9.449		6.885	< 0.001
Hope	1.234	0.282	0.387	4.374	< 0.001
Perceived severity of the disease	-0.859	0.104	-0.655	-8.224	< 0.001
Social support	0.350	0.137	0.249	2.561	0.012

R^2 = 0.551, adjusted R^2 = 0.536, $F_{3,93}$ = 36.745, P-value < 0.001.

Discussions and Conclusion

This study found that spiritual well-being among Thai terminally ill patients with breast cancer was at a moderate level (mean = 81.37 ± 13.57 out of 120 points). This finding is different from a previous study which found that the spiritual well-being of head and neck cancer patients was at a high level.[27] A study by Arsanok et at. (2022) [28] also revealed that the spiritual well-being of older patients with advanced cancer was at a high level. The fact that the participants in this study had a moderate level of spiritual well-being can be explained by many factors, namely the specific characteristics of the disease, the differences in the use of assessments, and other characteristics of the participants such as the data collection site and social and economic conditions.

The participants in this study were terminally ill patients with breast cancer whose cancer had spread to various organs. The lungs were the most common organ for the cancer to spread to (50.41%) causing the patients to have difficulty breathing, chest tightness and coughing. These may be caused by air or fluid in the pleural space. As a result, the participants perceived more about the severity of their illness causing physical suffering. Psychologically, the illness may cause the participants to experience anxiety and depression.

In terms of social aspect, it can affect the participants' work because they mostly were between 41 - 50 years old which is in a working adulthood. It is an age where one has responsibilities regarding work and family. Decreased ability to care for the family when being in the terminal stage of the disease may cause the participants to perceive the disease severity more. The disease not responding to treatment can also cause hopeless for treatment, resulting in not having the life goals and spiritual oppression. These can affect the spiritual well-being of the participants.

According to Paloutzian and Ellison (1982), spiritual well-being consists of 2 components namely the existential and religious well–being.[11] In this study, the participants' mean score of existential well- being was 39.33 points. The majority of the participants were in stage 4 breast cancer (80.85%). Most of them were company employees (42.55%). Based on the questionnaire, the participants were still able to work, but they were moved to work in the department not requiring specific abilities. This may decrease their self-esteem and result in a low level of existential well-being. For the religious well-being, the participants' mean score was 42.04 points. As all participants were Buddhists (100%), they have faith in Buddhism and apply religious doctrines to life. It is a mental anchor, expressed through practicing Dharma, praying to the Buddha to help calm the mind. Even though they had physical illness, religion can help them to have a calm mind and not be distracted. Also, following the Buddha's teachings is the path to true peace in life and can result in spiritual well-being.

For the factors predicting spiritual well-being among terminally ill patients with breast cancer, perceived severity of the disease, hope, and social support could together predict spiritual well-being by 55.1% (R^2 = 0.551, P-value < 0.001). Perceived severity of the disease was the most predictive factor of the participants' spiritual well-being (β = -0.655, P-value < 0.001). This indicates that the participants with high perceived severity of the disease had low spiritual well-being. It was also found that most of the participants had stage 4 breast cancer (80.85%), spreading to other organs, resulting in decreased self-help skills. The more symptoms the patients have, the more they suffer from the disease. The more the patients perceive severity of the disease, the lower perceived spiritual well-being. When the patients become bored, discouraged, hopeless, and afraid of pain and death, the more spiritual suffering is caused. As a result, the participants' life goals have changed and spiritual suffering arises, resulting in a decrease in spiritual well-being.[29] This is consistent with a study by Nimu et al which found that perceived severity of the disease was negatively related to spiritual well-being among Muslim patients with chronic diseases.[30]

Hope was the second variable that can predict spiritual well-being among terminally ill patients with breast cancer (β = 0.387, P-value < 0.001). The participants' hope was at a high level. Based on Herth's theory of hope, even the participants are terminally ill patients with breast cancer, they still have a sense of self-worth.[22] This may be because the participants still had the potential to pursue a career and had friends at work, received love and care from family members and spouses who were their sources of encouragement and helped them not feel lonely. They also had encouragement to live life to fight against the illness. They also had happy times even though the disease was spreading more. There were things that the participants had faith in and respects, helping them to have hope and a positive attitude in adapting themselves to the illness. It also helped them understand the meaning of life and have good morale and inner strength. As a result, they could adapt themselves and accept the illness

they were facing.[31] Satisfaction with life is important for terminally ill patients with breast cancer. The results of this study are consistent with a study by Forouzi et al which found that the spiritual needs of the patients with cancer in terms of hope were at a high level.[32] It is obvious that hope can cause the patients' spiritual well-being. This is different from the study of Chaoayachai which revealed that hope showed a positively significant relationship with psychological well-being at a high level.[33] A study by Nierop-van Baalen also showed that hope was positively related to spiritual well-being.[34] However, if patients are hopeless, they will be discouraged, resulting in spiritual suffering. Hope is, therefore, important in promoting the spiritual well-being of the participants.

2.3 Social support was the third variable to predict the participants' spiritual well-being ($\beta = 0.292$, P-value < 0.001). This indicates that social support in terms of emotional, informational and instrumental support according to Schaefer et al can help the participants to understand their self-worth, affecting the perception of spiritual well-being.[18] It is because social support will help the participants to receive physical and mental care from family members and medical personnel and co-workers who are important sources of social support. Because most of the participants were of working age and married, there was someone in the family to take care of them when they were sick, such as their husband, parents, and siblings, making the participants aware of their concerns. They could also receive help from family for necessary expenses such as travel expenses to see the doctor, accommodation expenses during radiotherapy or chemotherapy. They also had people to trust and discuss their own illnesses and received information about the symptoms and the progress of illness from doctors and advice on hygiene practices from nurses. A joint care plan has also been developed by the health team and family regarding home care. For these reasons, social support is an important factor that may help enhance spiritual well-being among terminally ill patients with breast cancer. This is consistent with the study of Arsanok et al wich found that social support had a significant effect on the spiritual well-being of elderly people with advanced cancer at the 0.05 level.[28] A study by Chaiyasit also revealed that social support was positively related to spiritual well-being among people living with HIV/AIDS ($r = 0.57$, P-value < 0.001).[35]

This study found that optimism did not significantly predict spiritual well-being among terminally ill patients with breast cancer. As the participants in this study were the terminally ill patients with breast cancer spreading to other distant organs such as the bones, lungs, brain, and liver, it may cause a decrease in the patients' ability to perform daily activities and disturbing symptoms from illness. This could result in both physical and mental discomfort and suffering. There could also be side effects from treatment such as nausea, vomiting and fatigue. Moreover, it is believed that cancer is a disease that causes death, so the patients are hopeless for a cure. Therefore, it may result in a decrease in the participants' optimism. The results of this study are not consistent with a study by Chaoayachai et al which found that optimism showed a positively significant relationship with psychological well-being of older patients with cancer receiving chemotherapy ($r = 0.423$, P-value < 0.01).[33]

This present study has certain limitations. In addition to terminally ill patients with breast cancer, further studies should investigate the spiritual well-being of other groups of patients, such as patients with other types of cancer or other chronic diseases receiving treatment in hospitals and out-of-hospital settings. This could broaden generalization to wider society and culture.

Based on study findings and conduct, it could be recommended that in nursing practice, nurses or health personnel can use the research results to develop the model for promoting spiritual well-being among terminally ill patients with breast cancer by organizing activities to promote social support and hope and providing information about patients' diseases. The patients can understand the actual disease progression. The spiritual well-being of terminally ill patients with breast cancer undergoing treatment should also be assessed. Nursing education institutions can use this research data as information for teaching. Researchers can use the results of this research as basic information for researching and developing the model for caring for terminally ill patients with breast cancer to promote hope and social support and providing information on perceived disease severity. Further research should be conducted among patients with stage 1 and 2 breast cancer, so the results of the research on spiritual well-being can be applied to patients with other stages of breast cancer. Models or programs should be studied and developed to help enhance spiritual well-being among terminally ill patients with breast cancer using data from this study, including perceived severity of the disease, hope and social support.

In conclusion, perceived severity of the disease, hope, and social support can jointly predict spiritual well-being among terminally ill patients with breast cancer. The research results will help health personnel to realize the importance of promoting hope and social support by allowing families to participate in care while the patients face their illness. In addition, encouraging patients to perceive the disease severity in a positive way will help promote spiritual well-being among terminally ill patients with breast cancer.

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