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Comparing relationship between spiritual well-being and death anxiety among women with breast and cervical cancers and women with gastric and colorectal cancers

Nasrin Nezami, Forouzandeh Dashti¹, Leyla Alilu², Shiva Heidari³

Department of Medical Surgical Nursing, Faculty of Nursing and Midwifery, Islamic Azad University, Isfahan (Khorasgan) Branch, Isfahan, Iran, ¹Department of Midwifery, Faculty of Nursing and Midwifery, Islamic Azad University, Isfahan (Khorasgan) Branch, Isfahan, Iran, ²Department of Medical Surgical Nursing, Faculty of Nursing and Midwifery, Urmia University of Medical Sciences, Urmia Branch, Urmia, Iran, ³Department of Medical Surgical Nursing, Faculty of Nursing and Midwifery, Islamic Azad University, Urmia Branch, Urmia, Iran

Address for correspondence:

Dr. Leyla Alilu,
Department of Medical Surgical Nursing, Faculty of Nursing and Midwifery, Urmia University of Medical Sciences, Urmia, Iran.
E-mail: Alilu@umsu.ac.ir

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Abstract:

BACKGROUND: Death anxiety is one of the most common problems among women with cancer, which can affect the useful treatment process. With regard to the superior role of spiritual well-being over other aspects of health, the present study is aimed to compare the relationship between spiritual well-being and death anxiety among women with breast and cervical cancers and women with gastric and colorectal cancers.

METHODOLOGY: This was a descriptive–correlational study. Research statistical population included Iranian women with cancer at major hospitals in Isfahan, Iran. 160 research samples were selected through convenience sampling method based on inclusion criteria using a demographic questionnaire, spiritual well-being scale (Paloutzian *et al.*) and death anxiety scale (Templer). Research data were analyzed through SPSS 22 using independent *t*-test, Pearson’s correlation, and analysis of variance at significance level 0.05.

RESULTS: The study findings indicated a significant inverse relationship between death anxiety and spiritual well-being (at 0.05) in both groups. As a result, people with higher spiritual well-being would experience less anxiety about death. In addition, the relationship between death anxiety and spiritual well-being in women with gastric and colorectal cancers was stronger than those with breast and cervical cancers.

CONCLUSION: Spiritual well-being is of effective factors of death anxiety among women suffering from cancer. Spirituality and meeting spiritual needs are considered as nursing care priorities for these women. Furthermore, paying attention to the spirituality by nurses may shield against individual difficulties.

Keywords:

Anxiety, cancer, death, spirituality

Introduction

Cancer is the second leading cause of death next to the cardiovascular diseases in developed countries, the fourth leading cause of death in developing countries, and the third leading cause of death in Iran; so that, out of every four persons, one person will be afflicted by

cancer during life.^[1] Cancer often occurs in soft and porous organs (such as breast) and muscular organs (such as cervix); therefore, it is more prevalent among women than men.^[2] Since breast is strongly related with femininity identity, sense of womanhood, sexuality, physical and sexual attractiveness, parenting, and motherhood,^[3] diagnosis and treatment of breast cancer is a considerable

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stressful factor, which is associated with numerous psychological disturbances and negative physical consequences.^[4] Furthermore, cervical cancer is the second common cancer among women worldwide, so that more than 490,000 cases of cervical cancer are annually reported throughout the world.^[5]

Accordingly, gastrointestinal cancers are considered as the most common type of cancer among Iranian men and the second most common type of cancer next to breast cancer among Iranian women.^[6] Gastric cancer is known as “captain of death” throughout the world due to its poor prognosis and high mortality;^[7] furthermore, colorectal cancer, in terms of incidence rate, is the third and fourth leading cancer among Iranian men and women, respectively.^[8] Majority of the patients with colorectal cancer survive at least 5 years after the diagnosis, so that the reduced mortality rate of this cancer has led to the increased survival rate; therefore, the patients who survive from colorectal cancer experience physical and psychological consequences, which will affect their abilities and daily lives.^[9]

In this regard, cancer is regarded as acrippler and incurable disease within the society; thus, subsequent to the diagnosis, the person suffers from anxiety and depression resulting from an unreal fear of death and reduced social energy.^[10] Death anxiety is a multidimensional structure constituted of fear, anticipatory anxiety, and awareness of the reality of death and dying, which embraces motivational, cognitive, and emotional components that are changed by growth (development) stages as well as events of sociocultural life.^[11] One of the factors affecting the incidence of death anxiety is the gender. Results of some of the studies show that the elderly women experience higher death anxiety compared to the elderly men.^[12]

Spiritual well-being is one of the human health aspects, which is considered along with the physical, psychological, and social aspects, promotes the general health, coordinates other health aspects, and thereby increases the psychological compatibility and functionality.^[13] The spiritual well-being is constituted of two components, namely religious well-being, which is an indication of a connection with a superior power that is God, and existential well-being, which is a sociopsychological element as well as a sign of the person’s feelings indicating who he is (identity), what he does (duty), why he does it (reasons), and where he belongs to (origin). The religious well-being aspect leads us toward God, while the existential well-being aspect leads us beyond ourselves and toward others and surrounding environment.^[14]

Since the experience and report of death anxiety can differ depending on the patient’s gender, due to the fact that the cultural backgrounds and religious beliefs of the Iranian patients with chronic diseases such as cancer about death and afterlife are different from other societies,^[12] and regarding the effect of death anxiety on cancer progression, the present research is considered as national research priorities. Regarding the importance of considering spiritual requirements in women with cancer and inconsistent results of prior literature, and regarding that, no similar studies have been so far carried out in Iran, it is necessary to study the issue. Therefore, according to the gaps of studies conducted on the role of spiritual well-being factors in death anxiety among women enduring breast and cervical cancer and women with gastric and colorectal cancer, scholars have intended to light shed on this issue. Moreover, given the significant role of nursing in caring cancer patients, different spirituality attitudes, and cultural differences with other nations, and regarding the significance of this issue in enhanced nursing care quality for patients with cancer and reducing the death anxiety, this research has been carried out to study the correlation between spiritual well-being and death anxiety among women suffering from breast and cervical cancer and women with gastric and colorectal cancer at selected hospitals of Isfahan in 2017.

Methodology

The present cross-sectional, descriptive–correlational study was conducted on a sample population including all the women with breast, cervical, gastric, and colorectal cancers referring to the Blood and Oncology Department of Milad Hospital, Alzahra Specialized Clinic, and Oncology Specialists Clinic in Isfahan (from February 20, 2016 to July 22, 2017). The sample size included 160 subjects selected via convenience sampling method. The sample size was calculated equal to 80 subjects in each experimental group for a two-way test at significance level of 5% ($\alpha = 0.05$) and test power of 90% ($\beta = 0.1$) in order to detect a difference of 0.5 standard deviation ($\delta = 0.5$) according to the following formula.

$$n = \frac{2\sigma^2 (z_{1-\alpha/2} + z_{1-\beta})^2}{\delta^2}$$

The inclusion criteria included the approval of cancer in accordance with the oncologist’s opinion, at least 18 years of age, willingness for cooperation, reading and writing ability, at least 6 months of diagnosis, awareness of the disease type, and appropriate consciousness for answering the questions. On the other hand, the exclusion criteria included the patients with a history of known psychiatric disorders and the patient’s sickening when answering the questions.

The first part of the questionnaire included questions on the patients' demographic information (age, marital status, educational level, job, and income), while the second part included the Paloutzian *et al.* spiritual well-being questionnaires as well as Templer Death Anxiety questionnaire.

The Death Anxiety Scale is a self-administered questionnaire of 15 items with dichotomous responses (true/false). Nine of the 15 items are scored on the true option and six on the false. Total scores range from zero, for the lowest scores on death anxiety, to 15, for the highest. Patients were classified into three levels of mild anxiety (0-6), moderate (7-9), and severe (10-15) according to the score obtained.^[15] In Aghajani *et al.*'s study,^[16] the internal reliability measurement method was used to assess the reliability of this scale, where the correlation coefficient of 0.86 was obtained. The scale's internal consistency in the Tomás-Sábado and Gómez-Benito study^[17] estimated by the Cronbach coefficient alpha, was 0.73. Sixty-four subjects repeated the Death Anxiety Scale 3 week after it was first administered, and a test-retest correlation of 0.87 was obtained.

The spiritual well-being questionnaire included 20 statements. The scale is divided into two groups: religious health and existential health, each of which contains 10 phrases and it gets a 10–60 scores. The answers of which were designed as a 6-point Likert scale (completely disagree to completely agree). The spiritual well-being score is the sum of the scores of these two subgroups ranging between 20 and 120. In questions 3, 4, 7, 8, 10, 11, 14, 15, 17, 19, and 20, the score of 1 was assigned to "completely disagree," and in the questions 1, 2, 5, 6, 9, 12, 13, 16, and 18, the score of 6 was assigned to "totally disagree." In this scale, spiritual well-being of the subjects was classified into three groups of low (20–40), moderate (41–99), and high (100–120).^[18] In Baljani *et al.*'s study,^[19] the validity of the spiritual well-being questionnaire was confirmed by content validity after translating to Persian. Its reliability has been reported equal to 0.88 using Cronbach's alpha.

In other study, Cronbach's alpha, as a measure of consistency, was 0.89 for the Spiritual Well-Being Scale (SWBS). For the domains of the SWBS, the consistency was 0.84 and 0.81 for the existential well-being (EWB) and religious wellbeing (RWB), respectively. The ICC was 0.94 for the SWBS. For Content validity, Confirmatory factor analysis was performed using LISREL, Statistics for the SWBS were goodness of fit index ($\chi^2 = 103.36$, $P = 0.0081$) and root mean square error of approximation of 0.0047.^[20]

In order for data analysis, the descriptive statistical methods (frequency, mean, and standard deviation)

and analytical methods (Shapiro–Wilk test, parametric including independent *t*-test, one-way analysis of variance (ANOVA), and multivariate ANOVA, and nonparametric tests including Mann–Whitney and Kruskal–Wallis tests) were used. The level of statistical significance was set at $P < 0.05$ for all the tests. Then, the data were analyzed using the IBM SPSS Statistics for Windows, version 22 (IBM Corp., Armonk, NY, USA).

Once the permission has been obtained from Islamic Azad University Isfahan (Najafabad Branch) (IR.IAU.NAJAFABAD.REC.1396.55), the researcher visited understudied hospitals and selected the patients qualifying inclusion criteria according to the medical records. The researcher visited the oncology ward of the hospital on different days and hours of the week (in the morning, evening, and night shifts) in order to increase the number of participants. The researcher introduced himself to the patients, described the objectives of the study to the patients, anonymity, voluntary participation, and privacy of their information; and those who were willing to participate were entered after signing informed consent form. Then, the patients were given a questionnaire and answering the possible questions. At the request of the participants, they could withdraw from the study.

Results

In this study, a total of 160 women with breast, cervical, gastric, and colorectal cancers aged 41–60-years old participated in the study, 52.5% of whom had breast and cervical cancers, and 53.8% had gastric and colorectal cancers. As for the marital status, 80% of the women with breast and cervical cancers and 81.3% of the women with gastric and colorectal cancers were married; furthermore, 55% of the women with breast and cervical cancers and 58.8% of the women with gastric and colorectal cancers had an educational level of below high school diploma. In terms of job, 78.8% of the women with breast and cervical cancers and 78.8% of the women with gastric and colorectal cancers were homemakers.

According to the results of the present study, the spiritual well-being was at a high level in 57.5% of the women of both groups, and the existential well-being was at a moderate level in 81.3% of the women with breast and cervical cancers and 72.5% of the women with gastric and colorectal cancers. In general, the spiritual well-being was at a moderate level in 58.8% of the women with breast and cervical cancers and in 62.5% of the women with gastric and colorectal cancers. According to results of the study, the death anxiety rate was at a moderate level in 78.8% of the women with breast and cervical cancers and 58.8% of the women with gastric and colorectal cancers [Table 1].

Findings showed that the death anxiety scores in women with gynecological cancers (women’s cancers) and women with gastric and colorectal cancers were in the range of 26–64 with a mean of 47.20 ± 8.30 and 19–63 with a mean of 44.19 ± 10.41 , respectively. Results of the independent *t*-test indicated a significant difference between the mean scores of death anxiety between the women in the two groups ($P < 0.05$); besides, the mean scores of death anxiety in women with gynecological cancers were significantly higher than those in women with general cancer [Table 2].

Findings of the present study indicated that the religious well-being scores had a mean of 51.10 ± 7.15 and 50.45 ± 7.67 in women with gynecological cancers and women with gastric and colorectal cancers, respectively. The existential well-being scores in women with female cancers and women with gastric and colorectal cancers had a mean of 42.91 ± 8.27 and 41.64 ± 10.65 , respectively. Furthermore, the spiritual well-being had a mean of 94.01 ± 13.91 in women with gynecological cancers and 92.09 ± 16.76 in women with gastric and colorectal cancers. The multivariate ANOVA showed no significant difference between the mean scores of religious well-being, existential well-being, and spiritual well-being variables in women with gynecological and general cancers ($P < 0.05$) [Table 3].

Pearson’s correlation coefficient showed a reverse and significant relationship between the scores of death anxiety and spiritual well-being ($r = -0.377, P < 0.05$), death anxiety and religious well-being ($r = -0.370, P < 0.05$), and death anxiety and existential well-being

($r = -0.314, P < 0.05$) among women with breast and cervical cancers, so that increase in the religious and existential well-being, and spiritual well-being in general, in women of this group led to a significant reduction in death anxiety. Among the women with gastric and colorectal cancers, there was also a reverse and significant relationship between the scores of death anxiety and spiritual well-being ($r = -0.530, P < 0.05$), death anxiety and religious well-being ($r = -0.376, P < 0.05$), and death anxiety and existential well-being ($r = -0.563, P < 0.05$); so that, increase in the religious and existential well-being, and spiritual well-being in general, in women of this group resulted in a significant reduction in the death anxiety [Table 4].

The Z-test results indicated no significant relationship between the correlation coefficient of religious well-being and death anxiety ($P > 0.05$) and existential well-being and death anxiety ($P > 0.05$) in the two groups of women with breast and cervical cancers and women with gastric and colorectal cancers. However, a significant difference was observed between the correlation coefficient of death anxiety and spiritual well-being scores ($P < 0.05$) in both groups. Furthermore, the relationship between death anxiety and spiritual well-being in women with gastric and colorectal cancers was stronger than that in women with breast and cervical cancers [Table 5].

Discussion

The results of the present study showed a high level of death anxiety among women with breast and cervical cancers; however, by reviewing the literature, the researcher found no research consistent with the findings of this study. The results of Aghabarari *et al.*'s study^[21] somehow support the findings of the present study, since, in that study, breast cancer was also considered as a horrific event for many of the women, so that it reported the feelings of grief, death anxiety, confusion, and anger as a natural reaction as well as psychological stresses due to the cancer diagnosis and relevant treatments in 70% of the patients. In a qualitative study, Gurm *et al.*^[22] concluded that the women with breast cancer were afflicted by mental pressure at diagnosis of their disease, believed that cancer is equivalent to death, and felt a sense of fear from imminent and definite death. In another study, Missel and Birkelund^[23] showed that diagnosis of cancer has led to disappointment and despair among the patients, so that they felt to be caught in an uncontrollable and difficult situation. The

Table 1: Frequency distribution of religious well-being, existential well-being, and spiritual well-being and death anxiety scores in women with cancer

| Variable | Category | Breast and cervical cancers, n (%) | Gastric and colorectal cancers, n (%) |
|------------------------|----------|------------------------------------|---------------------------------------|
| Religious well-being | Low | 0 | 0 |
| | Moderate | 34 (42.5) | 34 (42.5) |
| | High | 46 (57.5) | 46 (57.5) |
| Existential well-being | Low | 0 | 4 (5.0) |
| | Moderate | 65 (81.3) | 58 (72.5) |
| | High | 15 (18.8) | 18 (22.5) |
| Spiritual well-being | Low | 0 | 1 (1.3) |
| | Moderate | 47 (58.8) | 50 (62.5) |
| | High | 33 (41.3) | 29 (36.3) |
| Death anxiety | Mild | 9 (11.3) | 18 (22.5) |
| | Moderate | 63 (78.8) | 47 (58.8) |
| | Severe | 8 (10.0) | 15 (18.8) |

Table 2: Independent *t*-test for comparing means scores of death anxiety between the two groups of women

| Cancers | Minimum value | Maximum value | Mean | SD | Test statistics | Degrees of freedom | Significance level* |
|------------------------|---------------|---------------|-------|-------|-----------------|--------------------|---------------------|
| Breast and cervical | 26.00 | 64.00 | 47.20 | 8.30 | 2.023 | 150.6 | 0.045 |
| Gastric and colorectal | 19.00 | 63.00 | 44.19 | 10.41 | | | |

**P* value is significant ≤ 0.05 . SD=Standard deviation

Table 3: Multivariate analysis of variance of spiritual well-being in the two groups of patients

| Variables | Cancers | Minimum value | Maximum value | Mean | SD | Test statistics | Degrees of freedom | Significance level* |
|------------------------|------------------------|---------------|---------------|-------|-------|-----------------|--------------------|---------------------|
| Religious well-being | Breast and cervical | 29.00 | 60.00 | 51.10 | 7.15 | 0.355 | 2.157 | 0.701 |
| | Gastric and colorectal | 24.00 | 60.00 | 50.45 | 7.67 | | | |
| Existential well-being | Breast and cervical | 21.00 | 58.00 | 42.91 | 8.27 | | | |
| | Gastric and colorectal | 15.00 | 60.00 | 41.64 | 10.65 | | | |
| Spiritual well-being | Breast and cervical | 55.00 | 118.00 | 94.01 | 13.91 | | | |
| | Gastric and colorectal | 39.00 | 120.00 | 92.09 | 16.76 | | | |

*P value is significant ≤ 0.05 . SD=Standard deviation

Table 4: Pearson correlation coefficients

| Death anxiety | Spiritual well-being | Religious well-being | Existential well-being |
|--------------------------------|----------------------|----------------------|------------------------|
| Breast and cervical cancers | | | |
| <i>n</i> | 80 | 80 | 80 |
| <i>r</i> | -0.377 | -0.370 | -0.314 |
| <i>P</i> * | 0.001 | 0.001 | 0.005 |
| Gastric and colorectal cancers | | | |
| <i>n</i> | 80 | 80 | 80 |
| <i>r</i> | -0.530 | -0.376 | -0.563 |
| <i>P</i> * | <0.001 | 0.001 | <0.001 |

*P value is significant ≤ 0.05

above-mentioned studies are to some extent consistent with this finding of the present research.

In the present study, spiritual well-being was at moderate level. Religious wellbeing was high in 57.5% of women in both groups. Existential wellbeing was moderate in 81.3% of women with breast and cervical cancer, and 72.5% of women with gastric and colorectal cancer.

In this regard, no study that was consistent with the results of the present study was found; whereas, findings of the present study are partly consistent with those of some previous studies such as Moghimian and Salmani's study,^[24] which indicated that in order to maintain health and increase among the patients, the spiritual well-being must be highly regarded in nursing care of the life-threatening diseases such as cancer. The results of Kim study^[25] showed that the spiritual interventions would have considerable but moderate effects on spiritual well-being, meaning of life, and depression. They expressed that facilitating the awareness and spiritual needs might provide a valuable nursing intervention for patients with cancer.

Findings showed that the relationship between death anxiety and spiritual well-being in women with gastric and colorectal cancers was stronger than that in women with breast and cervical cancers. No study consistent with these findings was found; however, these findings are indirectly consistent with those of RezaieShahsavarloo *et al.*'s study,^[26] which showed that spiritual well-being and religious attitude have significant effect on satisfaction from life among patients

with cancer. Consistent with these findings, Askarizadeh *et al.*^[27] showed that attempting to promote the individuals' spiritual well-being and sensation-seeking can play an important role in reducing the death anxiety. In another study, Cooper^[28] showed that a priest, who had been trained on cancer, could improve the patient's distress, especially in relation with death anxiety, mental peace and health, and meaning of life. It seems that the experience and report of death anxiety can differ among the women with gynecological cancers such as breast and cervical cancers and those with other cancers in different societies depending on the demographic variables, cultural backgrounds, as well as religious beliefs.

The findings of this study are obtained with regard to some constraints, the most important of which was the inaccessibility of the similar studies, which made the comparison and evaluation of the findings very difficult. Besides, the physical and psychological conditions of the participants also affected the responses given to the questions while filling the questionnaire.

It is proposed to conduct such study longitudinally and with a larger sample size, because duration of the treatment affects the treatment outcome. Since death anxiety and spiritual well-being of the patients' family care-givers is also effective in different stages of diagnosis and treatment, it is proposed to conduct a study with the same title on family care-givers of these patients. Moreover, qualitative research is recommended in order to better understand the influence of spirituality on death anxiety. It is also recommended to introduce the concept of spiritual well-being as one of the most effective strategies to deal with death anxiety challenges to the students during theoretical and clinical training. On the other hand, it is necessary to consider programs to promote the spiritual well-being of these patients in order to deal with death anxiety challenges.

Conclusion

Findings of the present study indicate a high level of death anxiety among women with breast and cervical cancers; on the other hand, many studies express that the death anxiety would lead to important behavioral and emotional consequences in individuals, especially

Table 5: Comparing correlation coefficient of death anxiety and spiritual well-being between the two groups of women

| Correlation coefficient | Breast and cervical cancers | Gastric and colorectal cancers | Z statistics | Significance level* |
|--|-----------------------------|--------------------------------|--------------|---------------------|
| Death anxiety and religious well-being | -0.377 | -0.530 | 1.2 | 0.230 |
| Death anxiety and existential well-being | -0.370 | -0.376 | 0.04 | 0.968 |
| Death anxiety and spiritual well-being | -0.314 | -0.563 | 1.97 | 0.048 |

*P value is significant ≤ 0.05

the patients with cancer. Furthermore, the other finding of this research implies a moderate level of spiritual well-being in both groups of women with breast and cervical cancers and women with gastric and colorectal cancers, which reveals the necessity of consideration and development of a comprehensive care plan in order to reduce death anxiety among women with breast and cervical cancers. Considering the results, spiritual beliefs help patients to find meaning and purpose in life as a factor to deal with death anxiety challenges. In a society like Iran, paying attention to the tendency to look for a meaning in life is an easier and better way for multidimensional humanistic cares. Culture-based care, regarding meaning and having a comprehensive view of different dimensions of the patients, can help health staff to give appropriate services to chronic patients, including patients with cancer presented in a country with a rich history and deep religious beliefs.

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Conflicts of interest

There are no conflicts of interest.

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