Comparing Self-Compassion and Life Expectancy in Women with and without Breast Cancer

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Quantitative Study

Abstract

Background: Breast cancer is among the most prevalent forms of cancer in women. Today, it is known that variables such as self-compassion and life expectancy can improve and reduce the negative effects of this cancer. The current study aimed to compare self-compassion and life expectancy in women with and without breast cancer.

Methods: The research was conducted using a descriptive-comparative approach. The statistical population included all women referred to specialized centers in Basra, Iraq, in 2020. Out of 1670 clients, 220 women with cancer (110 individuals) and healthy women (110 individuals) were sampled using the convenient sampling method and responded to the questionnaires. The Neff Self-Compassion Scale and Snyder Life Expectancy Questionnaire were used in the present study. The descriptive branches of frequency, mean, and standard deviation (SD), as well as statistical tests and analysis of variance (ANOVA) were used to analyze the data with SPSS software.

Results: The mean ± SD of life expectancy of the healthy group was greater than that of the patients with cancer (P < 0.01). Patients with cancer (64.18 ± 5.48) and healthy people (62.49 ± 5.07) scored similarly on the Self-Compassion Scale. While there was no significant difference in the self-compassion variable, there were no differences between the two groups (P > 0.01). Besides, the cancer group had a lower life expectancy (13.62 ± 3.74) and the healthy group had a higher life expectancy (25.73 ± 4.34) (P < 0.01).

Conclusion: Women with breast cancer have the same level of self-compassion as healthy women, but their life expectancy is lower.

Keywords: Breast cancer; Self-compassion; Life expectancy

Introduction

Cancer is one of the life-threatening chronic diseases to which humans are continually exposed. Among it, the high prevalence of breast cancer and the complications caused by this disease are a growing concern for women's health (Fleagle, 2022). The increasing incidence of breast cancer over the past four decades has made it one of the most prevalent cancers among women. Due to its difficult nature and uncertain outcomes, a cancer diagnosis is a very unpleasant and unbelievable experience for any individual, both at the initial diagnosis and during treatment follow-up (Jacobs, van Dijck, de Kleijn, Kiemeney, & Verbeek, 2001). It disrupts the patient's job, socioeconomic status, and family life and its treatment, like many chronic and life-threatening diseases, can impact the physical and mental health of the patient (Bijan & Behzadipour, 2022). In addition, patients with various types of cancer suffer from various psychological problems and disorders, including stress, depression, anxiety, a decline in quality of life, and a fear of relapse and death. Half of patients with breast cancer report experiencing many of these psychological symptoms (Williamson, Garon, Shapiro, Chavira, Goldman, & Stanton, 2022).

Self-compassion is a variable closely related to people's mental health. This variable, which has received great attention in recent years for personality, social, and clinical psychology, signifies inner care and compassion during challenging times (McGowan, 2019). In reality, a self-compassionate attitude involves a balanced perspective of one's intellect and emotional experiences (Abdi-Malekabadi, Tavakoli, & Farzanfar, 2019). According to numerous scholars, self-compassion consists of three bipolar components: self-kindness versus self-criticism, shared humanity versus isolation, and mindfulness versus extreme imitation. The first component requires self-compassion and kindness rather than harsh self-criticism. The second component entails accepting life problems as part of shared human experiences, which are not exclusive to certain individuals (Li, Arellano, Bare, Bender, Strom, & Devlin, 2017). The third element is awareness of painful thoughts and feelings rather than total absorption (extreme assimilation). Both theory and observation support the relationship between self-compassion and mental health. Theoretically, compassion increases preventive behaviors that promote and preserve mental health (Pinto-Gouveia, Duarte, Matos, & Fraguas, 2014).

According to research, understanding is positively associated with mental health and psychological adjustment. Higher levels of self-compassion are associated with, among other things, greater life satisfaction, recognizing and dealing with issues, emotional intelligence, and improved social communication. Low levels are associated with symptoms of depression, anxiety, ruminating, shame, self-criticism, and fear of failure (Wilson, 2018). Compassion reveals limitations and identifies unhealthy behaviors, enabling one to make changes and encouraging change and mental health improvement (Schrag, Kuntz, Garber, & Weeks, 2000; Stuntzner, 2014). On the other hand, low self-compassion causes a person to evaluate himself in stressful situations harshly. Neither can he accept that life's difficulties are a shared human experience, and he frequently chews on the painful thoughts and emotions that result from this stressful situation (Zhao, Yang, Ma, & Qin, 2022).

On the other hand, it appears that the more self-compassionate a person is, the more motivated he/she is to pursue goals in addressing the disease problems and difficulties (Zhang & Chen, 2016). People who think about health issues, like cancer, for a living are more worried about dying. Most patients with cancer experience high

mortality anxiety, resulting from inadequate education and awareness of patients with cancer in oncology and radiology departments. In contrast, researchers have discovered that self-compassion reduces death anxiety. Self-compassion is structured, so that the person who has it considers life issues and approaches them with a kinder perspective rather than focusing on his/her problems (Gu et al., 2018). In actuality, self-compassion alleviates death anxiety by enhancing optimism, positivity, and happiness and decreasing negative self-activity (Hughes, 2018).

A review of the relevant literature indicates that external factors, such as increased social support, and internal factors, such as self-compassion and life expectancy, can significantly reduce this population's psychological and physical problems. Hope is one of the most important and effective coping mechanisms in the fight against cancer during treatment for patients with cancer (Ulmar, Richter, Cakir, Muche, Puhl, & Huch, 2005). Important characteristics of life expectancy include a focus on the future, optimism, purposefulness, realism, goal-setting, and internal communication. It can be said that life expectancy involves people's perceptions and focus on the future. The perception that positive outcomes are likely to be achieved motivates the patient to exert effort. Snyder and Lopez (2003) identify hope as one of the sources of resilience that can positively impact health and well-being in times of stress and despair. Numerous studies have demonstrated the effect of psychological interventions on the efficacy of cancer physical therapy. Hope therapy as a form of psychotherapy has a significant impact on a variety of mental and physical cancer-related factors (Habibi, Hashemi, Hemati, & Gholamrezaei, 2016). Hope therapy is founded on Snyder's theory of hope and concepts from cognitive-behavioral therapy (CBT), solution-oriented therapy, and narrative therapy. It also aims to assist therapists in formulating goals and constructing multiple paths to achieving them, motivating themselves to pursue goals, and reframing obstacles to overcome. This treatment aims to increase hope-based thinking and strengthen goal-based activities; thus, patients can apply these principles to their daily lives. Cancer and an optimistic outlook are related in two ways (Meyer, Drefahl, Ahlbom, Lambe, & Modig, 2020). First, promising individuals are more likely to engage in cancer screening behaviors, such as mammograms or self-breast exams. They are more likely to focus on the problem and take an active role in resolving it. In addition, optimistic individuals are less anxious and more accommodating when confronted with a cancer diagnosis and treatment (Sawaki, Shimomura, Shien, & Iwata, 2022).

Most cancer treatments have side effects that threaten patients' short- and long-term quality of life. Patients' low quality of life is correlated with the number of symptoms and complications caused by chemotherapy and their families' lack of education in this field. People today desire a quality of life (Minami, Jin, Freedman, Schonberg, King, & Mittendorf, 2022). Quality of life is an important indicator of a patient's functional status after illness and during and after cancer treatment. Cancer appears to affect life expectancy more than other chronic diseases. Patients with cancer pain are less hopeful and confident than other patients (Shen et al., 2022). In addition, the patient's uncertainty and frustration increase in proportion to the severity and extent of the pain. The relationship between hope and adaptive functions such as psychological adjustment, physical health, and problem-solving skills is direct. In the recovery phase, those with greater optimism are more optimistic about their lives and more likely to identify positive aspects (Jobsen, van der Palen, Siemerink, & Struikmans, 2022).

As the incidence of breast cancer among Iraqi women is rising due to factors such

as nutritional deficiency, unhealthy lifestyle choices, and psychological stress, more relevant research is required. When self-compassion and life expectancy are linked, training programs can be set up in the desired fields, as demonstrated by this study. Many studies have shown that factors like self-compassion and life expectancy are linked to death anxiety and depression. The comparison between these variables in patients with breast cancer in Basra, Iraq, has yet to be studied. Therefore, the current study aimed to compare self-compassion and life expectancy in women with and without breast cancer.

Methods

The present study was conducted using a descriptive-comparative approach. The statistical population comprised 1670 Basra women referred to specialized medical examination centers in 2020. Using the convenient sampling method, 220 patients who were interested in and qualified for the study were selected with simple random sampling from the patients referred to the medical centers. The subjects were divided into two groups: women with breast cancer (n = 110) and healthy women (n = 110). Notably, these two groups were comparable in size, age, level of education, marital status, body mass index (BMI), absence of hormonal drug use, and the number of pregnancies. Inclusion criteria for women with breast cancer included reproductive age, marriage, college education, middle socioeconomic status, and willingness to participate in the study. Healthy women were also required to have a university education, middle socioeconomic status, and willingness to participate in the study. Exclusion criteria for women with breast cancer included the presence of a second disorder, mental disorder, and unwillingness to participate in the research. Moreover, if a healthy woman had a mental disorder or did not want to participate in the study, she would be excluded. Participants in the study were assured that their identities and information would not be disclosed for ethical considerations.

Self-compassion was measured using the Self-Compassion Scale (Neff, 2003) in the present study. The mentioned scale includes 26 items and six subscales of self-kindness (5 questions), self-judgment (5 questions), common human characteristics (4 questions), isolation (4 questions), mind-awareness (4 questions), and over-assimilation (4 questions). For each item, the Likert scale ranges from 1 (rarely) to 5 (almost always). The internal consistency of the scale is estimated to be 0.79 (Neff, 2003); the reliability of the whole scale retest method is 0.93, and the scale components fall between 0.70 and 0.84 (Albertson, Neff, & Dill-Shackleford, 2015).

The Life Expectancy Questionnaire (Snyder, 1991) was also utilized in the current study. The questionnaire consists of 12 questions, and its purpose is to determine an individual's life expectancy. It uses a 5-point Likert scale ranging from 1 (completely incorrect) to 5 (completely correct). Four expressions on this scale are deviant, and questions 3, 7, and 11 are scored in reverse. The range of scale scores will therefore be between 8 and 40. Questions 1, 4, 6, and 8 pertain to the strategic subscale, whereas questions 2, 9, 10, and 12 pertain to the factor subscale. An average score of 22 has been proposed as a cutoff point for measuring a person's level of hope. Cronbach's alpha for this questionnaire ranged between 0.74 and 0.84, and its concurrent validity was determined through a correlation with the Beck Depression Inventory (BDI) as 0.44 (Snyder et al., 1991).

The data were analyzed using descriptive and inferential statistics methods. Mean and standard deviation (SD) were used in the descriptive statistics section, and multivariate analysis of variance (MANOVA) and the t-test were used in the

inferential section for two independent groups. SPSS software (version 23, IBM Corporation, Armonk, NY, USA) was used to analyze all statistical operations.

Results

220 people in this study were split into two groups: 110 with cancer and 110 without cancer. In these two groups, there were married women between the ages of 30 and 50. Table 1 shows that what kind of people were in each of the study groups. From table 1, it is clear that both groups are almost the same.

Table 2 shows the mean and SD of the variables of self-compassion and life expectancy for patients with cancer and healthy individuals. As it turns out, the values of the self-compassion variable were nearly identical in both groups. In contrast, the values of the life expectancy variable were significantly lower in the group of patients with cancer.

To evaluate the assumptions of analysis of variance (ANOVA), it should be noted that sampling was done randomly; in the sense that the sample was representative of the population from which it was taken, the researchers of this article had no role in its selection, and the chances of selecting each member in each selection were equal. Furthermore, the variance of random samples in each group was not significantly different. The experimental errors are independent of the means, which means that increasing the mean of the samples did not affect the variance within the samples.

Before conducting variance analysis, its underlying assumptions were investigated. Due to the non-significance of the Kolmogorov-Smirnov test, the self-compassion (P = 0.276, Z = 1.438) and life expectancy (P = 0.276, Z = 1.438) variables had a normal distribution, as evidenced by the test results conducted to determine the normal distribution in each group. Levene's test was also used to test the assumption of homogeneity of variances (to ensure that all groups had the same variance) and to ensure that results were obtained for self-compassion (P = 0.182, F = 1.943) and life expectancy (P = 0.149, F = 2.117) variables. Therefore, the variance difference was not statistically significant, and the assumption of variance equality was established. Thus, variance analysis can be used.

After looking at the defaults, MANOVA was used to determine the means of the variables that differed in the two groups. First, MANOVA significance tests were conducted to determine the immediate impact of the grouping factor on the dependent variables. Table 3 indicates that at least one of the dependent variables differs significantly between the study groups.

The square of eta (the square of the correlation coefficient between dependent variables and group membership) indicated a statistically significant difference between the two groups. In terms of the dependent variables, 0.469 is the value. The significance of the variables of self-compassion and life expectancy between the two sample groups was determined using an independent t-test.

Table 3 also reveals that the calculated t for the life expectancy variable was significant at less than 0.05.

Table 1. Demographic characteristics of the studied groups

Variable	Patients with cancer (mean ± SD)	Healthy people (mean ± SD)	P-value
Age (year)	42.74 ± 2.67	43.27 ± 2.14	< 0.001
BMI (kg/m^2)	59.34 ± 3.09	57.64 ± 3.37	< 0.001
Use of hormones	0	0	< 0.001
Number of pregnancies	2.49 ± 0.34	2.38 ± 0.19	< 0.001

BMI: Body mass index; SD: Standard deviation

Table 2. Descriptive indicators of the studied variables

Variable	Patients with cancer (mean ± SD)	Healthy people (mean ± SD)
Self-compassion	64.18 ± 5.48	62.49 ± 5.07
Life expectancy	13.62 ± 3.74	25.73 ± 4.34

SD: Standard deviation

Therefore, there were substantial differences in life expectancy between the two groups. Notably, the two groups had no significant differences in self-compassion (P > 0.05).

Discussion

The current study aimed to compare self-compassion and life expectancy in women with and without breast cancer. As a result of the findings, it is possible to assert that hope and optimism are crucial components of cancer coping. Possessing a positive outlook and life expectancy entirely depends on evaluating one's situation and self. The individuals' cognitive framework of position and self can be altered and improved by their life expectancy. The belief that a person will strive to achieve the desired goals, given positive feedback, can significantly impact this effectiveness. By participating in group efforts and receiving positive feedback, the subjects can increase their life expectancy. On the other hand, life expectancy gradually improves a person's image and contributes to the development of a positive outlook because it increases the likelihood of success. Therefore, it can be concluded that a change in attitude and way of thinking and the ability to recognize emotion can increase life expectancy (Albertson et al., 2015).

Compassion was not significantly different between the two groups. In this regard, we can say that self-compassion transcends the individual's physical and cognitive relationships with her environment and enters the transcendent realm of her life perspective. This method imbues individual events and experiences with deeper personal significance and value. One must rely solely on perceptions to evaluate one's quality of life. One's inner and outer worlds are intertwined regarding human behavior. In patients with breast cancer, addressing this issue can reduce feelings of hopelessness and depression (Hughes, 2018).

According to studies, those with a shorter life expectancy are less resilient. People with low levels of resilience are less resistant to stressful events and thus more susceptible to psychological harm. In this regard, the results of a study conducted by Cheavens et al. (2006) demonstrated that the intervention of hope therapy increased hope, the meaning of life, and self-esteem and significantly reduced depressive and anxious symptoms. In addition, research indicates that the hope of group therapy improves these patients' low resilience. Hope therapy improves a patient's ability to deal with the disease stress in the future, increasing adaptation and resilience (Minami et al., 2022).

Additionally, the patient's life expectancy decreases due to persistent physical weakness. In the review of studies on hope, Banson (2006) states that high levels of hope are positively correlated with physical and psychological health, high self-esteem, positive thinking, and excellent social relationships, which is consistent with the results of the present study.

Table 3. The effect of grouping factors on significant tests

Test	Value	F	Df	Error	P-value	Eta coefficient
Hotelling's trace	1.562	73.56	3	140	< 0.001	0.469
Roy's largest root	1.378	73.56	3	140	< 0.001	0.469
Wilks' lambda	0.481	73.56	3	140	< 0.001	0.469
Pillai's trace	0.627	73.56	3	140	< 0.001	0.469

Df: Degree of freedom

In this way, hope promotes mental health and feelings of self-worth and contributes to developing social relationships that improve health. Erol et al. (2010) concluded that hope was directly associated with adaptive functions such as psychological adaptation to physical health and problem-solving abilities. In their study, there was a significant correlation between the quality of life and strategic thinking and between the limitations of role-playing due to physical health status and life expectancy. However, there was no correlation between emotional problems and life expectancy. Przezdziecki et al. (2013) concluded in a study that there was a correlation between high hope and positive emotions and low hope and negative emotions. It predicts hopelessness that is independent of depressive symptoms and other coping strategies.

Overall, this study revealed a distinction between life expectancy and self-compassion among women with and without breast cancer. The occurrence of depressive disorder in life-threatening circumstances such as cancer can exacerbate problems and even disrupt and delay treatment. People can control stressful situations and avoid depression and anxiety by maintaining self-compassion and promoting life expectancy. Life expectancy can help a person achieve positive beliefs because human life becomes purposeful, which is extremely beneficial in achieving a positive outlook. In contrast, the characteristic of self-compassion can be the capacity to deal with the patient's problem, which can play a crucial role in the successful treatment process. These characteristics can speed up the recovery process and increase the likelihood of recovery. Patients with breast cancer are exposed to numerous psychological pressures that can result in psychological and social disorders. Because patients with cancer and their families experience a great deal of stress, the results of this research can be used to improve social adjustment and the ability to cope with stressful life situations.

It can also provide an extension of health psychology-related studies and a proper context for researchers and thinkers in this field. One of the benefits of the current study is the similarity of the study groups and the study of all patients with breast cancer in Basra in 2020. The present study's limitations include that it was conducted solely in Basra and was compared with no international standards. For future research, it is suggested that additional variables be investigated in patients with breast cancer and other methods and tests be utilized and compared to the findings of this study. In addition, it is recommended that the subscales of each variable be evaluated. Implementing the intervention and reviewing the pre-test, post-test, and follow-up procedures is also suggested.

Conclusion

Measuring self-compassion and life expectancy is a component of treating a patient with cancer, as the treatment of a patient with cancer today cannot be reduced to clinical dimensions alone. Cancer and its treatment have multiple facets, so paying attention to these issues in addition to clinical ones is natural and essential. Therapists must determine the personal threats that the patient has encountered.

Conflict of Interests

Authors have no conflict of interests.

Acknowledgments

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