

RESEARCH ARTICLE

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Self-Confidence and Quality of Life in Women Undergoing Treatment for Breast Cancer

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Abstract

Introduction: Quality of life is an important topic in the study of chronic diseases, especially cancer which can have a major effect on patient self-confidence. This study was conducted to determine quality of life and its relationship with self-confidence in women undergoing treatment for breast cancer. **Methods:** This cross-sectional, descriptive, analytical study was conducted in 2016 on 166 women with breast cancer undergoing treatment at Ghazi, Al-Zahra, International and/or Shams hospitals in Tabriz. The subjects were selected through convenience sampling. A personal-demographic questionnaire, the Cancer Quality of Life Questionnaire (QLQ-C30), and the Rosenberg Self-Esteem Scale (RSES) were completed for each patient. The data obtained were analyzed using independent t-tests, one-way ANOVA, multivariate linear regression and Pearson's correlation coefficients. **Findings:** The mean total score of quality of life was 59.1 ± 17.4 , ranging from 0 to 100. The highest mean score was obtained in the cognitive subscale (74.9 ± 23.8) and the lowest in the emotional subscale (51.4 ± 21.1). The mean score for self-confidence was 0.3 with a standard deviation of 0.1, ranging from -1 to +1. There was a significant positive relationship between self-confidence and quality of life, except in three symptom subscales for diarrhea, constipation and loss of appetite ($P < 0.05$). Self-confidence, disease duration, lifestyle, marital satisfaction and caregiver status were among the predictors of quality of life. **Discussion:** Given the significant relationship between quality of life and self-confidence, health care providers may need to pay special attention to women undergoing treatment for breast cancer and perform timely measures to maintain their belief in themselves.

Keywords: Breast Cancer- quality of Life-self-confidence

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Introduction

With the reduction in the prevalence of infectious diseases and the increased life expectancy, the problems of cancer patients have also increased in low-income countries (Sadjadi et al., 2009). Breast cancer is the most common malignancy that ranks first in the world and in Iran and is the fifth most common cause of death in women (Taghavi et al., 2012; Ghoncheh et al., 2015; Mahdaviifar et al., 2016). Approximately one in eight women (12%) in the US is affected by breast cancer during her life (WHO, 2015). Findings suggest that breast cancer is diagnosed a decade earlier at the age of 47.1-48.8 in women living in low-income and developing countries compared to women who live in developed countries (Yadollahie et al., 2011). The purpose of cancer treatment is to help patients with the advanced form of the disease recover or to prolong their survival (Siegel et al., 2012). Patients in stage 1 and 2 of the disease (i.e. the early stages of breast cancer) have a good five-year and ten-year survival, but those in stage 3 have an estimated 67.6% chance of five-year

survival and a 35.5% chance of ten-year survival, and those in stage 4 a 39.1% chance of five-year survival and a 26.1% chance of ten-year survival (El Saghier et al., 2014). The side-effects of treatment in women with breast cancer may directly alter their quality of life in the workplace or at home (Tachi et al., 2015).

The diagnosis and treatment of breast cancer comprise a critical period in a woman's life during which she suffers from concerns about the spread of cancer to other parts of the body, uncertainty about the future, anxiety and depression, anger, frustration, pain, altered self-image, fear of losing femininity and altered self-confidence (Avci et al., 2014). Self-confidence is an important component of mental health that can contribute significantly to the quality of life in cancer patients (Silverstone and Salsali, 2003). Self-confidence is the individual's attitude toward herself and her personal and subjective self-assessment and helps shape positive or negative ideas about her personal life (Noghani et al., 2006). Changes in physical appearance following treatment, limitations in physical functioning and daily activities,

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limited functioning in previous roles and the stigma of the disease and failing to accept it can lead to changes in the patient's self-confidence (Leite et al., 2015). The advances made in the diagnosis and treatment of breast cancer, the pathological differences between this disease and other chronic diseases, the changes in self-confidence, the development of negative emotions, the experience of everyday problems at work and in human relationships and the development of anxiety may lead to changes in the breast cancer patient's quality of life (Hirai et al., 2012).

As a result of the increase in the life expectancy and long-term survival of breast cancer patients and the need to improve their perceived physical and mental health, measures should be taken to determine and evaluate the quality of life in these patients (Abu-Helalah et al., 2014). Quality of life is an important outcome in breast cancer that affects the disease prognosis and can be used to manage the patient's condition and treatment, make medical decisions, control their symptoms and plan for supportive care interventions (Rohani et al., 2015). The WHO defines quality of life as the individual's perception of her position within the cultural and value system in which she lives and holds that it is also associated with the individual's ideals, expectations, standards and concerns (WHO, 1997). Quality of life is considered a consequence of the treatment of diseases and is a determinant of the quality of the treatment received (Knobf, 2006). Quality of life is a multidimensional structure consisting of different areas of functioning, including emotional, physical, sexual and social functioning (Janz et al., 2014). The physical functioning domain is related to the individual's subjective evaluation of her physical health and functioning (for example, pain, fatigue and incontinence). The emotional functioning domain consists of mental functioning and is concerned with the positive and negative indicators of mood. The social functioning domain involves the effect of the disease on personal role functioning and the social support received (Yanez et al., 2011). Clinical studies have shown that changes in the quality of life in patients undergoing treatment for cancer are associated with changes in the patients' clinical variables as well (Rahou et al., 2016). Changes in the quality of life should be considered throughout the treatment of breast cancer and the side-effects of treatment and any psychological concerns such as fear should be carefully addressed in this group (El Saghir et al., 2014).

Few studies have noted the role of self-confidence in the quality of life in patients with cancer. For instance, Mustian et al. (Mustian et al., 2004) conducted a study at Rochester School of Medicine in the US and examined the quality of life and self-confidence in 21 women with breast cancer whose treatment had ended over the past 30 months; they held 12 sessions of exercise training for one group and 12 sessions of psychological support therapy for the other group. The six- and 12-week follow-up showed that the group receiving exercise training had a better quality of life and self-confidence compared to the group receiving psychological support. In the Netherlands, Schroevers et al. (Schroevers et al., 2003) conducted a longitudinal study to examine the role of social support and positive and negative self-confidence

in 475 patients newly diagnosed with cancer and 255 healthy people from the general public and found that self-confidence and social support were moderately to poorly related to each other but found no significant differences between the cancer patients and the controls in terms of social support and self-confidence. In Brazil, Veiga et al. (Veiga et al., 2010) conducted a prospective study on quality of life and self-confidence in women undergoing conservative treatment for breast cancer and found higher quality of life and self-confidence scores in the breast restoration group 12 months after surgery.

Given the high incidence of breast cancer in women (Baker, 2016, Salehi et al., 2016), the lack of studies on this subject according to the researchers' review of literature and the importance of achieving a higher quality of life along with the increase in the life expectancy and long-term survival of breast cancer patients (Abu-Helalah et al., 2014, Holmes et al., 2016), the present study was conducted to determine the quality of life and its relationship with self-confidence in women undergoing treatment for breast cancer.

Materials and Methods

Study Type and Participants

This cross-sectional, descriptive, analytical study was conducted in 2016 on 166 women with breast cancer undergoing treatment at Ghazi, Al-Zahra, International and Shams hospitals in Tabriz. The inclusion criteria consisted of a diagnosis of breast cancer, being in stages I, II and III of the disease, in-situ lesions recorded in the patient's medical record, willingness to participate in the study and having at least reading and writing literacy. The exclusion criteria were the use of psychiatric medications, clinically-apparent physical or mental underlying diseases that prevented participation in the study, comorbid cancers, having experienced stressful life events over the past month and being in stage IV of the disease (i.e. the end stage).

Sample Size

The required sample size was calculated according to a study conducted by Lotfi Kashani et al., (2013) on self-confidence (30.35 ± 4.88) and a study by Monfared et al., (2013) on quality of life (53.86 ± 12.45) and was reported as 166 based on the biggest standard deviation in the quality of life subscales ($SD=12.45$) and $M=53.86$, $\alpha=0.05$, $CI = \%95$ and $d=0.05$.

Sampling

The subjects were selected through convenience sampling. After making the necessary arrangements and corresponding with the authorities, the researcher visited the select hospitals, introduced herself, explained the objectives of the study, ensured the candidates about the confidentiality of their data and their right to withdraw from the study at any stage and obtained informed consent from those who met the inclusion criteria. The personal-demographic questionnaire, the Cancer Quality of Life Questionnaire (QLQ-C30) and the Rosenberg Self-Esteem Scale (RSES) were then

completed for each participant through individual interviews held in their local language.

Data Collection Tools

The tools used to collect data included the personal-demographic questionnaire, the QLQ-C30 and the RSES.

The QLQ-C30 consists of 30 items for assessing the quality of life and has been used in numerous trials around the world. This questionnaire assesses the quality of life in five functioning subscales, including physical functioning, role functioning, emotional functioning, cognitive functioning and social functioning, nine symptom subscales, including fatigue, pain, nausea and vomiting, shortness of breath, diarrhea, constipation, insomnia, loss of appetite and financial problems caused by the disease and a general quality of life subscale. The score obtained in each subscale ranges from zero to 100. In the functioning subscales, higher scores of the general quality of life subscale indicate a better quality of life, while in the symptoms subscale, higher scores imply the greater severity or frequency of that symptom or problem. Safaee and Moghim Dehkordi, (2007) examined and confirmed the validity and reliability of all the 30 items of the QLQ-C30 at Namazi Hospital of Shiraz, Iran.

The RSES was developed by Rosenberg in 1965 and consists of ten items that assess the individual's positive and negative emotions toward herself. Different methods have been proposed for scoring the items of this questionnaire; for example, based on a four-point Likert scale (from 'totally agree' to 'totally disagree') or on a two-point scale ('agree' and 'disagree'). In Iran, the second form is used for scoring this questionnaire; items 1 to 5 are given +1 for each 'agree' response and -1 for each 'disagree' response; items 5 to 10 are given -1 for each 'agree' response and +1 for each 'disagree' response. The scores of the items are calculated and added up and then divided by 10, and the score thus obtained is interpreted as follows: +1 indicates a very high self-confidence, -1 indicates a very low self-confidence, scores above 0 indicate a high self-confidence and scores below 0 indicate a low self-confidence. In Iran, the validity and reliability of the questionnaire were confirmed in a study by Rajabi and Behlil, (2007).

A test-retest was performed on 30 participants with a two-week interval and the reliability of the questionnaire was assessed using the repeatability (with ICC) and internal consistency (Cronbach's alpha) methods. The Cronbach's alpha coefficient was calculated as 0.96 for self-confidence, 0.98 for the general quality of life, 0.93 for social functioning, 0.98 for physical functioning, 0.89 for financial problems, 0.99 for role functioning and 1 for all the symptom subscales except for vomiting, which had a coefficient of 0.80. The ICC was calculated as 0.96 for self-confidence, 0.98 for the general quality of life, 0.93 for social functioning, 0.98 for physical functioning, 0.89 for financial problems, 0.99 for role functioning and 1 for all the symptom subscales except for vomiting, which had an ICC of 0.80.

Data Analysis

The data obtained were analyzed in SPSS-21 using descriptive statistics including frequency, percentage, mean and standard deviation to describe the personal-demographic factors, quality of life and self-confidence. Pearson's correlation test was used to determine the relationship between the quality of life and self-confidence in women undergoing treatment for breast cancer, and the one-way ANOVA and the independent t-test were used to determine the relationship between some of the personal-demographic factors and the quality of life. To adjust the confounding variables, the independent variables with $P < 0.2$ (self-confidence and the personal-demographic factors) were entered into the multivariate linear regression model using the backward strategy.

Results

About half of the participating women were older than 50 (41%) and their mean age was 50 ± 11.4 years. About 41% of the women were under treatment and 22.3% had husbands with only primary to junior high school education. Almost one quarter of the women (21.1%) and 22.9% of their husbands had university education; 80% of the participants lived in urban areas; more than half of them (60.8%) reported the duration of their disease as one year. More than three quarters of the participants (72.2%) were housewife, about half (47.6%) had one or two children; more than half (54.2%) reported their family income as less than adequate; about half (49.4%) were under treatment for stage II of the disease; more than two-thirds (79.5%) were married; more than a quarter (27.1%) had husbands who were self-employed; more than three quarters (86.7%) lived with their family; about half (47.6%) had moderate marital satisfaction. More than three-quarters (89.2%) did not report a history of the disease in their first-degree relatives, and from the total of 18 patients who reported a history of the disease in their family, nine had their mothers affected and nine their sisters. A total of 153 patients (92.2%) received combination therapy. More than one quarter (34.9%) had their husbands as their caregiver, and 157 of the patients' caregivers (94.6%) were in good general health themselves Table 1.

The mean total score of the quality of life was 59.1 ± 17.4 in the women, ranging from zero to 100. The highest mean score was obtained in the cognitive subscale (74.9 ± 23.8) and the lowest in the emotional subscale (51.4 ± 21.1). The mean total score of self-confidence was 0.3 ± 0.1 , ranging from -1 to +1. A significant positive correlation was observed between self-confidence and the quality of life, except in three symptom subscales, including loss of appetite, constipation and diarrhea $P < 0.05$; Table 2.

The variables of self-confidence, age, occupation, number of children, income, disease stage, level of education, place of residence, disease duration, lifestyle, husband's education, marital satisfaction, caregiver and caregiver's health, which were related to the quality of life ($P < 0.02$), were entered into the multivariate linear regression model using the backward strategy, with the

Table 1. Relation of Personal-social Characteristics with Quality of Life in Patients Receiving Breast Cancer Treatments (n=166)

Variable	Number	Mean ±SD	variable	Number	Mean (SD)
Age (year) ††			Education of spouse ** † †		
40 and below	41	59.5±16.2	Elementary - secondary	37	61.7±19.3
41-50	57	57.2±19.1	High school - diploma	45	60.2±18.2
Above 50	68	60.5±16.8	University	38	54.8 ±17.5
Education † †			Occupation of spouse ** † †		
Elementary - secondary	68	59.8±20.2	employee	38	57.2 ± 18.6
High school -diploma	63	59.4±13.8	Self-employed	45	61.1±17.8
University	35	57.4±17.7	Retired	24	59.0±17.2
Residence †			Rancher, farmer, others	28	60.1±20.9
City	133	59.4±17.9	Lifestyle * †		
Village	33	58.1±15.5	My family	144	60.3±17.8
Duration of sickness † †			Others	22	51.5±12.2
1 year	101	61.71±8.2	Marital Satisfaction ** † †		
2 year	33	53.8±11.4	Low	17	54.9±18.9
3 year	14	55.3±17.5	average	79	57.4±15.9
More than 3 years	18	57.4±20.2	High	40	63.9±21.5
Occupation †			Family history of the disease †		
Housewife	120	59.3±17.5	Yes	18	62.0±20.0
Have a job	46	58.7±17.4	No	148	58.8±17.1
Number of children † †			History of the disease †		
No children	24	53.8±13.2	Sister	9	66.7±19.5
1-2 child/children	79	61.5±18.0	Mother	9	57.4±20.6
3 and more	63	58.2±17.9	Health of caregiver †		
Caregiver † †			Yes	157	59.6±17.1
Spouse	58	60.3±16.9	No	9	50.9±21.8
Mother and sister	28	53.9±23.4	Income † †		
Spouse and others	31	64.2±18.0	Enough	16	59.4±19.9
Others ¶	49	57.5±12.5	Not enough	90	58.8±16.1
Stage of disease † †			To some extent enough	60	59.6±18.9
I	61	60.8±19.4	Marital status † †		
II	82	60.2±15.4	Single	14	54.2±10.2
III	23	51.1±17.1	Married	132	59.51±8.1
treatment* † †			divorced or widowed	20	60.0±17.2
Chemotherapy	13	69.9±15.8			
Combination therapy ¶	153	58.2±17.3			

*p <0.05; □ education of spouse, occupation of spouse, matrimonial satisfaction contains unanswered data; ■ children and daughter-in-law; ●, one of stage I diseases is in situ; ◇, 4 among 20 people in divorced and widowed group were divorced; √, Among 153 people in combination therapy group, only one had undergone surgery ; #, Independent T-Test ;+The one-way ANOVA

variables of self-confidence, disease duration, lifestyle, marital satisfaction and caregiver ultimately remaining in the model to predict 10.6% of the variance in the total score of quality of life Table 3.

Discussion

The analysis of the data revealed a higher-than-average mean total score of quality of life in the patients undergoing treatment for breast cancer, as consistent with the study by Rouhani et al., (2015) on the changes in quality of life and the sense of dependence in women

with breast cancer within six months of their diagnosis, which found that women with breast cancer had a better quality of life score than the controls (P<0.001). The results of a descriptive-analytical study by Monfared et al., (2013) on the quality of life and its related factors in 170 women with breast cancer admitted to teaching hospitals in Rasht, Iran, showed that the mean score obtained in the subscale of emotional functioning was lower than the scores obtained in the other domains and found a generally low quality of life score in the patients, which could be due to the different data collection tool used, i.e. a general quality of life questionnaire with 26

Table 2. Quality of Life and Its Dimensions, Self-confidence and Its Relation in Patients Receiving Breast Cancer Therapy (n=166)

variable	Mean \pm SD	The range of achievable score	The range of achieved score	self-confidence	
				r	p
Functional					
Physical functioning	60.6 \pm 17.2	0-100	26.7-100	0.378	<0.001
Role functioning	61.4 \pm 23.1	0-100	0-83.3	0.393	<0.001
Emotional functioning	51.4 \pm 21.1	0-100	0-100	0.325	<0.001
Cognitive functioning	74.9 \pm 23.8	0-100	0-100	0.354	<0.001
Social functioning	68.1 \pm 20.0	0-100	0-100	0.269	<0.001
Symptom / items					
Fatigue	58.0 \pm 21.0	0-100	0-100	0.351	<0.001
Nausea and vomiting	63.2 \pm 23.2	0-100	0-100	0.350	<0.001
Pain	22.9 \pm 55.6	0-100	0-100	0.307	<0.001
Insomnia	65.1 \pm 28.8	0-100	0-100	0.321	<0.001
Dyspnea	74.7 \pm 30.7	0-100	0-100	0.346	<0.001
Appetite loss	78.5 \pm 27.5	0-100	0-100	-0.027	0.732
Constipation	84.3 \pm 24.2	0-100	0-100	0.085	0.276
Diarrhea	92.4 \pm 19.3	0-100	0-100	0.071	0.365
Financial difficulties	52.4 \pm 24.1	0-100	0-100	0.227	0.003
Global health status/Qol	59.1 \pm 17.4	0-100	8.3-100	0.212	0.006
self-confidence	0.3 \pm 0.4	-1 - +1	-0.8 - +1	-	-

Table 3. Predictor of Quality of Life in Women Receiving Breast Cancer Therapy (n=166)

Variable	B (Confidence Interval-95%)	P
Self-confidence	0.2 (14.6 to 0.4)	0.039
Time of disease (reference: one year)		
Two years	-0.2 (-0.6 to -17.0)	0.035
Three years	-0.1 (6.5 to -14.4)	0.452
More than three years	-0.05 (6.5 to -12.6)	0.530
Life style (reference: my family)		
Other	-0.2 (-0.03 to -31.4)	0.050
Matrimonial satisfaction (reference: low)		
Average	0.03 (10.5 to -8.2)	0.807
High	0.2 (17.7 to -2.9)	0.157
Caregiver (reference: spouse)		
Mothers and sister	-0.2 (-3.5 to -22.5)	0.008
Spouse and other family members	0.05 (13.4 to -7.4)	0.570
others	-0.1 (4.4 to -9.4)	0.474

Adjusted R square, 10.6%; P, 0.007; F, 2.6

items in the four domains of physical, psychological, social and environmental health. The consistency between the two studies in terms of the mean score of emotional functioning may be because both the present study and the one by Monfared examined patients who had mostly been diagnosed with breast cancer in the past year and it had not been long since their initial diagnosis and the beginning of their chemotherapy, surgery or combination therapy, and some were still suffering from the mental and emotional impact of their diagnosis and treatment. The results of a study conducted in Germany by Arndt et al., (2004) to identify differences in the quality of life in breast

cancer survivors in the first year of their diagnosis were also consistent with the present findings in terms of the quality of life score and emotional functioning. Shahsavari et al., (2015) also evaluated the effect of self-care on the quality of life in women with breast cancer and reported an average quality of life for the patients and managed to improve it by implementing a self-care program. The present study found a significant relationship between the physical aspect of quality of life and the variables of age, occupation, number of children, income, disease stage, marital satisfaction and caregiver. Similarly, Mkanta et al., (2007) examined the effect of age on the quality of life in cancer patients and found a significant correlation between the age variable and the health-related quality of life.

The results suggest that the patients obtained the highest mean score in cognitive functioning. A cross-sectional study by Gong et al., (2014) in China on 3,344 breast cancer patients to evaluate the relationship between exercise and quality of life revealed higher scores in physical, cognitive and role functioning in the patients who exercised, which is consistent with the present findings. In another study, Hassanpour et al., (2006) examined the factors affecting quality of life in 200 patients with cancer undergoing chemotherapy in Tehran and found a good quality of life in the domains of physical, social and occupational functioning and sleep patterns, which is consistent with the present findings too.

The present participants obtained a good mean score of self-confidence. A study conducted by Marila et al., (2015) in Brazil to assess self-confidence in cancer patients undergoing treatment showed that the majority of the patients had high or good self-confidence. Similarly, Sadegi and khodabakhshi, (2012) also compared body

image and self-confidence in two groups of women with breast cancer and reported high scores of self-confidence in them. The results showed no significant differences in self-confidence between the patients and the general public; in fact, the patients' self-confidence may even be higher because they have learnt to adapt to their disease and live with cancer (Carpenter, 1998). A study conducted by Noghani et al., (2006) to examine self-confidence in 101 male and female patients with cancer hospitalized at the oncology wards of hospitals affiliated to Tehran University of Medical Sciences showed that the majority of the patients had moderate confidence in their ability to adapt to different life conditions due to the mental and physical disabilities or limitations they experienced, and a statistically significant relationship was thus observed between the patients' self-esteem and changes or reduction in their physical functioning.

The present study identified the variables of self-confidence, disease duration, lifestyle, marital satisfaction and caregiver as predictors of the quality of life. A relationship was observed between self-confidence and quality of life after adjusting the demographic characteristics; that is, an increase in self-confidence improved the patients' quality of life ($P < 0.005$). The results of a longitudinal study by Courtens et al., (1996) on the relationship between quality of life and social support in cancer patients revealed an improved quality of life with the increase in self-confidence. In another study conducted in China, Chan et al., (2004) studied social support in cancer patients undergoing treatment and surgery and found that those encountering more facilitators in everyday life adapted to their disease much faster and experienced a better quality of life with a good self-confidence.

In the present study, the quality of life was worse in the women who had been diagnosed with the disease for two, three or more years compared to those with only a one-year duration of the disease. A study conducted by Holzner et al., (2001) in Australia on the relationship between disease duration (i.e. the duration of time since diagnosis) and quality of life showed that a higher disease duration is associated with a decreased quality of life in cancer patients.

Furthermore, the patients who did not live with their families (with the mother's family, husband's family or alone) reported a lower quality of life compared to those who lived with their own family. In their study of the health-related quality of life and its contributing factors in women with cancer, Monfared et al., (2013) also found a statistically significant relationship between the patients' living arrangements and the quality of life, as the patients who lived with their own family enjoyed a good quality of life.

In the present study, the women who had a moderate or high marital satisfaction also had a good quality of life compared to those who had a low marital satisfaction. In the study by Zeygami and Gaffari (2009) on the relationship between sexual dysfunction and quality of life in patients with cancer, a significant relationship was observed between marital satisfaction and the patients' quality of life, and good sexual functioning and high

marital satisfaction were associated with a good quality of life as well.

The quality of life was worse in the women whose caregivers were their mothers or sisters compared to those whose husbands cared for them. Parker et al., (2003) also examined the psychosocial and demographic predictors of quality of life in cancer patients and found that the family's presence and support, especially the spouse's, is a predictor of quality of life in cancer patients, as the quality of life increased in the patients with their spouse's support. In another study conducted in Finland, Juhani et al., (2009) examined the relationship between quality of life and spouse's support in cancer patients and found that the spouse's caregiving role contributed significantly to the quality of life in cancer patients and that the spouse's support as caregiver was associated with an improved quality of life in the patient.

Given that the present study was cross-sectional and did not follow up with the patients during their disease, it is possible for the patients to have been removed from their past problems and psychological issues at the time of the interviews; for this reason, they may have reported a moderate to high quality of life. Prolonging the study and following up with the patients during the course of their treatment may make them subject to confounding psychological factors, and it is clear that the patients' quality of life is affected by treatment and the wide range of physical and psychological symptoms that present with it.

The limitations of this study include its cross-sectional design; with this design, the relationship demonstrated between the quality of life and the two variables of self-confidence and personal-demographic characteristics may not necessarily indicate a causal relationship. Qualitative and quantitative studies need to be conducted on the factors affecting the quality of life in patients with breast cancer in order to help provide more effective solutions in this regard.

In conclusion, the results show that self-confidence is one of the factors affecting quality of life in patients with breast cancer, and given the earlier detection of breast cancer and the patients' increased survival in the present day, addressing the quality of life and its contributing factors is essential in these patients.

Merely staying alive is no longer considered the target in medical interventions and people have come to demand a better quality of life as well. Clinical health care providers can help with the control and treatment of diseases and consequently the improvement of the quality of life and the maintenance of self-confidence in patients by establishing positive relationships, using psychological techniques, providing psychosocial support (individual consultations, support groups, relaxation techniques, coping skills, etc.) and above all forming a communication defined by mutual understanding and respect for the patient. The presence of clinical psychologists in the oncology wards of hospitals can also be very helpful.

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Conflicts of interest

The authors declare that they have no conflicts of interest.

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