Depression and Perceptions of Quality of Life of Breast Cancer Survivors and Their Male Partners

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Breast cancer is the most common disease among women ages 30–60 from occidental countries and the second-leading cause of death from cancer in American women (Jemal et al., 2008; Smith, Cokkinides, & Eyre, 2007). Each year, more than one million women are diagnosed with breast cancer, representing more than 10% of all new cases of cancer (Anderson et al., 2006). Treatments for breast cancer are well known and can be summarized as mastectomy or breast-conserving surgery, chemotherapy, radiotherapy, and endocrine therapy (Menke et al., 2006).

Effective treatments can produce a life expectancy of 10 or more years, increasing concern for patients' quality of life (QOL) (Fallowfield, 1995; Ganz & Hann, 2008; Grunfeld, 2006; Wronska, 2003). As a result of early detection and improved treatments, more women now live with the disease and have to adjust to alterations such as change in body image (loss of a breast, hair loss, change of weight), modification in interpersonal relations (isolation and marriage, family, professional relationships) with a consequential influence on moods (Bower, 2008; Fallowfield; Jemal et al., 2008; Smith et al., 2007). In recent years, the use of QOL assessments for determining the global impact of diseases and medical treatments from patients' perspectives has increased. QOL measurements are potentially useful for application in research and clinical practice because isolating a disease from patients' perceptions of the disease is impossible (Carr & Higginson, 2001). Diverse QOL instruments based on patients' perspectives are available, with a multidimensional construct that includes physical health status, psychological well-being, social and cognitive functioning, and impact of disease and treatment based on patients' life experiences. Examples of generic instruments include the Medical Outcomes Study 36-item Short Form (SF-36), the EuroQol Instrument (EQ-5D), the World Health Organi-

Purpose/Objectives: To assess differences in ways women with breast cancer evaluate their own quality of life (QOL) compared to perceptions of their partners and to identify factors that influence dissimilarities in QOL perceptions.

Design: Cross-sectional study.

Setting: Breast unit in southern Brazil.

Sample: 73 women with stage I–III breast cancer and their partners. Most participants were middle-aged, with partners of long-term cohabitation.

Methods: QOL was evaluated with the World Health Organization Quality of Life–Brief Form (WHOQOL-BREF), Beck Depression Inventory, and WHOQOL-BREF adapted for a third person.

Main Research Variables: Demographic and clinical features, QOL, partners' perceptions, and depression.

Findings: No differences were found between the perceptions of QOL in different domains between the patients and their partners. Depression in women seemed to be the only variable that interfered in a consistent manner with the congruity of the QOL assessments made by patients and their partners.

Conclusions: Partners of women with breast cancer may be viewed as reliable surrogates to assess patients' QOL.

Implications for Nursing: Partners' judgments of patients' QOL may be important in some circumstances, particularly when patients are not able to answer questions about their own QOL because of cognitive or functional limitations. Nurses must be aware that partners are the most frequent informal caregivers and should be included in the entire treatment process.

zation Quality of Life (WHOQOL) and WHOQOL-BREF assessments in addition to others (Coons, Rao, Keininger, & Hays, 2000).

Breast cancer diagnosis and treatment may have a significant practical and emotional impact on the entire family, but particularly on partners (Baucom, Porter, Kirby, Gremore, & Keefe, 2005–2006). Reports indicate

that partners are the most frequent informal caregivers and patients with breast cancer say that their partners provide a valuable source of emotional support (Dorval et al., 2005; Pistrang & Baker, 1995). Although individuals (patients and partners) have been found to reflect others' personal system of judgments and values (perceptions) about what constitutes well-being, satisfaction, and state of health, elevated levels of stress may interfere with caregivers' ability to provide support (Hann et al., 2002; Manne, Ostroff, Winkel, Grana, & Fox, 2005). Depression may interfere negatively with patients' QOL when present as a comorbidity with several clinical diseases (Spiegel & Davis, 2003), but particularly with breast cancer (Burgess et al., 2005). Previous studies of patients with breast cancer have shown that lower QOL scores are associated with the presence of depressive symptoms (Rabin, Heldt, Hirakata, & Fleck, 2008). These depressive symptoms, in turn, may lead to an incongruence between the perceptions of patients and their caregivers regarding the impact of patients' conditions and treatments (Manne et al.; Wilson, Dowling, Abdolell, & Tannock, 2000).

No studies so far have considered simultaneously the points of view of patients and their partners relative to patients' QOL. According to the authors' hypotheses, caregivers seem to perceive patients' needs as if they were their own. The aim of this study was to evaluate the potential dissimilarity of the QOL of women with breast cancer with the perceptions of their partners, including an assessment of demographic and clinical variables as possible determinants.

Methods

Design and Sample

This was a cross-sectional study of 76 women diagnosed with breast cancer and their partners who were recruited in the Breast Unit at Hospital de Clínicas de Porto Alegre (HCPA) in southern Brazil during 2003 and 2004. The inclusion criteria for patients were (a) aged 18–65 years with stage I, II, or III breast cancer; (b) lived with a partner for at least one year; and (c) had the capacity to understand the instruments. Patients diagnosed with a terminal disease, defined as an advanced disease, incurable and progressive, without response to specific treatments and with a prognosis of less than six months of life, were excluded. The study was approved by the Research Ethics Committee of HCPA, and all of the patients and their partners signed agreements of free and informed consent.

Instruments

Collection of data for the application of instruments, such as sociodemographic variables (age, educational level, and time of cohabitation) and clinical data (stage

and time of the disease and treatment), was carried out by trained research assistants while the female patients and their partners waited for appointments at the clinic. When the partners were not with the patients, self-report instruments were submitted directly by the patients. The partners were given the option to submit their answers by mail or at the patients' next appointment. The patients' medical files were accessed by the research team for purposes of confirming the data gathered.

The QOL reported by the patients was evaluated according to the WHOQOL-BREF (WHOQOL Group, 1998), a self-report, generic instrument with internal consistency in each domain, discriminant validity, and test-retest reliability for Brazilian subjects (Fleck et al., 2000). The assessment is comprised of 26 questions, the first two of which measure a general perception about patients' QOL. The remaining 24 questions address four domains. The physical domain includes items about pain and discomfort, energy and fatigue, sleep and rest, mobility, daily activities, dependence on medication and treatment, and the capacity to work. The psychological domain covers questions that refer to positive feelings, thinking, learning, memory and concentration, self-esteem, body image and appearance, negative feelings, spirituality, religion, and personal beliefs. The social relationship domain evaluates personal relationships, social support, and sexual activity. The environment domain assesses physical safety and protection, home environment, financial resources, health and social care (availability and quality), opportunities to gain new information and skills, participation in opportunities of recreation and leisure, physical environment (pollution, noise, traffic, weather), and transportation. The scale provides scores, ranging from 1–100 in each domain, with higher scores indicating better QOL. Individual items are scored on a six-point Likert scale, from 1–5.

To evaluate the perception of the partners regarding the patients' QOL, the WHOQOL-BREF was adapted to the third person (proxy) (Trentini, Chachamovich, Figueiredo, Hirakata, & Fleck, 2006). For example, question 26 on the original instrument asks, "How often do you have negative feelings such as a blue mood, despair, anxiety, depression?" and was changed to, "How often does she have negative feelings such as a blue mood, despair, anxiety, depression?"

To identify the presence of depression symptoms, the **Beck Depression Inventory (BDI)**, a self-applied instrument, validated for Brazilian Portuguese (Gorenstein & Andrade, 1998) was used. The BDI identifies and quantifies cases of mild, moderate, and severe depression in hospitalized patients and outpatients (Beck & Steer, 2000). The BDI is comprised of 21 items, including neurovegetative and cognitive subscales. Scores lower than 10 represent an absence of depression, scores between 10 and 18 indicate mild depression, scores between 19 and 29 represent moderate depression, and scores

higher than 30 indicate severe depression. Individual items are scored on a five-point Likert scale, from 0–4 The WHOQOL-BREF and BDI have been used in previous studies with similiar results (Berlim, Pavanello, Caldieraro, & Fleck, 2005; Rabin et al., 2008; Trentini et al., 2006).

Statistical Analysis

Data were described by means and standard deviations. A comparison between the WHOQOL-BREF scores regarding perceptions of the patients and those of their partners was analyzed by student's t test for pairwise samples and by the intraclass correlation coefficient. To measure the association between the demographic and clinical variables of the study and potential discrepancies between patients' and partners' scores on the WHOQOL-BREF, Pearson's correlation coefficient, the student's t test, and the analysis of variance were used.

Hierarchical multiple regression analysis was carried out. The dependent variable was defined as the difference between evaluations by patients and their partners regarding patients' QOL. The independent variables of the study were grouped into three blocks: sociodemographic data (age, time of cohabitation, and education level), clinical data (stage, time with the disease, mastectomy, and chemotherapy), and depressive symptoms (BDI scale score). All of the variables of a certain block were inserted into the model at the same time. Therefore, it was possible to determine the impact of each independent variable on QOL through standardized α coefficients. Finally, the variables were analyzed according to the permanence in their block. The significance level was set at $\alpha = 0.05$.

Results

Seventy-six couples were included in the study and 73 (96%) filled out the instruments. Three couples did not return the questionnaires. Demographic and clinical variables of the patients are presented in Table 1.

The patients had a mean age of 48, more than eight years of formal schooling (51%), and a cohabitation time of more than 20 years. In terms of condition, 66% (n = 48) were in stage II, more than half had breast-conserving surgery, and 60% (n = 44) received chemotherapy. Depressive symptoms (ranging from mild to severe) were found in 48% (n = 35).

No signficant differences were found between the mean scores of QOL perceptions of the patients and their partners (see Table 2). Paired scores showed significant correlations in all four QOL domains. The patients' perceptions of QOL and that of their partners proved to be similar, rather than divergent.

Hierarchical multiple linear regressions were between patients' and partners' perceptions (see Table 3). The de-

Table 1. Sample Characteristics

Characteristic	$\overline{X}$	SD
Age (years)	47.85	7.88
Duration of cohabitation (years)	20.45	11.5
Duration with disease (years)	3.08	3.28
Beck Depression Inventory score	10.63	8.36

Characteristic	n	%
Beck Depression Inventory score		
0–9	38	52
10–18	20	27
19–63	15	21
Education level (years)		
8 or less	36	49
More than 8	37	51
Stage		
I	16	22
II	48	66
III	9	12
Mastectomy		
Yes	32	44
No	41	56
Chemotherapy		
Yes	44	60
No	29	40

N = 73

mographic variables were considered for the first block and the clinical variables were considered for the second block. BDI scores were considered for the third block. In the psychological and social relationship domains, only depression stood out as significant (p = 0.009 and p = 0.006, respectively). For the other domains, no variable appeared to be statistically significant. The results indicate how depressive symptoms enhance perception of patients' QOL by their partners.

Discussion

The purpose of this study was to evaluate the congruity between QOL perceptions of women with breast cancer and perceptions of patients' QOL by their partners. Results showed that the pairs were congruent in their perceptions for all QOL domains (r ranged from 0.44–0.58). According to other studies, congruity between pairs showed similar results (Brady et al., 1997; Sneeuw, Sprangers, & Aaronson, 2002), thereby suggesting that the congruity between pairs may serve as a source of reliable collaboration for evaluating patients' QOL in both clinical and psychosocial aspects. In the current study, women's depression seems to be the only variable that interfered in a consistent way with QOL assessments made by patients and their partners.

Informal caregivers, here seen as partners, have important roles in patients' adaptation to the disease (Dorval et al., 2005; Pistrang & Baker, 1995). In fact, partners are considered crucial to the treatment process (Baucom et

Table 2. Quality-of-Life Assessment Between Patients and Their Partners

Domain	Patients		Partners		p	Difference (CI$_{95\%}$)[a]	r
	$\overline{X}$	SD	$\overline{X}$	SD			
Physical	62.5	20.1	59.3	16.3	0.115	3.2 (–0.8, 7.2)	0.58
Psychological	66	17	65.6	12.7	0.839	0.3 (–3, 3.7)	0.57
Social relations	73.2	17.3	71.5	15.6	0.403	1.7 (–2.3, 5.8)	0.47
Environmental	63.4	11.8	62.7	12	0.645	0.7 (–2.3, 3.6)	0.44
Overall quality of life	65.2	18.8	67	17.7	0.436	–1.7 (–6.1, 2.6)	0.48

N = 73

[a] Difference between the World Health Organization Quality of Life–Brief Form mean of the patients and the perception of their partners in relation to their quality of life

CI—confidence interval

al., 2005–2006). The only divergence found in this study relates to the presence of depressive symptoms, meaning that the higher the depression levels, the higher the congruity on QOL for the psychological and social relations domains. Where a wider p value existed (of 0.10, as has been suggested frequently when using exploratory the multiple linear regressions), the role of depression also was considered to be significant in other WHOQOL domains. In this way, a multiple regression analysis indicates that the only variable that consistently affects a discrepancy in patients' own assessment of their QOL relates to what their partners perceive as depression: the greater the intensity of the depression, the lower the difference between patients' and caregivers' perceptions.

The results suggest several interpretations. In the present study, women tended to score higher in all QOL domains when compared to their partners' scores. The intensity of depression has been found to worsen the

way patients assess their own QOL. Therefore, the more depressed the women with breast cancer are, the worse the patients assess their own QOL (Rabin et al., 2008). Consequently, patients' scores are likely to be closer to the assessments of their partners, which initially were lower than those given by the patients themselves. Similar results were found by Trentini et al. (2006), who studied the differences of perception in QOL among older adults and their caregivers.

The psychological domain evaluates self-esteem and body-image questions related to personal relationships, whereas the social domain covers sexual life. The findings of other studies show that anxiety and depression among patients with breast cancer in remission for two to five years do not differ significantly from those of the healthy population (Bower, 2008; Vinokur, Threatt, Vinokur-Kaplan, & Satariano, 1990). In the sample used in this study, the average time of disease was 3.1 years,

Table 3. Quality-of-Life Score Differences Between Women and Their Partners and the Demographic, Clinical, and Beck Depression Inventory Hierarchical Multiple Linear Regression Variables

Variable	Domain									
	Physical		Psychological		Social Relations		Environment		Overall	
	β	p	β	p	β	p	β	p	β	p
Age	0.15	0.276	0.02	0.905	–0.05	0.689	0.09	0.518	–0.11	0.439
Education level 8 years or less	0.2	0.108	0.07	0.565	–0.01	0.954	–0.11	0.379	0.02	0.875
Time of cohabitation	–0.25	0.07	–0.01	0.935	0.17	0.223	–0.07	0.619	–0.01	0.977
Stage[a]										
II	–0.09	0.551	0.01	0.965	–0.05	0.752	–0.01	0.99	–0.07	0.634
III	–0.76	0.614	0.04	0.774	–0.07	0.64	–0.05	0.726	–0.26	0.09
Time with disease	–0.16	0.194	0.12	0.328	0.01	0.93	–0.13	0.307	0.17	0.167
Mastectomy	–0.21	0.091	–0.15	0.248	–0.14	0.262	–0.05	0.71	–0.06	0.607
Chemotherapy	–0.01	0.959	–0.06	0.665	0.05	0.694	0.22	0.106	–0.03	0.8
Beck Depression Inventory score	–0.23	0.054	–0.3	0.009	–0.32	0.006	–0.21	0.069	–0.12	0.322

N = 73

[a] Stages II and III were compared to stage I.

Note. The values presented for each variable were controlled for the others of the same level (block) or greater that were statistically significant.

but at least 42% presented a score for depression that ranged from moderate to severe. Depression is considered to cause possible serious disruptions in patients' QOL (Bower, 2008). As a result, it seems fundamental that healthcare professionals be alert to the symptoms of depression in their patients even several years after the diagnosis of cancer. Research has revealed that psychosocial interventions (six-week programs of telephone interpersonal counseling or self-managed exercise or attention control) were effective in decreasing symptoms of depression and anxiety, leading to an improvement of psychological QOL (Badger, Segrin, Dorros, Meek, & Lopez, 2007).

Implications for Nursing

Assessments given by informal caregivers of patients with breast cancer are important because judgments made by informal caregivers about patients' QOL have a fundamental effect with regard to decisions about treatment, particularly in oncology, where many patients are treated with palliative care and not with a healing function (Pearlman, Uhlmann, & Jecker, 1992). Therefore, understanding the likelihood that informal caregivers are able to accurately assess patients' level of operation and well-being is critical.

As a final consideration, although the importance of QOL as a self-reported measure among patients was highlighted in this article, the judgments made by partners about patient QOL also may be important, especially in circumstances where patients are not able to answer questions about their own QOL because of cognitive or functional limitations (Grassi, Indelli, Maltoni, Fabri, & Indelli, 1996). In such cases, having data about the concordance or discordance between the two sources of subjective evaluation is critical.

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