European Journal of Oncology Nursing 16 (2012) 491–497

Contents lists available at SciVerse ScienceDirect

European Journal of Oncology Nursing

journal homepage: www.elsevier.com/locate/ejon

Health-related quality of life among breast cancer patients in Lebanon

Huda Abu-Saad Huijer*, Sarah Abboud

Hariri School of Nursing, American University of Beirut, P.O. Box 11-0236, Beirut, Lebanon

Keywords:
Breast cancer
Palliative care
Quality of life
Symptom prevalence
Lebanon

A B S T R A C T

Background: High incidence rates of breast cancer (BC) emphasize the need to address health-related quality of life (QoL) in this population. The aim of this study was to evaluate the QoL, symptom prevalence and management, functional ability, and quality of care in Lebanese women with BC at a tertiary health care facility.
Methods: Cross-sectional descriptive survey targeting Lebanese adults with cancer and using a combination of four instruments: European Organization for Research and treatment of Cancer-Quality of Life Questionnaire, Memorial Symptom Assessment Scale; Barthel Index; Needs at End of life Screening Tool, and a demographic/clinical characteristics section. 89 breast cancer patients participated in the study; data was collected from 2009 to 2010. Descriptive analysis in addition to independent sample *t*-test, ANOVA, and Pearson *r* correlation were used for data analysis.
Results: The most prevalent symptoms were feeling nervous, feeling sad, lack of energy, and pain; symptom management was inadequate; high scores were reported on functional ability, medical care, spirituality, and relationships. Younger, single, and better educated participants who were diagnosed for less than 30 months, had no metastasis, and paid less than $450 dollars per month on medical expenses showed better global health status/QoL. Payments per month for medical expenses, presence of metastasis, time since diagnosis, and type of treatment received were significantly associated with QoL, the different functioning dimensions, and symptoms.
Conclusion: Strategies addressing symptom management in particular psychological symptoms need to be developed and implemented in addition to a holistic multidisciplinary palliative care approach.

Introduction

For the past decade, Lebanon has been witnessing high incidence rates of breast cancer (BC), the most commonly diagnosed type of cancer in the country. In 2002, 29.2% of female cancer patients were diagnosed with BC (Ministry of Public Health, WHO, and National Non-Communicable Diseases Programme, 2002), 42.3% in 2003 (Ministry of Public Health, WHO, and National Non-Communicable Diseases Programme, 2003), and 38.2% in 2004 (Shamseddine and Musallem, 2010). In 2004, the age-adjusted incidence rate was estimated at 69 new cases per 100,000, which is a notable increase from the estimated 20 cases/100,000 reported in the 1960s (Abou-Daoud, 1966). Lebanon can therefore be classified nearer to the developed countries than to the less developed in terms of the magnitude of the BC problem. A study conducted in 2002 (El Saghir et al., 2002) assessing the age distribution of BC in Lebanon, reported that a significant number of women were in the younger age groups compared to western countries.

Nowadays, with the improved cancer screening and early detection, women with BC are surviving longer but in Lebanon, only recently, healthcare providers have started looking at the quality of life (QoL) of women diagnosed and living with BC (Doumit et al., 2010a,b). A literature review from 1974 to 2007 (477 papers) on health-related QoL in BC patients reported that BC patients receiving chemotherapy might experience several side-effects and symptoms that negatively affect their QoL. Anxiety, depression, pain, fatigue, and arm morbidity were among the most common symptoms reported by BC patients. In addition, patients who underwent surgical procedures reported lower body image and sexual functioning than those who did not (Montazeri, 2008).

The aim of this study, which is part of a larger study, was to evaluate the QoL, symptom prevalence and management, functional ability, and quality of care provided to Lebanese women with BC at a tertiary health care facility.

Patients and methods

Patients

The study targeted 200 Lebanese adult patients with cancer living in Lebanon during the data collection period (2009–2010) and being

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* Corresponding author. Tel.: +961 1 374374x5952/3; fax: +961 1 744476.
E-mail addresses: huda.huijer@aub.edu.lb, hh35@aub.edu.lb (H. Abu-Saad Huijer).
URL: http://www.aub.edu.lb/~webson/

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doi:10.1016/j.ejon.2011.11.003

followed at the American University of Beirut-Medical Center (AUB-MC). Adults were defined as any person whose age is 18 years and above (age ≥ 18 years). The sampling procedure used was sequential; interviewers approached patients who fit the criteria on daily basis as they come to the center until the sample size ($N = 200$) was secured. AUB-MC, located in the capital Beirut, is considered Lebanon's cancer referring center and receives patients from all parts of the country. The sample size was calculated based on an estimate of 0.5 for prevalence of outcomes (such as symptom prevalence) and a precision of 7% for a 95% confidence interval; the required sample size was calculated to be 197. Sample size calculation was done using the PASS resource part of the NCSS software. For this article, results from the 89 female participants diagnosed with BC who joined the study are presented.

Methods and data collection

The study was a cross-sectional descriptive survey. Data collection was started after receiving Institutional Review Board (IRB) approval from AUB. Two trained interviewers and a research assistant were responsible for securing informed consent and for conducting the interviews. Data was collected from three oncology units at AUB-MC that admit patients from different socio-economical backgrounds and from all geographical areas. Participants' inclusion criteria were: Lebanese, age 18 years and above; diagnosed for more than one month prior to interview date; and are aware of their cancer diagnosis. Female participants with BC were not targeted separately but as part of the larger sample that was recruited on daily basis from the three oncology units at AUB-MC with the assistance of the nurse managers of each unit.

Questionnaires

The questionnaire used was a combination of four instruments: the first one is the European Organization for Research and treatment of Cancer-Quality of Life Questionnaire (EORTC-QLQ C-30) which is the most widely used QoL measure in oncology patients and composed of 30 cancer-specific items that address physical, role, cognitive, emotional, and social functioning; three symptom scales (fatigue, pain, and nausea and vomiting), and a global health and quality of life scale (Aaronson et al., 1988, 1993); EORTC-QLQ C-30 is a valid and reliable tool (Aaronson et al., 1993; Hagelin et al., 2006; Montazeri et al., 1999; Sprangers et al., 1998). The second instrument is the Memorial Symptom Assessment Scale (MSAS) which was used to measure 32 psychological and physical symptoms in terms of prevalence, frequency, severity, and distress. Psychometric properties of MSAS has been described by Portenoy et al. (1994) and showed adequate reliability and validity. An additional section was added to MSAS by the authors of the study to measure symptom management and its effectiveness.

The third instrument is the Barthel Index (Mahoney and Barthel, 1965) which evaluates functional ability in terms of feeding, bathing, grooming, dressing, bowels, bladder, toilet use, transfers, mobility, and stairs. The reliability and validity of the Barthel Index have been reported in many studies (Sainsbury et al., 2005; Uyttenboogaart et al., 2006). The quality of care was measured using 22 selected items from the fourth instrument: Needs at End of life Screening Tool (NEST) (Emanuel et al., 2000, 2001) measuring four subscales: financial burden (three items), medical care (nine items), spiritual and existential matters (five items), and relationships (five items). In addition, patient demographics and clinical characteristics were collected.

Translation and pilot study

The questionnaire was translated to Arabic using the back-translation method (Varricchio, 2004), evaluated for cultural appropriateness by four experts in the field, and pilot tested on ten oncology patients from AUB-MC oncology units for clarity, length, and presence of bothersome items. Based on the experts' recommendations and the pilot study, two MSAS symptoms were removed because of their resemblance in the Arabic translation to two items already present in the scale; in addition one item related to spiritual matters was removed because of difficulty to understand it.

Statistical analysis

Descriptive analysis was used for demographic and clinical characteristics and for EORTC-QLQ C-30, MSAS, Barthel Index, and NEST scores. For the EORTC-QLQ C-30, scales range from 0 to 100; high scores representing higher response level. Similarly, a high score on a functional scale represents a high/healthy level of functioning, a high score for global health status/QOL represents a high QoL, but a high score for a symptom scale represents a high level of symptomatology/problems (Fayers et al., 2001). For MSAS, scores were calculated as described by Portenoy et al. (1994). Separate scores were computed for 11 most prevalent physical symptoms (MSAS-PHYS), for five most prevalent psychological symptoms (MSAS-PSYCH), and Total MSAS score (TMSAS) which is the average of the symptom scores of all 30 MSAS symptoms. Scores for Barthel Index range from 0–100; higher scores mean better functional ability and higher degree of independence. As for the quality of care subscales (NEST), all scales range from 0 to 10 with a high scale score representing a higher/better quality of the subscale.

Independent sample *T*-tests and ANOVA were used to test the differences in mean scores of all subscales and demographic and clinical characteristics. Pearson r correlation between EORTC-QLQ-C30 and MSAS subscales were calculated to see which domain has the strongest relationship with QoL.

Results

The number of completed questionnaires was 200 for the main study; women with BC constituted 89 (44.5%) of total sample and results from this specific sample are analyzed and presented in this paper.

Demographic and clinical characteristics

Table 1 displays the demographic and clinical characteristics of participants. Almost all participants (97.8%) were recruited from outpatient clinics (same day treatment/chemotherapy). The mean age of participants was 49.19 (SD = 11.03); age range 24–79 years. Metastasis to other sites was reported by 37.1% of participants; participants received a multiple combinations of cancer treatment but surgery was the most common type of treatment (70.78%).

Scores

On the EORTC-QLQ-C30, participants scored fairly well on global health status/QoL scale (Mean = 59.64; SD = 29.09); scores on functioning scales ranged from 60.29 (SD = 28.48) for social functioning to 84.45 (SD = 22.16) for cognitive functioning. All symptoms scales in addition to financial difficulties received scores below 50.00 (Table 2).

The average number of symptoms reported by participants on MSAS was 9.32 (SD = 4.80); scores were 2.41 (SD = 0.68) for psychological symptoms, 2.29 (SD = 0.50) for physical symptoms, and a total score of 2.32 (SD = 0.47) for all symptoms (Table 2). The most prevalent physical symptoms were lack of energy (59.6%),