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Assessment of Quality of Life among Women Aged 35-55 Suffering from Breast Cancer

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Abstract

Background: Breast cancer is the most common type of cancer with women worldwide, striking more and more at women in productive age of life, and the success of healthcare for women with this disease is measured with the quality of life of survivors. The aim of this study was to examine how the breast cancer affects the quality of life of women aged 35-55 and in what dimension of health quality of life is the least accomplished.

Method: A pilot research has been performed in the period from June 10th to August 15th 2011, on 56 women, all from Association of women with breast cancer "Iskra" in Banja Luka, aged 35-55. The survey research was based on the EORTC QLQ-C30 version 3.0 and questionnaire.

Results: The average value of scale for total health status was 30.1 and the score of overall health condition (2.9) as well as the score for total quality of life (2.8). Mean values of the score for emotional and social functioning, as well as functional role were statistically lower in relation to the physical function and cognitive functions. The scores on the symptoms scale were statistically lower for constipation, dyspnea, nausea and vomiting, loss of appetite and diarrhea, in relation to scores for symptoms of fatigue, pain and insomnia.

Conclusion: Breast cancer affects all the domains in life quality in women's productive age, especially in the domain of emotional and social functioning. The quality of life is affected particularly in these domains by family, environment and community, whose influence is yet to be examined.

Keywords: Women from 35 to 55 years, Quality of life, Breast cancer

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Introduction

The span of mortality rate is significantly smaller (about 6-19 in 100.000), due to breast cancer survivals in developed regions (high incidence). As a result, breast cancer is the fifth cause of deaths in the total number of deaths (458 000 deaths), and in spite of that, it is still the leading cause of death in women from all types of cancer locations, and in countries in development (269 000 deaths, 12.7% of overall mortality) and developed regions, with an estimated number of 189 000 deaths, which is almost equal to the estimated number of deaths by lung cancer (188 000 deaths) [1].

Breast cancer was the leading cancer with women in Bosnia and Herzegovina in the year 2008, with an incidence 1100 (25.9%) with the standardized world rate ASR (W) on 100 000 inhabitants, 36.5 and mortality 399 (17%) with the standardized world rate ASR (W) 22.7 [1].

Breast cancer as a disease effects on financial expenses and presents an economic burden for reasons that, next to the direct costs, come the costs of treatment and mortality rates. During a longer period, the expenses grow according to a similar rate for total health costs. According to the American National Institute for Health, it is estimated that breast cancer will cost 209.9 billion dollars in the year 2005, 118.4 billion of which due to mortality expenses (loss of productivity due to patient's death), 74 billion due to direct medical expenses (money spent on medical care),

which used to be 17.5 billion dollars due to morbidity expenses (costs of loss of productivity due to disease) [2].

Robert Cummins is the founder of international group of scientist and researchers (International Well-Being Group), which advocates the understanding that life quality is a multi-dimensional construct made from: life standard, health, productivity, the ability to make close connections, security, the sense of belonging to a community, and the sense of security in the future [3].

Aim of this work: To see how breast cancer in our environment affects women aged 35-55 and in which dimension the quality of life is least accomplished, with the use of the questionnaire QLQ C30 -for life quality of women suffering from breast cancer.

Method

The research was conducted as a pilot study among 56 women aged 35-55, treated for breast cancer, all members of the association of women with breast cancer from Banja Luka. In 2011, a research was based on a questionnaire of the European Organization for Research and Treatment of Cancer (EORTC) for quality of life of patients with cancer QLQ-C30 (version 3.0.) with 30 questions. "All scales and single-item measures are ranged score of 0-100. Higher scores in the rankings are the result of presenting a higher level of response. Such a high score with a functional scale represents a high / healthy level of functioning, a high score for the global health status / QOL represents a high quality of life-QOL, as well as a high score for a symptom scale / item that represents a high level of symptoms / problems" [4]. A higher score represents a higher ("better") level of functioning, or higher ("worse") level of symptoms [5].

All participants were given a questionnaire with an explanation of how to fill it and they also signed consent on anonymity of the survey, and they were given the option of refusing to participate in the survey without explanation. Analysis of the questionnaires after the survey was performed according to the manual, "Guidelines for determining the quality of life in EORTC Clinical Trials' Group of the European Organization for Research and Treatment of Cancer EORTC quality of life QLQ [6]. Depending on their nature, description of the parameters of interest was performed by means of descriptive statistics: frequency, percentage, means (average), median, standard deviation (CI) and range. Testing was performed with a significance level p <0.05 using Friedman test and Pearson χ2 test. Data were analyzed with statistically programs: SPSS for Windows software (SPSS13.0, Inc., Chicago, Illinois, USA) and Microsoft Excel (11. Corporation Microsoft, Redmond, WA, USA), representing the statistical parameters in the Tables.

Results

Mean value of the scale for overall health status was 30.1 and the score of general health condition (2.9) as well as the score for total life quality (2.8) during the last week before surveying **(Table 1)**.

Mean values of the score for emotional and social functioning, as well as functional role were statistically smaller, (χ^2_4=126.694; p<0.01) in relation to the physical and cognitive functions **(Table 2)**.

In the last week before the survey more than 2/3 of surveyed women were "pretty" or "a lot of" anxious, irritated, and depressed. Also, 2/3 of women said that their health condition had „much" or „a lot of" influence on their family life and their social activities, whilst more than a ½ of women said that their abilities to perform house chores or daily activities, or to do hobby and other leisure activities were "pretty" and "a lot of" reduced "none " or "a little" was a response given on questions whether they needed help during meal time, bath time or using restrooms, and whether they spend time in bed or sitting, or they have problems during walk . In a higher percent they answered with "pretty" or "a lot of" when asked if they had troubles doing an arduous work (carrying bags or suitcases) or while taking long walks **(Table 3)**.

Scores on the symptoms scale were significantly lower (χ^2_4=255.875; p<0.01) for constipation, dyspnoea, nausea and vomiting, loss of appetite and diarrhea, in relation to scores for symptoms such as fatigue, pain and insomnia **(Table 4)**.

More than ½ of surveyed women said that they needed rest, that they felt "a lot of" or "pretty" of fatigue. Also, in a higher percent they stated that they experienced "a lot of" and "pretty" pain, and that it disturbed their everyday functions, as well as they suffered from insomnia **(Table 5)**.

Discussion

The program of cancer control in California, researched the emotional connection in a multi-ethnic sample in Los Angeles hospitals and agencies of communities in South California (including European, African, Hispanic and Asian American) of women survivors of breast cancer, and examined the difference in emotional items in relation to demographic symbols. The sample consisted of 703 women, and the emotional item varied

Table 1 Mean values of the scale of total health status, general health conditions and quality of life, women with breast cancer.

Mean values of the scale for	N=56	
	Mean(±SD)	Min-Max
Total health status	30.1(±18.1)	0-75
Score of general health during last week	2.9 (±1.1)	1-6
Score of general quality of life during last week	2.8(±1.2)	1-5

Table 2 Review of parameters of the score of functional scale women with breast cancer.

Scale	*QLQ.C30. score for functional scale (N=56) Average (SD) Median (Range)
Physical function	65.57 (±17.25) 66.67 (26.67-86.67)
Functional role	44.94 (±23.55) 33.33 (0-83.33)
Emotional functioning	35.71 (±25.16) 33.33 (0-75)
Cognitive functioning	62.50 (±31.5) 66.67 (0-100)
Social functioning	36.01 (±29.26) 33.33 (0-100)

* Friedman Test; χ^2_4=126.694; d f=4; p=0

Table 3 Answers to questions regarding physical function, functional role, emotional, cognitive and social functioning.

Questions	Answer							
	none		little		pretty		A lot of	
	n	%	n	%	n	%	n	%
Physical function								
Do you have any trouble performing arduous work (carrying suitcases or heavy shopping bags)?	0	0	20	36	27	48	9	16
Do you have any problem when taking long walks?	2	4	28	50	18	32	8	14
Do you have any problems when taking short walks away from home?	29	52	25	45	2	4	0	0
Are you forced to spend your day in bed or sitting in chairs?	11	20	34	61	11	20	0	0
Do you need help during mealtime, getting dressed, bathing, or going to the restroom?	41	73	14	25	0	0	0	0
Functional role								
Is your ability to perform chores or daily activities reduced in any way?	0	0	25	45	21	37	10	18
Is your ability to spend time in leisure or any other activities during your free time reduced?	4	7	20	36	28	50	4	7
Emotional functioning								
Were you tense?	0	0	18	32	24	43	14	25
Were you worried?	2	3	14	25	26	46	14	25
Were you irritated?	0	0	17	30	25	45	14	25
Were you depressed?	2	4	16	28	23	41	15	27
Cognitive functioning								
Did you have any trouble focusing while reading newspapers or watching TV?	24	43	17	30	11	20	4	7
Did you have trouble memorizing something?	12	21	24	43	9	16	11	20
Social functioning								
Did your health condition or your treatment affect your family life?	3	5	13	23	24	43	16	28
Did your health condition or your treatment affect your social activities?	4	7	14	25	22	39	16	28

Table 4 Review of parameters of the score for symptoms scale women with breast cancer.

Scale	*QLQ.C30. score for symptoms scale with patients (N=56) Average (SD) Median (Range)
Fatigue	53.17 (±19.04) 55.56 (22-89)
Nausea and vomiting	35.12 (±24.14) 33.33 (0-100)
Pain	51.78 (±24.55) 50 (0-100)
Dyspnea	24.4 (±23.35) 33.33 (0-66.67)
Insomnia	54.17 (±19.66) 66.67 (0-100)
Loss of appetite	38.09 (±24.97) 33.33 (0-100)
Constipation	10.71 (±19.18) 0 (0-66.67)
Diarrhea	39.29 (±25.51) 33.33 (0-100)

*Friedman Test; χ^2_4=255.875; d f=8; p=0.0

in relation to nationality, income, education, working status, language and age. All of them were very concerned for cancer regression and repetition, as well as the negative feeling of sadness or insecurity, regardless of ethnicity. The results uncover unique patterns of relations of emotional outcome on the total HRQOL result. Clinically, this study indicated a greater need for attention and respect of the influence of demographic context on the emotional well-being [7].

A study in two large city areas conducted on 1956 women had the goal to examine the occurrence of fatigue with women suffering from breast cancer, in relation to general population and demographic and medical psychosocial component. In average, the level of fatigue with women survivors of breast cancer was comparable and consistent to women of the same age in the general population, even though women survivors of breast cancer had more fatigue occurrence than the same age group of women. Approximately one third of breast cancer survivors show „heavier" fatigue, related to significantly higher levels of depression, pain and sleep disorders. Apart from that, women in menopause are more affected by fatigue and probably more than those women who had taken chemotherapy (with or without radiation) than healthy women. In the multivariate analysis, depression and pain resulted as the strongest predictors of fatigue [8].

In a research conducted among women suffering from breast cancer in Lebanon, the most often symptoms were the feelings of nervousness, sadness, lack of energy and pain [9].

Table 5 Answers to questions regarding the symptoms of fatigue, nausea, vomiting, pain, dyspnea, insomnia, loss of appetite, constipation and diarrhea.

Questions	Answer							
	none		little		pretty		A lot of	
	n	%	n	%	n	%	n	%
Fatigue								
Did you have to rest?	1	2	26	46	28	50	1	2
Did you feel weakness?	0	0	27	48	25	45	4	7
Did you feel tired?	1	2	23	41	25	45	7	12
Nausea and vomiting								
Did you have nausea?	10	18	31	55	14	25	1	2
Did you vomit?	16	29	25	45	14	25	1	2
Pain								
Did you have pain?	1	2	28	50	25	45	2	4
Did the pain disrupt your daily activities?	6	11	22	39	16	29	12	21
Dyspnea								
Did you have stifling?	23	41	25	45	8	14	0	0
Insomnia								
Did you have insomnia?	1	2	21	37	32	57	2	4
Loss of appetite								
Did you lose your appetite?	11	20	27	48	17	30	1	2
Constipation								
Did you have constipation?	41	73	12	21	3	5	0	0
Diarrhea								
Did you have diarrhea?	11	20	25	45	19	34	1	2

A study in Turkey, consisting of 90 women suffering from breast cancer was designed in order to analyze the relations between psychosocial adjustments and hopelessness among the groups of such women. It was noted that psychosocial adjustments were getting worse, as well as the increase of hopelessness in such women. With regards to these relations, it was concluded that the increase of hope and support for the psychosocial adjustment of these patients was important and that it plays a crucial role in increasing their life quality [10].

In a research made in a hospital in Turkey with patients treated from breast cancer, in a period of two months, 179 patients were included. 158 patients agreed to take part in the survey. Due to lack of data, 35 patients were excluded from the survey, so the total group of patients consisted of 123 patients. The questionnaires by the survey participants related issues of demographic characteristics and quality of life (QOL). The patients that took part in the research were of average age 49.37 ± 9.55 years (mean values ± SD) with a span 27-67 years. Quality of life QOL among patients in different stages of breast cancer shows a significant difference was given in aspects of physical functioning, social, sexual functions, and sexual pleasure, pain and arm symptoms. There was no significant difference in relation to global health conditions/QOL among patients in different stages of breast cancer. When comparing quality of life with patients (QOL) according to the time from setting a diagnosis, it was shown that functional role and sexual pleasure were on a higher scale among patients who had a breast cancer diagnosis of five years and more. The social work was better among those patients diagnosed with breast cancer in period 2-4 years. Pain, insomnia, loss of appetite and systematic effects of therapy, as well as symptoms of the breasts were more present with patients diagnosed a year or less. In regards to global health status, there was no significant difference in relation to length of duration of diagnosis, and the highest values for symptoms are noted in fatigue [11].

Medical condition or treatment had considerably more impact on family and social life of women with breast cancer with statistically significant difference compared to the control group women. Mean values of scores of emotional and social scales were significantly lower in ill women than in the control group of women. Research conducted regarding monitoring the quality of life of women with breast cancer have shown that in order to provide a better emotional and social functioning, it is necessary to ensure better support to the whole family, the environment and the community of women living with breast cancer [12]. Research performed in 2009 with 192.000 American women living with breast cancer showed that exercise can help in the fight against the symptoms of breast cancer treatment, and fatigue was identified as potential obstacle in doing physical activities. Even though fatigue is regarded as physical problem that demand physical intervention, this study provides new evidence that potential intervention for improving self-effectiveness can intermediate the effect of tumor that affects quality of life, and interventions on improving self-effectiveness can contribute to increasing physical activity and improving quality of life (QQL) in this population [13]. An online research in Australia, with 1.965 women with breast cancer, containing 47 quantitative and qualitative notions dominant problems identified in the qualitative analysis were emotional consequences, physical changes, feeling of unattractiveness, or lack of femininity, self-reconciliation regarding the changes, as well as influence on the partner or relations with him. This research indicated important changes in the sexual bliss after the diagnosis and treatment of breast cancer [14]. Understanding the ethnic differences in the quality of life (QQL) among the cancer survivors can give information regarding interventions focused on improving the health condition for Latin American women [15].

Conclusion

Assessment of quality of life with women aged 35-55 suffering from breast cancer showed that the scores for domains of emotional and social functioning are significantly lower, as well was symptoms of fatigue, pain and insomnia. The research did not include the monitoring of support by family, environment or community, which definitely affects the domains before mentioned, which should be the subject of additional research.

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