



Worry About Recurrence in Women Breast Cancer Survivors

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Abstract

One of the problems faced by breast cancer patients is fear and can be defined as the fear or worry that the disease will recur in the same or another organ. This affects the quality of life. This work aims to validate the 8-item Cancer Worry Scale (CWS) and to establish a cut-off score for high fear of cancer recurrence.

Methodology: Two hundred and fifty female cancer survivors were invited to participate in the study, of which 134 (53.6%) returned the questionnaires. This study was conducted at the Oncology Clinic of the Clinical Hospital Center of the University of Niš. Of these, 116 women completed the (CWS) in full, which was necessary for analysis. Responses on the scale are assessed using a 4-point Likert-type scale. Responses are “rarely”, “sometimes”, “often” and “almost always”. The score on the scale ranges from 8 to 32.

Results: In this study, we use an 8-item scale. The Worry Scale (CWS) assesses worry about cancer and its recurrence and the effects of these worries on daily life in those with a history of cancer. The cut-off score of the CVS was set at 13, and a score of 13 and below was defined as low fear, and a score of 14 and above as high fear. As the score increases, the level of fear of cancer increases, and the Cronbach's alpha coefficient was calculated as 0.713, so the instrument is quite reliable. As a result of this factor analysis conducted to determine the validity of the Breast Cancer Worry Scale, it was found that the factor loading values were between 0.61 and 0.87.

Conclusions: After breast cancer surgery, a serious problem that significantly impairs the quality of life of patients is the fear of cancer recurrence. This scale (CWS) is a reliable and valid questionnaire for assessing fear of recurrence in breast cancer survivors, allowing us to provide adequate care to survivors.

Key words: Psycho-Oncology, Breast Cancer, Cancer Worry Scale (CWS), Fear of Cancer Recurrence, Breast Cancer Surgery, Quality of Life

Introduction

Breast cancer is a common cancer type in women, with about a million new cases each year. In recent years, improved modalities for

early diagnosis and better breast cancer treatment approaches have contributed to an increase in the number of breast cancer survivors. That is the reason why due care should be taken as to the patients' coping with chronic or late effects of the disease and its treatments. One of the problems breast cancer patients are faced with is the fear after the operation or worry that the disease would recur in the same or in another organ [1, 2]. The fear of cancer “is defined as an emotional response associated with fear or anxiety related to cancer threat, involving the immediate causes such as cancer diagnosis, cancer treatment or unfavorable outcomes [3, 4]. The continuous and exaggerated fear can be very difficult to bear and it may severely hamper everyday activities and social interactions [5-7]”. It is of utmost importance that health care professionals establish the factors of impact on psychosocial well-being of their patients (such as insecurity, anxiety and fear of cancer), necessary interventions in that regard and management of symptoms [8].

There are numerous instruments that are used to assess the cancer worry. The Cancer Worry Scale (CWS) is a tool developed to evaluate the cancer worry [9, 10] and it has been evidenced as a valid and reliable tool for cancer patients in general.

Materials and Methods

Respondents and Methods

This cross-sectional study was conducted with women who underwent surgery for breast cancer. And it was conducted at the Oncology Department of the Clinical Hospital Center from June 2021 to January 2022 with face-to-face interviews.

Patients who met the inclusion criteria were explained the purpose of the study, and the participants signed an informed consent form before participation.

Inclusion criteria: (1) patients who meet diagnostic criteria after cancer surgery within 1 to 10 years aged 27-70 years.

Exclusion criteria: (1) those with other malignant tumors;

Questionnaire settings

The participants filled in the questionnaires by themselves in about 15 minutes. The questionnaire form contained the questions related to sociodemographic characteristics of included women (age, occupation, level of education, level of income).

The Cancer Worry Scale (CWS) containing 6 items was originally developed in Great Britain to assess the fear of developing cancer in women with breast cancer. Two items were added later in the Netherlands version of the CWS [9-13]. In this paper, we used an 8-item scale.

The CWS evaluates the worry related to cancer and its recurrence,

as well as the effects of this worry on everyday life in those with the history of cancer. The scale responses were assessed in accordance with the 4-point Likert type scale. The patient responses were as follows: „rarely“, „sometimes“, „often“ and „almost always“. The grades in the scale ranged from 8 to 32.

1. How often have you thought about your chances of getting cancer (again)?
Almost never Sometimes Often Almost always
1 2 3 4
2. Have these thoughts affected your mood?
Almost never Sometimes Often Almost always
1 2 3 4
3. Have these thoughts interfered with your ability to do daily activities?
Almost never Sometimes Often Almost always
1 2 3 4
4. How concerned are you about the possibility of getting cancer (again) one day?
Not at all A little Quite a bit Very much
1 2 3 4
5. How often do you worry about developing cancer (again)?
Almost never Sometimes Often Almost always
1 2 3 4
6. How much of a problem is this worry?
Not at all A little Quite a bit Very much
1 2 3 4
7. How often do you worry about the chance of family members developing cancer?
Almost never Sometimes Often Almost always
1 2 3 4
8. How concerned are you about the possibility that you will ever need surgery (again)?
Not at all A little Quite a bit Very much
1 2 3 4

Figure 1. Cancer Worry Scale

The low/high level of fear cut-off score was set at 13 – the result of 13 or lower indicated low fear, while the result of 14 or higher indicated a high level of fear. As the score was rising, the fear of cancer was rising too; the Cronbach's alpha coefficient was calculated to be 0.713, so that the instrument was rather reliable. The aim of the study was to confirm the validity of 8-item CWS. Cancer survivors

qualified for inclusion in the study if they had been disease-free for 1-10 years after the operation and had been treated with a curative intent. The questionnaires were filled in either on-line or on-site, in paper. More details of the procedure have been published elsewhere [14,15]. Table 1 shows the sociodemographic characteristics of the surveyed women.

		Studied group n (%)	Control group n (%)	χ^2 / t*	p
		M 50,36	SD ±10, 889		
Occupational status	Unemployed	65(56,0)			
	Employed	35(30,2)			
	Retired	16(13,8)		0,642	0,725
Educational status	Incomplete elementary education	12(10,3)			
	Elementary	24(20,7)			
	Secondary	19(16,4)			
	College	24(20,7)			
	Higher education	37(31,9)		26,399	<0,001
Marital status	Married	77(66,4)			
	Civil partnership	18(15,5)			
	Single	5(4,3)			
	Widow	12(10,3)			
	Divorced	4(3,4)			<0,001

Table 1. to be cont...

Children	Yes	88(75,9)			
	No	28(24,1)			0,004
Age at birth of first child	$\bar{x} \pm SD$	25,1 $\pm$ 3,0	24,6 $\pm$ 5,5	0,560	0,577
Number of children None	One				
	Two			15,565	0,001
	Three and more				
Stress	yes	112(96,6)			
	no	4(3,4)			
1.	1 Almost never				
	2 Sometimes	36(31,0)			
	3 Often	68(58,6)			
	4 Almost always	12(10,3)			
2.	1 Almost never				
	2 Sometimes	46(39, 7)			
	3 Often	63(54, 3)			
	4 Almost always	7(6, 0)			
3.	1	6(5,2)			
	2	69(59,5)			
	3	40(34,5)			
	4	9(9)			
4.	1				
	2	58(50,0)			
	3	55(47,4)			
	4	3 (2,6)			
5.	1	56(48, 3)			
	2	57(49,1)			
	3	2(1,7)			
	4	1 (0,9)			
6.	1	2(1,7)			
	2	68(58,6)			
	3	43(37,1)			
	4	3 (2,6)			
7.	1	1(0,9)			
	2	100(86,2)			
	3	13(11,2)			
	4	2(1,7)			
8.	1	1(0,9)			
	2	95(81,9)			
	3	13(11,2)			
	4	7 (6,0)			
Disease phase	I	84(72,4)			
	II	28(24,1)			
	III	4(3,4)			
Years of operation		M4, 24	SD 2,809		
Treatment modality					
	Surgery + chemotherapy + radiotherapy	93	48%		
	Surgery + chemotherapy	68	35%		
	Surgery + radiotherapy	16	8%		
	Surgery only				

Table 1. Sociodemographic characteristics of women in the study (n=116)

Questionnaire reliability and validity

If the Cronbach's alpha coefficient is below 0.40, the evaluation instrument is not reliable; if it is between 0.40 and 0.59 the instrument reliability is low; if it is between 0.60 and 0.79, the instrument is rather reliable; if it is between 0.80 and 1.00, the instrument is considered very reliable [15,16]. In this study, the results of Cronbach's alpha

coefficient was 0.778, which suggested that the instrument was rather reliable for the studied sample. The sample size was adequate and it was appropriate for factor analysis.

As the result of this factor analysis undertaken to establish the validity of the scale for breast cancer worry, it was established that the factor loading ranged from 0.61 to 0.87 (Table 2).

	M	SD	Factor Loading	Corrected Item-total Correlation
1. How often did you contemplated about your chances to get cancer (again)?	2,79	0,612	0.814	0.730
2. Did these thoughts affect your mood?	2,66	0,589	0.826	0.758
3. Did these thoughts hamper your ability to engage in everyday activities?	2,31	0,51	0.637	0.754
4. To what degree are you worried to get cancer (again) one day?	2,53	0,551	0.610	0.724
5. How often do you worry about getting cancer (again)?	2,53	0,535	0.871	0.737
6. How big a problem this worry represents to you?	2,41	0,575	0.619	0.738
7. How often do you worry about the chance that members of your family get cancer?	2,14	0,415	0.664	0.779
8. To what degree are you worried about the possibility that an operation would (again) be necessary to you?	2,22	0,561	0.687	0.799.

Table 2. Factor loading and correlations of total items on the breast cancer worry scale

Statistical Method

The study data was analyzed using the SPSS v. 16.0, and the same was used to analyze the descriptive statistics used for the inclusion characteristics of participants. The significance cut-off was set at 0.05. Measurement data were expressed as mean $\pm$ standard deviation ($M \pm SD$).

Enumeration data were expressed as n (%), with cross-tabulation chi-square (χ^2) test. Factors influencing fear of recurrence were analyzed with a linear regression model. $P < 0.05$ and $P < 0.001$ indicated statistical significance.

Results

Two hundred and fifty women received our invitation to participate in the study, and 134 (53.6%) returned the questionnaires. Out of that number, 116 women filled in the CWS completely, which was necessary for the analysis. The descriptive characteristics of the sample, sociodemographic characteristics of the women and their behavior regarding the methods of early diagnosis of breast cancer was shown in Table 1. The average age of the study participants was 50.5 years (SD, 10.889) years (range, 27-70 years).

Out of the total number of participants, there were 56.0% housewives, 20.7% had elementary education, and 31.9% were highly educated (Table 1).

Discussion

This was one of the rare studies aiming to establish the presence of fear of cancer in women who have been surgically treated for breast cancer. In our study, it was found that the average age of the participants was 50.50 years, and it was thought that this high average age of participants in the study possibly had an impact on the reduction of average results obtained with the Cancer Worry Scale (CWS). The fear of cancer was higher in single women, since they still did not enter menopause and they had no partner to support them in the process [16].

If in the family there are cancer patients, the feeling of individual vulnerability is increased, and since heredity is considered as a risk factor, it may have an impact on the health of the patient [17].

After tissue sampling during the operation, various reaction may occur in women in their postoperative period, ranging from anxiety, fear, anger, to depression [18].

This scale could be helpful to individuals to adjust their personal risk as a response to worry. In some situations, a more precise follow-up of groups with moderate to high risk if the familial risk has already been identified, so that worries could be reduced and quality of life improved. The study had certain limitations. A low response rate and small sample size could mean that the results would not be representative. It was possible that cancer survivors who were disease-free in the period of several years would not be willing to contemplate about hospitals or cancer research.

Conclusion

After breast cancer surgery, a serious problem that significantly impairs the patient's quality of life is the fear of cancer recurrence. This scale is a tool that allows us to provide adequate care to patients and enable patients to have a quality life.

Declarations

I paid all the expenses myself. I didn't have any financial help. That's why I want a free license.

There is no interest rate

I did all the drills at the Clinical Center of the Faculty of Medicine, University of Niš. The study was approved by the Ethics Committee of the Clinical Center Niš № 12613/57 of 06.05.2014.

There is no conflict of interest

I had written approval from patients to participate in the study.

This research is within the scope of my doctoral dissertation. So everything had to be protocol-based.

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