Szymczyk Anna, Gałka Aneta, Świątoniowska Natalia, Marcinkiewicz Jagoda. The influence of selected socio-demographic factors and the perception of the applied therapy on quality of life of women with breast cancer. Journal of Education, Health and Sport. 2018;8(12):219-231. eISNN 2391-8306. DOI http://dx.doi.org/10.5281/zenodo.2164000
http://ojs.ukw.edu.pl/index.phpohs/article/view/6363

The journal has had 7 points in Ministry of Science and Higher Education parametric evaluation. Part b item 1223 (26/01/2017).
1223 Journal of Education, Health and Sport eissn 2391-8306 7

The authors declare that there is no conflict of interests regarding the publication of this paper.

Received: 30.10.2018. Revised: 20.11.2018. Accepted: 10.12.2018.

The influence of selected socio-demographic factors and the perception of the applied therapy on quality of life of women with breast cancer

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Summary

Introduction. Breast cancer is the second most common malignancy detected in women in Poland. Every year 14.1% of women die of breast cancer. An important role, among cancer patients, in the treatment process plays their mental attitude, which is related to the perceived satisfaction with life, acceptance of the disease, satisfaction of treatment and coherence. Not without significance is the quality of life, which is considered assessment of the efficacy and safety of therapy. QoL (ang. Quality of life) in cancer depends on the severity and type of the treatment.

The aim of the study was to evaluate the influence of selected sociodemographic variables (education, age, marital status, financial situation) and satisfaction with the effects of treatment on quality of life of women with breast cancer.

Material and methods. The study involved 150 women with breast cancer. We used a standardized questionnaire EORTC QLQ-C30 to survey a quality of life and own questionnaire. Socio-clinical data have taken from medical records.

Results. Older age (r=0.168; p=0.04), good material situation (p=0.004), secondary education level (p=0.041) correlated with better functioning in daily activities. Decreased quality of life in elderly patients was associated with insomnia (r=0.246; p=0.002) as well as financial problems (r=0.166; p=0.043). Patients with primary education level and working have significantly greater financial problems than patients with higher education level (p=0.005). No permanent partner was significantly associated with financial problems (p=0.016), whereas patients that are in a very good financial situation significantly better sexual function compared to patients with good and bad situation (p<0.001). The problem with the perception

of body image concerned women who suffered from 2 to 5 years (p=0.042), were dissatisfied with the treatment (p=0.008) and the cosmetic effect (p=0.001) and felt that the surgery had a negative impact on their personal life (p<0.001). Cosmetic effect had a significant impact on reducing the suffering side effects of therapy (p=0.004).
Conclusions. Age, education level, being in relationship and financial situation are the socio-demographic variables affecting the quality of life. Breast cancer patients frequently experience problems with the perception of their own body.

Keywords: quality of life, breast cancer

Introduction

Breast cancer is a malignant tumor derived from epithelial mammary gland. Considering cancer is the second most common cancer occurring in women soon after lung cancer. The incidence of cancer is increasing in all European countries. Every year in Poland, 14.1% of patients die from breast cancer [1].

Cancer is a cause of tension and emotions, and thus reduced quality of life. The medical literature provide many definitions of quality of life, depending on the level at which the problem is dealt with. Professor DeWalden Gałuszko stresses that quality of life can be defined as an image of life's own position made by a man in a specified time interval. It determines the level of his own life in terms of individual categories relating to the essential characteristics of life [2]. Quality of life is the subject of interest of many research units. Researchers as determinants of life satisfaction exchange health condition, age, level of education, financial situation, the quality of relationships in the family, professional work, individual personality traits and life balance of achievements / losses and multidimensional support units in various stages of the way of life [3]. QoL also depends on the type of treatment. Fear related to the need of treatment (radio / chemotherapeutic, operational) and the side effects of the therapy significantly reduce quality of life. According to the literature, patients with comorbidities, treated with chemotherapy and unmet needs in life have a reduced quality of life. The occurrence of diseases is associated with significantly increased incidence of complications during treatment of breast cancer. Most of them are patients diagnosed with diabetes. However, the quality of life improves with time since diagnosis, and health behaviors associated with better QoL [4]. Therefore, when discussing treatment options, breast cancer patients should be informed of the potential differences in quality of life, which may result from their chosen surgical procedure. Health professionals should be aware of the changes in QoL in patients with breast cancer at different time points after surgery [5]. Therefore, the authors of this paper was to assess the effect of selected socio-demographic variables and perceived treatment of patients with breast cancer.

Material and methods

The study included 150 patients diagnosed with breast cancer, who reported on the visits to the Oncology Clinic and Surgical Oncology Clinic. The research was anonymous and voluntary, were conducted with the approval of the Bioethics Committee of the Medical University of Wroclaw KB number - 223/2016.

Socioclinical data have taken from medical records. To assess the factors affecting the quality of life we used two standardized questionnaires. EORT QLQ-C30 questionnaire (The European Organization for Research and Treatment of Cancer) is used to study the subjective feeling of health and assess the functioning dimension: emotional, physical and social. It contains 30 questions about the severity of the analyzed parameters. For each question the patient corresponds to a 4-point scale - 1-never, 2 sometimes 3 often 4 very often. Issues include physical, emotional, cognitive, social and role in life functioning. Questionnaire includes symptomatic scale to assess exploring fatigue, nausea and vomiting,

pain, as well as the concern of symptoms (shortness of breath, insomnia, loss of appetite, constipation, diarrhea) and financial difficulties. The last few questions relate to the overall health assessment. The EORT QL-23 BR questionnaire (Quality of Life Questionnaire for Breast Cancer) is dedicated to the study of women with breast cancer. It includes five scales that affect the functional status, sexual functioning and assessing the side effects of therapy (breast symptoms, arm, sexual satisfaction, worry about future health, hair loss) [6-10].

Results

Analysis of socio-demographic variables to assess the quality of life for the group of women with breast cancer

Age

Age significantly affected three of the 15 scale QLQ-C30 ($p<0.05$); (tab. 1). The higher the age, the better functioning in everyday activities ($r=0.168$; $p=0.04$). The study also confirmed the effect of age on the quality of life in the domains of insomnia ($r=0.246$; $p=0.002$) and financial problems ($r=0.166$; $p=0.043$). Older patients were more likely to report the presence of these problems.

Table 1. The impact of age on the assessment of the quality of life (EORTC - C30)

Variable	Correlation with age			
	Correlation coefficient	p	Direction of correlation	Strength of correlation
Global quality of life	-0.126	0,125	---	---
Physical functioning	-0.073	0.377	---	---
Role functioning	0.168	**0.04**	positive	very weak
Emotional functioning	0,025	0,765	---	---
Cognitive functioning	-0.064	0.436	---	---
Social functioning	-0.004	0.959	---	---
Fatigue	0,004	0.961	---	---
Nausea and vomiting	-0.119	0,146	---	---
Pain	0,108	0.188	---	---
Dyspnea	0.056	0.496	---	---
Sleep disturbance	0.246	**0,002**	positive	very weak
Appetite loss	0,025	0.761	---	---
Constipation	0,065	0.433	---	---
Diarrhea	0.056	0.495	---	---
Financial impact	0.166	**0.043**	positive	very weak

Education

The analysis showed that patients with secondary education level functioned substantially better in daily activities then patients with higher education level ($p=0.041$); (tab. 2). In contrast, patients with primary education level and working have significantly greater financial problems than patients with higher education level ($p=0.005$).

Table 2. The impact of education on evaluation of the quality of life (EORTC - C30)

Variable	Education	N	Mean score	SD	Median	p *
Global quality of life	Primary, professional	26	62.82	22.64	66,67	0.958
	Secondary school	58	64.37	15.44	66,67	
	College and above	65	63.59	16.83	66,67	

Physical functioning	Primary, professional	26	78,72	16	80	0.97
	Secondary school	58	80	12.74	80	
	College and above	65	79.49	13.09	80	
Role functioning	Primary, professional	26	80,13	22.62	83.33	**0.041**
	Secondary school	58	87.64	20.37	100	Ś>
	College and above	65	78.46	23.15	83.33	IN
Emotional functioning	Primary, professional	26	62.5	25,41	66,67	0.254
	Secondary school	58	72.7	18.06	75	
	College and above	65	68.89	20.34	75	
Cognitive functioning	Primary, professional	26	70.51	30.66	83.33	0,277
	Secondary school	58	82.18	20.68	83.33	
	College and above	65	81.28	19.66	83.33	
Social functioning	Primary, professional	26	70.51	23.71	66,67	0.08
	Secondary school	58	81.9	16.31	83.33	
	College and above	65	76,92	19.92	83.33	
Fatigue	Primary, professional	26	37.61	24:16	33.33	0,748
	Secondary school	58	35.82	22.8	33.33	
	College and above	65	37.95	20.96	33.33	
Nausea and vomiting	Primary, professional	26	8.33	17.16	0	0.404
	Secondary school	58	3.74	10.37	0	
	College and above	65	8.97	23.03	0	
Pain	Primary, professional	26	33.33	31.27	25	0.18
	Secondary school	58	20.4	19.51	16.67	
	College and above	65	20.26	21.95	16.67	
Dyspnea	Primary, professional	26	7.69	19.57	0	0.461
	Secondary school	58	12.64	23.22	0	
	College and above	65	11,28	18.89	0	
Sleep disturbance	Primary, professional	26	43.59	32.34	33.33	0.216
	Secondary school	58	41.95	32,78	33.33	
	College and above	65	33.85	34.61	33.33	
Appetite loss	Primary, professional	26	17.95	28.64	0	0.448
	Secondary school	58	10.34	19.95	0	
	College and above	65	15.38	26.4	0	
Constipation	Primary, professional	26	20.51	28.4	0	0.717
	Secondary school	58	14.37	21.73	0	
	College and above	65	15.38	22.11	0	
Diarrhea	Primary, professional	26	3.85	10.86	0	0.258
	Secondary school	58	10.92	22.85	0	
	College and above	65	6.15	16.55	0	
Financial impact	Primary, professional	25	48	38.59	33.33	**0.005**
	Secondary school	58	22,99	23.53	33.33	PZ>
	College and above	65	21.54	23.89	33.33	S, W

* Kruskal-Wallis + post-hoc analysis (Dunn test)

Marital status - being in relationship

The results of the questionnaire QLQ-C30 depending on the marital status of patients with breast cancer showed that single have more financial problems (p=0.016); (tab. 3).

Table 3. The impact of relationship on the quality of life (EORTC - C30)

Variable	Being in a relationship	N	Mean score	SD	Median	p *
Global quality of life	Yes	116	63.86	17.58	66,67	0.837
	No	34	63.24	16.55	66,67	
Physical functioning	Yes	116	80.4	12.13	80	0.357
	No	34	76.47	16.84	80	
Role functioning	Yes	116	81.61	22.78	100	0.46
	No	34	85.29	20.42	100	
Emotional functioning	Yes	116	68.27	19.82	66,67	0.195
	No	34	72.79	22.97	75	
Cognitive functioning	Yes	116	80.17	21.64	83.33	0.91
	No	34	78.43	25,47	83.33	
Social functioning	Yes	116	76.72	19.77	66,67	0.21
	No	34	81.37	18.7	83.33	
Fatigue	Yes	116	35.82	22:32	33.33	0.23
	No	34	41.18	20.93	33.33	
Nausea and vomiting	Yes	116	7.33	19.57	0	0.835
	No	34	4.9	11.26	0	
Pain	Yes	116	21.26	21,82	16.67	0.392
	No	34	26.96	27,53	16.67	
Dyspnea	Yes	116	10.92	20.51	0	0.891
	No	34	11.76	21.53	0	
Sleep disturbance	Yes	116	35.34	32.39	33.33	0.054
	No	34	49.02	35.99	33.33	
Appetite loss	Yes	116	13.79	24,89	0	0.794
	No	34	13.73	23.38	0	
Constipation	Yes	116	14.37	22.94	0	0.093
	No	34	20.59	23.23	16.67	
Diarrhea	Yes	116	7.47	19.7	0	0.231
	No	34	8.82	14,93	0	
Financial impact	Yes	115	22.9	25.5	33.33	**0,016**
	No	34	38.24	33.97	33.33	

* Mann-Whitney test

Financial situation

Patients in a very good financial status significantly have better sexual functioning in comparison to patients with good and bad status (p<0.001). Patients in insufficient and bad financial situation are significantly less satisfied with life (p=0.001) than the other patients (tab. 4).

Table 4. The impact of financial status on the assessment of the quality of life (QLQ-BR23)

Variable	Financial status	N	Mean score	SD	Median	p *
Body image	Very good	31	72.85	24.81	83.33	0.176
	Good	95	64.77	24,31	66,67	
	Insufficient, Bad	24	68.75	26.15	70.83	
Sexual functioning	Very good	31	31.18	20.97	33.33	**<0.001**
	Good	95	24.91	24.05	33.33	NZ<
	Insufficient, Bad	24	9.03	16.28	0	Bd D
Satisfaction with sexual intercourse	Very good	24	56.94	30.26	66,67	**0.001**
	Good	71	46.01	35.8	33.33	NZ<
	Insufficient, Bad	17	15.69	23.91	0	Bd D
The perception of the future	Very good	31	32.26	29.17	33.33	0.821
	Good	94	29.43	29.68	33.33	
	Insufficient, Bad	24	27.78	30.56	16.67	
Side effects of therapy	Very good	31	21.2	15,83	23,81	0.079
	Good	95	24.84	18.27	19.05	
	Insufficient, Bad	24	32.34	19.3	28.57	
Problems with breasts	Very good	31	17.47	20.57	8.33	0.5
	Good	94	21,48	22.5	16.67	
	Insufficient, Bad	24	24,31	25,41	12.5	
Problems with arm	Very good	31	19.35	18.36	22.22	0.517
	Good	94	21.39	19.23	22.22	
	Insufficient, Bad	24	26:39	23,58	27.78	
Hair loss	Very good	14	54.76	33.61	66,67	0.898
	Good	31	50.54	38.37	33.33	
	Insufficient, Bad	15	48.89	39.57	33.33	

* Kruskal-Wallis + post-hoc analysis (Dunn test)

Duration of illness

Patients suffering from 2-5 years were significantly less satisfied with their body image than patients suffering from less than 2 years (p=0.042); (tab. 5).

Table 5. The impact of cancer on the assessment of the quality of life (QLQ-BR23)

Variable	Duration of illness	N	Mean score	SD	Median	p *
Body image	<2 years (A)	68	72.59	23.05	75	**0.042**
	2-5 years (B)	34	60,05	27.04	66,67	A>
	> 5 years (C)	46	64.13	24.46	66,67	B
Sexual functioning	<2 years (A)	68	22.55	21.7	16.67	0.855
	2-5 years (B)	34	25,49	24.36	16.67	
	> 5 years (C)	46	23.19	25.21	16.67	
Satisfaction with sexual intercourse	<2 years (A)	50	42.67	33.7	33.33	0.503
	2-5 years (B)	22	51.52	35,23	50	
	> 5 years (C)	39	41.03	37.82	33.33	
The perception of the future	<2 years (A)	67	27.86	30.48	33.33	0.714
	2-5 years (B)	34	30.39	28.86	33.33	
	> 5 years (C)	46	31.88	28.94	33.33	
Side effects of therapy	<2 years (A)	68	24.88	20.2	25.24	0.667
	2-5 years (B)	34	26.19	14.56	28.57	
	> 5 years (C)	46	26,02	17.67	19.05	
Problems with breasts	<2 years (A)	67	22.01	23.78	16.67	0.383
	2-5 years (B)	34	23.53	21.56	16.67	
	> 5 years (C)	46	18.72	21.86	8.33	
Problems with arm	<2 years (A)	67	20.73	19.9	22.22	0.741
	2-5 years (B)	34	22.55	17.19	22.22	
	> 5 years (C)	46	22.95	21.77	22.22	
Hair loss	<2 years (A)	24	52.78	37.96	50	0.949
	2-5 years (B)	17	50,98	37,49	66,67	
	> 5 years (C)	19	49.12	37.46	33.33	

The impact of the perception of the applied therapy to assess the quality of life for for the group of women with breast cancer

Satisfaction with treatment

The group of rather dissatisfied and dissatisfied patients was little (less than 10% of the size of the group). So they were combined into one group. The analysis showed that satisfied patients had significantly better body image (p=0.008) and fewer problems with the side effects of therapy (p=0.004) than patients dissatisfied and rather dissatisfied with the treatment (tab. 6).

Table 6. The impact of treatment satisfaction on the assessment of the quality of life (QLQ-BR23)

Variable	Satisfaction with treatment	N	Mean score	SD	Median	p *
Body image	Satisfied (A)	99	71.21	23.21	75	**0,008**
	Rather satisfied (B)	28	63.1	26:39	66,67	C<
	Rather dissatisfied, dissatisfied (C)	23	54.11	24.97	58.33	AND
Sexual functioning	Satisfied (A)	99	24.07	24.07	16.67	0.646
	Rather satisfied (B)	28	25.6	22.44	33.33	
	Rather dissatisfied, dissatisfied (C)	23	19.57	21.11	16.67	
Satisfaction with sexual intercourse	Satisfied (A)	72	45,37	35,52	33.33	0.75
	Rather satisfied (B)	25	42.67	36.67	33.33	
	Rather dissatisfied, dissatisfied (C)	15	37.78	33.01	33.33	
The perception of the future	Satisfied (A)	98	30.95	30.74	33.33	0.795
	Rather satisfied (B)	28	26.19	27.75	33.33	
	Rather dissatisfied, dissatisfied (C)	23	28.99	27.16	33.33	
Side effects of therapy	Satisfied (A)	99	23.41	17.25	19.05	**0.04**
	Rather satisfied (B)	28	26,02	20.88	19.05	C>
	Rather dissatisfied, dissatisfied (C)	23	32,51	17.45	28.57	AND
Problems with breasts	Satisfied (A)	98	18,99	21.42	8.33	0.234
	Rather satisfied (B)	28	23.51	23.68	16.67	
	Rather dissatisfied, dissatisfied (C)	23	27.17	25.4	25	
Problems with arm	Satisfied (A)	98	20.63	19.61	22.22	0.058
	Rather satisfied (B)	28	19.44	20.65	16.67	
	Rather dissatisfied, dissatisfied (C)	23	29,47	18.53	33.33	
Hair loss	Satisfied (A)	37	46,85	37.23	33.33	0.298
	Rather satisfied (B)	11	66,67	36.51	66,67	
	Rather dissatisfied, dissatisfied (C)	12	50	36.24	66,67	

Rating cosmetic result

There were few women found the cosmetic effect as bad or very bad (less than 10% of the size of the group). So they were combined into one group. Patients found the cosmetic effect as bad (p=0.001) had significantly worse body image than the other patients (tab.7).

Table 7. The impact of cosmetic effect of treatment on quality of life (QLQ-BR23)

Variable	Cosmetic effect	N	Mean score	SD	Median	p *
Body image	Very good (A)	59	74.44	21,82	83.33	**0.001**
	Good (B)	68	65.69	25.37	66,67	C<A, B
	Bad, Very bad (C)	23	52.29	23,59	58.33	
Sexual functioning	Very good (A)	59	26.55	23.39	33.33	0.385
	Good (B)	68	21.57	21.37	16.67	
	Bad, Very bad (C)	23	22.46	28.25	16.67	
Satisfaction with sexual intercourse	Very good (A)	48	47.92	39.44	50	0.63
	Good (B)	48	40.28	29.14	33.33	
	Bad, Very bad (C)	16	41.67	39.44	33.33	
The perception of the future	Very good (A)	59	28.81	29.33	33.33	0.756
	Good (B)	67	29.35	30.99	33.33	
	Bad, Very bad (C)	23	33.33	26.59	33.33	
Side effects of therapy	Very good (A)	59	22.76	15.6	19.05	0.421
	Good (B)	68	26.09	19.74	23,81	
	Bad, Very bad (C)	23	29.4	19.3	28.57	
Problems with breasts	Very good (A)	58	17.39	19.82	16.67	0.301
	Good (B)	68	23.2	24.15	9.72	
	Bad, Very bad (C)	23	24.28	23.83	25	
Problems with arm	Very good (A)	58	18.39	15.93	22.22	0.356
	Good (B)	68	24.67	21.96	22.22	
	Bad, Very bad (C)	23	21.74	21,31	11.11	
Hair loss	Very good (A)	23	44,93	37.08	33.33	0.489
	Good (B)	26	52.56	37.92	33.33	
	Bad, Very bad (C)	11	60.61	35,96	66,67	

* Kruskal-Wallis + post-hoc analysis (Dunn test)

Assessment of the negative impact of the treatment on personal life

Patients who considered that the treatment had a big impact on their personal lives had significantly worse body image than other patients (p<0.001) and bigger problems with side effects of therapy (p=0.007). Women who did not feel the symptoms of breast often recognized that the treatment did not have any negative effect on their body (p=0.041); (tab.8).

Table 8. Evaluation of the negative impact of surgery on the quality of life (QLQ-BR23)

Variable	Negative impact of treatment on the personal life	N	Mean score	SD	Median	p *
Body image	Big	53	55.08	24.9	58.33	**<0.001**
	Small	46	69.38	25.16	70.83	D<
	Lack	51	77.45	18.58	83.33	N, B
Sexual functioning	Big	53	19.5	21.37	16.67	0.056
	Small	46	22.1	24.61	16.67	
	Lack	51	29.41	23,24	33.33	
Satisfaction with sexual intercourse	Big	36	38.89	32,37	33.33	0.536
	Small	33	43.43	35.83	33.33	
	Lack	43	48.06	37.3	66,67	
The perception of the future	Big	53	28.93	26.18	33.33	0.611
	Small	45	27.41	32.79	0	
	Lack	51	32.68	30.18	33.33	
Side effects of therapy	Big	53	31.45	21.04	28.57	**0,007**
	Small	46	24.29	14.76	21.43	
	Lack	51	19,79	16	14.29	D> B
Problems with breasts	Big	53	23.32	24.83	16.67	**0.041**
	Small	46	24.82	21.98	25	
	Lack	50	15,33	19.66	8.33	N> B
Problems with arm	Big	53	23.06	18.08	22.22	0.531
	Small	46	22.22	21.47	16.67	
	Lack	50	20	20.2	22.22	
Hair loss	Big	29	56.32	37.9	66,67	0.296
	Small	17	39,22	29.43	33.33	
	Lack	14	54.76	42.58	66,67	

* Kruskal-Wallis + post-hoc analysis (Dunn test)

Discussion

Quality of life is an indicator of the impact on the disease and the treatments used affects different spheres of patient life. Because of the multidimensional concept of quality of life, we used the EORTC-C30 to examine overall quality of life and the QLQ-BR23 dedicated to patients with breast cancer. The aim of the study was to determine the influence of sociodemographic variables and perceived therapy on quality of life of patients with breast cancer. The significant impact on the quality of life had socio-demographic variables such as age, education, financial situation and having a partner. Younger age correlated with better sexual functioning and satisfaction with intercourse, which is consistent with the available studies [10,11]. Also, people with higher education were more satisfied with sexual functioning [12], but also in everyday life. However, there are some discrepancies related to the impact of age on quality of life. Sleep disorders are very common among older patients and costs of living often exceed their financial capabilities. In our study, older patients complained of insomnia and financial problems. The study of Sharma and Purkayastha younger patients had a better financial situation compared to the elderly, but also characterized by poorer physical and social functioning [12,13,14]. Older age and secondary education level correlated with better functioning in everyday activities. Arndt et al. observed a generally higher quality of life of young women operated on for breast cancer. They noted that older patients achieved better results in the subscales describing the physical, emotional, cognitive and social functioning than younger women [15]. Other researchers noted that the prognosis is better anticipated by older women [16]. In contrast to the above observations, the study of Słowik et al. demonstrated no correlation of demographic variables with the described components of the functional quality of life of women surveyed. A study of 208 women living in rural areas of India showed that young age, lack of education and lack of partner were negatively associated with quality of life, employment, whereas a high monthly income was positively associated with quality of life [17]. It has been observed, that women with higher education is characterized by better quality of life [18]. The marital status of the evaluation of the quality of life is controversial issue. Kurowska et al. observed that the highest acceptance of illness demonstrated unmaried women, the lowest - divorced and the widows [19]. However, in the study of Musiał et al. marital status was not a key determinant of quality of life [20]. In our study, the lack of a partner was associated with a greater feeling of financial problems. Literature confirms the relationship between poor financial situation and lack of satisfaction with life and between lack of financial problems and better sexual functioning of patients with cancer [12, 21]. According to the study Stadnicka et al. the lack of a positive evaluation of the body image has a negative impact on the possibility of obtaining funding [22]. In the analysis of sexual functioning of women treated for breast cancer, the authors emphasized that about 78-88% of women going through the reduction of satisfaction with the sexual activity as a negative effect of cancer and of the treatment [23-25]. The available studies describe significant correlation between sexual dysfunction and reduced sexual activity and poorer body image, especially in young women [23,25]. Słowik et al. did not confirm these relationships. In the study group, there were no significant differences or lower rates of sexual functioning and sexual satisfaction in compared groups according to age, type of surgery, indicators of quality of life, body image, or side effects of treatment. This observation is consistent with the results of other authors [26].

The perception of the applied therapy had a significant impact on the quality of life. Women satisfied with the cosmetic effect better assessed their quality of life and body image, and thus suffered fewer side effects. The study of Silva et al. confirmed the effect of time of breast cancer diagnosis with the quality of life [27]. Roth et al. the difference between the duration of the disease and the level of the quality of life of women with breast cancer explain in the preparation of the treatment [28]. Women often are not prepared to get to grips with the

effects of the disease and the treatment. Lack of satisfaction with the surgery, cosmetic effect and a sense that the surgery had a negative impact on the lives of respondents were associated with poorer perception of their own body. Symbolic perception of breast as an attribute of the femininity caused that many women suffer severe trauma [29]. After one year of a mastectomy 25% of women showed high level of stress and mastectomy is associated with a change in body image, the image of femininity, and also affects sexual and social functioning [30].

The study has some limitations. First of all, in the future we should examine the patient at a certain time of diagnosis due to changes in quality of life, depending on the passage of time and interventions. It should be also consider the emotional state and social functioning of women with breast cancer as a component of life satisfaction.

Conclusions

1. Age, education level, being in relationship and financial situation are the socio-demographic variables affecting the quality of life.
2. Breast cancer patients frequently experience problems with the perception of their own body.

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