

# QUALITY OF LIFE IN WOMEN WITH BREAST CANCER

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**ABSTRACT — Objective:** The aim of this cross-sectional study was to investigate the quality of life (QoL) in women with breast cancer, who are members of support groups – civil society.

The second objective was to evaluate the possibility of supporting the education of nursing students at the undergraduate or postgraduate level in order to provide effective support to women with breast cancer and to identify the areas that need to be addressed in education.

**Methods:** For purposes of assessing QoL of women with breast cancer, the standardized instrument WHOQOL-BREF was used. The sample was composed of 90 women with malignant breast disease. Results of study were compared to a population norm. Empirical data collection was performed in a period from January to March 2014.

**Results:** Results of the statistical analysis pointed to the lowest quality of life in all aspects of the physical dimensions (physical health) in comparison with the population norm. The worst were evaluated in items of dependence on medical care (2.30), pain and discomfort (2.90) in the domain of "psychological health," the item was negative feelings (2.74). In contrast to the above results, the highest quality of life in women have been reported in the domain of "social relations" and "environment" that were almost identical, in certain items QoL was better with the values of a population norm. Women evaluated QoL worse after radical mastectomy and without life partner (single, divorced, widows).

**Conclusions:** Breast cancer is a serious disease that reduces the quality of life, particularly in physical domain and in the emotional area. Oncological disease is becoming a disease for a lifetime. It connected with the constant fear of cancer recurrence and the consequences of treatment. Attention should be paid to each patient and for better compensation of the disease and maintenance the quality of life, also to support the development of psychosocial intervention in all forms.

## INTRODUCTION

Breast carcinoma is the most frequently malignant tumour among women. Malignant tumour of breast became global, epidemiological and social problem which is affecting women in medium age category. For last twenty years, a large number of breast cancers has been increasing by more than 30% in women aging between 25 and 40 years, whereas in the past, the disease was occurring mostly in women aging about 60 years. Positive aspect is that in the event the cancer is detected soon enough, the treatment efficacy

achieves about 90–100%. Disease causes negative long-term changes in emotional, cognitive and social dimension [1]. Breast cancer is a very stressful event in women lives. They have permanent fear from disease recurrence which is connected with consequences of oncological treatment and psychosocial morbidity progress. This fear decreases the quality of life in the patients with the breast cancer [2]. Tumours require an intensive and complex treatment, which depends on the type, scope and location of the tumour focus. Woman-patient is confronted by notice diagnosis of various thoughts, feelings, physical changes

that result from a combination of therapies, such as surgery therapy in combination with chemotherapy, radiotherapy and hormonal therapy. Each modality brings with it a range of adverse effects through hematologic complications, regression of the immune system, hormonal changes, digestive problems (anorexia, nausea and vomit), alopecia, after local skin changes which are consequences of radiotherapy and persistent fatigue for months or years after treatment. Sadovská [3] states that the pain is often a complication and it affects approximately 80–90% of patients. Pain is characterized by burning feelings and contraction in thorax wall, arm-pit or back side of shoulder. However, the pain is usually also associated with lymphedema which is very often a complication after surgery intervention on breast and regional lymph system. It affects approximately 20–40% of women after the operation during six years [4]. The resulting lymphedema limits the mobility of the limb, furthermore is the source of pain and relapsing infections, and therefore greatly influences the quality of life of a woman. Symptoms of lymphedema will be able to retreat with long-term and intensive rehabilitation, compliance of treatment measures and skin care [3]. Mastectomy can cause unbalance and asymmetrical posture with tilting to healthy side of the body. These facts can induce pains in cervical spine and stiffness in the neck. Breast epthesis is an advisable tool for maintaining proper posture and it hides the empty space in the chest. With this prosthesis, women feel more confident (comfortable) and they can return to normal life without any visible changes in their body [4]. From the psychological aspect, the disease is a very challenging/ difficult life situation. It changes ordinary life rhythm, hobbies, and well-being and also threatens their feelings security [5]. Many investigation studies which were bearing to existence psycho-social problems, they documented the incidence of depression in 30% patients, adaptation problems and negative stress after they were diagnosed a cancer. Also, only 4% of patients with cancer accept that they suffer from a depression or anxiety [6]. Doubts on self-appreciation and difficulties in sexual relationships occur in addition to depression, fear, anxiety and emotional stress arising due to the disease in patients. Women feel low-rate, unattractive, abhorrent by the consequence of an amputation of their breast. In many cases, they have a fear that they are unattractive for their sexual partner. Very often, the first reaction after the removal of the breast in patients attempt to disguise scars and withdraw into seclusion. Some women do not put off their bra or they resist physical contact in chest area during sexual intercourse [7]. The rate of psychosocial burden and quality of life is a dynamic process, where problems in the mental, emotional and social areas persist several years after treatment of the disease [1]. In social dimension, life of every woman with breast cancer brings various changes in the arrangement of

their family life, changes in social roles, in the field of work and changes in the financial position [7]. All women have the biggest fear from work disability, from decreasing life standards and the resulting loss of social prestige. Surrounding social environment of women is affected by the disease, along with her surviving treatment, the chance to cure and disappointment [8].

## AIM

The aim of the research was to determine the quality of life in women with breast cancer by using a standardized questionnaire WHOQOL-BREF.

The second objective is to propose (evaluate) the possibilities of supporting the nursing education at pre-gradual level in the meaning of follow-up assistance and help to patients with breast cancer and to identify the areas where should be paid attention to the health-care workers education.

## METHODS

For measuring quality of life, we used a questionnaire Quality of Life by World Health Organization WHOQOL-BREF that is focusing to general quality of life, general satisfaction with health and the assessment of single domains and aspects of the quality of life. Questionnaire WHOQOL-BREF is a short version of the original questionnaire WHOQOL-100 which allows a detailed assessment of each individual facet relating to the quality of life. The instrument was developed by WHOQOL group (1998), based on an analysis of data from 20 research centres around the world. The questionnaire is used for self-assessing the quality of life that the respondent fills out alone. It is designed for assessing the quality of life of groups or populations and it enables regional or international comparison of groups with different socio-economic characteristics. The questionnaire was tested in 23 countries around the world such as Brazil, Spain, Russia, USA and the Czech Republic, where it was analysed by Dragomirecká and Bartoňová [9]. The questionnaire consists of 26 items: two independent items which are evaluating the overall quality of life and satisfaction with general health and 24 items associated into four domains (physical health, psychological health, social relationships and environment).

The results of questionnaire WHOQOL-BREF are expressed as:

- ▶ domain score which represents average raw score from items including the transformation to scale from 4 to 20 or from 0 to 100 (in %), the higher score means a better quality of life

- ▶ the values of answers of two independent items which evaluate general quality of life and overall health
- ▶ range of scale for individual items 1–5, which means 1 is the worst answer and 5 is the best answer [9].

The questionnaire was completed with other questions relating to the socio-demographic characteristics: age, marital status and questions are focused to the type of operation and the length of a diagnosed disease. Questionnaire was anonymous and its administration was voluntary. Data collection was conducted from January to March 2014 in Slovakia. Questionnaires were distributed after written agreement by female members of a self-group Venuša in Prešov, self-group Narcis in Vranov nad Topľou and self-group Viktorka in Banská Bystrica. We determined the specified criteria for the choice of respondents:

- ▶ age of cancer patients up to 65 years
- ▶ diagnosed breast carcinoma
- ▶ women willing to complete the questionnaire

Statistical analysis and evaluation of empirical data has been realized in Microsoft Office Excel 2007 programme and with the usage of descriptive statistics – absolute frequency (n), relative multiplicity (%), arithmetic average and standard deviation (SD). Results of our survey were compared with the results of research (population norm) by authors Dragomirecká and Bartoňová. Quality of life data was analysed and compared also in terms of operating performance and in terms of marital status of women. The gross scores of the domains and their transformation were carried out according to the methodology Dragomirecká and Bartoňová [9]. Evaluation of the quality of life was analysed and compared from the family aspect.

## RESULTS

The research sample consisted of 90 women with breast cancer. Predominant age group in the survey sample consisted of 73 women in the older adulthood (81%). Minimum number of women 5% was in age from 31 to 40 years and 2% in age to 30 years. From the perspective of marital status, it was 50 (56%) of married women, 24% widows and 13% divorced women in our survey. Single women accounted for 7%. More than half of respondents 49 (54%) reported the length of diagnosing the disease to six years or more. 21% of women reported 2–3 years and 18% of women reported the length of diagnosing 4–5 years. Minimum number of women 7% reported one year. From the whole research sample 49 (54%) of women underwent the breast-conserving surgery and 40 (45%) women the mastectomy. Only one woman has been without surgical intervention. The largest number of women

70 (78%) were located in remission period; the 5% of women were at the stage of remission. 17% of women was in the process of treatment.

Pleasing findings are that women have the greatest support among their closest, 34% in children and 25% in their sexual partners. 15% of women finds support in self-groups or civic associations, however, only 9% stated the support from the surrounding background (friends) and 7% from parents (Table 1).

## Interpretation of items and domains for questionnaire WHOQOL-BREF

In global assessment of quality of life and satisfaction with health it is possible to observe the differentiation in both population groups (Table 2). Respondents rated, in average, a poorer overall quality of life (3.55) than the population norm (3.82) and similarly they reported lower satisfaction with health (3.11) compared to population norm (3.68). Women with mammary carcinoma were the least satisfied in physical health (score 13.92). In the above domain they rated negative especially the option “dependence on medical care” and option “pain and uncomfortable feelings” (2.90). Mobility (3.45) was ranked also worse in comparison with the population norm. In other domains, patients ranked items such as population norm, except “negative feelings” in the domain of mental health (2.74) and “sex life” (3.04). Patients reported that they often suffered from negative feelings such as irritation, helplessness, anxiety and depression. Domain – environment was rated better than the population norm, especially in items: personal safety, environment, financial situation, access to information, hobbies, environment around residence/ home, transport, the results are shown in Table 2.

From the perspective of marital status, we observed the most significant differences in the mental health domain in item negative feelings. Women without partner (2.40) were suffering with depressive mood unlike married women (3.02). In domain environment, women without a partner have limits in practical life associated with their financial situation (3.10) and possibilities of transferring from one place to another by transport (3.25). Despite of results, it is possible observe in other items lower levels which are correlating with less ranking quality of life (3.23) and satisfaction with health (3.20) in single items.

**TABLE 1.** Basic socio-demographic and clinical characteristics of patient group (n = 90)

Characteristics		N	%
Age	to 30 years	2	2%
	31 - 40 years	4	5%
	41 - 50 years	11	12%
	51 - 65 years	73	81%
Marital status	single	6	7%
	married	50	56%
	divorced	12	13%
	widow	22	24%
Duration of disease	1 year	6	7%
	2-3 years	19	21%
	4-5 of years	16	18%
	6 years and more	49	54%
Type of operation	complete removal of the breast	40	45%
	removal of part of the breast	49	54%
	without surgical intervention	1	1%
Period	in the treatment process	15	17%
	at the stage of remission	70	78%
	at the stage of relapse	5	50%
Social support	husband/partner	44	25%
	children	60	34%
	parents	12	7%
	friends	16	9%
	members of the association	27	15%
	physician	8	5%
	nurse	1	1%
	psychologist	6	3%
priest	2	1%	

N - absolute frequency, % - relative multiplicity

**TABLE 2.** Mean score of items and domains WHOQOL-BREF in patients with breast cancer (n = 90) and population norm

Domains and items	Patients with breast cancer		Population norm*	
	Mean	SD	Mean	SD
<b>Single items</b>				
Q1 - quality of life	3.55	0.90	3.82	0.72
Q2 - satisfaction with health	3.11	0.81	3.68	0.85
<b>Domain 1 Physical health</b>	<b>13.92</b>	<b>2.53</b>	<b>15.55</b>	<b>2.55</b>
Pain and uncomfortable feelings	2.90	0.87	4.3	1.5
Dependence on medical care	2.30	0.99	4.16	0.95
Energy and fatigue	3.28	1.5	3.62	0.93
Mobility	3.45	1.9	4.27	0.84
Sleep	3.26	0.8	3.61	0.99
Daily activities	3.35	0.94	3.76	0.78
Working performance	3.24	0.93	3.76	0.80
<b>Domain 2 Psychological health</b>	<b>14.53</b>	<b>2.37</b>	<b>14.78</b>	<b>2.43</b>
Enjoyment of life	3.84	0.80	3.83	0.90
Meaning of life	04.1	0.84	3.86	0.85
Concentration	3.47	0.87	3.55	0.88
Adopt its own appearance	3.72	1.9	3.90	0.82
Satisfaction with oneself	3.50	0.81	3.57	0.76
Negative feelings	2.74	1.00	3.47	0.95
<b>Domain 3 Social relations</b>	<b>14.34</b>	<b>2.2</b>	<b>14.98</b>	<b>2.89</b>
Personal relations	3.73	0.76	3.75	0.91
Sex life	3.4	0.92	3.64	1.7
Support of friends	3.98	0.65	3.85	0.80
<b>Domain 4 Environment</b>	<b>13.94</b>	<b>2.59</b>	<b>13.30</b>	<b>2.8</b>
Personal safety	3.33	0.82	3.24	0.79
Environment	3.36	0.99	2.85	0.92
Financial situation	3.14	1.6	2.87	1.8
Access to information	3.92	1.5	3.87	0.77
Hobbies	3.64	1.13	3.33	1.00
Environment around residence	3.61	0.76	3.54	0.86
Access to healthcare	3.39	0.85	3.70	0.79
Transport	3.49	0.82	3.19	1.7

\* Dragomirecká, Bartoňová, 2006, p. 41

Mean - arithmetic average, SD - standard deviation

**TABLE 2.** Differences in domains 2–4 by marital status of patients

Domains and items	Marital status			
	Single, divorced, widow		Married patients	
	N	Mean	N	Mean
<b>Domain 2 Psychological health</b>				
Enjoyment of life	40	3.56	50	3.80
Meaning of life	40	3.68	50	4.8
Concentration	40	3.50	50	3.52
Adopt its own appearance	40	3.74	50	3.95
Satisfaction with oneself	40	3.30	50	3.70
Negative feelings	40	2.40	50	3.2
<b>Domain 3 Social relations</b>				
Personal relations	40	3.58	50	3.78
Sex life	40	2.93	50	3.14
Support of friends	40	3.88	50	4.6
<b>Domain 4 Environment</b>				
Personal safety	40	3.28	50	3.38
Environment	40	3.42	50	3.40
Financial situation	40	3.10	50	3.55
Access to information	40	3.93	50	3.92
Hobbies	40	3.56	50	3.54
Environment around residence	40	3.68	50	3.65
Access to healthcare	40	3.55	50	3.58
Transport	40	3.25	50	3.64
<b>Single items</b>				
Q1 – Quality of life	40	3.23	50	4.2
Q2 – Satisfaction with health	40	3.20	50	3.70

Mean – arithmetic average, SD – standard deviation

## DISCUSSION

A fundamental change in the living situation with oncological disease significantly influences the subjective perception of the patient's condition and the related overall quality of life [10]. Women with breast carcinoma have to stand consequences of diagnosis and aggressive treatment such as pain, swelling of the upper extremities, lymphedema, limited mobility and discomfort, loss of or deformation of breast cancer which affects their life [2]. The values of a monitored group in comparison with the population norm show that oncological disease significantly affected all aspects of the physical dimension. The most frequent problems in cancer patients are pain in connection with discomfort, low mobility and an increased need for medical care.

Quality of life reflects more than just physical health. Sadvská [11] states that emotional, social and spiritual aspects that can be enhanced especially in situations where physical health is absent have a great influence to her evaluation of QoL. Analysis of the various aspects showed that the largest share in reduced quality of life has psychosocial distress. Patients suffer from a lot of negative feelings like a despair, irritation, anxiety or depression in comparison with the population norm. Mesárošová et al. [6] suggest that women with malignant breast cancer are highly experiencing symptoms of depression, anxiety and stress. Lehto et al. [12] in a large prospective clinical study investigated the effect of psychosocial factors on the quality of life and length of survival in patients treated by mastectomy and subsequent radiotherapy or chemotherapy. They state that consequence



of pressuring the psycho-social morbidity in patients is manifested in development of behavioural risk profile. It includes feelings as dangerous, anxiety, frustration, depression, stress and other negative emotions, which severely limits the length of survival of women with breast cancer. The good aspect is that women indicate despite frequent negative feelings, more sense and pleasure in their life than the population norm by Dragomirecká and Bartoňová [9]. This fact can be explained that the women are forced to seek sources of intense pleasure in life and more often think about its meaning.

Dančíková [1] describes the loss of the breast (symbol of femininity) brings feelings of disturbance of body integrity, deflection of femininity and physical attraction which makes a decreased self-esteem and fear of establishing new contacts and relationships. The results of the data analysis conclude that the psychosocial consequences of the group influence in the negative sense to their sexual life. Similarly, dissatisfaction in the sexual life was confirmed by research Bencová, Bella and Švec [13]. The research findings by Kočíšová [14] point to the disruption of social relations, not excluding sexual cohabitation between partners.

Maintaining a positive relationship with the partner is essential in the difficult period of a woman's life. Open communication about disease, problem or anxiety is inevitable to a harmonic relationship. Only kind, tolerant and careful partner can help the woman and he can give her safety and make her stronger in the difficult time of her life [15, 16]. A positive finding is that patients, as well as the population norm, have a good personal relationships and adequate support from friends, what we attribute to the importance of active membership in the self-help groups. Žiaková, Maštenová [17] detected the differences in post-traumatic growth in women after surgical treatment of the breast cancer by using multiple methods (PTGI, PSSS, Brief COPE, SWLs). Participation in self-help groups allows women to be emotionally relaxed, dispel thoughts rationally to accept their situation and seek positive changes in their lives. In comparison to women who visit self-help group or not, they certify that women who visit self-help groups feel more positive changes in interpersonal relationships (reduction of social isolation). Participation in self-help groups allows women to be emotionally relaxed, dispel thoughts rationally to accept their situation and seek positive changes in their lives.

In comparison to the quality of life of married women and single women, widows or divorced women, we found out very interesting results. Women who are not married have analysed all dimensions of quality of their life worse than married women. They reported a lower satisfaction in personal relationships,

sex life, family support, which greatly affected their satisfaction with life and the sense of life. They often feel negative feelings such as anxiety, despair or depressions or hopelessness. They have problems with financial situation and traffic. Arndt et al. [18] investigated consequences of treatment to the quality of life in women with breast during several years. Their study concluded that the physical problems subside within approximately one year after surgical treatment, mainly due to the family support and dispensary care by health professionals. At the same time, symptoms from emotional, psychological and social fields arise and persist years after the end of anticancer therapies. This topic is a challenge for continuing nursing care. Due to the current problems of women with breast cancer, it creates the space for nurses working in community care (nursing home care agency and others). Our educational institution reflects the current oncology issue and therefore it also incorporated the content of the nursing care of women with breast tumors within the portfolio of a specialized study programme nursing in community care.

Our research implies that psycho-social care will have to be an integral part of the comprehensive treatment regardless the course of the disease (treatment, remission, relapse, convalescence). The benefit of care is to help women overcome cognitive, emotional, and behavioural consequences of the disease and its treatment and to lead to the social reintegration (return to a normal family, work and social life), which has a positive impact on success of treatment, the average survival time and quality of life of cancer patients [2].

The results of study point to necessity of identifying the bio-psycho-social needs of these patients, which we detect with nursing students by model situations in education in artificial conditions. After completing the clinical training subjects, especially the subject Nursing in Oncology, students are able to perform physical assessment in these patients with the implementation of assessment tools (Test for functional assessment - instrumental activity daily living, Pain Assessment Scales, Depression, anxiety, stress scales and others) for specific clinical case. They also learn to use acquired theoretical knowledge in clinical practice through direct nursing interventions.

Our educational institution provides innovative training to future midwives in the form of an e-learning module. The project titled Multimedia technologies in midwifery preparation aims to create an e-learning environment in Faculty of Health Care of the University of Prešov. It is intended to complement and innovation the theoretical and practical training of midwifery students in accordance with the principles of adult learning and with support of distance learning.

Orientation of the content base of the project takes place through interaction and

active monitoring of information, problem-solving teaching, simulation of model situations, development of communication-information capabilities, demonstration procedures, case studies implementation, innovation of multimedia technologies.

Care for woman includes a bio-psycho-social model of perception of the disease and application of acquired knowledge in direct interaction with a female patient within clinical practice.

The training program is aimed at the bachelor's degree study programme of midwifery. Its content is to provide a composite picture of care for female and reproductive health. In the various modules, e-learning is focused on pathological processes of reproductive health during the life of a woman. Part of the training modules are thematic units, focusing on the issue of cervical cancer and breast cancer.

For understanding and objectivizing the impact of the disease on the quality of life of women students implement the scales and assessment tools directly during practical training at clinical workplaces. Multi-disciplinary care for a patient with breast cancer requires interventions from other professionals of non-medical study disciplines. In addition to midwives, the nursing profession has a dominant position in the care of a woman. Treatment of the disease involves a surgical and oncological approach, its effects cause a physical discomfort, emotional and social distress that is manifested by social isolation, disruption of family relationships and partnership, and disorder of self-image and self-conception. Therefore women with breast cancer expect a professional, erudite, empathic care, which involves highly professional training of graduates of the above-mentioned disciplines. Based on research results, it is necessary to develop communication skills in students of non-medical study disciplines in the context of psycho-social and emotional support.

Due to the high incidence of illness, nursing students take part in health education programmes (breast self-examination) in order to increase health awareness about the prevention, screening and pitfalls of the already diagnosed disease. Health educational programmes are focused at a target group of young women and girls for the positive modification of their attitudes towards own health.

## CONCLUSION

Breast cancer significantly affects the quality of life of women. The results of our research investigation confirmed the reduced quality of life of patients in the

domain of physical health. Oncological disease is becoming a disease for a lifetime and it is associated with the constant fear from relapse of disease and from the adverse effects of anticancer treatment.

Attention should be given to each patient and for a better compensation of the disease and maintenance of the quality of life we shall promote the development of psychosocial interventions in all forms [19].

This issue is the basis for continuous training of nurses and midwives and the measurement of quality of life by using cancer-specific instruments in long-term breast cancer survivors [20]. Current statistics of cancer becomes an incentive for the development of new education programmes of non-medical professions (Radiology technics, Laboratory diagnostics methods in healthcare). Oncological diseases should be part of many health education programmes in Slovakia. They should also stimulate the interest of transnational policies across the EU.

## CONFLICT OF INTEREST STATEMENT

Neither author has any financial or personal relationship with people or organisations that could inappropriately influence their work.

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