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IDENTIFICATION OF FACTORS AFFECTING THE QOL OF WOMEN AFTER BREAST CANCER TREATMENT

N.M. KEREYEVA[1], L.A. ISHIMOVA[1], P.Zh. AITMAGANBET[1], A.B. TULYAYEVA[1], S.T. TAZHBENOVA[1]

[1]West Kazakhstan M. Ospanov Medical University, Aktobe, Republic of Kazakhstan

ABSTRACT

Relevance: Breast cancer (BC) is one of the most common oncological diseases among women, and its physical, psychoemotional, social, and sexual consequences negatively affect pa-tients' quality of life (QoL). A decrease in QoL in the post-treatment period may hinder full rehabilitation. Therefore, studying the sociodemographic and clinical factors affecting QoL in women with BC remains relevant.

The study aimed to identify the impact of sociodemographic and clinical factors on the quality of life of women after breast cancer treatment.

Methods: The study was conducted at the West Kazakhstan Marat Ospanov Medical University Medical Center. Participants completed the EORTC QLQ-BR23 standardized questionnaire. A total of 103 women took part in the study. In addition to the questionnaire, sociodemographic and clinical data were collected. Data analysis was carried out using IBM SPSS Statistics 25.0. Multivariate logistic regression was used for statistical analysis.

Results: Single women (p = 0.022) and those who detected the disease independently (p = 0.030) reported significantly lower QoL. Employed women (p = 0.040) and those who underwent breast-conserving extended sectoral resection (BCESR) (p = 0.013) rated their body image and confidence in the future higher (p = 0.041). Unemployed and moderately educated women had signifi-cantly lower scores in sexual function and future outlook (p < 0.05). Pensioners more frequently experienced arm symptoms (p = 0.003), while increased hair loss was noted after BCESR (p = 0.030).

Conclusion: The findings reveal that multiple factors influence the QoL of women with BC. Socioeconomic status, type of surgery, and psycho-emotional support are key determinants of QoL. These results may provide a scientific basis for enhancing rehabilitation programs.

Keywords: woman, breast cancer (BC), quality of life (QoL), EORTC QLQ-BR23, sociodemographic factors, clinical factors.

Introduction: Breast cancer (BC) is the most common malignant disease in women worldwide [1]. It is a unique disease because it can significantly affect women's appearance, which in turn directly or indirectly affects their quality of life (QoL). In addition, the cancer itself, the fear of its recurrence, or death, also complicates the psycho-emotional state of women [2]. In recent decades, the number of studies devoted to the QoL of patients with BC has increased. Assessment of QoL is particularly important, given that this is a common chronic disease with a favorable prognosis when diagnosed early and adequately treated [3]. QoL encompasses a person's perceptions of their physical and mental health, as well as various factors that affect it. Many theories of QoL are based on the World Health Organization's definition of health, which generally considers health to be physical, psychological, and social well-being [4]. The prognosis for the etiology and course of cancer emphasizes the importance of studying the interaction of various biological, psychological, and social factors [5]. This may be a prognostic factor for cancer patients and also an important factor influencing survival after recurrence of squamous cell carcinoma [6].

Overall survival of women diagnosed with BC is closely related to their socioeconomic status as well as the stage of the disease. In the context of universal health coverage, the impact of sociodemographic characteristics on overall survival components becomes more pronounced after the active treatment period. Gender roles in the family and society are also important factors that affect women's overall survival. Family obligations, the burden of household chores, or difficulties in balancing work and personal life may negatively affect overall survival in women. In addition, in women with BC, late diagnosis, aggressive disease relapse, and/or complexity of treatment methods may negatively affect overall survival [1].

In oncology, the concept of OS is particularly important due to the specific nature of the pathology and the radical nature of the treatment methods (surgery, radiation, and chemotherapy) [7]. Removal of the mammary gland, an aesthetically important organ, causes significant harm to women's physical, psychological, and emotional well-being [8]. Sexual function, sexual satisfaction, and body image were rated higher by women who underwent organ-preserving surgery, while they were rated lower by respondents who underwent radical mastectomy (RME). Decreased libido was often observed in the group of women who underwent RME, which led to a decrease in their OS. In these studies, although 80% of patients were satis-

fied with their appearance, only 54% of them were able to accept their naked body [9].

A meta-analysis showed a significant correlation between age and overall survival in patients with BC ($p = 0.03$), with each additional year of age associated with a 0.19 increase in overall survival. This result is consistent with other studies showing that breast conservation improves body image, social and emotional well-being, and, in turn, increases overall survival [10]. Some studies have shown that older patients are more psychologically prepared for treatment, despite the presence of comorbidities [11].

High levels of anxiety are observed in women who are married or in relationships. This may be due to a feeling of insecurity about their partners' acceptance of the disease, as well as a fear that the disease may cause the partner to break off the relationship or leave for another woman [12].

This was a great challenge, and some mothers preferred to hide their condition from their children. During the mother's illness, some children had difficulty with their studies. Patients felt that they had lost their social identity and were labeled as "cancer patients," which was so depressing and debilitating that they did not want anyone except their family to know about it. Other women tended to hide their emotional experiences from relatives and children [13]. Several studies have shown that women with minor children have higher levels of anxiety and depression. This may be explained by the increased responsibility for their children and the psychological burden associated with it [14].

Most of the factors identified in many studies are related to monthly income, medical expenses, and level of education. Level of education also influences OD [12]. Women with university education have higher OD rates, which may be related to a higher cultural level and education, as well as a better-paid job. Compared with those whose income is lower than their expenses, women with incomes equal to or higher than their expenses showed significantly higher scores on the quality of sexual life (mean scores 33.35±26.05 and 52.50±29.74, respectively; $p=0.003$), as well as on the level of dyadic adaptation (88.90±30.55 and 107.43±26.61; $p=0.004$) [15]. This enables them to access information and utilize more tools, resources, and strategies to manage the disease. Likewise, increased economic resources allow them to meet the needs arising from this new health situation [1, 2]. A better understanding of the QoL and body image of women with BC can contribute to the development and improvement of therapeutic and curative measures, as well as modern service and care models [16]. In addition, the study of QoL allows for individualization of rehabilitation programs for women who have undergone radical breast surgery [17]. Reconstructive surgery is an advanced method of surgical rehabilitation. The main goal of this method is to ensure a high level of psychosexual well-being and satisfaction with the QoL of patients while maintaining oncological safety [18].

This study is one of the first to comprehensively analyze sociodemographic and clinical factors affecting the QoL of women with BC undergoing treatment in Kazakhstan, including the Aktobe region. In addition, the study demonstrated the validity of using international questionnaires, the EORTC QLQ-BR23 and QLQ-C30, in Kazakhstan. An analysis of factors influencing the QoL of women with IBD demonstrates the multifaceted nature of this problem and the close relationship between physical, social, psycho-emotional, and sexual aspects.

This work is a continuation of the author's previous work on this topic. While the previous publications conducted a literature review based on international and domestic scientific sources to collect data on the impact of BC on women's QoL [12], and the QoL was assessed at a general descriptive level [19], then the present study, based on empirical data conducted in a specific region (Aktobe region), significantly deepens this topic and includes a comprehensive analytical study aimed at identifying the relationships between QoL and specific sociodemographic and clinical factors. The study employed multivariate logistic regression analysis, and statistically significant relationships were identified between patient characteristics and QoL scales.

The study aimed to determine the influence of sociodemographic and clinical factors on the quality of life of women undergoing treatment for breast cancer.

Materials and methods:

Data collection. The EORTC QLQ-BR23 questionnaire was administered to patients of the Medical Centre of the West Kazakhstan Marat Ospanov Medical University (letter of permission No. 13/8-21-77). The widely recognised standardised *EORTC QLQ-BR23 questionnaire* was used to determine the influence of sociodemographic and clinical factors on patients' QoL. This instrument was developed in 1996 by the Quality of Life Task Force of the European Organisation for Research and Treatment of Cancer (EORTC). The questionnaire consisted of 23 questions and was divided into 4 functional (body image, sexual function, sexual satisfaction, outlook on the future) and 4 symptomatic scales (side effects of systemic therapy, arm and breast symptoms, hair loss). Each question was rated on a scale from 1 (none) to 4 (very strong). In addition, to obtain comprehensive information on patients' QoL in line with the EORTC measurement guidelines, two questions from the EORTC QLQ-C30 health status/QoL scale were used. In these two questions, patients rated their health and overall QoL on a scale of 1-7 (1 = very poor, 7 = excellent). The assessment was scored on a 0–100 scale by linearly transforming each scale's raw scores, as recommended in the EORTC assessment guidelines. For the functional scales, a higher score corresponded to a higher QoL. In contrast, the

opposite was true for the symptom scales: higher scores indicated greater negative symptoms. Unanswered questions were handled according to the guidelines: if a scale consisted of a single item and was left unanswered, it was scored as "not available" [20].

During data collection, in addition to the questionnaire questions, respondents' sociodemographic and clinical data were collected, including age, marital status, number of children, level of education, employment status, place of residence, diagnostic method, and type of surgical intervention.

Sample. When planning the study, the sample size was calculated using Cohen's f² calculator for regression analysis with an effect size of $f^2 = 0.35$, power of 0.8, and significance level (α) of 0.05. As a result, the required sample size was 82 people. Taking into account possible losses (non-responses, etc.), a 20% margin was added, and a total of 98 people were planned to participate. Of the 210 patients who sought treatment at WKSU Medical Center between January 15, 2024, and January 1, 2025, 103 met the inclusion criteria and provided consent to participate in the study.

Inclusion criteria:

– all women first hospitalized for BC at Marat Ospanov West Kazakhstan State University Medical Center after surgery (in the volume of RME or breast-conserving extended sectoral resection (BCESR) of the mammary gland);

– those who have given consent to fill out the questionnaire.

Exclusion criteria:

– women with newly diagnosed BC not eligible for surgical treatment;

– patients who have undergone surgery for benign tumors;

– patients who have undergone breast-conserving sectoral resection of the mammary gland;

– those who did not give consent to complete the questionnaire.

Ethical aspects: Before the study, the local bioethics committee of the West Kazakhstan State Medical University, named after Marat Ospanov, approved the research work in strict compliance with all necessary ethical standards and rules (Protocol No. 9, dated 02.10.2023). Participants were informed about the study's goals and objectives, its significance, their right to refuse participation at any time, the confidentiality of the data, and the measures taken to maintain their anonymity. All respondents signed informed consent to participate in the study.

Statistical analysis: The data were processed using IBM SPSS Statistics (version 25.0, Armonk, NY: IBM Corp.). The distribution of numerical variables was assessed using the Shapiro-Wilk test. The mean (M) and standard deviation (SD) were calculated for numerical data, while the frequency (N) and percentage (%) were calculated for qualitative variables. Survey results from the EORTC measurement were presented to management, with values ranging from 0 to 100, which showed a linear relationship on the transformed scales [20]. These scales were then dichotomized (good/bad) based on their mean values. For the functional and health/QoL scales, scores from 0 to 50 were interpreted as "bad", from 51 to 100 as "good"; for the symptomatic scales, scores from 0 to 50 were interpreted as "good", from 51 to 100 as "bad". To determine the influence of sociodemographic and clinical factors on QoL, a multivariate logistic regression analysis was employed. This method enabled the estimation of the influence of several independent variables (e.g., age, socioeconomic status, treatment type) on the dependent variable, specifically the QoL level (good or poor). $p<0.05$ was taken as statistical significance, and the Exp(B) values characterize the direction and strength of the effect.

Results: The sociodemographic and clinical characteristics of the women participating in the study were as follows (Fig. 1). The average age of the respondents was 58.4 years (SD=10.89). By the age structure, most women were 56 to 65 years – 39.8% (CI: 30.4-49.3), the least of them were 25 to 35 years – 2.9% (CI: -0.3 to 6.2) (Fig. 1A). Most of the respondents were urban residents (81.6%; CI: 74.1-89.0), with 18.4% of rural residents (CI: 11.0-25.9) (Fig. 1B). By level of education, 70.9% of respondents (CI: 62.1-79.6) had secondary education, and 29.1% (CI: 20.4-37.9) had higher education (Fig. 1C). By employment status, the largest proportion was made up of employed women – 43.7% (CI: 34.1-53.3) and pensioners – 39.8% (CI: 30.4-49.3), while the unemployed accounted for 16.5% (CI: 9.3-23.7) (Fig. 1D). By marital status, 54.4% (CI: 44.7-64.0) of respondents were married, and 45.6% (CI: 36.0-55.3) were single (Fig. 1E). By the number of children, 65.0% of women (CI: 55.8-74.3) were mothers of 2-3 children, 18.4% (CI: 11.0-25.9) had 0 to 1 child, and 16.5% (CI: 9.3-23.7) had 4 or more children (Fig. 1F). By diagnostic method, 52.4% (CI: 42.8-62.1) were diagnosed with cancer through screening, and 47.6% (CI: 37.9-57.2) sought medical care by self-referral (Fig. 1G). Regarding treatment methods, most patients (70.9%; CI: 62.1-79.6) underwent RME, and 29.1% (CI: 20.4-37.9) underwent BCESR (Fig. 1H).

In our study, we identified and statistically analyzed the sociodemographic and clinical factors influencing sexual dysfunction (Fig. 2). However, the sexual satisfaction scale was not included in the calculations due to an insufficient number of responses (15). Take-aways:

1. Age, place of residence, or number of children did not have a significant effect on the health status/QoL scale of women who had undergone treatment for BC ($p > 0.05$), taking into account sociodemographic and clinical factors (Table 1). Compared with married women, single women (Exp(B) = 0.312; p = 0.022) and women examined and diagnosed independently, rather than through screening (Exp(B) = 0.339; p = 0.030), reported significantly lower health status/QoL.
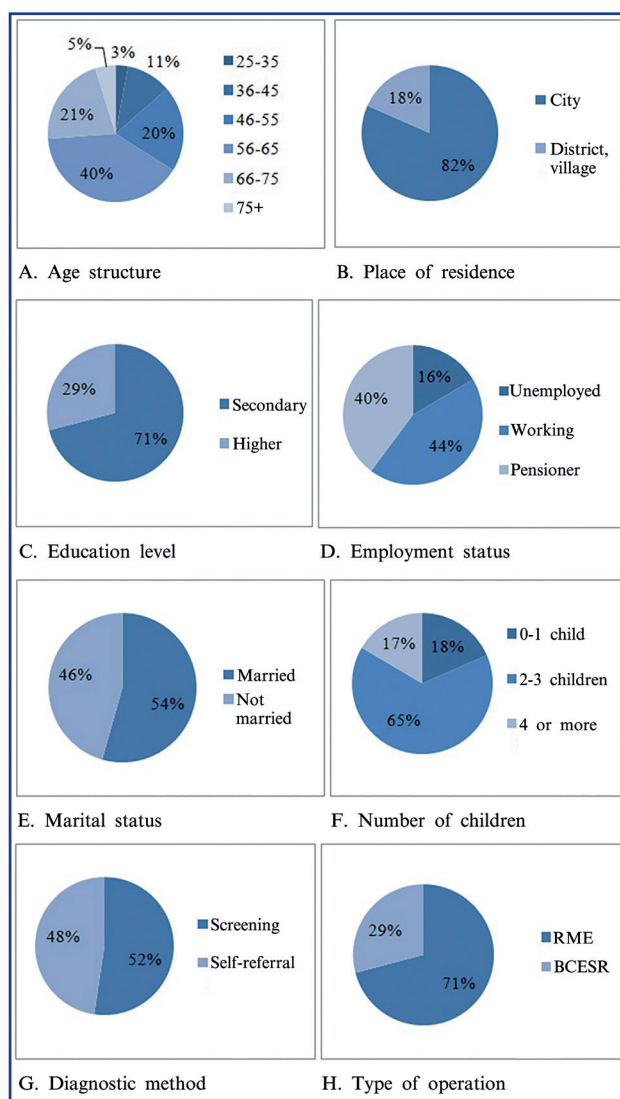
Figure 1 – Socio-demographic and clinical characteristics of respondents who took part in the study (A, B, C, D, E, F, G, H).
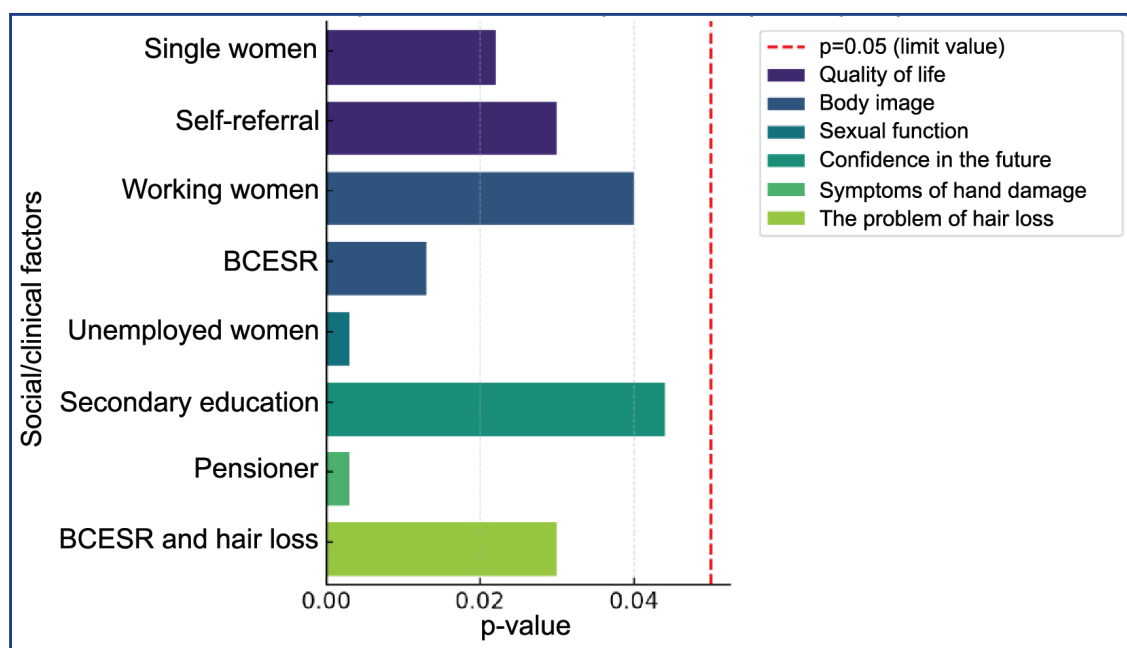
Figure 2 – Results of multivariate logistic regression of factors influencing the quality of life of respondents who participated in the study

Table 1 – Determination of the relationship between socio-demographic and clinical factors with health status/quality of life, functional scales of quality of life in women undergoing treatment for breast cancer

Functional parameters	Body image			Sexual function			Confidence in the Future			Health status/Quality of life		
	n (%)	Exp (B) (95% CI)	song p- m	n (%)	Exp (B) (95% CI)	song p- m	n (%)	Exp (B) (95% CI)	song p- m	n (%)	Exp (B) (95% CI)	song p- m
Age												
25-35	3	1		3	1		3	1		3	1	
36-45	11	0.0	0.9	11	0.0	0.9	11	0.1 (0.0-4)	0.2	11	0.0	0.99
46-55	21	0.0	0.9	21	0.0	0.9	21	2.3 (0.1-45.8)	0.5	21	1.3 (0.1-18.9)	0.81
56-65	41	0.0	0.9	41	0.0	0.9	41	1.8 (0.1-30.1)	0.6	41	2.8 (0.2-34.2)	0.41
66-75	22	0.0	0.9	22	0.0	0.9	22	5.5 (0.4-71.1)	0.2	22	1.2 (0.1-10.6)	0.9
75+	5	0.0	0.9	5	0.0	1	5	2.9 (0.2-43.1)	0.4	5	0.6 (0.0-6.5)	0.64
Place of residence												
City	84	1		84	1		84	1		84	1	
District center, village	19	3.7 (0.7-18.6)	0.1	19	0.6 (0.1-5.6)	0.7	19	3.2 (0.8-12.6)	0.1	19	0.4 (0.1-1.6)	0.22
Level of education												
Secondary education	73			73			73			73		
Higher education	30	2.0 (0.5-7.6)	0.3	30	5.8 (1.0-32.3)	0.0*	30	0.1 (0.0-0.5)	0.0*	30	1.0 (0.3-3.4)	0.96
Employment status												
Unemployed	17	1		17	1		17	1		17	1	
Working	45	7.7 (1.1-54.6)	0.0*	45	0.0 (0.0-0.2)	0.0*	45	7.6 (1.1-53.7)	0.0*	45	0.8 (0.1-5.4)	0.85
Pensioner	41	4.6 (0.7-26.8)	0.1	41	0.2 (0.0-2.4)	0.2	41	5.7 (1.2-25.4)	0.0*	41	1.4 (0.3-5.7)	0.63
Marital status												
Married	56	1		56	1		56	1		56	1	
Single	47	3.0 (0.9-9.2)	0.0*	47	0.3 (0.0-2.2)	0.2	47	2.7 (0.9-7.8)	0.06	47	0.3 (0.1-0.8)	0.02*
Number of children												
0-1	19	1		19	1		19	1		19	1	
2-3	67	1.7 (0.2-13.6)	0.6	67	0.0	0.9	67	0.5 (0.1-3.2)	0.4	67	3.7 (0.5-24.2)	0.16
4 or more	17	2.6 (0.4-14.8)	0.2	17	0.0	0.9	17	0.6 (0.1-2.8)	0.6	17	0.8 (0.1-4.0)	0.83
Type of operation												
RME	73	1		73	1		73	1		73	1	
BCESR	30	5.9 (1.4-24.5)	0.0*	30	1.4 (0.2-9.1)	0.6	30	2.7 (0.8-9.1)	0.1	30	0.6 (0.2-2.1)	0.49
Diagnostic method												
Screening	54	1		54	1		54	1		54	1	
Self-referral	49	1.5 (0.5-4.6)	0.4	49	0.7 (0.1-3.9)	0.7	49	1.1 (0.4-3.3)	0.7	49	0.3 (0.1-0.9)	0.03*

* - Statistically significant p - value for the interaction between scales and factors, established in multivariate logistic regression ($p < 0.05$)

2. Age, place of residence, or number of children did not have a significant effect on the functional scores of patients (p>0.05) (Table 1). Statistically significant factors influencing the functional scores (p < 0.05) included: Working patients (Exp(B) = 7.742; p = 0.040) who underwent organ-preserving BCESR (Exp(B) = 5.988; p = 0.013) demonstrated a better perception of body image and higher confidence in the future (Exp(B) = 7.652; p = 0.041) than unemployed patients who underwent radical surgery. Unemployed women had significantly lower sexual function scores (Exp(B) = 0.023; p = 0.003). In addition, women with secondary education rated sexual function (Exp(B) = 5.828; p = 0.044) and confidence in the future (Exp(B) = 0.123; p = 0.004) lower than women with higher education. Retired women, in contrast, had a higher confidence in the future (Exp(B) = 5.741; p = 0.022).

3. Marital status and employment status, diagnostic method, and type of surgical intervention did not have a significant effect on symptomatic indices (p > 0.05) (Table 2). Statistically significant factors influencing symptomatic scales (p < 0.05) included: Symptoms of hand damage are more common among pensioners (Exp(B) = 4.386; p = 0.003). Hair loss was more common among patients who underwent organ-preserving BCESR for squamous cell carcinoma (Exp(B) = 3.565; p = 0.030).

According to the study results, factors influencing the QoL of women undergoing treatment for BC are complex and multifaceted. Lower assessment of the QoL of single women (p = 0.022) and women who were diagnosed independently (p = 0.030) compared to married women may be associated with a lack of social support, a feeling of loneliness, and late seeking of medical care. These factors make it difficult for the patient to accept the disease, increase psychological distress, and negatively affect the overall QoL. According to the functional scale, better body image perception (p = 0.040) and greater confidence in the future (p = 0.041) among working women are likely due to their active engagement with society and a sense of social significance. Organ-preserving BCESR was also associated with a positive effect (p = 0.013 for body image; p = 0.041 for confidence in the future), as women perceived themselves more positively because their appearance was preserved without compromising body image.

In contrast, unemployed women showed a significant decrease in sexual function (p = 0.003). This situation may be associated with a decrease in social status, psycho-emotional stress, lack of income, and decreased self-confidence. Low assessment of sexual function (p = 0.044) and confidence in the future (p = 0.004) in women with secondary education is explained by their inability to fully comprehend information about the disease, lack of access to necessary resources, and limited adaptation strategies. High confidence in the future of pensioners (p = 0.022) may be associated with a shift in their expected life goals due to aging and a greater ability to adapt psychologically, resulting from life experience. Regarding symptom score, the high-

er incidence of symptoms of hand damage among retirees (p = 0.003) may be due to a slower recovery process associated with aging and impaired lymphatic circulation. In addition, patients who underwent organ-preserving BCESR for squamous cell carcinoma had a higher incidence of hair loss (p = 0.030), probably due to the side effects of chemotherapy that continue after surgery.

Thus, the results of the study indicate that many factors influence the outcome of the disease after traumatic brain injury, and it is necessary to pay attention not only to clinical treatment but also to the social and psycho-emotional state of the patient.

Discussion: The study's results showed that the factors influencing the QoL of women with BC receiving treatment are multifaceted and complex. This result is consistent with data from several studies demonstrating the major role of psychosocial and economic factors in shaping QoL [10]. However, some authors do not deny the importance of age. For example, a meta-analysis [11] found a statistically significant correlation between the patient age and QoL (p = 0.03), with each additional year of age associated with a 0.19-point increase in the QoL index. These contradictory results could be attributed to differences in age-related adaptation strategies and the level of social support available to patients.

The study's results showed that employment and educational level play significant roles in QoL perception. Patients with secondary education rated their sexual function (p = 0.044) and confidence in the future (p = 0.004) lower. It was found that employed women have a better perception of their body image (p = 0.040) and higher confidence in the future (p = 0.041). This finding is consistent with the literature. In particular, it was demonstrated that women with a university education have a higher ES, and women whose income exceeds their expenses also exhibit higher sexual function (p = 0.003) and dyadic adaptation (p = 0.004) [16]. Additionally, patients who underwent organ-preserving surgery reported a more positive body image (p = 0.013) and greater confidence in their future (p = 0.041). Other studies confirm these data: patients after organ-preserving operations better assessed their QoL in terms of physical (p = 0.001) and sexual (p = 0.007) indicators [10], and also showed that this was associated with higher functional indicators, increased confidence in the future (p = 0.005), and a higher level of sexual satisfaction (p = 0.001) [11].

The above data suggest that the main factors influencing the survival of women with BC are social support, economic stability, educational level, and type of surgery. The results of this study provide a comprehensive understanding of the factors that affect patients' QoL and can serve as a basis for guiding post-oncological support. In particular, it is demonstrated that during the post-treatment period, it is necessary to consider not only medical but also psycho-emotional, social, and aesthetic aspects. This study is considered a crucial scientific and practical foundation for planning programs and interventions in this area.

Table 2 – Determination of the relationship between socio-demographic and clinical factors on the symptom scale in women with breast cancer who have undergone treatment

Age	Side effects of systemic therapy			Symptoms of hand damage			Symptoms of breast diseases			The problem of hair loss		
	n (%)	Exp (B) (95% CI)	song p-m	n (%)	Exp (B) (95% CI)	song p-m	n (%)	Exp (B) (95% CI)	song p-m	n (%)	Exp (B) (95% CI)	song p-m
Age												
25-35	3	1		3			3	1		2	1	
36-45	11	1.6 (0.0-68.7)	0.8	11	0.0	0.9	11	0.0	1	8	0.2 (0.0-20.3)	0.49
46-55	21	2.2 (0.1-37.6)	0.5	21	0.0	0.9	21	0.0	0.9	15	2.1 (0.0-107.2)	0.71
56-65	41	3.3 (0.2-49.3)	0.3	41	0.0	0.9	41	0.0	0.9	27	0.1 (0.0-3.2)	0.19
66-75	22	1.2 (0.1-15.2)	0.8	22	0.0	0.9	22	0.0	0.9	15	0.8 (0.0-16)	0.89
75+	5	0.7 (0.0-10.3)	0.7	5	0.0	0.9	5	0.0	0.9	3	3.7 (0.1-91.9)	0.42
Place of residence												
City	84	1		84	1		84	1		55	1	
District center, village	19	0.8 (0.2-3.2)	0.8	19	2.4 (0.6-8.5)	0.1	19	7.4 (0.4-120.5)	0.1	15	1.0 (0.2-4.9)	0.99
Level of education												
Secondary education	73	1		73	1		73	1		51	1	
Higher education	30	0.5 (0.1-1.6)	0.2	30	1.3 (0.4-4.1)	0.5	30	1.8 (0.3-8.9)	0.4	19	1.1 (0.2-4.7)	0.94
Employment status												
Unemployed	17	1		17	1		17	1		14	1	
Working	45	2.1 (0.3-12.1)	0.3	45	2.2 (0.7-7.2)	0.1	45	0.0	0.9	28	3.5 (0.3-33.1)	0.27
Pensioner	41	1.5 (0.3-6.7)	0.5	41	4.3 (1.6-11.7)	0.0*	41	1.1 (0.1-15.5)	0.9	28	4.7 (0.7-30.6)	0.10
Marital status												
Married	56	1		56	1		56	1		42	1	
Single	47	0.5 (0.1-1.5)	0.2	47	1.1 (0.4-2.6)	0.9	47	1.1 (0.2-4.7)	0.8	28	0.7 (0.2-2.5)	0.60
Number of children												
0-1	19	1		19	1		19	1		13	1	
2-3	67	1.9 (0.2-15.5)	0.5	67	2.1 (0.3-12.4)	0.4	67	3.6 (0.2-50.8)	0.3	45	4.3 (0.4-40.8)	0.19
4 or more	17	2.3 (0.3-14.2)	0.3	17	2.6 (0.6-10.9)	0.2	17	2.2 (0.2-18.3)	0.4	12	2.9 (0.4-18.6)	0.25
Type of operation												
RME	73	1		73	1		73	1		53	1	
BCESR	30	1.1 (0.4-3.8)	0.7	30	2.4 (0.8-6.4)	0.1	30	3.5 (0.5-23.8)	0.2	17	3.5 (1.1-11.2)	0.03*
Diagnostic method												
Screening	54	1		54	1		54	1		35	1	
Self-referral	49	2.8 (0.8-9.7)	0.1	49	0.5 (0.2-1.3)	0.2	49	1.2 (0.2-5.7)	0.7	35	0.7 (0.1-2.6)	0.63

* - Statistically significant p-value of the effect between scales and factors using the multivariate logistic regression method($p<0.05$)

Conclusion: A complex combination of sociodemographic and clinical factors influenced overall survival in patients with BC. The study's results showed that the levels of social support, employment status, education level, and type of surgery significantly influenced overall survival. In particular, women who were employed, had higher education, and underwent organ-preserving surgery had higher levels of body image satisfaction and future confidence ($p < 0.05$). In contrast, single, unemployed, and moderately educated patients had lower overall survival scores. In addition, specific symptomatic problems, such as symptoms of hand damage ($p = 0.003$) and hair loss after BCESR ($p = 0.030$), were reported by retired women.

The obtained results indicate the need to strengthen psychosocial support and rehabilitation in the fight against BC, not limited to drug treatment alone. An integrated approach that comprehensively considers the factors influencing BC development will enhance the effectiveness of oncological care and facilitate patients' successful adaptation to everyday life. The study can serve as a valuable scientific and practical foundation for developing measures of preventive, psychosocial, and informational support for cancer patients.

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АНДАТПА

СҮТ БЕЗІ ҚАТЕРЛІ ІСІГІ БАР ЕМДЕУДЕН ӨТКЕН ӘЙЕЛДЕРДІҢ ӨМІР САПАСЫНА ӘСЕР ЕТЕТІН ФАКТОРЛАРДЫ АНЫҚТАУ

Н.М. Кереева¹, Л.А. Ишимова¹, П.Ж. Айтмаганбет¹, А.Б. Туляева¹, С.Т. Тажбенова¹

¹«Марат Оспанов атындағы Батыс Қазақстан медицина университеті» КеАҚ, Ақтөбе, Қазақстан Республикасы

Өзектілігі: *Сүт безі қатерлі ісігі (СБҚІ) – әйелдер арасында жиі кездесетін онкологиялық аурулардың бірі және оның физикалық, психоэмоционалдық, әлеуметтік және сексуалдық салдарлары әйелдердің өмір сапасына (ӨС) теріс әсер етеді. Емнен кейінгі кезеңде ӨС төмендеуі пациенттердің толыққанды оңалуына кедергі келтіруі мүмкін. Сондықтан СБҚІ бар әйелдердің ӨС әсер ететін әлеуметтік-демографиялық және клиникалық факторларды зерттеу өзекті мәселе болып табылады.*

Зерттеу мақсаты *– сүт безі қатерлі ісігі бар емдеуден өткен әйелдердің өмір сапасына әлеуметтік-демографиялық және клиникалық факторлардың әсерін анықтау.*

Әдістері: *Зерттеу М.Оспанов атындағы БҚМУ Медициналық орталығында жүргізілді. Қатысушылар EORTC QLQ-BR23 стандартына сәйкес сауалнама толтырды. Қатысушылар саны – 103 әйел. Деректерді жинау барысында сауалнама сұрақтарымен қоса респонденттердің әлеуметтік-демографиялық және клиникалық деректері анықталды. Деректер IBM SPSS Statistics 25.0 бағдарламасында өңделді. Статистикалық талдау көпөлшемді логистикалық регрессия әдісі арқылы жүргізілді.*

Нәтижелері: *Зерттеу нәтижелері бойынша, некеде тұрмайтын (p = 0,022) және ауруды өздігінен анықтаған әйелдер (p = 0,030) ӨС төмен бағалады. Жұмысы бар (p = 0,040) және ағза сақтайтын сүт безінің кеңейтілген секторалды резекция (СБКСР) операциясынан өткен әйелдер (p = 0,013) дене бейнесін жоғары бағалады және болашаққа сенімі жоғары болды (p = 0,041). Жұмыссыз және орта білімді әйелдерде сексуалдық функция мен болашаққа сенім көрсеткіштері едәуір төмен болды (p < 0,05). Зейнеткерлерде қол симптомдары жиірек (p = 0,003), ал СБКСР операциясынан кейін шаш түсу жиілігі артқаны байқалды (p = 0,030).*

Қорытынды: *Алынған зерттеу нәтижелері көрсеткендей СБҚІ бар әйелдердің ӨС әсер ететін факторлар көпқырлы. Әлеуметтік-экономикалық жағдай, операция түрі және психоэмоционалдық қолдау ӨС айқындайтын негізгі көрсеткіштер болып табылады. Бұл нәтижелер реабилитациялық бағдарламаларды жетілдіруде ғылыми негіз ретінде қызмет ете алады.*

Түйінді сөздер: *әйел, сүт безі қатерлі ісігі (СБҚІ), өмір сапасы (ӨС), EORTC QLQ-BR23, әлеуметтік-демографиялық факторлар, клиникалық факторлар.*

АННОТАЦИЯ

ОПРЕДЕЛЕНИЕ ФАКТОРОВ, ВЛИЯЮЩИХ НА КАЧЕСТВО ЖИЗНИ ЖЕНЩИН, ПРОШЕДШИХ ЛЕЧЕНИЕ ОТ РАКА МОЛОЧНОЙ ЖЕЛЕЗЫ

Н.М. Кереева¹, Л.А. Ишимова¹, П.Ж. Айтмаганбет¹, А.Б. Туляева¹, С.Т. Тажбенова¹

¹НАО «Западно-Казахстанский медицинский университет имени М.Оспанова», Актобе, Республика Казахстан

Актуальность: *Рак молочной железы (РМЖ) является одним из наиболее распространённых онкологических заболеваний среди женщин, и его физические, психоэмоциональные, социальные и сексуальные последствия негативно влияют на качество жизни (КЖ) пациенток. Снижение КЖ в постлечебный период может затруднить полноценную реабилитацию. Поэтому исследование социально-демографических и клинических факторов, влияющих на КЖ женщин с РМЖ, является актуальной.*

Цель исследования *– определить влияние социально-демографических и клинических факторов на качество жизни женщин, прошедших лечение от рака молочной железы.*

Методы: *Исследование было проведено в Медицинском центре ЗКМУ имени М. Оспанова. Участницы заполнили анкету согласно стандарту EORTC QLQ-BR23. Общее количество участниц составило 103 женщины. В ходе сбора данных, наряду с анкетированием, были получены социально-демографические и клинические характеристики респондентов. Обработка*

данных проводилась в программе IBM SPSS Statistics 25.0. Статистический анализ выполнен с использованием метода многомерной логистической регрессии.

Результаты: *Согласно результатам исследования, незамужние женщины (p = 0,022) и женщины, самостоятельно выявившие заболевание (p = 0,030), оценили своё КЖ ниже. Трудоустроенные пациентки (p = 0,040) и женщины, перенёсшие органосохраняющую расширенную секторальную резекцию молочной железы (РСРМЖ) (p = 0,013), выше оценили образ тела и проявляли большую уверенность в будущем (p = 0,041). У безработных и женщин со средним образованием показатели сексуальной функции и уверенности в будущем были значительно ниже (p < 0,05). У пенсионерок чаще отмечались симптомы со стороны руки (p = 0,003), а после РСРМЖ чаще наблюдалось выпадение волос (p = 0,030).*

Заключение: *Полученные результаты показывают, что на КЖ женщин с РМЖ влияет множество факторов. Социально-экономическое положение, тип операции и уровень психоэмоциональной поддержки являются основными определяющими показателями КЖ. Эти данные могут служить научной основой для совершенствования реабилитационных программ.*

Ключевые слова: *женщина, рак молочной железы (РМЖ), качество жизни (КЖ), EORTC QLQ-BR23, социально-демографические факторы, клинические факторы.*

Authors' information:
Kereeva N.M. – Candidate of Medical Sciences, Associate Professor of the Oncology Department of the West Kazakhstan Medical University named after Marat Ospanov, Aktobe, Republic of Kazakhstan, tel. +77014536721, e-mail: nrgl77@mail.ru, ORCID: 0000-0001-6205-4029;
Ishimova L.A. (Corresponding author) – 2nd-year master's student of the educational program 7M10101 "Public Health", Department of Public Health and Public Healthcare, West Kazakhstan Medical University named after Marat Ospanov, Aktobe, Republic of Kazakhstan, tel. + 77058142790, e-mail: ishimova.lunara@mail.ru, ORCID: 0009-0005-2712-3873;
Aitmaganbet P.Zh. – Candidate of Medical Sciences, Associate Professor of the Department of Public Health and Healthcare, West Kazakhstan Medical University named after Marat Ospanov, Aktobe, Republic of Kazakhstan, tel. + 77023398577, e-mail: perizat.a@zkmu.kz, ORCID: 0000-0002-1958-0493;
Tulyaeva A.B. – Candidate of Medical Sciences, Assistant Professor, Department of Oncology, West Kazakhstan Medical University named after Marat Ospanov, Aktobe, Republic of Kazakhstan, tel. + 77016599861, e-mail: dekart_85@mail.ru, ORCID: 0000-0001-7149-0121;
Tazhbenova S.T. – Candidate of Medical Sciences, Associate Professor of the Department of Public Health and Healthcare, West Kazakhstan Medical University named after Marat Ospanov, Aktobe, Republic of Kazakhstan, tel. + 77027895289, e-mail: t.saule.t@mail.ru , ORCID: 0000-0002-4073-0070.

Correspondence address: Ishimova L.A., Department of Public Health and Healthcare, West Kazakhstan Marat Ospanov Medical University, 68 Maresyev Street, Aktobe, Republic of Kazakhstan.