

# Psycho-emotional state and quality of life characteristics in women with post-mastectomy syndrome with different types of attitude to the disease

DOI: <https://doi.org/10.5114/pq.2018.74706>

Tetiana Odynets, Yuriy Briskin, Oleh Sydorko

Lviv State University of Physical Culture, Lviv, Ukraine

## Abstract

**Introduction.** The aim of the study was to determine the pattern of the psycho-emotional state and quality of life in women with post-mastectomy syndrome with different types of attitude to the disease at the dispensary stage of rehabilitation.

**Methods.** Theoretical analysis of literature sources; sociological methods (surveys); mathematical statistical methods. An interview of 115 women with late symptoms of post-mastectomy syndrome was conducted with the use of 3 validated questionnaires: Type of Attitude towards the Disease, Hospital Anxiety and Depression Scale, and Functional Assessment of Cancer Therapy – Breast. The women had undergone surgical treatment and adjuvant radiation therapy for breast cancer.

**Results.** Women with a rational type of attitude towards the disease were more likely to have significantly ( $p < 0.01$ ) better indicators of physical well-being, emotional well-being, and functional well-being, as well as fewer manifestations of anxiety compared with those with intrapsychic and interpsychic attitudes.

**Conclusions.** The findings have shown that the revealed peculiarities of attitude towards the disease in patients with post-mastectomy syndrome justify the need for increased attention to their life quality indicators and psychological characteristics.

**Key words:** women, attitude to the disease, post-mastectomy syndrome, quality of life

## Introduction

Post-mastectomy syndrome (PMS) is still the major long-term complication after surgical treatment and radiotherapy [1, 2]. Improvements in breast cancer therapy have contributed to a great success in the treatment of cancer, but the overall negative impact on the psycho-emotional state and quality of life in women has remained unchanged. The affected women may have a lot of negative emotions, including frustration, anxiety, sadness, fear, anger, and decreased self-confidence resulting from their body image [3–7].

According to recent studies [8, 9], the evaluation of the quality of life has become an important criterion for assessing the effectiveness of women's physical rehabilitation.

The problem of improving the quality of life in women with PMS is especially relevant because of the development of negative phenomena caused by both the tumour process itself and the methods of treatment, which lead to significant violations of the physical, psycho-emotional, and social aspects of life [10–13].

The psycho-traumatic factors are the cancer disease intelligence, the idea of the lack of its cure, high percentage of lethal consequences, as well as surgical interventions, radiation, and chemotherapy, which are closely related to somatic discomfort [10, 12, 13].

In order to enhance adaptation to a distress situation and to improve the results of special treatment for patients with PMS, it is necessary to use psychological correction during the period of surgery and after its completion [11, 13].

Considering the wide polymorphism of PMS and the individual typological characteristics of a woman's personality and attitudes to the disease, there is an urgent need to study the

peculiarities of the psycho-emotional status and quality of life in patients with PMS with different types of attitude to the disease.

The aim of this study was to determine the pattern of the psycho-emotional state and quality of life in women with PMS representing different types of attitude to the disease at the dispensary stage of rehabilitation.

## Subjects and methods

The research was performed at the Regional Cancer Centre in Zaporizhzhya (Ukraine). All the patients were informed about the aim of the investigation. Medical information concerning the stage of disease, surgery, and adjuvant therapy was obtained from medical records.

The inclusion criteria were recent history of modified radical mastectomy by Madden (less than 6 months before recruitment), age 50–60 years, breast cancer-related lymphedema and fatigue complaints, limitation of shoulder joint motion, negative psychosocial effects and quality of life, normal body mass index, consent to participate in the study, ability to read and understand the questionnaires, and no contraindications for physical rehabilitation. All the women who were selected for the research met the eligibility criteria.

The total of 115 women with late symptoms of PMS were enrolled. They had undergone surgical treatment and adjuvant radiation therapy for breast cancer. The average age of the patients was  $58.49 \pm 1.06$  years. The time after surgery was 6 months.

An interview was conducted with the use of 3 validated questionnaires: Type of Attitude towards the Disease, Hos-

*Correspondence address:* Tetiana Odynets, Department of Physical Rehabilitation, Khortytsia National Academy, Department of Theory of Sport and Physical Culture, Lviv State University of Physical Culture, Kostyushko str., 11, 79000, Lviv, Ukraine, e-mail: [tatyana01121985@gmail.com](mailto:tatyana01121985@gmail.com)

Received: 2018.02.07

Accepted: 2018.03.16

*Citation:* Odynets T, Briskin Y, Sydorko O. Psycho-emotional state and quality of life characteristics in women with post-mastectomy syndrome with different types of attitude to the disease. *Physiotherapy Quarterly*. 2018;26(1):9–12; doi: <https://doi.org/10.5114/pq.2018.74706>.

pital Anxiety and Depression Scale (HADS), and Functional Assessment of Cancer Therapy – Breast (FACT-B).

To determine the type of attitude toward the disease, we used a questionnaire that was developed at the Laboratory of Clinical Psychology at the V.M. Bekhterev Institute, which allowed us to define 12 types of attitude toward the disease: harmonious, ergopathic, anosognostic, anxious, hypochondriac, neurasthenic, melancholic, apathetic, sensitive, self-centred, paranoid, dysphoric.

Each type of attitude towards the disease consisted of common feelings (wellness, mood, sleep, and appetite), patient perceptions about their disease, treatment, attitudes toward medical staff, family, environment, work (studying), and loneliness in the past and future. Summarizing the results, all attitudes toward the disease were divided into 3 groups. The first group included rational attitudes: harmonious, ergopathic, and anosognostic types; these point at the most favourable patient's response to the disease. The second group included intrapsychic attitudes: anxious, hypochondriac, neurasthenic, melancholic, and apathetic; these indicate disorders of the patient's social adaptation. The third group included interpsychic attitudes: sensitive, self-centred, paranoid, and dysphoric; these are usually associated with signs of mental and social maladaptation. The variability of attitudes predicted the presence of 3 or more assessment scales in the diagnostic area [14].

Anxiety and depression were evaluated with the HADS questionnaire, validated in many countries and languages [15–17]. The patients completed a questionnaire composed of statements relevant to either generalized anxiety or depression. Each statement was referred to by the patient on a 4-point (0–3) response scale. The questionnaire contains 14 items, with responses scored on a scale of 0–3 (3 indicates higher symptom frequencies). Scores for anxiety and depression range from 0 to 21 and are categorized as follows: normal: 0–7, mild: 8–10, moderate: 11–14, and severe: 15–21 [18].

FACT-B+4 is a self-report questionnaire designed to measure the multidimensional quality of life in patients with breast cancer. The FACT-B consists of the FACT-General and specific module, which complements the general scale with items specific to the quality of life of women with breast cancer [19]. The current version of FACT-B+4 consists of 4 subscales: physical, functional, and social/family well-being (maximum score: 28 points), emotional well-being (24 points), breast cancer subscale (36 points), arm subscale (20 points). Each statement was answered by the patient on a 5-point (0–4) scale.

The results were analysed with the Statistica for Windows software (version 8.00). Previously, all variables were analysed for normality with the use of the Shapiro-Wilk test. Independent sample t-tests were applied to compare the investigated parameters between 2 groups of women with the rational attitude and the intrapsychic attitude, and the rational attitude and the interpsychic attitude towards the disease. The values of  $p < 0.05$  were considered statistically significant.

### Ethical approval

The research related to human use has been complied with all the relevant national regulations and institutional policies, has followed the tenets of the Declaration of Helsinki, and has been approved by the authors' institutional review board or equivalent committee.

### Informed consent

Informed consent has been obtained from all individuals included in this study.

## Results

The rational attitude towards the disease, which is accompanied by relatively sufficient mental adaptation, was observed in 47% of the patients; symptoms of the intrapsychic and interpsychic attitudes were present in 37% and 16% women, respectively (Table 1). The women with the rational attitude were more frequently found to have an ergopathic (24%) type of attitude towards the disease; those with the intrapsychic attitude had a diffuse (21%) type, and

Table 1. Types of attitude towards the disease in women with post-mastectomy syndrome at the dispensary stage of rehabilitation ( $n = 115$ )

Type of attitude	Number of cases	%
Rational attitude		
Harmonious	13	11
Ergopathic	28	24
Anosognostic	14	12
Intrapsychic attitude		
Anxious	9	8
Hypochondriac	2	2
Neurasthenic	3	3
Melancholic	3	3
Diffuse	25	21
Interpsychic attitude		
Sensitive	14	12
Egocentric	4	4

Table 2. Comparison of life quality indicators ( $M \pm m$ ) in women with post-mastectomy syndrome with different types of attitude to the disease (scores)

Indicator	Rational attitude ( $n = 55$ )	Intra- psychic attitude ( $n = 42$ )	Inter- psychic attitude ( $n = 18$ )	Norm
Physical well-being	14.21 $\pm 0.31$	12.31 $\pm 0.88^*$	12.43 $\pm 0.80^*$	28
Social/family well-being	17.90 $\pm 1.06$	16.41 $\pm 0.72$	16.38 $\pm 0.64$	28
Emotional well-being	13.29 $\pm 0.86$	10.37 $\pm 0.63^{**}$	10.11 $\pm 0.79^{**}$	24
Functional well-being	14.54 $\pm 0.79$	11.74 $\pm 0.47^{**}$	9.75 $\pm 0.82^{***}$	28
Breast cancer subscale	18.72 $\pm 1.01$	14.62 $\pm 0.33^{***}$	13.91 $\pm 0.75^{***}$	36
Arm subscale	8.54 $\pm 0.96$	8.33 $\pm 0.42$	8.16 $\pm 0.90$	20
Total score	87.20 $\pm 1.47$	73.78 $\pm 1.56^{***}$	70.74 $\pm 1.96^{***}$	164

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$  (comparison of data between the rational attitude and the intrapsychic attitude); \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$  (comparison of data between the rational attitude and the interpsychic attitude)

the participants with the interpsychic attitude represented a sensitive (12%) type.

The obtained results showed that the anxious type (8%) was characterized by excessive anxiety and suspiciousness related to an unfavourable course of the disease or its treatment. These patients tried to receive some advice about the diagnosis and treatment from various doctors. They constantly validated the diagnostic procedures on the basis of new information from medical literature and the Internet.

The melancholic type of attitude was observed in 3% of the studied women and it was characterized by an excessively high level of awareness of the existing problems, self-criticism, pessimism, and assessment of future prospects for recovery.

The high presence of the sensitive type (12%) was more frequently seen in women with the interpsychic attitude toward disease. This type was manifested by an extreme effort to hide the illness, vulnerability, concern about the possibility of a negative impression on others with the information about the disease and, as a result, avoidance of communication.

The comparison of life quality indicators in women with PMS and different types of attitude towards the disease is presented in Table 2. The average result of physical well-being was statistically significantly higher in women with the rational attitude toward the disease compared with those with the intrapsychic and interpsychic attitude by 1.9 scores ( $p < 0.05$ ) and 1.78 scores ( $p < 0.05$ ), respectively; the emotional well-being was better by 2.92 scores ( $p < 0.01$ ) and 3.18 scores ( $p < 0.01$ ), respectively; the functional well-being was better by 2.80 scores ( $p < 0.01$ ) and 4.97 scores ( $p < 0.001$ ), respectively; the breast cancer subscale was better by 4.10 scores ( $p < 0.001$ ) and 4.81 scores ( $p < 0.001$ ), respectively.

A difference was also shown in anxiety and depression between women who had a rational attitude to the disease and those with violations of social and psychological adaptation (Table 3). Particularly, individuals with the intrapsychic and interpsychic attitude presented higher anxiety than those with the rational one by 3.31 scores ( $p < 0.001$ ) and by 3.41 scores ( $p < 0.001$ ), respectively. The probable differences in the depression scores were not recorded among the studied group.

On the basis of HADS scores in the PMS patients, sub-clinical anxiety was observed in 40% of women with the rational type of attitude to the disease, 16% of those with the intrapsychic attitude, and 12% in the case of the interpsychic attitude. Subclinical manifestations of depression were found in 40% of women with the rational type of attitude to the disease, 28% of those with the intrapsychic attitude, and 20% in the case of the interpsychic attitude.

Clinical manifestations of anxiety were recorded in 60% of respondents with the rational type of attitude to the disease, in 84% of those with the intrapsychic attitude, and in 88% of the individuals with the interpsychic attitude.

Table 3. Comparison of anxiety and depression indicators (M ± m) in women with post-mastectomy syndrome with different types of attitude to the disease (scores)

Indicator	Rational attitude (n = 55)	Intrapsychic attitude (n = 42)	Interpsychic attitude (n = 18)
Anxiety	10.09 ± 0.57	13.40 ± 0.54***	13.50 ± 0.59***
Depression	10.17 ± 0.66	10.99 ± 0.67	10.01 ± 0.52

\*\*\*  $p < 0.001$  (comparison of data between the rational attitude and the intrapsychic attitude); \*\*\*  $p < 0.001$  (comparison of data between the rational attitude and the interpsychic attitude)

## Discussion

The results of the presented research indicate that in most cases women with PMS are characterized by a rational attitude (47%) to the disease, and an intrapsychic attitude (37%), which violates social adaptation of patients. The maladaptive behaviour of such women was manifested by anxiety, depression, and complete focus on their illness. The interpsychic attitude was observed to a lesser extent and characterized by sensitivity with respect to the disease and by aggressive mood.

A considerable body of research [4, 6, 11, 20] demonstrates that breast cancer treatment decreases the quality of life and can cause numerous negative side effects, impacting on sleep quality, body image, relationships, and social contacts.

Many studies [8, 9, 11, 12] have confirmed that an integral part of the causes for psychological maladjustment is the psychological impact of radical surgery (removal of an organ or the formation of certain cosmetic defect). This circumstance is an additional stressful factor because psychological identification of breast cancer with female substance occurs in the women' minds. This fact has a significant impact on the recovery process, emotional condition, further prognosis of the disease, and the patients' quality of life.

Previous research has shown that different types of physical activity may be an effective method of attenuating the depression, anxiety, and fatigue in breast cancer survivors [21–23]. At the same time, it is emphasized that the rehabilitation program should be individualized for all breast cancer patients in accordance with their age, functional state, and physical activity level. However, the current study suggests that the development of physical rehabilitation program should also take into account the psychosocial distress and type of women's attitude towards the disease.

On the basis of the data obtained, conclusions could be drawn that further physical rehabilitation program should be individualized with regard to the type of attitude towards the disease in order to improve the quality of life and psycho-emotional state in women with PMS.

## Limitations

The presented study has some limitations. Firstly, the population involved was small numerically and included female subjects from Ukraine only, thus restricting the possibility to make generalizations to other populations. Secondly, the study was conducted only within the framework of one institution; therefore, institutional bias might limit the generalization of the results. Thirdly, it should be taken into account that physical and functional well-being was assessed by a questionnaire and differences in the lifestyle of the women studied could have influenced the outcomes.

## Conclusions

The findings have suggested that the revealed peculiarities of attitude towards the disease in patients with PMS justify the need for increased attention to their life quality indicators and psychological characteristics. It has been observed that women with a rational type of attitude towards the disease are more likely to have better indicators of physical well-being, emotional well-being, and functional well-being, as well as to present fewer manifestations of anxiety compared with the individuals with intrapsychic and interpsychic attitudes.

## Disclosure statement

No author has any financial interest or received any financial benefit from this research.

## Conflict of interest

The authors state no conflict of interest.

## References

1. Larsson IM, Ahm Sørensen J, Bille C. The post-mastectomy pain syndrome – a systematic review of the treatment modalities. *Breast J.* 2017;23(3):338–343; doi: 10.1111/tbj.12739.
2. Verbelen H, Gebruers N, Tjalma W. Late effects of cancer treatment in breast cancer survivors. *South Asian J Cancer.* 2015;4(4):182; doi: 10.4103/2278-330X.175956.
3. Taghian NR, Miller CL, Jammallo LS, O'Toole J, Skolny MN. Lymphedema following breast cancer treatment and impact on quality of life: a review. *Crit Rev Oncol Hematol.* 2014;92(3):227–234; doi: 10.1016/j.critrevonc.2014.06.004.
4. Mehnert A, Veers S, Howaldt D, Braumann KM, Koch U, Schulz KH. Effects of a physical exercise rehabilitation group program on anxiety, depression, body image, and health-related quality of life among breast cancer patients. *Onkologie.* 2011;34(5):248–253; doi: 10.1159/000327813.
5. Briskin Y, Odynets T, Pityn M. Influence of the problem-oriented program of physical rehabilitation on the type of attitude to the disease in women with postmastectomy syndrome. *J Phys Educ Sport.* 2016;16(1):33–37; doi: 10.7752/jpes.2016.01006.
6. Maass SW, Roorda C, Berendsen AJ, Verhaak PF, de Bock GH. The prevalence of long-term symptoms of depression and anxiety after breast cancer treatment: a systematic review. *Maturitas.* 2015;82(1):100–108; doi: 10.1016/j.maturitas.2015.04.010.
7. Jones SL, Hadjistavropoulos HD, Gullickson K. Understanding health anxiety following breast cancer diagnosis. *Psychol Health Med.* 2014;19(5):525–535; doi: 10.1080/13548506.2013.845300.
8. Blaney JM, Lowe-Strong A, Rankin-Watt J, Campbell A, Gracey JH. Cancer survivors' exercise barriers, facilitators and preferences in the context of fatigue, quality of life and physical activity participation: a questionnaire-survey. *Psychooncology.* 2013;22(1):186–194; doi: 10.1002/pon.2072.
9. Hayes SC, Rye S, Disipio T, Yates P, Bashford J, Pyke C, et al. Exercise for health: a randomized, controlled trial evaluating the impact of a pragmatic, translational exercise intervention on the quality of life, function and treatment-related side effects following breast cancer. *Breast Cancer Res Treat.* 2013;137(1):175–186; doi: 10.1007/s10549-012-2331-y.
10. Odynets T. Types of attitude of women after radical mastectomy. *Phys Act Health Sport.* 2013;4(14):59–64.
11. Desautels C, Savard J, Ivers H, Savard MH, Caplette-Gingras A. Treatment of depressive symptoms in patients with breast cancer: a randomized controlled trial comparing cognitive therapy and bright light therapy. *Health Psychol.* 2018;37(1):1–13; doi: 10.1037/hea0000539.
12. González-Fernández S, Fernández-Rodríguez C, Mota-Alonso MJ, García-Tejido P, Pedrosa I, Pérez-Álvarez M. Emotional state and psychological flexibility in breast cancer survivors. *Eur J Oncol Nurs.* 2017;30:75–83; doi: 10.1016/j.ejon.2017.08.006.
13. Akel R, El Darsa H, Anouti B, Mukherji D, Temraz S, Raslan R, et al. Anxiety, depression and quality of life in breast cancer patients in the Levant. *Asian Pac J Cancer Prev.* 2017;18(10):2809–2816; doi: 10.22034/APJCP.2017.18.10.2809.
14. Wasserman LI, Iovlev BV, Karpova EB, Vuks AYA. Psychological diagnosis of the attitude to a disease [in Russian]. St. Petersburg: V.M. Bekhterev Psychoneurological Research Institute; 2005.
15. Snaith RP. The Hospital Anxiety and Depression Scale. *Health Qual Life Outcomes.* 2003;1:29; doi: 10.1186/1477-7525-1-29.
16. Bjelland I, Dahl AA, Haug TT, Neckelmann D. The validity of the Hospital Anxiety and Depression Scale. An updated literature review. *J Psychosom Res.* 2002;52(2):69–77; doi: 10.1016/S0022-3999(01)00296-3.
17. Yi JC, Syrjala KL. Anxiety and depression in cancer survivors. *Med Clin North Am.* 2017;101(6):1099–1113; doi: 10.1016/j.mcna.2017.06.005.
18. Zigmond AS, Snaith RP. The Hospital Anxiety and Depression Scale. *Acta Psychiatr Scand.* 1983;67(6):361–370; doi: 10.1111/j.1600-0447.1983.tb09716.x.
19. FACT-B (Functional Assessment of Cancer Therapy) questionnaires for patients with breast cancer. Available from: <http://www.facit.org/facitorg/questionnaires>.
20. Chwałczyńska A, Woźniewski M, Rożek-Mróż K, Malicka I. Quality of life in women after mastectomy [in Polish]. *Wiad Lek.* 2004;57(5–6):212–216.
21. Taso CJ, Lin HS, Lin WL, Chen SM, Huang WT, Chen SW. The effect of yoga exercise on improving depression, anxiety, and fatigue in women with breast cancer: a randomized controlled trial. *J Nurs Res.* 2014;22(3):155–164; doi: 10.1097/jnr.0000000000000044.
22. Vardar YN, Şener G, Arıkan H, Sağlam M, İnal İD, Savcı S, et al. Do yoga and aerobic exercise training have impact on functional capacity, fatigue, peripheral muscle strength, and quality of life in breast cancer survivors? *Integr Cancer Ther.* 2015;14(2):125–132; doi: 10.1177/1534735414565699.
23. Şener HÖ, Malkoç M, Ergin G, Karadibak D, Yavuzşen T. Effects of clinical Pilates exercises on patients developing lymphedema after breast cancer treatment: a randomized clinical trial. *J Breast Health.* 2017;13(1):16–22; doi: 10.5152/tjbh.2016.3136.