



Self-Esteem and Working Capacity of Women after Mastectomy

Original scientific paper

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Abstract

The study aimed to examine the impact of mastectomy on women's self-esteem and labour adaptation. The research was conducted using data collected in 2022 and 2023 from 11 women aged 18 and older who had undergone mastectomy. The methodology involved questionnaires and in-depth individual interviews, focusing on the physical, psychological, social, and professional aspects of patients' lives to assess their needs and develop rehabilitation programmes. The findings indicate that mastectomy significantly affects women's mental and physical well-being, leading to a decreased quality of life and reduced work capacity, thereby necessitating specialised rehabilitation programmes to address physical limitations and enhance psychological resilience. Women who undergo breast reconstruction and receive adequate social support exhibit better psychosocial well-being and labour adaptation. Participation in the rehabilitation programme has led to an increase in the percentage of women who have positively assessed their self-esteem.

Keywords: *Rehabilitation, Psychological Impact, Mental Health, Work Efficiency, Social Support*

Mastectomy has a significant psychological impact on women, specifically on self-esteem, causing depression and anxiety. The study of these aspects helps to develop effective psychological interventions to improve the quality of life of patients. In addition, after mastectomy, physical limitations may arise that affect the ability to perform certain types of

work, which makes it difficult to adapt to work. Investigating these limitations allows creating rehabilitation programmes and recommendations for improving performance. Social support and adaptation in the work environment are essential factors for a successful return to work after surgery. Researching these aspects helps to identify effective support strategies from employers

and colleagues. The relevance of the study is underscored by the growing number of breast cancer cases and related surgeries, which makes the problem important for society as a whole.

Over the past five years, scientific research has substantially expanded the understanding of the impact of mastectomy and other surgical interventions on patients' self-esteem and quality of life. Wojtyna et al. (2023) studied changes in the overall quality of life and self-esteem of patients after breast cancer surgery. Their results showed a considerable decline in quality of life and self-esteem in all participants, with patients with high preoperative self-esteem suffering the greatest losses. Another study by Tarkowska et al. (2020) also confirmed these findings, establishing substantial problems with sexual functioning and self-esteem in women after mastectomy compared to healthy women. Women who underwent mastectomy had significantly worse outcomes in all aspects of sexual functioning, including desire, arousal, ability to reach orgasm, and overall sexual satisfaction.

Socha and Sobiech (2021) focused on the factors that affect the quality of life of women after mastectomy. They found that depression, chronic illness, and abdominal obesity considerably worsen quality of life indicators. Women who suffered from depression or had chronic illnesses reported lower quality of life scores in all areas. Abdominal obesity has also been found to be a significant negative factor affecting physical and psychological health. However, regular physical activity, living with a partner, prominent level of education and living in a city contributed to an improved quality of life. Women who exercised had better physical health and overall quality of life, while living with a partner provided emotional support, which contributed to higher rates of psychological health. Ośmiałowska et al. (2021) showed that constructive coping strategies, such as active struggle and positive thinking, improve quality of life, while destructive strategies, on the contrary, reduce it. Severe pain also significantly reduced the quality of life of patients in all functional areas, negatively affecting physical activity, emotional state, and social interactions.

In studies covering other types of cancer, Budna et al. (2020) found a positive

correlation between disease acceptance and quality of life after cancer surgery. Patients who had high acceptance of the disease reported a higher quality of life in physical, psychological, and social dimensions. The acceptance of the disease did not depend on the age of the patients, the type of treatment or repeated surgery. Patients who lived alone had significantly lower quality of life and acceptance of illness, while patients who underwent surgery for the first time perceived their quality of life in the environmental domain to be significantly lower. Tarkowska et al. (2022) confirmed the significant impact of the type of surgery on the quality of life of patients after colorectal cancer treatment. Patients who underwent minimally invasive interventions had better quality of life scores, returned to their social roles faster, and felt better about their bodies. Jurys et al. (2022) found a significant deterioration in the quality of life of patients with prostate cancer after radical prostatectomy. The most significant changes were observed in emotional, social, and role functions. Patients reported decreased emotional stability, increased anxiety, depression, and general emotional discomfort. Social functions also deteriorated, with patients reporting difficulties in maintaining social relationships and activities they had performed before surgery. Finally, Błaszowski et al. (2021) investigated the factors affecting the quality of life of patients after radical surgical treatment of rectal malignancies. They found that the greatest deterioration in quality of life was due to anorectal dysfunction. Patients who underwent low rectal resection and radiation most often suffered from gas and faecal incontinence, urgency of defecation and difficulty in defecation, which substantially affected their daily life. Thus, previous research highlights the significance of a comprehensive approach to treatment and support for patients, considering not only medical but also psychological and socio-demographic factors. However, most studies lack an analysis of the impact of mastectomy on women's labour adaptation. Therefore, the purpose of this study was to investigate the impact of mastectomy on women's self-perception and labour adaptation, and to develop recommendations for effective rehabilitation programmes and support strategies based on this.

Material and Methods

The main theoretical and methodological approach to investigating the impact of mastectomy on women's self-esteem and labour adaptation is based on a systemic holistic approach (holism), which covers physical, psychological, social, and spiritual aspects of patients' lives. This approach allows considering the problem in a comprehensive and integrated manner, considering all the significant components of health and well-being. The data presented here was collected during a survey conducted among the seminar participants in 2022 and 2023. The needs of the recipients were identified based on the analysis of the topic and direct consultations with NGOs, as well as conversations with people who work with women after mastectomy on a daily basis. Based on these findings, it was decided that the innovative model was aimed at women aged 18 and over after unilateral or bilateral mastectomy, who declared their readiness to better adapt to the labour market, return to the labour market, or start a business. The study was conducted with the participation of 11 women, more than half of whom were aged 40-49 (54.5%). The youngest women (under 40) accounted for 27.3%, while the oldest (over 50) – for 18.2%. The age structure of the participants confirms the general statistics of morbidity, as there is currently a constant upward trend, especially in the group of perimenopausal women (about 45-50 years old). Most of them had a university degree, lived in cities with a population of 100,000 or more, and had a partner and children. Nine participants of the workshop underwent radical mastectomy (removal of the entire breast, including the nipple, areola, and skin; all axillary lymph nodes; pectoralis major and minor muscles), and seven of them underwent breast reconstruction surgery. Nine participants were out of the labour market, including four who were receiving pension benefits and three who were unemployed.

The method of the Rosenberg Self-Esteem Scale (Rosenberg, 2006) was used to assess the level of self-esteem of the participants at three stages: before taking part in the workshop, immediately after the workshop, and three months after the workshop. This approach made it possible to

assess short- and long-term changes in the self-esteem of women who had undergone mastectomy under the influence of the proposed rehabilitation measures. The use of the Rosenberg Self-Esteem Scale in this study helped to comprehensively assess the impact of mastectomy and rehabilitation measures on women's self-esteem. The three-time measurement of self-esteem made it possible to identify both immediate and sustainable changes that occurred under the influence of the workshops. The statistical indicators of the participants before the workshop, immediately after the workshop, and three months after the workshop were analysed in detail.

Descriptive statistics were conducted and Shapiro-Wilk tests and univariate analysis of variance in the within-group design were applied. The classical significance threshold of $\alpha=0.05$ was used as the basis for determining the statistical significance of the results. At the first stage, the basic descriptive statistics for quantitative variables were calculated. Shapiro-Wilk tests showed that all variables have distributions close to normal. In this regard, a one-way analysis of variance was conducted. A survey of participants' expectations was also an important part of the study. It included an assessment of their expectations before the workshop, their satisfaction after the workshop, and the impact of the workshop on their professional situation. A total of 4 individual in-depth interviews were conducted with the recipients to understand their experiences and outcomes of the workshops in greater detail.

Results

Psychological Impact of Mastectomy on Women and Factors of Improvement

Mastectomy, the surgery to remove the breast, is a complex surgical procedure that often has a considerable impact on women's mental health. Breast loss can cause a series of psychological problems, including low self-esteem, depression, and anxiety. First of all, mastectomy can cause serious changes in the appearance of women, which affects their perception of themselves and their attractiveness. Many women experience a loss of femininity and sexual attractiveness after surgery. These experiences are often accompanied by a range of psychological and

social challenges, which can be exacerbated by cultural and societal norms that emphasise female attractiveness and the role of the breast in sexuality and identity.

Breast loss can cause feelings of inferiority and discomfort with one's body (Efremov, 2024). Women may feel less attractive and less feminine due to the physical changes that accompany mastectomy. In cultures where the meaning of femininity and sexuality is linked to the presence of breasts, women who have undergone mastectomy may face social stigma and feelings of isolation. They may feel pressure from society's expectations and their personal ideas of what a woman should look like (Mofrad et al., 2021). Changes in appearance after mastectomy can affect sexual self-esteem and desire. Women may feel ashamed or afraid of sexual intercourse, worried that their partners will see them as less attractive or even refuse them (de Souza et al., 2020). A mastectomy can leave scars and asymmetry, which often causes negative emotions about one's body. These physical changes can affect how women see themselves in the mirror and how they feel about their bodies in everyday life.

The physical discomfort and pain that can accompany the healing process also affects one's overall self-image. This can include a feeling of loss of sensation in the breast area and discomfort when wearing certain clothes (Anim-Sampong et al., 2020). Breast loss can cause strong emotional reactions, including depression and anxiety. Women can experience deep sadness, loss of motivation, and interest in life (Datskovsky et al., 2018). Constant anxiety can be caused by changes in appearance and possible reactions from others. Berhili et al. (2019) showed that women who have undergone mastectomy often experience psychological distress, including symptoms of depression and anxiety. Radical mastectomy is an independent factor that increases the level of psychological distress in young women, especially if they do not receive sufficient social support (Shaituro et al., 2025).

Breast reconstruction after mastectomy can have a significant impact on the psychological state, quality of life, self-esteem, and other aspects of women's psychosocial functioning. Recent studies have highlighted the significance of breast reconstruction in improving emotional and physical well-being. According to

Fortunato et al. (2021), younger breast cancer patients report worse emotional and social functioning after mastectomy, which improves after breast reconstruction. Breast reconstruction during mastectomy has a considerable impact on body image and sexual functioning (Spytska, 2023a). Consultation with a plastic surgeon before surgery improves the rates of immediate reconstruction, while delayed reconstruction is rarely used. About 20% of patients regret their decision to undergo breast reconstruction in general, breast reconstruction helps women regain satisfaction with their bodies and improve their self-esteem after mastectomy. Women with breast reconstruction have better indicators of psychosocial well-being compared to women who have not undergone reconstruction (Rabinowitz, 2013). According to Retrouvey et al. (2019) women who underwent breast reconstruction had higher rates of breast satisfaction and psychosocial well-being 12 months after surgery compared to women who chose mastectomy without reconstruction. Thus, breast reconstruction after mastectomy has a significant positive impact on the psychological and physical well-being of women, increasing their self-esteem, life satisfaction, and reducing depression and anxiety.

It is also important to consider the impact of social support on the psychological state of women after mastectomy. Biswas (2021) examined in detail how support from family and friends affects the psychological state of women who have undergone mastectomy. The main results of the study showed that support from family and friends is a key factor in reducing anxiety and improving self-esteem. Women who received regular support from family and friends had considerably lower levels of anxiety compared to those who did not. Support was expressed in the form of emotional support, assistance in everyday activities, and spending time together. Social support helped women to feel less isolated and reduced their fears and anxieties related to physical changes after mastectomy. Furthermore, support from loved ones helped to improve women's self-esteem.

Women who felt supported by family and friends had a more positive attitude towards their bodies and the changes that

occurred after surgery. This made it easier for them to accept their new bodies and maintain their self-esteem. Notably, the lack of social support had a negative impact on women's psychological state. Women who did not receive support from family and friends were more likely to experience isolation, depression, and anxiety. They had low self-esteem and felt less confident in their abilities. Thus, social support plays a crucial role in the psychological rehabilitation of women after mastectomy. Providing emotional support and assistance from family and friends can considerably improve women's psychological well-being, reduce anxiety, and increase their self-esteem, which contributes to their overall well-being (Spytska, 2023b; Efremov, 2025).

Psychological interventions are also a factor in improving the condition of women after mastectomy. Thus, Saki et al. (2022) showed considerable results on the impact of anger management training on improving self-esteem in women after mastectomy. The study involved 30 women with breast cancer after mastectomy who were randomly divided into experimental and control groups, 15 women in each group. The experimental group received anger management training using a cognitive behavioural approach, while the control group received no intervention. Participants answered the Rosenberg Self-Esteem Scale before and after the training. The results of the study showed that training in anger control skills had a significant positive impact on the self-esteem of women in the experimental group. A post-hoc analysis of covariance showed that there was a significant difference in self-esteem between the experimental and control groups.

The level of self-esteem in the experimental group increased significantly after the anger control training, while in the control group no changes in self-esteem were observed. The effectiveness of the training was measured using the Rosenberg Self-Esteem Scale, and the results showed that 64% of the change in self-esteem after the intervention was due to the impact of anger management training. This indicates the high effectiveness of the cognitive-behavioural approach in the context of psychological rehabilitation of women after mastectomy. Thus, the study confirmed that anger management training

can be an effective tool for improving self-esteem in women after mastectomy, which contributes to their overall mental health and well-being. Thus, mastectomy has a considerable impact on the mental state of women, often causing a decrease in self-esteem, depression, and anxiety. Physical changes after surgery can lead to a loss of femininity and sexual attractiveness, which is reinforced by cultural and societal norms. Breast absence is often accompanied by feelings of inferiority, shame, and isolation. Social support from family and friends plays a significant role in improving psychological well-being, reducing anxiety, and boosting self-esteem. Breast reconstruction helps to restore satisfaction with one's body, reducing depression and anxiety. Consultation with a plastic surgeon before surgery can improve the results of immediate reconstruction. Psychological interventions, such as anger management training, are also effective in improving self-esteem. Women who undergo breast reconstruction have better indicators of psychosocial well-being. Lack of social support has a negative impact on psychological well-being, increasing the risk of isolation and depression. Overall, psychological and social support are key factors in the rehabilitation of women after mastectomy.

Labour Adaptation and Working Capacity of Women after Mastectomy

The labour adaptation and working capacity of women after mastectomy are critical for their return to normal life and work. Recent studies highlight the main problems and ways to overcome them. The quality of life of women after mastectomy can be significantly reduced due to physical symptoms and psychological problems, which affects their overall performance and efficiency at work. After surgery, many women experience physical problems such as pain, limited arm mobility and general weakness. These physical limitations complicate the performance of everyday and professional duties, which leads to a decrease in performance. Apart from physical problems, women often experience psychological difficulties, such as depression, anxiety, and low self-esteem. The loss of a body part can negatively affect their perception of their attractiveness and femininity, which increases emotional stress. This psychological state can lead to

a decrease in motivation and productivity at work, as well as problems in social interaction. Social support and rehabilitation programmes can play a significant role in improving the quality of life of women after mastectomy. However, lack of proper support can worsen their condition and reduce their ability to adapt to new living and working conditions. All this together significantly affects the overall quality of life of women after mastectomy, reducing their ability to work and efficiency at work (Rowland et al., 2000).

Women who have undergone mastectomy often face considerable physical difficulties (Griban et al., 2020; Del Carpio-Delgado et al., 2023). The main problems include decreased mobility of the arm on the side of the operation and general physical weakness, which makes it difficult to perform professional duties, especially in jobs that require physical activity. Almost half of the women did not receive instructions on exercise after surgery. This indicates the need to improve rehabilitation programmes for patients after mastectomy. Employers are generally willing and able to adapt the workplace for employees returning to work after mastectomy when they are provided with specific information about their physical and functional limitations (Hinman, 2001). Women who have undergone mastectomy often perceive a decrease in their ability to work after returning to work (Bocheliuk et al., 2020). This problem is particularly acute for women who work in physically demanding conditions or have low levels of education and income. After mastectomy, many women find it difficult to perform their professional duties due to physical limitations, such as reduced mobility of the arm on the side of the operation and general physical weakness (Akhmetov & Zhamuldinov, 2025). Such physical difficulties lead to a decrease in their efficiency at work and frequent absenteeism. Furthermore, women with low levels of education and income have limited access to the resources and support they need to successfully rehabilitate and adapt to new working conditions. This makes it even more difficult for them to return to work and contributes to a sense of disability (Musti et al., 2018). Thus, mastectomy not only affects the physical condition of women, but also considerably affects their ability to work and

their overall quality of life.

Veiga (2019) examined the impact of various types of breast cancer surgery on women's ability to work and productivity. Specifically, the study compared women who underwent mastectomy or breast conservation with those who underwent breast reconstruction. The results showed that women who had undergone mastectomy had reduced work capacity and productivity compared to women who had undergone breast reconstruction. One of the key factors influencing these figures was the availability of radiotherapy. The study noted that women who received radiotherapy had a higher risk of capsular contracture, which led to an unsatisfactory aesthetic result after breast reconstruction.

This could have a negative impact on their performance and productivity. In the group of women who underwent breast reconstruction, the percentage of those who received radiotherapy was significantly lower (31.5%) compared to the groups with mastectomy (60.5%) and breast conservation (100%). Thus, the findings of the study highlight the significance of breast reconstruction in improving the performance and productivity of women after mastectomy and indicate the negative impact of radiotherapy on these indicators due to the aesthetic complications it can cause.

Zomkowski et al. (2020) investigated functional capabilities and factors related to work behaviour among women who have recovered from breast cancer. The study included 62 Brazilian women who had survived breast cancer. The study used a cross-sectional design and analysed various socio-demographic, workplace, and clinical aspects. The results of the study showed that 56.5% of women did not return to work after treatment. The main factors associated with a low probability of returning to work were modified radical mastectomy and moderate to severe upper limb disability. Women who underwent modified radical mastectomy were five times more likely to not return to work (odds ratio (OR)=5.13, 95% CI=1.35 to 18.66). Women with moderate to severe upper limb disability also had a higher probability of not returning to work (OR=6.77, 95% CI=1.86 to 24.92). Furthermore, the average time before returning to work was 16 months (± 15.21), and the average duration of absence from

work was 41 months (± 34.58). The study also showed that productivity losses were higher among informal workers (21.5%) ($p=0.04$). These findings highlight the significance of developing specific rehabilitation programmes for women after mastectomy aimed at reducing the level of upper limb disability and supporting their return to work. Rehabilitation programmes can include physiotherapy, occupational therapy, and psychological support to improve the physical and emotional state of patients, which will increase their ability to return to work.

Thus, the labour adaptation of women after mastectomy is an important aspect of their return to normal life and work. Recent studies have highlighted the significant physical and psychological challenges women face after surgery. Limited mobility of the arm, pain, and general weakness make it difficult to perform professional duties. Psychological difficulties, such as depression and low self-esteem, also affect women's performance and efficiency at work. Social support and rehabilitation programmes play a significant role in improving the quality of life of women after mastectomy. Research shows that employers are ready to adapt the workplace for such employees, but they need to be informed about their limitations. Women with low levels of education and income have limited access to rehabilitation

resources, making it difficult for them to return to work. The importance of breast reconstruction in improving performance has also been confirmed by studies that have shown that women who have undergone reconstruction have better outcomes. Special rehabilitation programmes can include physiotherapy, occupational therapy, and psychological support to improve the physical and emotional state of patients. The development and implementation of such programmes are key to supporting women in returning to work after mastectomy.

Workshops in Circles for People after Mastectomy: Concept and Testing of the Model

Workshops in mastectomy circles are an essential part of an innovative programme designed to support women who have undergone breast surgery. This concept was developed as part of the TransferHUB Social Innovation Incubator, organised by the Foundation for Social and Economic Initiatives and the Forum for Responsible Business. The programme was aimed at overcoming the labour market inequalities faced by women after mastectomy by providing them with comprehensive support in physical, emotional, social, and spiritual aspects. The project has concrete goals (Table 1). They are divided into short-term and long-term.

Table 1.

Goals of the Project to Overcome Labour Market Inequalities Faced by Women After Mastectomy

Project goals	Description
Short-term goals	
Personal empowerment of participants	Promotion of self-confidence and decision-making
Connection with the community after mastectomy	Creation of a supportive community for interaction and exchange of experience
Increase in chances of keeping and getting a job	Preparation for a successful return to the labour market by developing the necessary skills
Recognition of the strengths of the participants and identifying their professional interests	Assistance in identifying and using strengths for professional development
Improvement of psychological well-being	Provision of psychological support to reduce stress and improve emotional well-being
Boost of motivation to find a job	Motivation to actively seek employment or change career paths
Long-term goals	
Creation and implementation of friendly methods of working with people after mastectomy	Development and implementation of methods that accommodate the special needs of women after mastectomy
Raising visibility and awareness of the needs of people after mastectomy	Dissemination of information about the needs and problems of women after mastectomy among the public and professional circles
Raising employers' awareness of the needs of these people	Informing employers about the specific needs of women after mastectomy to create favourable working conditions

Source: Created by the author

The project is based on the concept of a holistic approach to rehabilitation, which includes physical, emotional, social, and spiritual components. This approach allows providing comprehensive support and recovery for women after mastectomy, focusing on restoring their self-esteem, professional, and personal development. The workshops include work in four principal areas. Firstly, the physical area. Rehabilitation after mastectomy includes breathing exercises, physiotherapy to reduce swelling and restore mobility. An essential component is yoga for cancer patients, which helps to restore contact with the body, relieve tension, and improve overall well-being. The rehabilitation process begins with breathing exercises, effective coughing and improving the functioning of venous and lymphatic pumps. It is recommended to keep the upper limb on the operated side elevated to reduce swelling, and to use compression sleeves or bandages. Self-massage and lymphatic drainage form an integral part of the therapy. Subsequently, exercises are introduced to restore tissue flexibility, range of motion and muscle strength in the chest, shoulder blade and upper extremities. Yoga classes are held with special attention to the chest and lymph node area, including breathing techniques and light exercises to relax and reconnect with the body.

Secondly, the emotional area. Support in this area is aimed at relieving stress, traumatic experiences, and building a positive self-perception. Mindfulness, relaxation, and bodywork techniques are used to remove emotional blocks. Participants are offered mindfulness techniques that help them better handle stress and emotions, as well as develop their inner observer. At the mindfulness workshops, participants are introduced to techniques that allow them to observe their thoughts and emotions, choose their reactions and change unhealthy beliefs. Relaxation exercises are also offered, including body scans and visualisations, which allow achieving deep relaxation and tranquillity. Bodywork techniques, such as Tension & Trauma Releasing Exercises (TRE), help relieve stress and traumatic experiences through bodily exercises. Thirdly, the spiritual/creative area. Art therapy and music therapy are used to express emotions, relieve stress, and improve psycho-emotional state. These

methods allow participants to experience deep relaxation and find inner harmony. Art therapy includes a variety of creative activities, such as painting, sculpture, dance and singing, which help to express inner emotions and experiences. Music therapy is carried out using therapeutic instruments such as Tibetan bowls, gongs, bells, koshi, and other ethnic instruments. Participants lie in a comfortable position, listen to relaxing music, and immerse themselves in sound vibrations, which promotes deep relaxation and restoration of inner harmony. Voice techniques, such as yoga nidra, are also used to help with positive visualisations and maintain a positive attitude.

Fourthly, the social (career) area. Career workshops and individual consultations with career coaches help participants identify their strengths, develop a professional development plan, and increase their confidence in the labour market. Career mentors conduct group and individual sessions that address beliefs about work, rational behaviour in the context of a career, principles of healthy thinking and methods of career development planning. The purpose of these sessions is to strengthen participants' self-esteem, identify their potential and help them plan their next steps in the labour market. Individual consultations allow tailoring support to the concrete needs of each participant, providing them with the necessary tools and resources to successfully integrate into the labour market.

A self-esteem survey conducted among participants in workshops for people after mastectomy using the Rosenberg methodology yielded impressive results. After receiving comprehensive support, the percentage of women who positively assess their level of self-esteem increased from 36.3% to 81.8%. The percentage of women who are aware of their positive character traits has also increased significantly, from 45.5% to 72.7%. The percentage of people who believe that they are not doing well in life has fallen from 27.3% to 0%. At the same time, the percentage of women who strongly agree with the statement that they can do things as well as most other people has increased from 36.4% to 45.5%.

In addition, the statistical indicators of the participants before the workshop, immediately after the workshop, and three months after the workshop were

examined in detail. Descriptive statistics were conducted and Shapiro-Wilk tests and univariate analysis of variance in the within-group design were applied. The classical significance threshold of $\alpha=0.05$ was used as the basis for determining the statistical

significance of the results. At the first stage, basic descriptive statistics for quantitative variables were calculated (Table 2). Shapiro-Wilk tests showed that all variables have distributions close to normal. In this regard, a one-way analysis of variance was conducted.

Table 2.

Goals of the Project to Overcome Labour Market Inequalities Faced by Women After Mastectomy

Variable	M	Me	SD	Sk	K	Min	Max	W	p
Measurements before the workshop	28.82	30	4.33	0.04	-1.72	23	35	0.91	0.23
Measurement immediately after the workshop	32.18	31	4	0.57	-1.07	27	39	0.91	0.227
Measurement 3 months after the workshop	34	34	3.89	0.13	-0.85	28	40	0.97	0.912

Notes. M – mean; Me – median; SD – standard deviation; Sk – skewness; K – Kurtosis; Min and Max – minimum and maximum values; W – result of the Shapiro-Wilk test; p – significance.

Source: Created by the author

The analysis of variance showed statistically significant results ($F(2,29)=4.39$; $p=0.022$; $\eta^2=0.22$), indicating a high strength of effect. A post-hoc analysis using the Sidak test showed that the level of self-esteem was higher three months after the seminar compared to the level before the seminar ($p=0.021$). The results immediately after the workshop were not statistically significantly different from the pre-workshop level ($p=0.178$) or three months after the workshop ($p=0.681$). The study showed that participation in the workshop had a positive impact on participants' self-esteem three months after the event. However, no significant changes in self-esteem were observed immediately after the workshop. These results highlight the significance of the long-term effect of training seminars and workshops on personal development. The percentage of women who believe that they have few reasons to be proud of themselves has fallen from 18.2% to 0%. At the same time, the percentage of women who say they definitely like themselves increased from 18.2% to 45.5%. 36.4% of participants strongly agree that they are satisfied with themselves, compared to 9.1% before the support. The percentage of women who sometimes feel unnecessary has decreased: 0% of participants strongly agree with this statement compared to 9.1% initially, and 45.5% agree compared to 54.5%. 27.3% of participants strongly disagreed with the statement that they sometimes feel like

they sucked, compared to 9.1% before the support started. As a result of the support, the percentage of people who rate their skills needed to compete in the labour market as fairly low or average fell from 45.5% to 27.3%.

On the other hand, the degree of very high self-esteem in the face of labour market competition increased by as much as 45%. The percentage of people who rate their motivation to find a job or change their professional life as medium or medium low decreased by 9.1%. At the same time, the number of people who declare high or very high motivation for change has increased significantly (by 36.4%, from 54.6% to 91%). The number of people who rate their physical condition as low or moderately low has also decreased (from 27.3% to 9.1%). On the other hand, the proportion of people who declare their physical condition as average, high or very high has increased significantly from 72.7% to 91%. Prior to the workshop, 18% of participants rated their level of self-kindness, letting go, and acceptance as low or medium. After the support was provided, all these people moved into the area of medium, high, or very high self-kindness. Thanks to the project, 54.5% of participants rate their level of friendliness highly. Workshops for people after mastectomy have proven to be effective in supporting women who have undergone breast surgery. A holistic approach that encompasses physical, emotional, social, and spiritual

aspects contributes to a considerable improvement in self-esteem, stress reduction, and increased motivation to find a job. Statistical analysis confirmed the long-term positive impact of the workshops on the participants, particularly three months after they were completed. It is recommended to implement such rehabilitation programmes in medical and social institutions to support women after mastectomy. It is important to continue to provide comprehensive support, including physical rehabilitation, emotional and psychological care, and career counselling. To achieve maximum impact, access to individual counselling should be ensured and programmes should be tailored to the concrete needs of each participant. Furthermore, employers should continue to raise awareness of the needs of women after mastectomy to create favourable working conditions. Overall, such programmes contribute to improving the quality of life of women and their successful integration into society and the labour market.

Discussion

The findings of the study highlight the significance of long-term support for women after mastectomy. Thanks to the programme, the participants feel an improvement in their emotional and physical state, as well as an increase in self-esteem and motivation. The project also contributed to an increase in the number of women who declare themselves highly motivated to make changes in their professional lives. Through a comprehensive approach, the project helps women after mastectomy regain their strength and self-confidence, as well as successfully integrate into the labour market. A self-esteem survey conducted among participants in workshops for people after mastectomy yielded substantial results. After receiving comprehensive support, the percentage of women who positively assess their level of self-esteem increased from 36.3% to 81.8%.

According to Liu et al. (2024), perceived social support acted as a mediating factor in the effects of the Managing Cancer and Living Meaningfully (CALM) intervention on women's psychological resilience and quality of life following breast cancer surgery. In comparison to the control group, the results show that the intervention significantly improves psychological

resilience ($F=9.059$, $p<0.01$), and a partial mediator between resilience and quality of life was found to be enhanced social support. These results are consistent with the ongoing research on mastectomy-related self-esteem and labor adaptability, which also highlights the critical role that social support plays in psychological rehabilitation following surgery. The consistent data emphasizes the need of including social support systems into recovery programs for breast cancer patients, supporting all-encompassing, multifaceted rehabilitation strategies to improve post-mastectomy patients' quality of life.

This is also confirmed by Janowski et al. (2020), who found that social support significantly reduces the level of depressive symptoms and improves the overall psychological state of women after mastectomy. The results showed that women who reported higher levels of perceived social support had statistically significantly lower levels of depressive symptoms, higher ratings of their illness in terms of challenge and value, and lower ratings in terms of obstacles/losses. Women with higher levels of social support also showed higher levels of acceptance of living with the disease compared to those with less support.

The regression analysis showed that spiritual support was the type of support that substantially influenced most of the functioning indices. Some functioning indices were also substantially dependent on emotional and instrumental support. Thus, social support, including spiritual support, is a significant factor in psychological adaptation to a serious illness such as breast cancer. Another study by Nurhidayati et al. (2023) noted that strong family support is positively correlated with higher self-esteem and better psychological outcomes in patients after mastectomy. This support plays an essential role in their recovery and adaptation.

A significant correlation was found between family support and patients' self-esteem ($p=0.001$, $r=0.57$). This indicates that the more support a patient receives, the higher her self-esteem and better her psychological well-being. A study by Gooda et al. (2023) examined the impact of self-care programmes on women after mastectomy. The purpose of the study was to increase self-esteem and improve women's self-support practices. The programme included training

women in effective methods of self-care and psychological support. The results showed that after taking part in the programme, women's self-esteem improved considerably, as well as their satisfaction with their physical and emotional state. This confirms the effectiveness of self-support programmes in improving the self-esteem of women after mastectomy.

As a result of the workshops conducted within the framework of this study, women felt a decrease in their sense of uselessness. The percentage of women who sometimes feel unwanted has dropped to 0% compared to the initial 9.1%. Thus, Urio et al. (2019) found that support from family, friends, and faith substantially helps women handle psychological difficulties after mastectomy. It was found that women who had dedicated support had significantly lower levels of depression and anxiety, as well as better psychological adaptation to their condition. The results of the study showed that women who had dedicated support from their loved ones had significantly lower levels of depression and anxiety. Specifically, women who received family support felt less lonely and more confident in their condition.

Another study conducted by Olasehinde et al. (2019) examined the experiences of young women in Nigeria after mastectomy, namely the impact of family, friends, and faith support on their psychological adjustment. The study showed that women who had strong social support significantly improved their psychological adaptation, reduced anxiety and depression, and increased their motivation to make changes in their lives. One of the key findings of the study was that the percentage of women declaring high or very high motivation to make changes in their professional lives increased from 54.6% to 91% after taking part in support programmes. This confirms that social support is critical for the psychological well-being of women after mastectomy.

There was also an improvement in physical condition. The proportion of people who declare their physical condition as average, high, or very high increased from 72.7% to 91%. A study conducted by Odinets et al. (2019) evaluated the effectiveness of individual physical rehabilitation programmes to improve respiratory function in women with postmastectomy syndrome.

The randomised controlled trial involved 50 women who had undergone mastectomy. All participants were divided into two groups: the experimental group, which practised water aerobics, conditional swimming and recreational aerobics, and the control group, which practised only conditional swimming and Pilates. Both groups attended individual physical rehabilitation programmes three times a week for 48 weeks.

The primary outcome measure was spirometry performed before the study, 6 months, and 12 months after the intervention. The results of the study showed that most parameters of respiratory function improved significantly in both groups during the year of training. The physical rehabilitation programme for the experimental group was significantly more effective ($p < 0.01$) compared to the control group, except for the reserve inspiratory volume and maximum ventilation, which had no statistically significant differences. This study showed that individualised physical rehabilitation programmes can be effective in improving respiratory function in patients with post-mastectomy syndrome. These results can serve as a basis for the wider development of clinical rehabilitation programmes. Women also experienced an improvement in their competitiveness in the labour market. The percentage of women who rate their skills to compete in the labour market at a fairly low or average level fell from 45.5% to 27.3%.

Salime and Srour (2022) evaluated the impact of a structured training programme on the health needs and practices of women after mastectomy. The programme consisted of several components, including educational seminars, physical rehabilitation, psychological support, and professional counselling. Women who took part in the programme reported significant improvements in their skills and confidence in the labour market. The programme included individual consultations with professional coaches, group sessions on developing self-management skills, and job search training.

Studies show that participation in psychoeducational programmes considerably improves self-esteem and psychological adaptation of women after mastectomy. Women who took part in such programmes showed significant improvements in body image and reduced anxiety about their

appearance. Social support, including emotional and spiritual support, also plays a critical role in psychological adaptation to breast cancer. Women with higher levels of social support had lower levels of depression and anxiety and felt more peaceful and optimistic about their future. Individual physical rehabilitation programmes have been shown to be effective in improving the function of the respiratory system in women with post-mastectomy syndrome. Such programmes also help to boost self-esteem and improve physical condition, which helps women feel more competitive in the labour market. Women who took part in structured training programmes reported significant improvements in their skills and self-confidence. Thus, comprehensive support programmes are important for the psychological and physical recovery of women after mastectomy. They help women handle negative emotions, encourage active life changes, and improve their overall psychological and emotional well-being.

Conclusion

Mastectomy has a significant impact on the mental and physical state of women, reducing their quality of life. Physical problems, such as pain and limited mobility, make it difficult to perform professional duties, and psychological difficulties, including depression and anxiety, reduce motivation and productivity. Social support and rehabilitation programmes are critical for improving psychological well-being and physical rehabilitation, which facilitates return to work. Women who undergo breast reconstruction have better indicators of psychosocial well-being and ability to work. The lack of proper support and rehabilitation negatively affects women's ability to adapt to new living and working conditions. The significance of specialised rehabilitation programmes to reduce upper limb disability and provide psychological support is clear. Overall, a comprehensive approach to rehabilitation is key to restoring performance and improving the quality of life of women after mastectomy.

Mastectomy has a significant impact on women's ability to work, making it difficult for them to return to normal life and work due to physical and psychological problems. Women face pain, limited arm

mobility, and general weakness, which reduces their effectiveness at work. Psychological difficulties, such as depression and anxiety, impair their motivation and productivity. Social support and rehabilitation programmes are critical to improving the quality of life and ability to work for women after mastectomy. The lack of proper support makes it difficult to adapt to new living and working conditions. Studies show that breast reconstruction improves performance and productivity compared to mastectomy without reconstruction. Radiotherapy can adversely affect the results of reconstruction due to aesthetic complications, which reduces the ability to work. Specific rehabilitation programmes, including physiotherapy, occupational therapy, and psychological support, are necessary to reduce the level of upper limb disability and support return to work. Women with low levels of education and income need additional resources and support for successful rehabilitation. Workshops in mastectomy groups are an important part of an innovative programme aimed at supporting women who have undergone breast surgery. They help women to overcome physical and psychological problems, increase their self-esteem and facilitate their return to active life and work. The programme includes comprehensive rehabilitation, covering physical, emotional, social, and spiritual components. Physical rehabilitation includes breathing exercises, physiotherapy, and yoga to help reduce swelling and restore mobility. Emotional support is aimed at relieving stress and traumatic experiences using mindfulness and relaxation techniques.

Spiritual and creative areas include art therapy and music therapy, which promote emotional recovery. Social support includes career workshops that help women identify their strengths and increase their confidence in the labour market. Studies have shown that after taking part in the programme, the percentage of women who rate their self-esteem positively increased from 36.3% to 81.8%. They also improved their physical condition, motivation to find work, and overall quality of life. The participants of the workshops reported a decrease in the feeling of uselessness and increased confidence in their professional skills. Positive changes persisted even three months after the programme was completed, which indicates

its long-term effect. The introduction of such comprehensive programmes is an essential step in supporting women after mastectomy and their successful integration into society. The limitation of the study is the small sample of participants, which may affect the overall representativeness of the results. However, prospects for further research may include expanding the sample and conducting long-term studies of the impact of rehabilitation programmes.

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