

Adjustment to Cancer among Patients with Breast Cancer Hospitalized in the Day Care Oncology Ward

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Summary

Introduction: Breast cancer is one of the most common malignant tumours affecting women. The treatment often involves the surgical removal of the neoplastic lesion or even the resection of the whole breast. The disease affects virtually every sphere of a woman's life. The aim of the work was to learn strategies for coping with pain on the example of patients of the Neurological Hospital of the City Hospital named after John Paul II in Bielsko-Biała.

Materials and methods: The study involved 100 patients with breast cancer following oncological surgery who were hospitalized in the oncology ward of the Beskid Oncology Centre of the Town Hospital in Bielsko-Biała. The research was carried out from March to December 2017. The following research tools were used: self-inquiry questionnaire and the Mini-Mac Mental Adjustment Scale for cancer.

Findings: While analysing the ways of coping with cancer, it was shown that the constructive style definitely dominates along with the high intensity of the positive re-evaluation strategy, the fighting spirit. The destructive style, however, scored low among the respondents.

Conclusions: The patients showed an attitude leaning towards cancer adjustment. Most women had a positive attitude towards their disease.

Key words: breast cancer, strategies for coping with the disease, oncological surgery

Introduction

Psychological adjustment to cancer is extremely difficult for the patient, as cancer is classified as a serious and chronic disease. The process is aimed at reducing emotional discomfort and regaining mental balance which was disturbed by the disease. Psychological adjustment to breast cancer also entails the ability to cope with stress and emotions resulting from a difficult life situation [1, 2]. Women who heard the breast cancer diagnosis are confused and afraid of what the future will bring. The disease is associated with long-term treatment, suffering and even death. A person struggling with the disease is faced with not only physical but also mental pain. Patients have problems adjusting to the disease and the changed appearance of their body which is mutilated as a result of surgical treatment [3]. Some strategies of mental adjustment to cancer can be listed. Women with breast cancer cope with the disease differently, and this is shown by the four strategies according to Juczyński. The first one is the anxious preoccupation, the second the fighting spirit. Still the third strategy is the helpless-hopeless approach. The fourth and last strategy is positive re-evaluation, also called stoic acceptance and fatalism [4,5,6,7,8]. The main aim of the study was to assess the adjustment to cancer in patients with breast cancer hospitalized in the day care oncology department. The following tasks were associated with this objective: What effect does age have on adjustment to cancer? Does the time that has elapsed since the operation affect the adjustment to cancer? Is the type of surgery performed significant to adjustment to cancer?

Materials and methods

The study involved 100 patients who were hospitalized in the oncology ward of the Beskid Oncology Centre of the Town Hospital in Bielsko-Biała in the period from March to December 2017. The following research tools were used in the study: self-help questionnaire and the Mini-Mac Questionnaire of Mental Adjustment to Cancer and an own survey questionnaire.

Statistical method

The analyses were carried out in the JASP program (version 0.8.6). In all the analyses, the relevance level was set at $p = 0.05$. Three types of tests were used. To verify differences between the two groups Mann-Whitney U test was used, and to verify differences between more than two groups - the Kruskal-Wallis test, and to check the correlation between quantitative variables - the Spearman's correlation coefficient.

Results of Tests

The detailed sociodemographic characteristics of the studied group are presented in Table I.

Table I. Sociodemographic characteristics of the examined group

| Variable | | N | % |
|---------------------|---------------|--------|------|
| Education | Elementary | 3 | 3,0 |
| | Vocational | 17 | 17,0 |
| | Secondary | 38 | 38,0 |
| | Higher | 42 | 42,0 |
| Age | M | 46,23 | |
| | SD | 10,414 | |
| Place or residence | Village | 50 | 50,0 |
| | Town/city | 50 | 50,0 |
| Employment status | Unemployed | 11 | 11,2 |
| | Part-time job | 15 | 15,3 |
| | Full-time job | 54 | 55,1 |
| | Own business | 9 | 9,2 |
| | Student | 2 | 2,0 |
| | Disabled | 9 | 9,2 |
| Marital status | Married | 75 | 75,0 |
| | Single | 12 | 12,0 |
| | Widow | 6 | 6,0 |
| | Divorced | 7 | 7,0 |
| Financial situation | Good | 54 | 54,0 |
| | Average | 43 | 43,0 |
| | Bad | 3 | 3,0 |
| Children? | Yes | 82 | 82,0 |
| | No | 18 | 18,0 |
| Number of children | M | 1,73 | |
| | SD | 1,219 | |

Key: N- number of people, M- median, SD- standard deviation

Source: own calculations

Detailed data on the subject of health status is provided in Table II.

Table II. Characteristics of the health status of the examined group

| Variable | | N | % |
|--|--|-------|-------|
| Smoking | Yes and I still smoke | 14 | 14,0 |
| | Yes and I do not smoke anymore | 24 | 24,0 |
| | No | 62 | 62,0 |
| Comorbidities | Yes | 39 | 39,8 |
| | No | 59 | 60,2 |
| Knowledge of breast self-examination technique | Yes, I know it/can do it | 77 | 78,6 |
| | Yes, I know it/cannot do it | 16 | 16,3 |
| | I don't know it/cannot do it | 5 | 5,1 |
| | Total | 98 | 100,0 |
| First symptoms of the disease | Noticeable lump | 71 | 71,7 |
| | Enlarged lymph nodes | 10 | 10,1 |
| | Skin changes | 7 | 7,1 |
| | Change in the appearance of the areola | 10 | 10,1 |
| | Other | 16 | 16,2 |
| The occurrence of breast cancer in the family | Yes | 39 | 39,8 |
| | No | 59 | 60,2 |
| | Total | 98 | 100,0 |
| Diagnosis of breast cancer stage | Early | 41 | 41,4 |
| | Intermediate | 37 | 37,4 |
| | Advanced | 18 | 18,2 |
| | Very advanced | 3 | 3,0 |
| | Total | 99 | 100,0 |
| Time elapsed after surgery (in weeks) | M | 3,88 | |
| | SD | 1,593 | |
| Type of surgery performed | Tumour/lesion excision | 58 | 58,0 |
| | Mastectomy | 38 | 38,0 |
| | Excision of the sentinel lymph node | 3 | 3,0 |
| | Other | 1 | 1,0 |

Key: N- number of people, M- median, SD- standard deviation

Source: own calculations

Styles of coping with cancer among breast cancer patients

In the methods of dealing with cancer on the Mini-Mac scale, the constructive style is clearly dominant with a high intensity of the fighting spirit strategy and positive revaluation definitely dominates. In contrast, the destructive style of coping with cancer was low among the respondents with the low intensity of helplessness - hopelessness strategy and slightly higher levels of anxiety preoccupation. The analysed results can be found in Table III.

Table III. Styles of coping with cancer among breast cancer patients

| | <i>N</i> | <i>M</i> | <i>SD</i> | <i>Min</i> | <i>Max</i> | <i>Q25</i> | <i>Me</i> | <i>Q75</i> |
|-------------------------------|----------|----------|-----------|------------|------------|------------|-----------|------------|
| Anxious preoccupation | 100 | 14,66 | 4,108 | 7 | 28 | 12,00 | 14,00 | 18,00 |
| Fighting spirit | 100 | 23,45 | 3,010 | 15 | 28 | 21,00 | 24,00 | 26,00 |
| Helplessness and hopelessness | 100 | 11,35 | 3,506 | 7 | 23 | 8,00 | 11,00 | 13,00 |
| Positive revaluation | 100 | 22,24 | 2,871 | 16 | 28 | 20,25 | 22,50 | 24,00 |
| Constructive style | 100 | 6,94 | 1,399 | 5 | 10 | 6,00 | 7,00 | 8,00 |
| Destructive style | 100 | 2,94 | 1,650 | 1 | 9 | 1,00 | 3,00 | 4,00 |

N - number; *N*- number of people, *M*- median, *SD* - standard deviation, *Min* - minimum value, *Max* - maximum value, *Q25* is the first quartile, *Me* - median, *Q75* - the third quartile

Source: own calculations

The influence of age on psychological adjustment to cancer

The analysis was aimed at checking whether there is a correlation between the age of the respondents and their psychological adjustment to cancer.

A statistically significant relationship was found between the age and the intensity of feelings of helplessness and hopelessness ($R = 0.224$, $p < 0.05$). With regard to the remaining strategies and styles of coping with cancer, statistically insignificant results were recorded ($p > 0.05$).

The results obtained are presented in Table IV.

Table IV. The impact of age on psychological adjustment to cancer

| Scale | Age | |
|-----------|----------|---|
| | <i>R</i> | |
| ANX | -0,047 | |
| FIGHT | -0,071 | |
| HELPL | 0,224 | * |
| POS | 0,145 | |
| CONS_Sten | 0,057 | |
| DES_Sten | 0,120 | |

Note. ANX - Anxious preoccupation; FIGHT - Fighting Spirit; HELPL - helpless hopelessness; POS - Positive reevaluation; CONS_Sten - Constructive style, sten score; DES_Sten - destructive style, sten score. *R* - Spearman's correlation coefficient.

* $p < 0.05$.

Source: own calculations

The influence of the time which elapses from the surgery on the psychological adjustment to cancer

The research presented in Table 8 was aimed at checking whether there is any relationship between the time that has passed after the surgery and the psychological adjustment of the respondents to cancer. A statistically significant relationship was found between the time that has passed after surgery and the intensification of positive re-evaluation ($R = 0.219$; $p < 0.05$). With regard to the remaining strategies and styles of coping with cancer, statistically insignificant results were collected ($p > 0.05$)(table V)

Table V. The influence of the time which elapses from the surgery on the psychological adjustment to cancer

| Scale | Time from surgery <i>R</i> |
|--------------|---|
| ANX | -0,043 |
| FIGHT | 0,048 |
| HELPL | 0,123 |
| POS | 0,219 * |
| CONS_Sten | 0,090 |
| DES_Sten | 0,090 |

Note. ANX - Anxious preoccupation; FIGHT - Fighting Spirit; HELPL - helpless hopelessness; POS - Positive revaluation; CONS_Sten - Constructive style, sten score; DES_Sten - destructive style, sten score. *R* - Spearman's correlation coefficient.

* $p < 0.05$.

Source: own calculations

The impact of the type of the treatment on the psychological adjustment to cancer

Another analysis was to check whether there are differences regarding the strategy and styles of coping with cancer between women following tumour/lesion excision, and women following mastectomy. The remaining types of treatments were excluded from the analysis due to the insufficient number of cases. Statistically significant differences were noted in the scale concerned with anxious preoccupation ($AT = 785.0$; $p < 0.05$). Higher results on the scale were obtained by women following mastectomy. The results in this group ranged from 7 to 25 and the median was $Me = 15.5$. It means that half of the respondents in this group obtained a result which was not lower than this level. Among patients following tumour or lesion removal, the results were lower - half of the respondents did not exceed the level $Me = 13$, and three-quarters $Q3 = 16$.

Differences were also noted in the scale of the fighting spirit ($AT = 800.0$; $p < 0.05$). Higher results were obtained by women following tumour or lesion surgery ($Me = 25$) than women following mastectomy ($Me = 23$). Statistically significant differences were also noted in relation to the destructive style ($AT = 820.5$; $p < 0.05$). Higher results in this scale were

obtained by women following mastectomy ($Me = 3$) than women following tumour or lesion surgery ($Me = 2$).

As for the remaining strategies and the constructive style, no statistically significant differences were noted ($p > 0.05$).

The obtained results are presented in Table VI.

Table VI. Impact of the type of procedure on psychological adjustment to cancer

| | ANX | | FIGHT | | HELPL | | POS | | CONS_Sten | | DES_Sten | |
|------------|--------|------|--------|----|-------|----|-------|----|-----------|----|----------|----|
| | WG | MA | WG | MA | WG | MA | WG | MA | WG | MA | WG | MA |
| <i>N</i> | 58 | 38 | 58 | 38 | 58 | 38 | 58 | 38 | 58 | 38 | 58 | 38 |
| <i>Min</i> | 7 | 7 | 19 | 15 | 7 | 7 | 16 | 16 | 5 | 5 | 1 | 1 |
| <i>Max</i> | 28 | 25 | 28 | 28 | 23 | 20 | 28 | 27 | 10 | 10 | 9 | 6 |
| <i>Q1</i> | 10 | 12,8 | 22 | 20 | 8 | 9 | 21 | 20 | 6 | 6 | 1 | 2 |
| <i>Me</i> | 13 | 15,5 | 25 | 23 | 11 | 11 | 22 | 23 | 7 | 7 | 2 | 3 |
| <i>Q3</i> | 16 | 18,3 | 26 | 25 | 12,3 | 14 | 24 | 25 | 8 | 8 | 4 | 5 |
| <i>U</i> | 785.0* | | 800.0* | | 864,5 | | 957,5 | | 1053,5 | | 820.5* | |

Note. ANX - Anxious preoccupation; FIGHT - Fighting Spirit; HELPL - helpless hopelessness; POZ - Positive reevaluation; CONS_Sten - Constructive style, sten score; DES_Sten - destructive style, sten score; *N* - number; *min* - minimum value, *max* - maximum value, *Q1* - lower quartile; *Me* - median; *Q3* - upper quartile; WG - tumour excision / lesions; MA - Mastectomy; *AT* - test statistic *AT* Mann-Whitney.

* $p < 0.05$.

Source: own calculations

6. Discussion

Influence of sociodemographic factors on adjustment to cancer

According to the research, it is clear that age has a significant impact on adjustment to cancer. Based on the analysis of the data, it is evident that the older the respondents were, the higher the level of severity of the feeling of helplessness and hopelessness. This means that

older women feel at a loss, powerless, overwhelmed by the disease and are characterized by a low level of adjustment to the disease.

The results of own work are inconsistent with the results presented in the studies by Malicka et al. [9] carried out among 40 patients, divided into two groups according to the type of surgery. Only half of the women surveyed were patients following the surgical treatment of breast cancer (14 radical surgeries and 6 sparing ones), the other group were patients following tumour removal surgery within the reproductive organs. The women were hospitalized in the Lower Silesian Oncology Centre in Wrocław. The study aimed to assess the mood and identify the patterns of coping with the disease by women treated surgically for breast cancer or genital tumours. The following research tools were used: Beck Depression Inventory (BDI) and the Mini-MAC cancer psychological adjustment scale. The average age of women was 56.1 ± 10.2 years and the results obtained indicate that the study groups do not differ in terms of age and this does not affect the analysis of the scales used. Also, there was no correlation between the age of patients and the parameters that assessed their emotional state in any of the groups.

The influence of the time which elapsed after the surgery on the psychological adjustment to cancer

Adjustment to cancer is influenced by the time that elapsed after the surgery. According to own research, there was a significant result between the time and the intensity of positive reevaluation, i.e. the more time elapsed after the surgery, the higher the results were achieved by the women tested on the Mini-Mac scale. It means that the more time elapses after the surgery, the more patients realize the seriousness of their illness, try to accept the situation in which they found themselves, not seeing the illness as a failure and begin to appreciate what happened in their lives and want to implement changes in their life, they are willing to act. With regard to the remaining styles of coping with cancer, statistically insignificant results were recorded.

The results of the research presented by Milik [10] are similar to those presented in my own work. For the purposes of her research the author also used the Mini-Mac Scale of Mental Adjustment to Cancer and the self-constructed questionnaire. The duration of the research involved the years 2011 and 2012, the place of the conducted research was the Crisis Intervention Centre. The surveys were administered among 42 women with breast cancer. The work presented by Milik aimed to investigate how to adjust to cancer in women with breast cancer before and after surgery. When verifying the data analysis, she states that patients

before and after the procedure use constructive coping strategies more often, i.e. namely positive re-evaluation and fighting spirit.

The research presented by Ogińska-Bulik [11] is similar to the research in our own work. Various research techniques were used, such as the scale of acceptance of the disease, the scale of resilience measurement and the scale of psychological adjustment. The study group included 60 women who suffered from breast cancer and had mastectomy performed within a period not longer than 5 years from the time of the examination. The respondents belonged to the club of breast cancer survivors (known as Amazon women in Poland) in one of the cities of the Lodz region. The study posed a research question regarding the extent to which women with breast cancer adjust to cancer, and their preferred coping strategies. The research results clearly show that the studied group of women was characterized by a low intensity level of strategies, such as: anxiety preoccupation and helplessness/hopelessness, with the higher intensity in the strategies of the fighting spirit and positive re-evaluation. The research also shows that the constructive style achieved a high score, and the destructive style was characterized by a low score.

The results obtained by Malicka and her colleagues [9] differ from our own research. The scale of mental adjustment to the Mini-MAC cancer as well as the Beck Depression Inventory (BDI) were also used in the study. The aim of the study was to identify and assess the mood patterns of coping with the disease by the women after oncological surgery. The women were hospitalized in the Lower Silesian Oncology Centre in Wrocław. The research involved 40 women, 20 of whom were patients after breast cancer procedure, where 14 women underwent radical surgery and 6 women sparing surgery, while the other half of the women surveyed underwent surgery to remove the tumour within the reproductive organs. According to the analysis of the studies among patients following oncological breast cancer surgery, there was a high rate of helplessness-hopelessness and anxiety preoccupation, as well as the destructive style of coping with the disease. In the course of the examination, the patients were just after the surgery between the 1st and the 7th day. It can be stated that women within a short time after surgery feel fearful and anxious about their state of health and are unable to find themselves, feel lost and often display a passive attitude towards the disease as a result.

The impact of the type of the treatment on the psychological adjustment to cancer

The results of own work regarding the influence of the type of surgery on the psychological adjustment to the cancer disease revealed significant differences in the scale of anxiety preoccupation. Higher results on the scale were obtained by the women following mastectomy. However, the results were lower among the patients following tumour or lesion surgery. The respondents who underwent breast amputation feel greater anxiety caused by the disease than women following tumour removal procedure. This is due to the fact that mastectomy causes the woman to lose her entire breast, i.e. they can be said to have been deprived of femininity, in turn, in the other group of women after excision of the tumour this fear is a bit smaller because they lost only part of the breast and it was not such a big shock for them. The difference was also noted in the strategy concerning the fighting spirit. In this case, the higher results were achieved by the women following tumour or lesion surgery, in contrast to the women following mastectomy. This means that patients after the tumour removal surgery are more active, set specific goals, and want to fight the disease, than the women following mastectomy.

The analysis of the research also shows that in relation to the destructive style, the patients following mastectomy obtained higher results than the women after the surgery of tumour or lesion removal.

As for the constructive style, no significant statistical differences were noted as in the other coping styles.

Research carried out by Milik [10] is inconsistent with that presented in my own work. It were carried out from July 2011 to March 2012. at the Crisis Intervention Centre, Polish Red Cross in Gdańsk. The Mini-Mac Scale of Mental Adjustment to Cancer and own questionnaire were used for the research. 42 women with breast cancer were examined. The aim of the study was to examine the methods of adjustment to cancer in women with breast cancer before and after surgery and the impact of the type of surgery on adjusting to cancer. Milik proved that the type of surgery (mastectomy or sparing surgery) does not affect the strategy of adjusting to the disease in women with breast cancer. The studies were aimed at presenting the general characteristics of the approach as

well as coping with the disease, specific for women with breast cancer and in this case the type of surgery was insignificant.

7. Conclusions

Based on the analysis of own work, the following results can be formulated:

1. Among the sociodemographic factors, only age affects psychological adjustment to cancer. It is stated that the older the respondents were, the higher the level of the feeling of helplessness and hopelessness.
2. According to the analysis the psychological adjustment to the disease is influenced by the time that elapsed after the operation. The relationship between the time and the intensity of positive re-evaluation was significant. The longer the time elapsed after surgery, the higher results were obtained by women surveyed in the style concerned with positive re-evaluation.
3. Statistical correlation was found to exist between the psychological adjustment to cancer and the type of surgery. The post mastectomy women achieved higher results in the strategy of anxiety preoccupation, in contrast to patients following tumour or lesion surgery. There was also a difference in the strategy relating to the fighting spirit, higher results were achieved by the women following tumour or lesion surgery than the women following mastectomy. A significant result was also obtained in relation to the destructive style, the patients following mastectomy obtained higher results than the women after the surgery of tumour or lesion resection.

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