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Coping with loss of ability vs. acceptance of disease in women after breast cancer treatment

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ABSTRACT

Aim: To answer the question: is there a correlation between copying with the loss of ability and the acceptance of disease?
Background: The loss of ability is the beginning of a process of dealing with a widely understood dysfunction and its consequences. This happens owing to the lifting of the barriers that emerged due to the loss of ability and through the acquisition of skills that help an individual find their way in the new reality.
Materials and methods: The study included 90 patients with history of breast cancer. They were divided into two groups- I: up to five years from diagnosis, II: more than five years from diagnosis. The study was conducted using the Questionnaire on Coping With Ability Loss by P. Wolski, Acceptance of Illness Scale – B.J. Felton, T.A. Revenson, G.A. Hinrichsen, adapted by: Z. Juczyński.
Results: Group I: it is positive weak correlation, meaning that the higher level of acceptance in the QCAL test, the higher acceptance of illness. Group II: there is no relation between acceptance of illness and the QCAL test acceptance scale and no relation between depression and the level of acceptance.
Conclusions: The more depressed a patient is and the less successful they are in dealing with the loss of ability, the lower their level of acceptance of illness. On the other hand, in time, it is struggle with the disability that plays more important role in the acceptance of the disease than the impact of negative emotions.

1. Background

Any disease, particularly a chronic one like breast cancer, is a critical situation. The diagnosis phase, the chronic phase and the terminal phase all bring a whole spectrum of dynamic and extreme emotions that disintegrate all areas of the life of a person diagnosed with cancer: physical, mental, social and spiritual. Strong emotional reactions combined reinforced with close and remote effects of treatment often give rise to adaptive disorders which may impede patient's return to a satisfactory every day psychosocial functioning.

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One of possible side effects of breast cancer treatment is acquired post-surgery disability (lymphadenectomy). The loss of ability and diagnosis of cancer are breakthrough events.[1]

There are plenty of concepts and models that try to define disability.[2] Since the 1990s, a new stage began in defining and diagnosing the loss of ability. The first, biological model was primarily based on the understanding of bodily dysfunction in the context of employment.[3,4] Then, an interactive (social) model developed and still applies regarding the limitation of ability as an effect of physical, economic or social barriers in the disabled person's life.[5]

The loss of ability is the beginning of a process of dealing with a widely understood dysfunction and its consequences.[6] The process leads to the transformation of self and one's functioning in various areas of life. This happens owing to the lifting of the barriers that emerged due to the loss of ability and through the acquisition of skills that help an individual find their way in the new reality.[7] Many authors have developed concepts regarding the course of the process.[4,6,8–13]

2. Aim

Despite the similarity between the effects of both critical events, i.e. diagnosis of breast cancer and the loss of ability (disintegration in all areas of human functioning: cognitive, emotional, behavioural, social and spiritual, decomposition and integration of identity and associated disorders,[14] mental suffering incurred), is there a correlation between copying with the loss of ability and the acceptance of disease? Is there a relationship between the stage of coping with the loss of ability and the level of adaptation to the disease? Answers to these questions may provide a practical diagnostic and therapeutic guidance to professionals who work with cancer patients (at various stages of treatment).

3. Material and methods

The study included 90 patients with history of breast cancer, aged between 36 and 82 years. They were divided into two groups according to the time elapsed from cancer diagnosis. Group I: up to five years from diagnosis: $n = 71$ (36 subjects after mastectomy, 35 – after quadrantectomy; 7 premenopausal, 12 perimenopausal, 49 postmenopausal women). Group II: more than five years from diagnosis $n = 19$ (10 subjects after mastectomy, 9 – after quadrantectomy; 3 premenopausal, 5 perimenopausal, 11 postmenopausal women). All the subjects from both groups had undergone lymphadenectomy. Cancer patients perceive the first five years of remission as a critical period with the highest risk of relapse. Due to the surgery, they became disabled (according to the biological model).[3–5] The study is of a practical type.

The study was conducted using the Questionnaire on Coping With Ability Loss, developed by P. Wolski, Acceptance of Illness Scale – AIS, developed by B.J. Felton, T.A. Revenson, G.A. Hinrichsen and adapted by Z. Juczyński.

The Questionnaire on Coping With Ability Loss – *QCAL* is designed to diagnose the stage of coping with the loss of ability. The questionnaire comprises 27 items divided into three scales: struggle (combing three sub-scales: shock and denial – 4 items; anger – 3 items, bargaining – 8 items); depression – 4 items; acceptance – 8 items. Scores obtained are entered by the investigator into an Excel worksheet template in a 0/1 system where 0 stands for 'no' and 1 for 'yes' with regard to particular statements. The assessment of scores is based on the median of each of the five sub-scales corresponding to three stages of coping with the loss. Five scores are calculated – separately for each sub-scale. Results of the first three sub-scales sum up to make the score of the struggle scale. Scores above the median for a specific scale indicate at what stage the person is, while scores below the median imply that the stage lacks any characteristic features. High scores are also assumed for neighbouring phases as a manifestation of the so-called inter-phase transition. It is assumed that identification of the stage of coping with the loss of ability allows to predict an individual's behaviour, being representative for that particular stage.[15–17]

Acceptance of Illness Scale – AIS is a tool to measure the degree of acceptance of the disease; it consists of eight statements describing adverse consequences of poor health. Those consequences amount to the recognition of the limitations imposed by the disease, lack of independence, sense of dependence on others and reduced self-esteem. Full agreement (marked 1) expresses poor adaptation to the disease, while full disagreement (marked 5) means the acceptance of the disease. The total of all scores is, therefore, an overall measure of the acceptance degree, ranging from 8 to 40 points. A low score represents the lack of acceptance of and adaptation to the disease and a strong sense of mental discomfort. A high score, on the other hand, reflects the acceptance of one's disease that is manifested with the absence of difficult emotions related to it. The acceptance of the disease is demonstrated by lower intensity of adverse reactions and emotions associated with that disease. The scale may be applied to assess the degree of acceptance of any disease. It is used for investigating adult patients who are currently affected by the disease.[18]

4. Results

Research problem 1: Is coping with the loss of ability linked with the acceptance of the disease in women after cancer treatment?

Operationalisation of variables:

(a) Coping with the loss of ability – the measurement of the variable was made using the Questionnaire on Copying with Loss of Ability (*QCAL*). The variable was described by three scales in the questionnaire: struggle, depression and acceptance.
(b) Acceptance of illness – the measurement was taken using the Acceptance of Illness Scale (AIS). The variable is measured by one scale in the questionnaire.
(c) Women after breast cancer treatment – the study sample was split into two groups; the first one was made up by women who were diagnosed within recent 5 years (not earlier than in 2010), and the other one consisted of women who were diagnosed longer than 5 years ago.

Statistical description of the variables is shown in Table 1.

Table 1 – Descriptive statistics of acceptance and copying with the loss of ability.

Time of diagnosis		Acceptance of illness	Copying with loss of ability		
			Acceptance	Depression_KRSS	Struggle_
Group I (up to 5 years)	N	71	72	73	63
	Mean	28.86	6.28	0.74	7.98
	Median	29.82	6.57	0.66	7.714
	Dominant	26	7	0	7
	Standard deviation	6.48	1.3	0.80	3.29
	Minimum	14	1	0	1
	Maximum	40	7	3	14
Group II (over 5 years)	N	19	17	18	18
	Mean	27.95	6.47	0.5	7.89
	Median	29	6.5	0.38	8
	Dominant	25	7	0	11
	Standard deviation	8.49	0.62	0.86	2.74
	Minimum	8	5	0	4
	Maximum	39	7	3	12
For the whole sample:					
Kolmogorov–Smirnov Z		**0.1***	**0.33****	**0.32****	**0.1***
Significance		0.03	<0.01	<0.01	0.05

Source: In-house study.
* Significance at $p < 0.05$.
** Significance at $p < 0.001$.

The variables were checked by the Kolmogorov–Smirnov test for distribution regularity. It turned out that the above variables did not show a normal distribution. The study hypothesis was verified by the *r* Spearman correlation coefficient, as the variables do not have a normal score distribution.

The analysis shows that there are grounds for rejecting the hypothesis that coping with the loss of ability is not linked with the acceptance of the disease in women after cancer treatment. In Group I, the acceptance of illness correlates with the acceptance scale of the QCAL test. It is a positive weak correlation, meaning that the higher level of acceptance in the QCAL test, the higher acceptance of illness. There is also a moderately strong negative correlation between depression and self-esteem and acceptance of illness. The more depression experienced by an individual, the lower is their level of acceptance or the less depression experienced, the higher the is their acceptance of illness. The correlation between acceptance of illness and struggle is also at the border of the statistical trend. It is a weak negative correlation, meaning that the more an individual struggles against the loss of ability, the lower their level of disease acceptance.

However, in the other group of women, the relationships under study are different. There is no relation between acceptance of illness and the QCAL test acceptance scale and no relation between depression and the level of acceptance. There is, however, a statistically significant correlation between struggle and disease acceptance. That correlation is moderately strong negative, meaning that the more an individual struggles, the *less* they accept their illness.

Another research problem was raised.

Research problem 2: Do women in group I differ from those in group II in terms of coping with the loss of ability and acceptance of illness?

Mann–Whitney's test was used to verify the zero hypothesis. Results are shown in Tables 2 and 3.

The analysis reveals no grounds for rejecting the hypothesis that women in group I do not differ from those in group II in terms of coping with the loss of ability and acceptance of illness. Women in short time after diagnosis do not differ significantly from those who had lived with the diagnosis for a long time in terms of acceptance of illness and copying with the loss of ability.

One of the issues to cope with following breast cancer diagnosis and treatment is the loss of motor ability. Both disability and cancer diagnosis give rise to intense, often dismal emotions like sorrow, despair, anxiety, anger, fear, helplessness, injustice, but also hope. The process of adapting to the loss of motor ability consists of three stages: struggle, depression and acceptance.[6,15,19] Each of those phases has its characteristics and specific reactions, cognitive, emotional, behavioural and social mechanisms and phenomena that are assigned to it.[6,15,20–22] Those emotions are also adaptive in nature: their occurrence is a natural part of restoring equilibrium, whereas going through each of the stages provides opportunities to view ourselves in a situation of trauma, in how we handle our emotions, how we act and react in a crisis.[6,15]

Study results show that patients within five years from diagnosis who have *less* trouble dealing with their disability and who more sharply experience the depression stage find it more difficult to accept the disease in any extent. In the other group, with women diagnosed more than five years back, the results show that *the more an individual struggles* with the loss of ability, the *less* she accepts her disease (studies indicate that the principle of feedback may also apply in the case, meaning that the acceptance of the disease may activate the patient, but also activity – not just physical – may increase the acceptance).[23]

The above indicates that it is important to begin psychophysical rehabilitation immediately after surgery, or even in the pre-surgery phase. Therefore, a note should perhaps be

Table 2 – Coping with the loss of ability vs. acceptance of illness in two groups.

Time of diagnosis	Copying with loss of ability		Acceptance of illness
Group I (up to 5 years)	Acceptance	Spearman's *r*	**0.24***
		Significance	0.05
		N	68
	Depression	Spearman's *r*	**−0.45****
		Significance	<0.01
		N	68
	Struggle	Spearman's *r*	**−0.23**
		Significance	0.09***
		N	59
Group II (over 5 years)	Acceptance	Spearman's *r*	0.34
		Significance	0.18
		N	17
	Depression	Spearman's *r*	−0.17
		Significance	0.50
		N	18
	Struggle	Spearman's *r*	**−0.54***
		Significance	0.02
		N	18

Source: In-house study.
* Significance at $p < 0.05$.
** Significance at $p < 0.001$.
*** Significance at the border of the statistical trend.

taken of the importance of early psycho-oncological intervention in the form of a support therapy[24] supplemented with psychoeducation. Psychoeducation may include knowledge on patient's individual profile dependent on their age, the type of the treatment, menopausal status, educational attainment, social and professional status; on emotional dynamism in the crisis of illness, ways of dealing with the trauma arising from patient's prior abilities, resources, possibilities and experiences, role of social and systemic support (e.g. from close ones, support groups, associations, foundations or specialists). This may facilitate a smoother passage through the adaptation process or prevent disadaptive responses, while helping minimise the discomfort of the treatment and encouraging to start physical therapy. This, in turn, may provide a contribution to a recently resumed discussion on the role and importance of practical cooperation of diagnostic and therapeutic interdisciplinary units towards holistic care of cancer patients. That is why it seems to be impossible to create the only one type of the procedure. Interdisciplinary units should each time take into account the individual profile of the patient and apply suitable support of the specialists.

With regard to Group I patients, the more they accept the loss of ability, the more they accept the disease itself. This may prove that the less difficulties patients experience in their every day functioning, the less affected they feel by the mutilating and handicapping procedure and the more inclined they are to accept the condition of being diseased. A note should be made then to the importance of physical therapy in the post-operative period and in the first years following cancer treatment as it may affect patients' mental state and emotional balance. Even more so because the stage of accepting the loss of ability is usually marked with lower emotional intensity; it is the time of dealing with distressful experiences or replacing them with hope or belief, emergence of strong will, motivation and sense of agency observed by the patient and her environment in the actions she takes.[15] It should be noted and considered by specialists that acceptance may assume three different forms: creative, adaptive and neurotic.[15,25] It seems useful to take a closer look at them in order to prevent the development of a destructive demanding attitude[26] and facilitate, instead, a proactive and appropriate adaptation to disability,[24] which will contribute, as mentioned before, to the change in the way disability is viewed: from the biological model to the social model which is not only better from the social policy standpoint, but also more beneficial for the disabled persons themselves.

In the other group, consisting of women diagnosed more than five years back, no relation was found between the depression and acceptance scales of the *QCAL* and the level of acceptance of illness. The lack of relationship may indicate

Table 3 – Mann–Whitney's test characteristics.

	Acceptance of illness	Copying with loss of ability		
		Acceptance	Depression	Struggle
Mann–Whitney's *U*	661.5	583	528	562.5
Asymptotic significance (two-sided)	0.90	0.73	0.16	0.96
N	90	89	91	81

Source: In-house study

that the adaptation process, which usually requires a long time and involves strong and disagreeable emotions, has come to an end and disability, supported with a sustained remission phase, is no longer the main factor determining the quality of life of an individual giving way to the recovery to a satisfactory everyday life.[15] The above is also demonstrated by the fact that for the Group II patients struggling with the loss of ability gradually gains the upper hand over strong distressful emotions. What this result shows may not indicate a return to the first stages of adaptation but rather point to the fact that during the struggle phase there arise emotions which – apart from being helpful in handling the stage of adaptation – make patients believe in their effectiveness, mobilise them to become involved and take actions, and show realistic objectives to achieve by demonstrating available possibilities. When the five-year remission period is over, which continues to be perceived by patients as a period of highest risk of recurrence, concerns about the relapse may become smaller, which in turn may encourage the patient to engage in some activities without being burdened with negative emotions. Thus, activating the strategies known from the period of struggle against the loss of ability combined with a recovery to emotional balance may encourage patients to higher activity in the changed conditions and, consequently, to raise their quality of life despite the acquired motor disability.

That finding may also serve as a guideline for professionals working with cancer patients showing that it is worthwhile to invest time and any available methods of psycho-oncological and therapeutic support to try not to prolong the process of patient's adaptation to disability and, thus, to the disease, and to mitigate its anticipated consequences.

5. Conclusions

Within five years after diagnosis, acceptance of illness is associated with the level of depression and struggle. The more depressed a patient is and the less successful they are in dealing with the loss of ability, the lower their level of acceptance of illness. On the other hand, as seen from the analysis of Group II, in time, it is struggle with the disability that plays more important role in the acceptance of the disease than the impact of negative emotions.

Conflict of interest

None declared.

Financial disclosure statements

None declared.

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