

## Coping and anxiety in cancer patients

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### Summary:

**Aim:** The experience of disease is one of the most stressful events in human life, resulting in a need to take action to successfully deal with a new, often very difficult situation. Coping preferences affect patients' activity, thus contributing to the course of treatment. The aim of this study was to investigate the relationship between styles of coping with stress and the level of anxiety in patients with cancer.

**Method:** 55 patients hospitalized at the Oncology Center in Szczecin, including 28 women and 27 men, completed the State-Trait Anxiety Inventory (STAI) and the Coping Inventory for Stressful Situations (CISS).

**Results:** Data analysis showed differences between men and women in terms of their coping preferences and significant relationships between coping styles and the level of anxiety in patients with oncological diseases.

**Discussion:** Our analysis suggests a relationship between specific styles of coping with stress and the level of anxiety in patients with oncological diseases. Cancer patients manifest high levels of anxiety, with those using emotion-oriented reporting greater anxiety than those using task-oriented or avoidance-oriented coping.

**Conclusion:** There is a relationship between coping styles and the level of experienced anxiety in patients with cancer.

**anxiety, coping styles, cancer**

### INTRODUCTION

Cancer, considered not only a chronic disease, but primarily a threat to the patient's life, has long attracted the attention of researchers, especially psychologists. The importance of patient experience is no longer limited to the biological consequences of the disease or the healing process, but applies also to their functioning in a psychological and social context. The moment the patient receives a diagnosis of cancer may mark the beginning of a crisis, threatening their

overall personal integrity, ie. affecting their spiritual and moral, biological, social and psychological functioning [1].

Many emotions that arise in connection with changes resulting from the diagnosis underlie the need to analyze their intensity and verify their impact on patient functioning, their involvement in the treatment process or adaptation to the disease. One of the most extensively analyzed emotions is anxiety, a state associated with predicting a threat, the source of which can be either external (located in the environment) or internal (emerging from within) [2].

The specificity of cancer causes many patients to perceive the diagnosis through the prism of experiencing extreme pain or changes associated with the treatment process, such as hair loss

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or vomiting. This may trigger certain emotional reactions, expressed primarily in the form of anxiety [3]. Adaptation to the disease is important in terms of long-term health consequences [4], contributing also to patients' acceptance of their experiences.

Cancer, which is a long-term stressor, forces the patient to apply specific coping strategies. In terms of their form, these strategies can be task-oriented or instrumental, focused on the pursuit of solutions to a problem, or, on the other hand, primarily concerned with emotional self-regulation, in order to reduce the experienced tension [5]. The use of constructive coping strategies is one of the indicators of successful adaptation to the disease [6].

## OBJECTIVES

The aim of the study was to assess coping styles and the level of anxiety in patients with cancer, and to determine the relationship between them.

## MATERIAL AND METHOD

The study included patients hospitalized at the Oncology Center in Szczecin, without detailed consideration for the type of cancer, its location, stage of disease, or effectiveness of treatment. The study protocol was approved by the Ethics Committee of the Institute of Psychology of the University of Szczecin. A total of 55 patients participated in the study, including 28 women and 27 men (50.9% of patients were female and 49.1% were male). The age of participants ranged from 45 to 79 years, the mean was  $M = 64.67$  years, and the standard deviation  $SD = 7.753$ .

The relevant permission forms were approved by the hospital's Medical Director. Each patient provided an informed consent to participate in the study, and completed two questionnaires. All patients underwent assessment in good general health and at a time that did not interfere with their treatment plan. The study was conducted during patients' stay in the day hospital, during chemotherapy or inpatient treatment. Questionnaires were given individually to each patient.

The following research tools were used: the State-Trait Anxiety Inventory (STAI), in the Pol-

ish adaptation by C.D. Spealberger, J. Strelau, M. Tysarczyk, and K. Wrześniewski [7], the Coping Inventory for Stressful Situations (CISS) by N.S. Endler and J. D. Parker in the Polish adaptation [8], and a self-designed sociodemographic survey.

The State-Trait Anxiety Inventory (STAI) is a tool often used to measure anxiety associated with medical or surgical tests or procedures. It is also most commonly used to identify changes in the level of anxiety, manifested during various medical or surgical operations, such as preparation for surgery or adaptation in the post-operative period. The tool consists of two subscales, designed to measure state and trait anxiety. Each subscale is the sum of 20 items scored on a 4-point frequency scale. Both scales have high internal consistency, and good theoretical validity.

The Coping Inventory for Stressful Situations (CISS) is used to measure the preferred styles of coping with stress. The tool consists of 48 items describing different behaviors people can exhibit in stressful situations. Respondents are asked to rate the frequency with which they engage in the indicated types of activities when faced with difficult, stressful or upsetting situations on a 5-point Likert-type scale. S are presented on three scales, relative to the three dimensions of the CISS, ie. task-oriented, emotion-oriented and avoidance-oriented coping. There are two subscales for the avoidance-oriented scale: distraction and social diversion. The questionnaire has high internal consistency and confirmed factor validity.

Statistical calculations were performed with the SPSS and STATISTICA packages. To verify the assumed relationship between anxiety and coping in patients with cancer, we performed the Pearson correlation.

## RESULTS

All results are presented below, in the form of tables and discussion.

The data presented in Table 1 indicate that there is a significant relationship between task-oriented coping and state anxiety ( $r = -0.388$ ,  $p = 0.003$ ). As the use of task-oriented style increases, the level of state anxiety decreases, and

vice versa, reduced use of task-oriented coping increases the level of state anxiety.

**Table 1.** Anxiety and coping styles in cancer patients

		Trait anxiety	State anxiety
SSZ	Pearson correlation	-.230	-.388
	Significance (two-sided)	.091	.003
	N	55	55
SSE	Pearson correlation	.240	.399
	Significance (two-sided)	.078	.003
	N	55	55
ACZ	Pearson correlation	-.063	.028
	Significance (two-sided)	.648	.842
	N	55	55
PKT	Pearson correlation	-.015	-.135
	Significance (two-sided)	.911	.326
	N	55	55

Source: own research

Abbreviations used in the table: SSZ – task-oriented coping ; SSE – emotion-oriented coping; ACZ – avoidance-oriented coping/distraction; PKT – avoidance-oriented coping/social diversion

Our analysis also suggests a relationship between emotion-oriented coping and state anxiety ( $r = 0.399$ ,  $p = 0.003$ ). Greater preference for emotional coping is linked with elevated state anxiety, while reduced reliance on emotion-oriented strategies seems to alleviate it.

In terms of their preference for task-oriented coping, the mean score of cancer patients is  $M = 3.85$  with  $SD = 2.376$ . Such scores are interpreted as low. In the case of emotion-oriented coping, the mean score is  $M = 4.91$  with  $SD = 2.699$ , which is in the average range. In the avoidance-focused style, the mean score was  $M = 5.84$  with  $SD = 1.979$ , which is also average. As regards the distraction subscale, the mean result was  $M = 5.71$  with  $SD = 1.524$ , which is defined as average, and the mean score in the social diversion subscale was  $M = 6.56$  with  $SD = 1.664$ , also indicating its average use in the sample.

The results presented in Table 2 suggest that cancer patients with low trait anxiety tend to prefer task-oriented coping (51.7%), while those

with average trait anxiety report average use of task-focused strategies (52.7%). Patients scoring high on trait anxiety more frequently use task-oriented coping styles (43.9%).

**Table 2.** Trait anxiety and applied coping styles

Styles of coping with stress		Trait anxiety		
		Low	Average	High
Task-oriented	Low	10.3	10.5	14.3
	Average	37.9	52.6	42.9
	High	51.7	36.8	43.9
Emotion-oriented	Low	5.6	18.8	9.5
	Average	55.6	43.8	3.3
	High	38.9	37.5	5.1
Avoidance – oriented	Low	0.0	10.3	16.7
	Average	37.5	44.8	44.4
	High	62.5	44.8	38.9
Distraction	Low	0.0	7.5	23.1
	Average	50.0	45.0	38.5
	High	50.0	47.5	38.5
Social diversion	Low	0.0	10.0	12.5
	Average	0,0	43,3	45,8
	High	100.0	46.7	41.7

Source: own research

Patients with low and moderate levels of trait anxiety tended to use emotion-oriented coping with moderate frequency (55.6% and 43.8%, respectively), while those with high levels of trait anxiety scored high on this scale (57.1%).

Patients with low to moderate levels of anxiety tended to prefer the use of avoidance-oriented coping (62.5% and 44.8%), while patients with high anxiety levels had average scores on avoidance scale (44.4%).

Patients with low levels of trait anxiety had moderate and high scores on distraction subscale (50% each), while patients with moderate anxiety levels were more likely to score high on distraction scale (47.5%). In patients with high anxiety, medium and high preference for distraction was demonstrated (38.5% each).

All patients scoring low on trait anxiety tended to manifest high preference for social diversion, while patients with average anxiety scores reported high (46.7%) and average (43.3%) tendencies to rely on this form of coping. On the other hand, patients with high levels of anxiety

reported average tendencies to search for social contacts (45.8%).

Table 3 shows that patients with low levels of state anxiety were mostly characterized by high scores on task-oriented coping (62.1%), while among patients with average or high trait anxiety, the average use of task-focused style prevailed (73.7% and 85.7%, respectively).

**Table 3.** State anxiety and applied coping styles

Styles of coping with stress		State anxiety		
		Low	Average	High
Task-oriented	Low	0.0	0.0	0.0
	Average	37.9	73.7	85.7
	High	62.1	26.3	14.3
Emotion-oriented	Low	0.0	0.0	0.0
	Average	72.2	62.5	38.1
	High	27.8	37.5	61.9
Avoidance – oriented	Low	0.0	0.0	0.0
	Average	75.0	48.3	61.1
	High	25.0	51.7	38.9
Distraction	Low	0.0	0.0	0.0
	Average	100.0	55.0	53.8
	High	0.0	45.0	46.2
Social diversion	Low	0.0	0.0	0.0
	Average	100.0	46.7	66.7
	High	0.0	53.3	33.3

Source: own research

Patients with low to average anxiety scores exhibited average emotion-oriented coping (72.2% and 62.5%), while those with high anxiety levels reported high preference for emotion-focused coping (61.9%).

As presented in Table 3, patients with low state anxiety reported mainly average reliance on avoidance-oriented coping (75%), which is similar to patients with high anxiety scores (61.1%). On the other hand, patients with moderate state anxiety usually scored high on avoidance-focused coping (51.7%).

Interestingly, regardless of state anxiety level, the most common coping style, though reported mostly with moderate frequency, turned out to be distraction (100% in patients with low anxiety, 55% in patients with moderate anxiety and 53.8% in patients with high anxiety).

Patients with low and high levels of state anxiety obtained average results in social diversion scales (100% and 66.7%, respectively). Table 3 also shows that average state anxiety scores are mostly associated with high preference for social diversion (53.3%).

## DISCUSSION AND CONCLUSIONS

Our research results allow to conclude that there is a relationship between specific coping styles and the level of anxiety in patients with oncological diseases. It was confirmed that cancer patients exhibit high levels of anxiety and, moreover, that those using an emotion-oriented style present a higher level of anxiety than those reporting preference for task-oriented or avoidance-oriented coping strategies. Highest levels of state (61.9%) and trait anxiety (57.1%) were recorded in patients scoring high on emotion-oriented coping.

The presented research has shown differences between men and women in terms of coping styles. Among patients with oncological diseases, task-oriented coping was more frequent in men, while emotion-oriented, avoidance-oriented and distraction-oriented coping was more frequently observed in women.

Dealing with a stressful situation, such as the diagnosis of cancer, acceptance of patient role and involvement in the treatment process depends largely on the experienced level of anxiety. Our findings therefore confirm that the goal of interventions should not only aim to reduce the onerous somatic or physiological consequences of treatment, but also to care for the psychological well-being of the patient. This is mostly important because patients' anxiety is related to their preferred coping styles, which, in turn, determine their attitudes and behaviors that may either improve or hinder their treatment [9].

As demonstrated in the study, focusing on emotions is related to experiencing high levels of anxiety (both as a state and as a trait). These results seem particularly important for improving quality of life in people suffering from oncological diseases, but also in terms of planning further actions that have practical significance and can affect their functioning.

So far, many researchers have investigated the relationship between coping with stress and patients' acceptance of illness. According to a study conducted by K. Kurowska and B. Lach (2011) on patients suffering from type 2 diabetes, there is a relationship between the level of adaptation to the disease and selected coping strategies. In addition, the authors showed that reduced acceptance of illness is associated with increasing reliance on emotion-oriented coping [10]. Bearing in mind the results obtained by K. Kurowska and B. Lach, it seems reasonable to explore whether similar patterns could occur in relation to oncological patients and whether there are significant differences between women and men in this regard.

Experiencing various negative emotions in people suffering from somatic conditions affects their perceived quality of life. Disturbed balance between tasks and responsibilities performed so far and new disease-related requirements creates psychological tension, which needs to be reduced [11]. In today's society, the goal of treatment is not only to provide patients with help understood as a mere reduction or treatment of symptoms, but also to improve their psychological well-being and overall quality of life, including reduced anxiety. This research confirms the necessity to promote a holistic approach to the process of providing care to oncological patients and highlights the effect of experienced anxiety on their preference regarding selection of applied coping strategies.

*The authors declare no conflict of interest. This manuscript has never been published, reproduced or sent anywhere. The study was conducted in accordance*

*with worldwide standards of Good Clinical Practice (GCP) and conforms to accepted ethical standards, as outlined by local requirements and the Declaration of Helsinki (World Medical Association, 1989).*

*All experiments were performed with approval of the Ethics Committee of the University of Szczecin, Poland.*

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