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**REHABILITATION OF CANCER PATIENTS AT A REMOTE  
STAGE AFTER RADICAL ANTITUMOR TREATMENT**

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*Abstract*

The article presents the results of empirical research of the thyroid cancer patients' psychological status in remote terms (2-4 years) after radical antitumor treatment at the stage of psychological rehabilitation. The methods used in the study: Mini-Mult; Spielberger-Khanin anxiety questionnaire; Test WAM (well-being, activity, mood). The aim of the study was to find the state of personality destructive changes of the cancer patients and the structure of their components, to substantiate scientifically and to prove experimentally the need for psychological rehabilitation. The introduction of the developed author's psycho-correctional program has proved the possibility of overcoming the personal destructions caused by the disease development tendency by the purposeful formation of the capacity for the mental state self-management. The psychological profile of patients reflects a characteristic decrease in the values of well-being and mood, an increased state of anxiety; significantly higher value of almost all indicators of destructive personal properties (anxiety, hypochondria, depression, hysteria, etc.); increased sensitivity to life situations that causes stress. These patients are characterized by: ipohondricescie - the struggle with the disease, which transforms into the fight for the right to be sick, hysteria-the transformation of neurotic anxiety into functional somatic disorder, psych asthenia - a reduction in the threshold of tolerance to stress, passive – suffering position, the schizoid - social exclusion, exit in the dream world, a state of confusion.

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**Keywords:** Thyroid cancer, psychological rehabilitation, personal characteristics, factor analysis.



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## **1. Introduction**

Psychological and emotional disturbances often develop in cancer patients, which complicate treatment and reduce the efficiency of rehabilitation in the recovery period. Therefore there is a need for psycho-correction and psychotherapy (Solopova, Tabakman, Vorobjev, & Idrisova, 2015).

Psychological counselling of cancer patients is most often aimed at creating realistic attitudes towards their disease. Therefore, one of the goals of oncopsychologist is to bring all types of patients (ergopathic, anosognostic, anxious, hypochondriacal, neurotic, melancholy, apathetic, sensitive, egocentric, paranoid and dysphoric) to vital setups of the balanced type. That is why harmonization of the patient's psychological state and training to use his or her own internal resources become the goal number one for the psychologist accompanying the patient in his or her difficult path of healing and returning to the healthy society (Fedorenko, 2015).

## **2. Problem Statement**

Rehabilitation of cancer patients should be comprehensive and include the use of different treatment and influence methods. According to the recent data rehabilitation measures should begin on the diagnostic stage, continue in a hospital and after discharge from it for at least 1-5 years - a period during which many parameters of patients' lives in terms of radical program treatment are being determined. In describing the clinical picture of oncology patients two basic psychological variants reflecting polar types of the internal picture of disease can be allocated. The first type shows the attitude towards the disease through the high significance of experiencing bodily distress and the belief in the inability to cope with the somatic symptoms independently. The second type shows the attitude towards the disease through the reduction of the relevant experiences, underestimating the importance of somatic illness and the belief in the possibility to cope with it of their own (Kukshina & Vereshchagina, 2013).

## **3. Research Questions**

Rehabilitation of cancer patients at a remote (2-4 years) stage after radical antitumor treatment.

## **4. Purpose of the Study**

The aim of the study was to find out the state of personality destructive changes of the cancer patients and the structure of their components, to substantiate scientifically and to prove experimentally the need for psychological rehabilitation.

## **5. Research Methods**

The empirical basis of the study was the results of 120 people diagnostics. These were the thyroid carcinoma patients after radical antitumor treatment in the long term (2-4 years), the mean age of them were  $42,5 + 0,9$  years.

The following methods were used: Mini-Mult shortened version of Minnesota multidimensional Personality Questionnaire (Minnesota Multiphasic Personality Inventory), the technique to evaluate the

level of the neuro-emotional stability, the degree of the personal properties integration, the level of the person adaptation to the social environment; The questionnaire of anxiety by Spilberger-Khanin (Psychological tests for professionals, 2007), the differentiated measurement of situational and personal anxiety; Test WAM (well-being, activity, mood), which displays psychophysiological functions. The test results were processed with the help of the program Statistika 7.0. Comparative, correlation and factor analysis of the studied parameters were made in the experimental group of patients with thyroid cancer, who took part in psychological training and in the control group of patients who refused to receive psychological support.

## 6. Findings

Factor analysis showed that positive changes in the studied indicators occurred in the experimental group of patients undergoing radical treatment of thyroid cancer who attended psychocorrection training. For the same time, the same patients who did not attend correctional classes, the tendency to destructive changes in personal indicators only increased. As can be seen from Table 1 the structure of the indicators has changed significantly as a result of the training. The methods based on relaxation and optimization of the mental state had a positive effect. In the structure of the studied indicators, this effect manifested itself in the noticeable change in the number of negative interconnections between state indicators and destructive personal properties. Interpreting the revealed regularity we can say that the formation of emotional stability and the ability to the mental state self-management, which occurs as a result of psychocorrectional training, indirectly helps to suppress the tendency of destructive changes in the psyche. So, the increase in the level of well-being, activity and mood entails a decrease in hypochondria, depressiveness, hysteria and all other indicators of the personal scales studied, which is proved by the negative nature of their interconnections. Likewise, the decrease in the level of reactive anxiety and personal anxiety contributes to decrease in the destructive personality traits indicators due to direct interconnections with them.

According to the factor analysis, some changes in the factor structure also occurred in the control group of patients who did not attend psychocorrectional activities. However, most of these changes cannot be considered positive. Thus, the index of hypochondria increased its rank and moved from fourth-order factors to first-order factors. The factor of hysteria, which also turned out to be at the level of first-order factors, became essential. In addition to hysteria, the factor structure included reactive anxiety, paranoia and hypomania which previously were not included. Mental status indicators (well-being, activity, mood) have not changed their position in the factor structure. The only positive change in this structure is the shift of the psychopathy factor from the highest level to the level of fourth-order factors, which indicates a decrease in the tendency to avoiding behavior.

**Table 01.** The results of the studied indicators factor analysis

The control group of patients at the beginning of the study		%	The control group of patients after two months	%	The experimental group of patients before training	%	The experimental group of patients after training
First order factors	Scales of psychopathy, psychasthenia, schizoidity of the Mini-mult test	24	Scales of hypochondria, hysteria, psychasthenia of the Mini-mult test	31	Scales of reactive anxiety, hypochondria, depression, hysteria, psychopathy, psychasthenia scales of the Mini-mult test	26	Hypochondria, hysteria, psychopathy, psychasthenia scales of the Mini-mult test
Second order factors	Well-being, activity, mood of WAM-test	23	Reactive anxiety, well-being, activity, mood of WAM-test	24	Mood scales of WAM, personal anxiety, the coefficients L and K of the Mini-mult test	14	Reactive anxiety and the mood scale of WAM-test
Third order factors	K coefficient of the Mini-mult test	21	factor F And K, paranoid, hypomania scales of the Mini-mult test	16	and a scale factor Fhypomania Mini-mult	17	coefficients of L and K, paranoid scale of the Mini-mult test
Fourth order factors	Scales of hypochondria and depression of the Mini-mult test	12	scale L and psychopathy of the Mini-mult test			16	Well-being and activity scales of WAM-test

Besides, in addition to the factor analysis data, it should be noted that the comparative analysis of the mean indicators of the control group in the two diagnostic sections (using the t-test of Student and Fisher) did not reveal significant differences, i.e. significant changes in the quantitative indicators of this group also did not occur.

Mismatch in the structure of the mental state individual indicators (well-being, activity, mood, reactive anxiety) which normally have to be interconnected is a destruction of their structure. The only remaining interconnection is the negative interconnection between the well-being and the anxiety scales.

The life of patients filled with significant events providing mental stress causes reduce of their mood and at the same time increase personal anxiety, depression, psychopathic, psychasthenic and schizoid traits. In other words, patients with thyroid cancer at remote times after radical post-tumor treatment are sensitive to situations of vital activity, causing increased stress. Staying in these situations aggravates the tendency of destructive personality changes, inadequate response to stress, "withdrawal to illness" and deformation of personality observed in patients.

The analysis of correlation interconnections in the structures of both samples reveals a general pattern: the indices of the mental state (well-being, activity, mood) have opposite (negative) connections

with destructive properties. Apparently, destructive personality changes directed towards increasing depressiveness, hysteria, etc., cause regular deterioration in the state. The same can be said about the interconnection between personal indicators and anxiety indicators: the increase in destructive properties is accompanied by the increase in anxiety. The most clearly revealed regularity is manifested in the structure of the sick person's indices.

The revealed regularity of the interconnection between the indices of the mental state and destructive personality traits in people in difficult life situations suggested that it is possible to overcome the development of personal destruction caused by the disease through the purposeful formation of the ability to self-manage the mental state. This positive moment also testifies to the conducted activities effectiveness, the purpose of which was to form the capacity for the mental state self-management of and the prevention of destructive personality changes.

The investigated parameters in the control group of patients, for the past time between the first and second diagnostic sections remained the same. I.e. psychological status of these patients has practically not changed in two months (psychological status is a multidimensional personality characteristic that can be represented as a function of variables such as ideal and real, observable and unobservable personal properties that determine the quality of life, values, the patient's focus on the development of the disease or recovery), there is a destruction of their structure. The tightly organized substructure in the patients' overall structure is formed by the destructive properties assessed by the scales of the Mini-Mult questionnaire. This allows us to expect that the accentuation of any of the destructive properties components will naturally cause the entire structure of their structure to move in the direction of the indicators increasing.

Based on these results, the formation of the mental state and destructive personality traits indicators structure can be seen as the basic prerequisite for drawing up programs for the prevention and therapy of personality deformation which has come a result of the advanced illness and other severe situations (Denisenko, 2015; Egikyan, 2014).

The findings of our study are confirmed in articles by other authors. Thus, the authors of the Saratov State Medical University conclude that patients with thyroid cancer are marked with psychological problems and vegetative imbalance in pre- and postoperative period. Operative treatment is a physical and psychological stress factor, as can be seen from the results of the study. The operation results in the violation of nonspecific adaptation reactions. The level of psychological problems increases in the postoperative period, despite the basic positive effect of the antitumor treatment (Tarnovskaya, 2014).

The authors of the other article found that patients who were previously characterized by the high life activity, often dominated by anxiety and fear. As for passive people, depression attacks them. The most dangerous combination is a combination of alarm with increased behavior activity that can externally be masked by active but fussy unproductive activity. The hidden Depression can be followed by suicidal thoughts. There is a category of patients who always find special "problems" in the body, referring to vague feelings and wrongly assess them as symptoms of the rapid spread of tumors throughout the body. The patients previously characterized by suspiciousness and anxiety tend to this type

of deviation. Apathetic and asthenic symptoms deserved special attention. Patients demonstrate lethargy, confusion, indifference, loss of any interest in their fate (Egikyan, 2014).

The program of cancer patients' rehabilitation should be built taking into account the opportunities and conditions for the realization of medical, socio-psychological characteristics of the patient life, which constitute a qualitative determinant of the patient's personality. Preservation of life and improvement of its quality is the most important and paramount direction of the oncological patient rehabilitation, which is largely determined by the adequate and purposeful treatment of the underlying disease and prevention of the tumor process progression, as well as the provision of social, psychosocial care and support (Trifonova, Butrina, & Lutsko, 2014).

## 7. Conclusion

The data obtained through factor and correlation analysis testify to the effectiveness of the psycho-rehabilitation measures implemented.

The author's program for the rehabilitation of cancer patients at remote times after radical treatment, created and tested in the formative experiment, based on the principles of relaxation and optimization of the mental state, has proved its effectiveness: the structure of the studied indicators has changed significantly; there was a noticeable change in the number of negative interconnections between state indicators and destructive personality traits.

### 7.1. Recommendations

The introduction of the developed author's psycho-correctional program has proved the possibility of overcoming the tendency towards the development of personal destruction caused by the disease by the purposeful formation of the mental state capacity self-management. On this basis the program can be recommended for wide application by specialists of psychological services engaged in counseling and psychocorrection of persons who have suffered traumatic events. The acquired knowledge can be taken into account in the development of training courses and used in the process of training students, retraining and professional development of psychologists.

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