



# Features of Coping Behavior of Tuberculosis Patients

**Sukhova Elena Viktorovna\***

Head of the Department Clinical medicine, Samara medical University, Russia

**\*Corresponding author:** Sukhova Elena Viktorovna, Doctor of medical Sciences, Head of the Department Clinical medicine, Samara medical University Reaviz, Russia.

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## Annotation

According to the results of the study of psychological and social characteristics of patients with tuberculosis, as well as the results of the survey on the targeted author's questionnaire presents the features of coping behavior of patients with tuberculosis.

**Keywords:** Strategies of Coping Behaviour; Psychological Characteristics of Tuberculosis Patients; Social Characteristics of Tuberculosis Patients; Directions of Psychological and Social Correction

## Introduction

The bloodiest war has not claimed as many lives as tuberculosis. For many centuries it has accompanied humanity. Modern methods of genetic diagnosis revealed traces of tuberculosis in mummies of Egyptian pharaohs. Pulmonary tuberculosis is an infectious disease, the causative agent of which is *Mycobacterium tuberculosis* or Koch's wand. Even now, with modern advances in medicine, patients die from this disease.

Tuberculosis is a chronic infection with a long period of isolation of the pathogen, a variety of clinical manifestations, lesions of various organs and systems [1]. This is a common disease with a predominant lesion of certain systems and organs [1]. The disease is long-term, often with complications, and even now leads to disability deaths [2,3]. Socially disadvantaged persons are one of the risk groups of the disease. This contingent is a little disciplined, has low motivation to any systematic activity, including treatment. People who come from prison, alcohol abusers, drug addicts, unemployed, migrants are especially often ill with tuberculosis [4,5]. Recently, a growing number of patients who secrete strains of mycobacteria resistant to treatment. Biological cure of tuberculosis is impossible, only clinical. It requires great efforts on the part of the doctor and the patient [6-8].

Any disease causes a sick person a lot of negative emotions. Emotions can manifest themselves in external behavior. Situational emotions can "impose" certain actions on a person. Emotions drive action.

Fear is an emotion that occurs when danger is detected.

The method of coping with anxiety, fear described R. Lazarus [9]. The task of coping with negative life circumstances is to overcome difficulties, reduce their negative consequences, avoid them, endure [10,11]. The individual consciously and purposefully, taking into account the specific problem and his state of health, changes social behavior, applying a set of different behavioral strategies [12]. However, the available literature does not reflect the features of coping behavior of patients with pulmonary tuberculosis.

If you have TB disease in a human patient developing adverse mental reactions. These reactions affect the discipline of treatment and its effectiveness. The course of standard chemotherapy lasts a long time, the drugs have side effects. Treatment requires hospitalization, separation from the family and the usual connections, violations of the stereotype of life. We need a strong motivation for treatment, the presence of certain strong-willed qualities, internal discipline. A sick person may be disturbed by various kinds of fears and anxieties that may affect the discipline of treatment. It is necessary to take into account the fact that patients have negative experience of treatment.

The actual study of the features of the coping behavior of tuberculosis patients. The aim of the study was to study the characteristics of coping behavior of patients with tuberculosis.

## Object and Methods

A group of patients with fibrous - cavernous pulmonary tuberculosis out of 253 patients was examined there were 152 men and 101 women undergoing inpatient treatment at the Samara regional tuberculosis hospital. The patients were taken by the method of continuous sampling. The average duration of tuberculosis was  $7.5 \pm 1.8$  years. Clinical methods of examination were common to confirm the diagnosis of pulmonary tuberculosis.

To study coping strategies, the questionnaire Of R. Lazarus and S. Folkman in T. L. Kryukova's adaptation was used. The Respondent is offered 50 statements on behavior in a difficult life situation. He must assess how often these behaviors are manifested in him. With the help of this questionnaire, the following coping strategies can be identified: confrontation - a fierce confrontation between a person and the situation, an aggressive response to specific life circumstances; self-control - suppression of emotions for the transition to reasonable action; the search of social support - the desire to seek the assistance of loved ones, supporters, to get rid of loneliness in a difficult moment; an escape - avoidance - avoiding the problems, the responsibility is transferred to other people; planning to solve the problem is to develop an accurate plan of the way out of the situation; distancing - the problem in the distance; a positive revaluation - the desire to see in any situation a positive side; the acceptance of responsibility - acceptance of responsibility as a given.

To identify the emotions that developed in response to the disease, the author developed a special questionnaire. A questionnaire consisting of 17 statements was developed to conduct a multivariate analysis of the causes of fear in tuberculosis patients.

The developed questionnaire allows to analyze many factors that may underlie the feeling of fear in patients with tuberculosis. It allows you to identify the fear of different nature: associated with the disease, with its treatment, with interpersonal and social interaction, the threat of loss of efficiency, the possibility of disability. The score scale of the assessment allows to reveal the value of fear of this etiology, the value of fear is measured by the

patient. Statistical processing of the results allows to determine the most common causes of fear in patients with pulmonary tuberculosis.

A month after the survey, it was repeated in 30% of respondents. There were no discrepancies in the results.

## Obtained Result

The main complaints of patients were: General weakness, shortness of breath with little exercise, constant cough with a small amount of sputum, sweating at night, sleep disturbance, decreased performance. Bronchoscopic picture and histological verification data corresponded to the diagnosis of "chronic fibrosis-cavernous pulmonary tuberculosis".

Analysis of the social situation showed the following. 60,3 % of patients from rural areas had primary or incomplete secondary education, 58,4% secondary and 8,9% higher education. 57,8% of the men abused alcohol and 98,7% of the smoke, a Smoking history exceeding 10 years. Among women smoked 62,4, and 38,7 % Smoking experience exceeded 10 years. 62,3 percent of the men were in prison. The disease began in prison in 40,3 %. Full family had 28,2%, incomplete, i.e. single mother, father with children 8,1 %. Single was 27,4 %. Lived with relatives, i.e. with brothers, sisters, members of their families, elderly parents - 36,3 %.

The material situation was assessed according to the following categories: lack of means of subsistence; financially dependent, i.e. income per family member was below the subsistence minimum; financially secure, i.e. having income in the form of the subsistence minimum and above. Each region has its own estimate.

It is characterized by the ratio of the subsistence budget to the average wage. The calculation is carried out for each administrative - territorial formation and is controlled by social protection services.

55,2 % of the examined patients with pulmonary tuberculosis had no means of subsistence. The disease of fibrous-cavernous pulmonary tuberculosis led to the development of a whole range of emotions. They are presented in Table 1.

**Table 1:** Emotions of patients with pulmonary tuberculosis.

Emotions of Patients	Percentage of men	Percentage of women
Shame for his disease by questioning and talking about it	16,8±2,3	18,3±3,1
Wine in front of their friends due to the illness	27,0±3,2	40,3±2,4
Confidence that others avoid and despise tuberculosis patients	68,0±2,6	80,2±1,9
Dissatisfaction due to the fact that tuberculosis disease led to the restriction of contacts	68,0±2,6	80,2±1,9
Feeling of fatigue from the disease, long-term treatment	80,7±2,9	60,4±2,4
Fatigue from separation with close	20,6±2,4	40,7±1,7
Fatigue from hospital food	11,4±3,2	36,3±1,9
Fatigue from hospital environment	20,4±1,2	10,5±3,1
Self-pity	46,2±2,1	61, 9±1,8
The sensation of his own physical weakness	80,7±2,9	60,4±2,4
Fear that others will know the diagnosis and will despise and avoid	80,7±2,9	60,4±2,4

Fear of losing one's job	20,4±2,6	27,8±2,9
Fear of future uncertainty	48,4±3,2	60,4±2,6
Fear of being alone due to illness	52,4±2,5	20,6±1,8
Fear of the inability to physically protect yourself	48,2±2,6	20,6±1,8
Fear of dying from tuberculosis	12,3±2,6	10,7±3,4
The fear of speaking about the disease and	20,5±3,1	30, 7±1,7
Fear of long-term treatment	38,7±2,1	52,4±4,1
Fear that others may see them entering the tuberculosis hospital	72,4±2,8	80,3±3,1
Anger because of the isolation from society	68,0±2,6	80,2±1,9
Anger due to isolation from friends	80,3±3,2	80,7±2,7
Outrage and anger from lack of emotional support from family members, relatives and friends	48,6±1,7	60,8±3,2
Grief due to tuberculosis	38,8±2,5	40,3±2,6
The desire to obtain information about their disease and prognosis	52,7±2,3	42,9±3,1
The desire to make a change in his position	38,7±3,1	52,4±2,4
The desire to "get back" at the society for their disease	25,3±2,4	37,1±3,2
Feeling of confidence in the successful outcome of the disease	69,1±2,4	85,7±1,8
Regret that there are no more effective drugs	60,1±3,8	80,7±2,1
Confidence in the competence of the doctor	24,4±2,2	35,4±1,9
Confidence in using the nontraditional methods of treatment	15,3±2,4	8,9± 2,3

**Table 2:** Fear indicators in points.

Approval	Points
I think my condition is incurable	33,68
I'm afraid my relatives will turn away from me	10,24
I'm afraid society doesn't need me	21,40
I'm afraid I've been prescribed a lot of drugs	20,72
I'm afraid the drugs have a lot of side effects	53,90
I try to hide from relatives that I am sick with tuberculosis	28,50
I am ashamed of my illness	47,60
I'm afraid of infecting the other	76,18
I'm afraid I'll be seen outside the tuberculosis hospital	20,66
I'm afraid I don't have the patience to finish treatment	27,32
I'm afraid I'll have trouble finding a job	52,60
I'm afraid the office will find out about my condition	22,32
I'm afraid to infect home	74,54
I'm afraid to die	35,64
I'm afraid the disease will affect my performance	61,88
I can't make a career	57,98
Long stay in the hospital depresses me	71,70

Thus, from the data of table 1 it becomes clear that for patients with chronic pulmonary tuberculosis the disease is a stressor. In response to the disease developed destructive emotions-grief, anger, indignation, shame, fear, guilt. The emotions revealed show how difficult the situation of the disease is. A big place is occupied by fears. Out of 253 patients, 100 were interviewed on a questionnaire aimed at studying the nature of fear. studying the etiology of fear. Respondents had to assess their own fears from 0 to 100 points. The results are presented in Table 2.

As the table shows, the highest scores correspond to the following statements: I'm afraid to infect others; I'm afraid to infect loved ones; prolonged stay in the hospital depresses me; I'm afraid that the disease will affect my performance; I cannot make a career, i.e. the highest scores were found in social fears. Consequently, the highest sense of fear in patients with pulmonary tuberculosis is associated with the possibility of social dysfunction.

The correlation analysis of the obtained Pearson data revealed statistically significant direct and inverse correlation dependence.

A direct significant correlation was observed between the causes of fear expressed in the statements: "I think my disease is incurable" and "I'm afraid that the drugs have many side effects" ( $r = 0,394$ ;  $p = 0.005$ ).

"I am afraid that my relatives and friends will turn away from me" and "I am afraid to die early" ( $r = 0,383$ ;  $p = 0.006$ ) (social and vital fear); "I am afraid that the drugs have many side effects" and "I am afraid that I will not have enough patience to finish the treatment" ( $r = 0,384$ ;  $p = 0.003$ ). "I am afraid that the drugs have many side effects" and "prolonged hospital stay depresses me" ( $r = 0,415$ ;  $p = 0.001$ ). "I try to hide from loved ones that I have tuberculosis" and "I'm afraid that at work they will learn about my

disease" ( $r = 0,656$ ;  $p = 0,0001$ ). "I am ashamed of my disease" and "I am afraid to be seen near a tuberculosis hospital" ( $r = 0.396$ ;  $p = 0.004$ ). (social fear).

Thus, a direct correlation between the causes of fear was revealed. The inverse correlation was observed between the causes of fear "I am afraid that relatives and friends will turn away from me" and "I am afraid that I will have problems with employment" ( $r = 0.375$ ;  $p = 0.007$ ). Logically there is a question – as patients with tuberculosis cope with a stressful situation, what ways of coping use. To study coping strategies, a survey was conducted using the questionnaire of R. Lazarus. The results are presented in Table 3.

**Table 3:** Coping strategies for tuberculosis patients.

Coping strategy	Percentage of men	Percentage of women
search for support	74	66
planning a solution to the problem	22	18
confrontation	20	17
accepting responsibility	14	18
Fourteen Eighteen	11	8
self-checking	8	6
spacing	6	4
positive reevaluation	2	0

\***Note:** one patient can use multiple coping strategies at the same time.

**Table 4:** The change of behaviour of TB patients.

Change in patient Behaviour	Percentage of men	Percentage of women	Significance of differences (2)
Conversion to religion	76,8±3,4	64,7± 3,6	4,78*
Use of non-traditional treatments	75,6± 3,2	34,9±1,9	4,23*
Following the advice of other patients	54,1±3,1	31,3±2,5	14,45*
Correct execution of medical appointments	50,1 ±4,9	66,2 ±4,7	5,80*
Failure to comply with medical appointments	34,2±2,5	23,8±4,1	3,15
The implementation of the rules of personal hygiene	28,4 ±3,5	74,4 ±2,3	4,93*

**Note:** \* the difference is significant.

Each patient uses several coping strategies at the same time. Statistical analysis revealed no significant differences in the frequency of use of coping strategies presented by men and women. Patients with pulmonary tuberculosis are trying to cope with the disease in a different way. To study the behavior changes the author developed a special questionnaire. The results are presented in Table 4.

Changing the behavior of sick people coping with the disease is the strategy of their coping behavior. It is significantly different in men and women. Men use religious conversion, non-traditional treatments, and advice from other patients. Women are subject to personal hygiene, medical appointments and religious practices.

## Discussion

The examined group of patients with lungs was homogeneous. They all represented a real danger to others due to the fact that isolated *Mycobacterium tuberculosis*. 15% had multiple drug

resistance. Negative emotions of patients with tuberculosis had a real reason for the appearance. 93 % of men and 100% of women feel regret that there are no effective drugs. In 80 % of cases, the disease led to limited contacts and social isolation. The patients themselves try to conceal their disease. 81% of women and 60% of men feel sorry for themselves. 48% of men and 60% of women experience isolation due to the disease. The desire to "take revenge" on society for their disease was revealed in 15% of men and 9% of women.

Analyzing the features of the behavior of patients with pulmonary tuberculosis, we can distinguish the following features of coping behavior: the use of non-traditional methods of treatment; attraction to religion; infection of others. Fear of death, fear of disease, lead to the use of alternative treatments. Used in 76% of men and 35% of women. It should be explained that dry crushed cockroaches, meat of young dogs, badger fat, bear fat are used as non-traditional methods of tuberculosis treatment. If the

patient stops the prescribed treatment and uses such “methods”, he constantly infects the surrounding members of society.

Fear of death, social exclusion lead to conversion to religion. This behavior was found in 77% of men and 65% of women. Social isolation, the stigma of tuberculosis lead to ignoring the rules of hygiene and infection of others. In the questionnaire, the question was formulated as “do you observe the rules of personal hygiene.” 74% of women and 28% of men answered in the affirmative. The rest do not follow the rules and thus contribute to the infection of others.

This behavior is of great social importance. Tuberculosis is an infectious disease. Only compliance with the rules of personal hygiene can prevent infection of others. And two-thirds of men with tuberculosis do not take measures to the safety of others. At the material research conducted on the scene revealed could use behavior of TB patients. All patients with chronic pulmonary tuberculosis need the help of a psychologist to help develop adequate behavior to cope with the disease. Fear of death, social exclusion lead to conversion to religion. This behavior was found in 77% of men and 65% of women.

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### Summary

- a. In patients with pulmonary tuberculosis revealed various negative emotions.
- b. To cope with the disease is used: the use of non-traditional methods of treatment, appeal to religion, infection of healthy people.

- c. 77% of men and 65% of women come to religion.
- d. The use of a strategy of targeted infection of healthy people by tuberculosis patients contributes to the spread of the disease among the population.
- e. In the treatment of tuberculosis patients should take into account the presence of vital and social fears.

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