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**ANXIETY-DEPRESSIVE DISORDERS AND THEIR  
PSYCHOCORRECTION IN SYSTEMIC LUPUS ERYTHEMATOSUS**

**(Monograph)**

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This monograph is based on the candidate dissertation on the topic “Anxiety-depressive disorders and improving medical-psychological care in systemic lupus erythematosus.”

This monograph can be used by medical psychologists, psychotherapists, psychiatrists, psychoneurologists, rheumatologists, therapists practicing in medical practice, as well as researchers interested in this field.

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## INTRODUCTION

Systemic lupus erythematosus (SLE) is one of the diseases that cause death in patients in a short time due to damage to vital organs. According to official data, “...systemic lupus erythematosus is widespread among rheumatological diseases, occurs 10 times more often in women than in men, and the onset period often falls on the age group of 14-40 years...”<sup>1</sup>. Systemic lupus erythematosus (SLE) presents a significant challenge as a prominent psycho-emotional illness, with detrimental consequences for the socio-economic landscape. Its high association with disability underscores the urgent need for innovative approaches to medical and psychological care. Developing these advanced methods remains a critical concern within the field of medicine.

Globally, extensive research efforts are being directed toward resolving these issues, focusing on enhancing the efficacy of early detection of anxiety and depressive disorders through improved psychodiagnostic techniques, as well as refining psychotherapy and psychoprophylactic strategies. A crucial aspect involves examining the pathogenetic links between these disorders and conventional SLE treatments. Early and accurate diagnosis is paramount, along with preventing the development of complications arising from anxiety and depressive states that may occur secondary to organ damage. Furthermore, assessing the impact of these co-occurring conditions on patients’ overall well-being and quality of life is essential.

Within our nation, various scientific initiatives are also in progress, all aimed at advancing the medical sector and elevating the standard of medical services. This includes a focus on the early identification and management of anxiety and depressive disorders among individuals diagnosed with rheumatic diseases (RD). In order to ensure further improvement in the quality of medical care, the Strategy of Actions in five priority areas sets out tasks such as “Development and improvement of the system of medical and social assistance to the population” within the framework of the development of the Republic of Uzbekistan in 2017-2021. The

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<sup>1</sup> Gadaev A. - Collection of lectures for general practitioners - 2010. 669 p.

implementation of these tasks, which include the identification of psycho-emotional disorders and effective treatment of SLE, the improvement of specialized medical and psychological care using modern methods of psychopharmacotherapy and psychotherapy, as well as the provision of timely medical and psychological assistance, is very important in improving the quality of life of patients.

The Resolutions of the President of the Republic of Uzbekistan No. PD-4985 dated March 16, 2017 “On Measures to Further Improve Emergency Medical Care”, No. PD-5590 dated December 7, 2018 “On Comprehensive Measures to Radically Improve the Healthcare System”, No. PD-3071 dated June 20, 2017 “On Measures to Further Develop Specialized Medical Care for the Population in 2017-2021” and No. PD-4067 dated November 19, 2018 “On Measures to Implement the Investment Program of the Republic of Uzbekistan for 2019” support the implementation of the tasks set out in the regulatory legal acts in this area.

Modern rheumatology practice is aimed at developing highly effective methods of early diagnosis and improving approaches to solving problems of comorbid diseases. Russian researchers Lisitsyna T.L., Veltishchev D.Yu., Seravina O.F., Kovalevskaya O.B., Marchenko A.S. and others (2008) reported that 66% of patients diagnosed with SLE had mental disorders, including depressive episodes, adjustment disorders, generalized anxiety disorder, and dysthymia. Voznesenskaya T.G. (2008) showed that chronic stress caused the debut of rheumatic diseases or relapses of rheumatic fever and the onset of ADD, while Veltishchev D.Yu., Lisitsyna T.A., Zeltyn A.E. (2010) found that chronic stress due to adaptation problems and lack of confidence in recovery from the disease further increases anxiety and depressive disorders in patients.

Specialists from prestigious foreign universities have also conducted a number of studies to determine the effectiveness of psychotherapy in autoimmune diseases, including Miller A.H., Maletic V., Raison Ch.L. (2008), Navarrete N. (2010) who succeeded in improving the quality of life, positive changes in relationships, patient self-esteem, and general health in patients with SLE through psychotherapy and psychological support. Céu T. M. C., Navarrete N, Peralta-

Ramírez M.I., Sabio-Sánchez J.M. (2019) conducted studies aimed at eliminating psychoemotional disorders in patients through psychotherapy methods based on psychoanalysis and cognitive-behavioral psychotherapy, and as a result, noted that patients experience problems in expressing emotions and overcoming difficulties. Today's modern medicine shows the need to include in the treatment of somatic diseases not only standard treatment, but also medical and psychological methods, while studying the patient's personal characteristics, socio-psychological factors and mechanisms of adaptation of the individual to the disease in the priority tasks of the direction of psychological diagnostics.

In Uzbekistan, over the past decade, no scientific research has been conducted on the psychodiagnosis of anxiety and depressive disorders in systemic lupus erythematosus, the impact of psychoemotional disorders on the quality of life of patients, and the assessment of the effectiveness of Gestalt therapy in these pathologies. This, in turn, creates the need for in-depth and comprehensive research on these problems. Accordingly, due to the small size of the samples currently taken in this regard, the lack of randomness, and the lack of positive results in only a few areas, future research in this area is of urgent and scientific and practical importance.

# **Chapter I. PSYCHOLOGICAL STRUCTURE OF PSYCHO-EMOTIONAL DISORDERS AND THE CURRENT STATE OF PSYCHOTHERAPEUTIC SUPPORT IN RHEUMATOLOGY PRACTICE (Literature Analysis)**

## **§1.1. The prevalence of anxiety-depressive disorders in rheumatological practice**

The President's order of the Republic of Uzbekistan No.PD-3606 dated March 16, 2018 determines the most important orientation of national policy in the fields of population, prevention, diagnosis and treatment. There is no effective structure of management and mutual cooperation of psychotherapeutic and medical-psychological services in our republic. At the moment, active work is being carried out in connection with the implementation of the decision of the President of the Republic of Uzbekistan No. PD-3606.

Today, attention is paid to the reconstruction of approaches to solving the problems of accompanying disorders in the contemporary practice of rheumatology and the development of highly effective methods for early diagnosis. One of the tasks facing rheumatology today is to study and assess the specifics of the course of psychosomatic disorders in rheumatic diseases [19, 43, 76, 94].

Furthermore, dysfunctions of the anti-inflammatory immune system (T-cells, cytokines, interleukin-1, tumor necrosis factor- $\alpha$ ) also raise the occurrence of mental health conditions in rheumatic diseases [11, 43].

According to the results of a large international epidemiological study conducted by the WHO, every fourth (24%) patient with common diseases has various mental disorders, and every fifth (21%) has a depressive spectrum disorder [29].

While early studies considered psychoemotional disorders to be the result of severe chronic somatic, including rheumatic, diseases, numerous studies in recent years have shown that these disorders often precede the onset of chronic somatic diseases, are associated with a single triggering factor, and occur with similar pathologies. Research by Katon W.J. and colleagues suggests that individuals with

long-term physical illnesses face a heightened risk, up to 41%, of developing anxiety and depressive disorders [20, 76].

Anxiety and depression often stem from chronic heart failure, fibromyalgia, lower back pain, systemic lupus erythematosus (SLE), rheumatoid arthritis (RA), osteoarthritis, scleroderma, and rheumatic heart disease. [23].

The prevalence of rheumatic diseases is very high, accounting for 0.5–2% of the adult population. Immune-inflammatory rheumatic illnesses are long-lasting, worsening conditions. They impact numerous bodily systems and are marked by initial functional loss. They also cause decline in work and social abilities, disability, and increased middle-age death rates. [78].

The occurrence of ADD in the general population is 4–5 times greater than in chronic physical illnesses and 7–15 times greater than in immuno-inflammatory rheumatic diseases (IRD). Regarding specific conditions: rheumatoid arthritis (RA) shows prevalence in 30-89% of instances, SLE in 50-83%, systemic scleroderma (SSD) in 36-81%; Sjögren's disease (SCD) in 20-50% and juvenile arthritis (JuA) in up to 50% cases also exhibit ADD [84,92].

According to the results of a study by Margaretta M., Julian L. et al., mental disorders in rheumatological diseases are 7-15 times more common in the structure of mental disorders than in the general population and make up 89% [82].

In a study conducted at the Institute of Rheumatology of the Russian Academy of Medical Sciences, various psychoemotional disorders were found in 66% of patients. Lisitsyna T.L., Veltishchev D.Yu. and other specialists found that 83% of patients diagnosed with ADD had SLE, 40% had a depressive episode, 24% had an adjustment disorder, 10% had generalized anxiety disorder, 9% had dysthymia, and 7% had cognitive impairment, and this was not related to the age, sex, disease, duration of corticosteroid use, cytotoxic therapy, or cumulative dose of cyclophosphamide [21, 22].

According to the American Psychiatric Association (DSM-IV, ARA, 1994), depressive (major (severe and moderate depressive episode) and minor (mild depressive episode and dysthymia) depression)) and anxiety (generalized anxiety

disorder, adjustment disorder with anxiety and anxiety-depressive component) disorders are the most important factors for RA and SLE[19].

Brey and colleagues (2012) found that 27% of lupus patients experienced depressive episodes, and dysthymia was a type of these mood disorders. They observed a mild, long-term depressed mood (lasting over two years) in 6% of patients, an adjustment disorder in 16%, and generalized anxiety in 7%. Overall, more than half (56%) of the patients evaluated had a depressive disorder [42].

Palagini (2013) and colleagues' systematic reviews indicated that depressive disorders affected between 17% and 75% of SLE patients [98].

Within the Hopkins Lupus Cohort, the rate of depressive episodes was 29.7 per 1000 SLE patients [72].

According to the results of a study by Hanly J.G., Su L. (2015), neuropsychiatric symptoms in SLE account for 47.2%, and affective disorders - for 12.7% [65].

In Brazil, Ayache and Costa found that 65% of lupus patients experienced depression [33].

Bachen et al. reported that 65% of 326 SLE patients in their study had a lifetime diagnosis of anxiety or depressive disorder [36].

Uguz F. and Akman C. (2009) discovered the frequency of depression within lupus patients was fourfold greater when compared to individuals who did not have lupus. This research also indicated that serious depression affected 22% of those with lupus, contrasting with the percentage in those without the condition [103].

Considering the information, a significant number of rheumatic disease patients also experience anxiety disorders, which subsequently lowers their quality of life and negatively affects their treatment. Consequently, given the prevalence of mood disorders, particularly anxiety, in rheumatology patients, it's crucial to perform early psychological assessments to enhance outcomes. Further examination is warranted to understand how these issues impact physical health, and suitable recommendations, with an emphasis on comprehensive treatment strategies, should be provided.

## **1.2-§. Pathophysiology and clinical manifestations of anxiety-depressive disorders in systemic lupus erythematosus**

Anxiety disorders are a common mental health condition that can affect various areas of a person's life. If they are accompanied by rheumatic diseases, they create difficulties in managing and treating symptoms. Anxiety disorders can have a chronic or acute clinical course. The length and severity of anxiety disorder symptoms vary based on personal situations, surrounding influences, and genetic makeup. Anxiety disorders commonly develop into long-term conditions alongside rheumatic diseases, necessitating personalized treatment plans tailored to the intensity of symptoms and the range of presentations over the disease's progression. The exact cause of psychoemotional disorders in SLE is still unknown. However, these disorders are higher in the acute phase of SLE, and a decrease in mental disorders is observed during the regression of the disease.

According to studies, psychoemotional disorders were detected in 17% of patients in the acute phase of the disease and in 61% in the chronic phase, of which adaptation disorders were mainly noted up to 5 years of the disease, delirious states in the active phase, that is, up to four years from the onset of the disease, and depressive episodes - at almost all stages of the disease [21].

According to some experts, the severity of anxiety-depressive disorders is not always related to the activity of SLE. The link between heightened SLE activity and more severe depressive symptoms isn't fully understood. The question is: does the same stressor worsen both depression and SLE, or does SLE flare-ups actually worsen depressive symptoms?

However, in the studies of Lisitsyna T.L. (2011), a direct relationship between SLE symptoms and constant stress was noted in 35% of patients. This indicates that depressive disorders as a result of distress arise and develop with increased SLE activity [23].

The causes and mechanisms of the pathogenesis of anxiety-depressive spectrum disorders in rheumatic diseases are diverse and are associated with a wide range of psychosocial, neuroimmune and neuroendocrine factors [98].

A number of studies conducted to date have confirmed that chronic stress can lead to the development of various chronic somatic, including rheumatic diseases, and at the same time, ADD.

Studies investigating the relationship between depressive disorders and dysfunction of the hypothalamic-pituitary-adrenal system, stress and immune response regulation, chronic autoimmune inflammation, excessive production of inflammatory cytokines, chronic pain, fatigue and sleep disorders support a pathological link between RD and ADD [22, 54, . 81, 82, 88, 100].

In recent years, the diathesis (predisposition)-stress model, proposed in the 1960s, has been actively developed. This model identifies a triggering role in the development of chronic diseases, including depression and RD, which occurs against a background of a certain predisposition. The predisposition variants in this model are determined not only by hereditary factors, but also by the history of the subject, in particular, the presence of psychological trauma in childhood [8, 19].

Besides persistent stressors, psychological trauma during early childhood, especially parental neglect, loss of a parent, extended separation from the mother when young, and circumstances like being raised by distant family members or in an orphanage, are also linked to chronic physical illnesses (especially autoimmune conditions) and mental health issues. Many studies have shown that adults who have experienced two or more psychological traumas in childhood have a twofold increased risk of developing autoimmune diseases and depression. In addition, stress hormones and inflammatory mediators negatively affect the regulation of the hypothalamic-pituitary-adrenal axis and general adaptive function [44, 55,89, 107].

Many authors have attempted to link the neuropsychiatric manifestations of SLE with antineuronal, antiphospholipid, antiganglioside antibodies, and antibodies to ribosomal P protein. In SLE, a correlation between psychosis and depression has been observed, with an increase in the level of antiribosomal P antibodies at the onset of psychosis. Interestingly, the presence of high titers of antiribosomal P antibodies is a sign of psychosis associated not with the appointment of high doses of glucocorticosteroids, but with the exacerbation of SLE, and their detection may

have differential diagnostic significance. According to F. Conti et al., high levels of antiendothelial antibodies were detected in the serum of patients with SLE with psychiatric disorders (64.7%), while in the group of patients without psychiatric disorders it was 29.4% [22].

Researchers have focused on the impact of environmental factors on the body's immune and neuroendocrine systems. These factors include moderate to severe chronic stress, which is associated with the onset or worsening of depression in 83-86% of cases [24, 36, 101, 110].

Currently, certain researchers view depressive disorders as a distinct illness, emerging alongside rheumatic diseases. They believe these conditions share comparable triggers and mechanisms. In their view, anxiety-depressive disorders, akin to rheumatic conditions, are systemic and multifaceted diseases. Their development involves psychosocial, neuroimmune, and neuroendocrine elements. They also suggest that ADD, much like depression, is a systemic, multifactorial illness tied to the same factors [50, 80].

Psychosis, problems with thinking, shifts in mood, depression, and abrupt loss of awareness (altered mental state) were seen in SLE patients. Additionally, psychosis, along with mental and emotional disturbances (mood-related depression), were identified in 4/3 of the individuals [67].

In SLE, anxiety and mood disorders can be worsened by ongoing stress stemming from difficulties adjusting and worries about the unpredictable course of the physical illness [7].

Some studies have found a clear link between mental illness and the duration of physical illness, with each new episode of the disease progressively worsening the patient's quality of life, intimate relationships, and increasing the severity of depression and suicide attempts [30]. Systemic lupus erythematosus usually affects multiple organ systems throughout the body and causes widespread inflammation. People with SLE frequently deal with many symptoms, such as long-lasting pain, high temperature, tiredness, and skin problems. Nevertheless, some of the most common and troubling symptoms linked to SLE are anxiety and low mood. All of

the risk factors and the development of psychoemotional disorders listed above directly affect the course and severity of SLE. This requires paying sufficient attention to disorders in the psycho-emotional sphere from the initial stages of the disease.

### **1.3-§. Psychodiagnostics in rheumatology practice**

Currently, a number of studies have been conducted to study psychosomatic correlations in a number of somatic diseases, including arterial hypertension, cardiovascular diseases, bronchial asthma, diabetes mellitus, viral hepatitis, gastric and duodenal ulcers, and psoriasis. However, the number of studies conducted on this topic in rheumatology practice is limited.

In most cases, weakness, fatigue, sleep disorders, anorexia, appetite disorders, attention deficit disorder, and other vegetative symptoms in patients with somatic diseases prevent the detection of depressive and anxiety disorders in the early stages.

The task of psychodiagnostics is to study the patient's mental state, the changes that lead to his personality and social activity, as well as the possible consequences for the human psyche during the period of the disease and over time. Furthermore, psychodiagnostics aims to identify emotional and personality issues stemming from difficult traumatic events and to pinpoint crucial, conflicting elements in personal relationships, along with determining the most suitable defense and coping strategies.

A recent trend in patient-centered psychological assessment within internal medicine focuses on exploring the psychological adjustment of individuals grappling with long-term illnesses that present a tangible physical danger [5, 33].

Initial mental disorder (MD) assessment in rheumatology uses screening (early detection). Screening for anxiety and depressive disorders is advised for lupus (SLE) patients because these conditions often have serious negative effects [37].

Screening for ADD in patients with SLE is performed by a nurse or rheumatologist at the first visit or upon admission. If the screening result is positive, a psychopathological diagnosis is made by a psychiatrist [103].

In the psychodiagnostics of patients with RD, if symptoms are detected that allow suspicion of MD, it is necessary to conduct the same examination as in patients with similar symptoms who do not suffer from RD [37, 49, 52, 79, 80, 86, 98, 103].

Psychometric tests and questionnaires, encompassing self-report methods where the patient responds, are tools employed in psychological assessment. Utilizing these methods can reduce the time a clinician dedicates to evaluation and doesn't necessarily demand specialized expertise for result interpretation. Commonly used and insightful psychometric tools consist of the Hospital Anxiety and Depression Scale (HADS), the Beck Depression Inventory, and the Spielberger-Hanin Anxiety Scale. Repeated application of these tests provides an opportunity to observe and track changes in the patient's state [7, 28, 36, 111].

In the development of mental disorders in rheumatic diseases, secondary causes (endocrine diseases, drug abuse, etc.) should be excluded. Based on the ICD-10, a psychiatrist or rheumatologist, specifically trained in the diagnosis and management of ADD in patients with rheumatic conditions, makes the diagnosis. This protocol is designed for use in primary care settings [37].

Psychodiagnostics helps us decide on the key approaches to therapy by looking at a person's emotional issues, pinpointing stressors, which means doing a clinical-psychological-logical review of projective techniques [8, 24].

In their research, Kharchenko S.A. and colleagues employed the Battery test (a formal evaluation of neurotic symptoms) for psychological assessment. They utilized it to identify the frequency of asthenia, depression, anxiety, and hypochondriasis among patients. Moreover, they gauged the level of subjective control using the "LSC" questionnaire and assessed attitudes towards illness with the "type of attitude to the disease" approach. The intensity of psychological defense mechanisms was analyzed using the "Lifestyle Index" questionnaire [29, 99].

The application of medical psychology's concepts and techniques in treating physical illnesses is accelerating, which stems from a greater recognition of how a patient's individual traits and social-psychological influences affect both the onset and course of their condition and the effectiveness of their care. This validates that belief. Psychodiagnostics in rheumatology encompasses a variety of investigative procedures designed to assess the psychological dimensions of rheumatic ailments, including issues like stress, worry, depression, and coping mechanisms.

#### **1.4-§. Psychotherapy and psychopharmacotherapy in rheumatological practice**

Information exists regarding the significance of psychological assessment in gauging depression and anxiety levels within systemic lupus erythematosus, as well as methods for psychological adjustment. Nevertheless, because of limited research, the question of more efficient psychorehabilitation for individuals with systemic lupus erythematosus remains unanswered.

According to data, only one-fifth of patients with depression in rheumatic diseases are willing to discuss their mood problems with a doctor, and only one-fourth of them receive adequate psychopharmacological and psychotherapeutic support [19].

Insufficient psychotherapy and drug treatments for rheumatic conditions severely worsen the outlook for these illnesses. Moreover, when ADD is also present, individuals with rheumatic diseases face heightened pain, regular exhaustion, frequent sleep problems, major functional limitations, reduced well-being, and poor compliance with their anti-inflammatory and immunosuppressive treatments [46, 60].

When depression isn't addressed, it can worsen pain, lead to lasting inflammation because of constant tiredness, and complicate the progression of rheumatic illnesses. Research reveals that depression can double the chance of early death in individuals with rheumatic conditions, even when considering other potential contributors. In addition, cognitive impairment can lead to problems with

medication adherence, which can reduce treatment efficacy and negatively impact disease outcome [5, 20, 72, 109].

Suicide attempts are more frequent among patients with long-term illnesses, such as rheumatic diseases, compared to the broader public. Research indicates that, based on WHO mortality data, suicide is 45 times more prevalent in individuals with diagnosed SLE than in the general population [46].

Suicidal ideation has been reported in 8–34% of patients with a diagnosis of SLE across different populations using various screening methods [5].

Certain medications for physical ailments can cause depression and potentially raise suicide risk. Examples include corticosteroids, reserpine, blood pressure medications like propranolol, and some chemotherapy drugs [30].

Some researchers believe that in 45-70% of cases, a moderate or severe depressive episode precedes suicide. Approximately 70% of people who commit suicide suffer from an acute or chronic illness [40, 95].

In particular, depressive symptoms can be a cause or effect of suicidal thoughts. Therefore, the detection of suicidal thoughts in SLE requires immediate medical psychological and psychiatric evaluation. This reduces the risk of suicide in patients [46].

A suicidal attempt is an autoaggressive aggressive behavior that is motivated by an explicit or implicit intention to die, aimed at self-harm or self-destruction, manifested at least in the form of fantasies, thoughts, ideas, or actions [17,23,48,67].

The level of suicide varies among population groups that differ in socio-demographic, economic, medical and a number of other statistical indicators. Risk factors are probabilistic concepts, and their predictive value is relative. However, their significance increases with the combination of many factors.

The main risk factors include socio-demographic, medical, biographical, individual psychological and others.

Given the diverse ways depression presents itself, simply prescribing antidepressants and neuroleptics within a comprehensive treatment plan for rheumatic conditions isn't sufficient. The core of depression is significantly shaped

by an individual's makeup and exposure to stressors. Considering shared underlying mechanisms, inadequate psychopharmacological intervention may worsen rheumatic disease. Conversely, addressing mental health issues can support an anti-inflammatory response and positively affect rheumatic conditions [19].

Because rheumatic diseases and depression share aspects of their development, specific immune system targets crucial for treating these illnesses have been explored, with anti-inflammatory cytokines highlighted as key. Lately, studies have shown that genetically engineered biologic medications, known to reduce cytokines, help alleviate depressive symptoms, including feelings of tiredness, in some people with rheumatic diseases [19, 45, 54, 55, 66, 67, 101].

On the other hand, studies have shown that the concentration of inflammatory markers in depressed patients is normalized against the background of successful antidepressant therapy [19, 69].

Because of the concentration on the immune system's role in SLE, anxiety and depression are frequently overlooked and not properly treated. These issues are sometimes seen as a "natural" reaction to a long-term condition. Diagnosing depression is further challenged by symptom overlap with SLE (e.g., persistent tiredness, movement difficulties, weight changes, sleep issues, loss of interest in food). Moreover, non-psychiatric doctors may lack the time and knowledge needed to spot mental health disorders [19].

An additional factor in the development of psychoemotional disorders is the use of high doses of painkillers, in particular nonsteroidal anti-inflammatory drugs and corticosteroids, for a long time [22, 41, 93].

Patients diagnosed with SLE should be transferred to a specialized psychiatric department if there is a risk of harm to their own life or health or to others [11, 36, 49, 80, 103].

If SLE is highly active and acute psychosis or delirium is observed, patients are prescribed high doses of GCS in combination with cytotoxic drugs. Plasmapheresis, intravenous immunoglobulin, and rituximab (monoclonal anti-CD-

20 antibodies) are employed to improve tolerance of regular immunosuppressive treatment [37].

If a patient in the rheumatology department experiences acute psychosis, administer benzodiazepine tranquilizers or sedative antipsychotics without delay, specifically haloperidol (2.5-5.0 mg intramuscularly). Delirium treatment is heavily influenced by its specific features; thus, a prompt assessment is crucial before starting medication. For significant psychomotor agitation, consider sedative neuroleptics (mainly haloperidol 0.5-2.5 mg intramuscularly), typically used in low doses. Compared to benzodiazepines, these are generally considered safer in cases of delirium [8].

Within the multifaceted approach to treating SLE, current antidepressants, alongside conventional treatments, and neuroleptics, beyond their impact on depression, can improve asthenic syndrome in ADD patients [10,57].

Effective antidepressant treatment, administered in adequate daily doses, not only provides an antidepressant effect but also has an anti-inflammatory effect. Enhancing patient adherence through the betterment of their mental state is equally crucial [10].

Correction of psychoemotional disorders in patients with SLE should be supervised by a medical psychologist, psychiatrist. For individuals with RD, regular weekly meetings with either a psychiatrist or rheumatologist are essential. This specialist must have specific experience in diagnosing and treating SLE. Unless the situation is manageable, psychotropic medications are avoided. If treatment is ineffective, the dose of the drugs should be adjusted or changed to another group of drugs. If the mental state improves after long-term (> 6 months) use of antidepressants, their daily dose can be gradually reduced [49].

For systemic lupus erythematosus (SLE) patients experiencing apathetic cognitive issues, flupentixol (1-2 mg daily) can be a beneficial treatment. In cases where SLE presents with anxiety, doctors often recommend low daily doses of noradrenergic antidepressants, such as amitriptyline (12-25 mg), together with anxiolytic neuroleptics, like sulpiride. If there is no inconsistency in the use of drugs

used in the treatment of rheumatic diseases and drugs used in psychopharmacotherapy, their therapeutic effect will occur quickly. Examination of cognitive functions, timely detection of their disorders, their medical and psychological correction have a positive effect on the course of the disease [37].

When prescribing psychopharmacotherapy, it is necessary to take into account the side effects of the drug and the clinical manifestations of the RC. When kidney function is impaired, it's crucial to evaluate the potential risks associated with psychotropic medications. If risks are considerable, the drugs are avoided; otherwise, with moderate risk, low psychotropic drug dosages are administered (equivalent to 30-50% of the usual daily dose) [7].

Be careful when giving selective serotonin reuptake inhibitor (SSRI) antidepressants to patients who are also on nonsteroidal anti-inflammatory drugs, because this combination elevates the chance of gastrointestinal bleeding. If switching the antidepressant isn't an option, proton pump inhibitors (like omeprazole) are usually prescribed [49].

When co-prescribing psychopharmacological drugs and warfarin, their influence on the cytochrome P450 system must be considered to avoid interactions. Fluoxetine and fluvoxamine (slowing down metabolism and intensifying warfarin's effects), and carbamazepine (reducing warfarin's anticoagulant effect) have a strong impact. Paroxetine has a moderate impact (increasing warfarin's effect). Citalopram and sertraline are the safest antidepressants when warfarin is prescribed, with a minor increase in prothrombin time and international normalized ratio observed. Lithium, sulfide, and amisulpride are deemed safe when combined with warfarin since they do not impact the cytochrome P450 system's isoenzymes. Prothrombin time monitoring is necessary when prescribing psychotropic drugs that influence warfarin metabolism [49, 77, 96].

To avoid drug dependency, it's important to restrict the use of benzodiazepine sedatives and sleeping aids, especially during sudden stress, and when starting antidepressant treatment. Benzodiazepines are best avoided for patients who have coordination problems. Remember that as anxiety lessens, sleep improves, and the

need for both benzodiazepine and non-benzodiazepine tranquilizers and hypnotics typically diminishes; continuation is usually unnecessary [49].

Haija and Schultz (2011) emphasize the need for an alternative approach to the treatment of SLE and recommend the addition of psychotherapy methods as an adjunct [43, 62].

Multiple studies have assessed how effective psychotherapy is for autoimmune diseases. These studies have revealed that psychological interventions in those with lupus (SLE) result in improvements in their well-being, along with reduced depression and anxiety, and positive changes in how they relate to others, self-perception, and general health. However, they have some shortcomings, such as small sample sizes, lack of randomization, and positive results in only a few areas [43, 88].

Céu T. M. C. (2019) et al. employed psychoanalytic psychotherapy in their research to address psychoemotional issues in SLE patients. Drawing from Alexander's work in psychosomatic medicine, Pierre Marty created a prominent psychoanalytic theory centered on perception to explain psychosomatic processes. This concept resembles alexithymia, where individuals struggle to identify and manage their feelings. Therapy for such patients should be targeted, face-to-face once a week, and should focus on observing body language, expressing emotions, and facilitating instinctive arousal [43].

The Psychiatry Department at the Escola Paulista de Medicina, Federal University of São Paulo, has employed group psychotherapy to treat somatoform disorders. They have established a psychoanalytic setting tailored for these patients [40].

Navarrete N. and colleagues (2010) demonstrated that using medication alongside psychoanalysis as supplementary support for individuals with physical ailments assists them in coping with their condition and boosts their receptiveness to treatment [88].

Grekhov R.A. in his studies noted that anxiety-depressive disorders can be psychocorrected by using the biological reconnection (biofeedback) method in rheumatological patients.

Contemporary therapeutic approaches primarily focus on engaging and fostering the patient's innate strengths. A key component of these resources involves the psychological dimensions of their character, especially how they adapt to and cope with their illness [4].

Based on the above data, the study of psychoemotional disorders in rheumatic diseases, in particular, in SLE, remains an urgent problem. Since the MDs in the disease lead to a sharp decrease in the quality of life of patients. Unfortunately, there is currently no cure for SLE, but there are treatments that can help manage symptoms. One such treatment is psychopharmacotherapy, which involves the use of psychiatric medications to control the emotional and psychological symptoms associated with SLE. This form of therapy can be particularly helpful for patients who experience depression, anxiety, or other mental health problems in addition to the physical symptoms of the illness. When used in conjunction with other treatments, such as corticosteroids and immunosuppressants, psychopharmacotherapy can help improve a patient's outcomes and overall quality of life.

Successful treatment may involve therapy, medication, or a blend of both. "Therapy" is a structured method that assists patients in managing the emotional effects of a physical ailment. Combining medication, therapy, and relaxation practices in treatment can be efficient in lessening symptoms and boosting patients' well-being. In addition, self-care strategies such as exercise, relaxation techniques, and stress management may be helpful in managing anxiety through lifestyle changes in rheumatology patients. In addition, patients may seek support groups where they can connect with others who have gone through similar experiences.

Collaborative approaches that involve mental health professionals and rheumatologists can help in the comprehensive assessment and management of these diseases.

## **§ 1.5. Chapter summaries**

Systemic lupus erythematosus is a chronic autoimmune disease that causes many problems that reduce the quality of life of patients, including physical symptoms such as fatigue, pain, and cognitive dysfunction. In addition, the disease causes adverse psychosocial consequences, including depression, anxiety, and reduced social and occupational functioning.

Patients diagnosed with SLE can find it difficult to cope with the uncertainty and unpredictable outcomes that come with it. They may experience strong emotions such as depression, anxiety, and even helplessness as they try to manage their symptoms and adjust to their new life. Psychodiagnostics is key for promptly spotting and addressing the emotional and psychological effects of SLE. It also assists in creating effective methods for coping with chronic autoimmune diseases, and in lessening the effect that anxiety and depression have on the health and overall well-being of patients.

The mental and emotional dimensions of rheumatic conditions can be assessed through both medical and psychological evaluations, plus emotional surveys, conversations, and observations. Recognizing these factors is crucial for thorough and effective treatment of individuals with rheumatic diseases. The use of various methods of psychological diagnostics by medical psychologists, psychotherapists, psychiatrists and rheumatologists, due to an integrated approach to the patient, allows patients suffering from this chronic disease to lead a normal lifestyle.

The principles of providing medical and psychological care in Uzbekistan, including the early detection of anxiety and depressive disorders in systemic lupus erythematosus, the impact of this condition on the quality of life of patients and the effectiveness of Gestalt therapy, have not been studied in recent years. This requires a detailed and comprehensive study of these issues. Accordingly, due to the small sample size, lack of randomization and the lack of positive results in only a few areas, future research in this area is of urgent and scientific and practical importance.

The goal of this study is to increase the ability of patients to adapt to new living conditions and improve their treatment and rehabilitation process through the

timely use of effective psychodiagnostics, psychopharmacotherapy, and psychotherapy methods.

## **Chapter II. EMPIRICAL STUDY OF ANXIETY-DEPRESSIVE DISORDERS IN SYSTEMIC SYMPTOMS**

### **(Research materials and methods)**

#### **2.1-§. General characteristics of the subjects**

The research involved 80 systemic lupus erythematosus patients who received care at the rheumatology department of the multidisciplinary clinic of the Tashkent Medical Academy between 2017 and 2019. The cohort consisted of patients aged 18-40 years, their average age was  $28\pm 9.2$ , and all were women. The research was carried out in individuals with systemic lupus erythematosus that was in a subacute phase.

#### **Criteria for forming study groups**

The clinical diagnosis of systemic connective tissue disease in the patient was carried out by the attending physician in the rheumatology department of the hospital. In order to exclude chronic neurological pathology, patients were examined by a neurologist in addition to a medical psychologist.

#### **Inclusion criteria for the study:**

1. Age from 18 to 40 years (adolescence according to the WHO classification in 2017);
2. Duration of the disease from 1 to 5 years;
3. Diagnosis: Systemic connective tissue disease. Systemic lupus erythematosus subacute course;
4. Absence of additional diseases that aggravate the patient's condition;
5. Subjective data on the patient's psychoemotional disorders;
6. Patients in stable condition;
7. Patients who agreed to participate in the study.

### **Exclusion criteria for the study:**

1. Age under 18 and over 40,
2. Acute and chronic course of SLE;
3. Presence of mental illness;
4. Severe cognitive impairment;
5. Suicidal attempts;
6. Comorbidity other than epilepsy and connective tissue disease;
7. Patients who refused to participate in the study.

### **General characteristics of the study groups:**

Based on the goals and objectives of the dissertation, the patients were divided as follows (Figure 2.1.1):

In order to compare the effectiveness of the applied psychotherapy and psychopharmacotherapy, 80 patients in the Main Group were divided into 2 groups:

A) 40 (50%) patients who received Gestalt therapy and psychopharmacotherapy (PPT) (antidepressant and anxiolytic) in addition to basic treatment;

B) 40 (50%) patients who received rational psychotherapy and PPT in addition to basic treatment;

2) 40 (100%) examinees in the control group - persons with no organic and mental disorders (practically healthy).



**Fig. 2.1.1. Distribution of patients in the main group.**

## **§ 2.2. Research methods**

All patients underwent objective and rheumatological paraclinical examinations on the day of admission to the hospital. The patient's medical and psychological status was recorded in a medical and psychological questionnaire (Ibodullaev Z.R., 2018) [3]. This method is based on a psychological interview, collection of psychological history and identification of cognitive processes using clinical examinations. This questionnaire contains general information about the patient: name, age, gender, ethnicity, marital status, profession and duration of treatment. In addition, the patient's main complaints, disease and life history, psychological history are listed. The psychological status determines the presence or absence of pathologies of the subject's temperament, personality, sensory and cognitive spheres, behavior, attention and memory. The results of psychometric tests, determination of the duration of psychopharmacotherapy and psychodiagnostic courses are also included in this questionnaire.

Psychological tests were used to objectively assess the dynamics of the identified psychoemotional disorders. For this purpose, the HADS (Hospital Anxiety and Depression Scale), which is widely used in clinical practice, was selected. This scale, developed by A.S. Sigmund and R.P. Schnait (1983), is adapted for patients undergoing treatment in a hospital setting and is considered to be very easy to use and draw conclusions. The scale is completed by the patient. It takes 10-15 minutes to complete. When forming the HADS scale questions, the authors excluded somatic symptoms of depression. This allows for a more accurate assessment of the symptoms of pure depression and anxiety in the patient.

The “Hospital Anxiety and Depression Scale” consists of 14 items, each of which has 4 response options indicating the severity of the detected symptom: 0 - no symptoms; 1 - mild; 2 - moderate; 3 - severe. Thus, an increase in the level of scores indicates an increase in the level of depression and anxiety.

The SF-36 Health Status Survey was used to determine the quality of life indicators of patients.

Chronic disease in patients with diagnosed SLE, constant intake of glucocorticosteroid drugs, and psychoemotional disorders negatively affect the course of the disease, reducing the quality of life and leading to disability in 25-57% of cases.

According to SLE patients, quality of life is the state of health, feeling good, maintaining the ability to serve oneself and work. Patients with SLE have a lower functional status than the general population due to the specific symptoms of the disease, which leads to a decrease in quality of life. Disbelief in the disease and obsessive thoughts about it, pain, and fatigue are stressors and contribute to a decrease in the patient's quality of life [6].

Currently, many questionnaires are used in the world to assess the quality of life. The modern concept of studying the quality of life in medicine is characterized by 3 main features;

1. Multidimensionality: quality of life includes information about all major areas and manifestations of human life. Health-related quality of life assesses

disease-related and non-disease-related components, helps to determine the impact of treatment and disease on the patient's condition.

2. Temporal variability. Quality of life changes over time depending on the patient's condition. Quality of life data allow for continuous monitoring of the patient's condition and, if necessary, treatment correction.

3. Patient participation in assessing the patient's condition. This feature is of primary importance. The patient's own assessment of the quality of life is an important and reliable indicator of his general condition. Together with information on the quality of life, the doctor's medical opinion helps to establish a complete and objective course of the disease.

The main tool for analyzing the quality of life are special questionnaires. Questionnaires are general (used to assess the quality of life of the population) and specific (used to assess the quality of life in a specific disease). In addition, the questionnaire must meet certain requirements, namely;

- universal (must comprehensively cover all parameters of quality of life);
- reliable (record the individual characteristics of the quality of life of each respondent);
- sensitive (detect any significant changes in the health of each respondent);
- reproducible (test = pretest);
- should be short and simple to use;
- standardized (provide standard questions and answers with the same options for all groups of respondents);
- evaluative (provide a quantitative assessment of quality of life parameters).

When studying quality of life, using only approved questionnaires is necessary to ensure dependable data. General questionnaires are advantageous as they allow for comparing how different medical programs influence quality of life, whether within a specific group, disease, or the population overall. These general tools are versatile and often evaluate factors such as physical and social well-being,

emotional state, mobility, self-worth, and contentment with life. The SF-36 questionnaire is a widely used example. It's a general tool for measuring the quality of life in patients with diverse conditions and for comparing these measures to those of a healthy population. Furthermore, the SF-36 is suitable for adults, including respondents 14 and older. This questionnaire is considered effective, concise (containing 36 questions), and simple to administer.

Consequently, the SF-36 questionnaire was utilized for this phase of assessing patient quality of life.

### **SF-36 Questionnaire**

Criteria for assessing quality of life according to the SF-36 questionnaire:

**1. Physical role functioning (PF).** The individual provides a personal judgment regarding their current physical activity level while healthy. They perceive a direct relationship: more activity equates to a greater capacity for physical exertion, as judged by them.

**2. Role of physical problems in limiting daily activities (RP).** The respondent is asked to rate the degree of limitation of daily activities due to a health problem over the past 4 weeks. In this case, an inverse correlation relationship arises; the higher the indicator, the less limited his activity is, in the opinion of the respondent.

**3. Bodily pain (BP).** The respondent characterizes the role of his pain sensations in limiting daily activities over the past 4 weeks. In this case, an inverse correlation is observed; the higher the indicator, the less mixed pain sensations affecting daily activities.

**4. General health (GH).** The respondent gives an overall subjective assessment of his current health. It is observed in a positive correlation; the higher the general indicator, the higher the respondent assesses his health.

**5. Vitality (VT).** The patient assesses the level of activity in his life over the past 4 weeks. Positive correlation; the higher the score, the higher the respondent

assesses the activity in his life or the more time during the past 4 weeks he felt full of energy and activity.

**6. Social functioning (SF).** The patient subjectively assesses the level of interaction with friends, relatives, and colleagues over the past 4 weeks. Positive correlation is observed; the higher the score, the higher the patient assesses the level of social interaction.

**7. Role of emotional problems in limiting life activities (RE).** The respondent assesses the degree of limitation of daily activities associated with emotional problems over the past 4 weeks. Inverse correlation is observed; the higher the score, the less the respondent believes that his emotional state has affected his daily activities.

**8. Mental health (MH).** The respondent assesses his/her mental state (joy, peace, tranquility, etc.) over the past 4 weeks. A positive correlation is observed; the higher the indicator, the better the patient's mood or the more calm and peaceful he/she felt during the past 4 weeks.

### **2.3-§. Psychopharmacotherapy of anxiety-depressive disorders in systemic lupus erythematosus**

In order to correct psychoemotional disorders, patients in both groups were given psychopharmacotherapy along with basic treatment. Psychopharmacotherapy was prescribed to both groups from the first day of the medical-psychological examination. For the purpose of psychopharmacotherapy, fluvoxamine (fevarin) 100 mg was administered. The medication specifically prevents serotonin from being taken back up, resulting in more of the neurotransmitter in the space between nerve cells, thereby boosting its impact on the receptors of the receiving cell.

The drug is used for depression of various genesis, obsessive-compulsive disorders. Contraindications to use are hypersensitivity to this drug and simultaneous use with drugs of the same composition, MAO inhibitors and tizanidine. Caution is

required when using fevarin in severe hepatic and renal failure, epilepsy, the elderly, thrombocytopenia, and pregnancy.

Afobazole (fabomatizol) has been included in the psychopharmacological regimen as an anxiolytic agent. Afobazole is a selective nonbenzodiazepine anxiolytic. It affects the  $\sigma_1$ -receptors of brain nerve cells, stabilizes GABA/benzodiazepine receptors and restores their sensitivity to endogenous inhibitory receptors. Afobazole also increases the bioenergetic potential of neurons and has a neuroprotective effect: it restores and protects nerve cells. The effect of the drug is mainly a combination of anxiolytic (anti-anxiety) and partly mild stimulant effects. Afobazole reduces or eliminates somatic manifestations of anxiety, bad mood, fear, irritability, tension, fatigue, sleep disorders, depression, anxiety, and is also effective in restoring cognitive functions. The drug can be used for anxiety, suspicion, distrust, increasing weakness and emotional instability, especially in people with asthenic nature.

This medication is prescribed for adults dealing with anxiety disorders, specifically generalized anxiety disorder, neurasthenia, and adaptation difficulties. It's also used in cases of several physical conditions, including bronchial asthma, systemic lupus erythematosus, irritable bowel syndrome (IBS), high blood pressure, and irregular heartbeats (arrhythmias). In addition, it can be used for anxiety-related sleep disorders, neurocirculatory dystonia, premenstrual syndrome.

Contraindications to the use of the drug:

High sensitivity to the components of the drug, pregnancy, lactation and children are not allowed.

#### **2.4-§. Psychotherapy methods**

Psychotherapy is a method of verbal treatment of pathological conditions and diseases that exist in a person.

For the purpose of psychotherapy, the Gestalt therapy method was used in the A-subgroup of the main group. The psychotherapy method was carried out on the first day of the medical-psychological examination. An algorithm for providing

psychotherapeutic assistance using Gestalt therapy techniques to patients diagnosed with SLE and diagnosed with anxiety-depressive disorders has been developed.

### **Gestalt therapy**

Gestalt therapy, as conceived by Frederick and Laura Perls, draws on the idea of "Gestalt," a term originating in the cognitive psychology field that emerged in Germany and Austria towards the close of the 19th century. Gestalt therapy is one of the methods of psychotherapy based on psychoanalysis and Zen Buddhism. According to Perls, human behavior is not driven by instincts, but by unmet needs, unfinished gestalts.

What is an unfinished gestalt? Any unmet needs, unfinished situations form "gaps" (black holes) in the human mind - unfinished gestalts.

Gestalt in German means "form". More precisely, the forms do not have any meaning in isolation from each other. Their specific organization forms a kind of integrity, because the whole is made up of parts that are determined by their interconnectedness and interaction. "This is the main principle of the Gestalt approach.

Gestalt therapy aims for more than just fixing issues; it seeks to reshape the client's overall perspective. Instead of directly resolving a particular problem, it empowers the client to tap into their inner resources, fostering self-reliance and promoting healthy interactions with others.

Gestalt therapists, in order to understand the client, work based on his personal experience. The world with which a person encounters cannot be separated from his personal experience:

1. Unity of body and soul. The Perls believed that people function in a certain integrity. Emphasis is placed on integration, not fragmentation.

2. The organism is viewed as a whole. In solving the problem, the client is viewed as a whole "form".

3. Attune the client to the principle of "here and now". Anxiety is a conflict between the "now" and "then" situations.

4. The superiority of the concept of “how” over “why”. “In full awareness, you can notice the body’s self-regulation and watch it regulate itself without interfering with it.”

5. The process of awareness is central. The process of awareness is the expansion of the scope of self-awareness, the main factor that hinders it is the avoidance of awareness.

Gestalt therapy can be of significant help to patients with SLE, helping them to better understand and manage their feelings and symptoms. Gestalt therapy is a holistic form of psychotherapy that focuses on the present moment and helps people identify and resolve emotional blocks that may be interfering with their ability to function in everyday life. The Gestalt therapist helps patients learn to listen to their bodies and feelings better, and also helps patients develop more effective strategies for managing stress and symptoms of illness. This includes meditation exercises, deep breathing exercises, movement, visualization, and other techniques that help improve the patient's attitude towards their health and well-being.

For the purpose of psychotherapy, the B-subgroup of the main group used the method of rational psychotherapy.

Rational psychotherapy suggests that a patient's feelings, and thus their thoughts, are the root of psychosomatic disorders. The patient can manage these feelings with their thinking. This approach utilizes psychological techniques to educate the patient about the illness's origins, the reason for symptoms, and how to harness their potential to cope.

Rational psychotherapy involves:

- Assessing personality and the factors contributing to the illness.
- Explaining the illness's origin, development, and recovery options patiently.
- Developing a personalized treatment plan and shifting the patient's perspective on the condition.

- Encouraging the patient's engagement and the development of personal strengths.

- Supporting any beneficial thought or strategy that arises.

### **§ 2.5. Algorithm for psychocorrection of patients with systemic lupus erythematosus**

The principles of psychocorrection in SLE include the following:

- Express sympathy for the patient and gain his trust;
- Ensure that the patient undergoes examinations;
- Make sure that the diagnosis is correct;;
- Pay attention to the patient's specific problem, for example, depression, fear, anxiety;
- Let's walk through your symptoms step-by-step to understand what's affecting your mental well-being.;
- Pinpoint the issue that's impacting your mental health;
- Identify and discuss unrealistic expectations or dissatisfaction with treatment;
- Identify treatment goals and discuss treatment plan;
- Focus treatment on reducing symptoms and disability;
- Individualize medication therapy;
- Conduct regular counseling sessions;
- Help the patient take ownership and responsibility for their treatment;
- Helping the patient overcome false beliefs and fears about psychotropic drugs;
- Preventing and correcting side effects.

An algorithm designed to address psychoemotional issues in SLE was created; it involves these steps:

### **Stage 1. Medical psychological analysis**

Currently, the study focuses on patient-reported symptoms of anxiety and depression, and the Hospital Anxiety and Depression Rating Scale (HADS) is employed to form assessments. In addition, the first two techniques of Gestalt therapy are used in conjunction with PFT.

### **Stage 2. Correct understanding of psychoemotional problems**

In Gestalt teaching, the process of understanding is central. The process of thinking is an expansion of the scope of self-awareness, the main factor that hinders it is avoidance of understanding. “In full awareness, you can notice the body’s self-regulation and observe it self-regulation without interfering with it.”

This step assists patients in forming accurate understandings of their emotions, using various methods from Gestalt therapy.

The formation and completion of Gestalt depends on the ability of a person to clearly identify his needs and to communicate with the environment in order to satisfy these needs. Communication with the environment depends on several aspects. First, on the ability to distinguish the environment from himself, and secondly, on the ability to distinguish the individual’s own characteristics, for example, feelings, their truth and polarity. For the psychotherapist, it is important to know the patient’s opposing qualities, and most importantly, to know the feelings that accompany the struggle of these opposites. The struggle of opposing personal qualities often causes conflicts within us.

### **Stage 3. “Breaking the mold”**

In Gestalt theory, the body is viewed as a whole. Therefore, when solving a problem, the client is viewed as a whole “form”.

In Gestalt therapy, the concept of “How” prevails over “Why”.

Currently, the individual starts to execute routine actions with a modified approach, using specific Gestalt therapy methods.

#### **Stage 4. Strengthening the achieved psycho-emotional stability**

This is the concluding phase, where the psycho-emotional equilibrium attained earlier by patients is reinforced through the explanation of specific processes.

##### **Accepting responsibility for oneself**

The cause of any neurotic mechanism is the inability of a person to accept responsibility for himself.

In Gestalt therapy, the client must first of all be responsible for his actions, thoughts, and feelings. In Gestalt therapy, responsibility is the main attribute of a real person, that is, an ideal model of human development.

A real person knows the differences between feelings and thoughts, fantasies, does not interpret the truth in his ideas, does not demand that they correspond to his expectations. Taking responsibility is primarily responsible for a person's inner world, for understanding his feelings and needs and acting in accordance with them, for believing in what he feels. Therefore, the actions of a real person correspond to the environment. A real person is aware of all the elements of interaction with the environment, they know the limits of their capabilities. They believe that happiness depends not on other people and circumstances, but on themselves. Therefore, they create this situation themselves, consciously choose their own life path, implement their own life direction.

##### ***Algorithm for working with losses in life:***

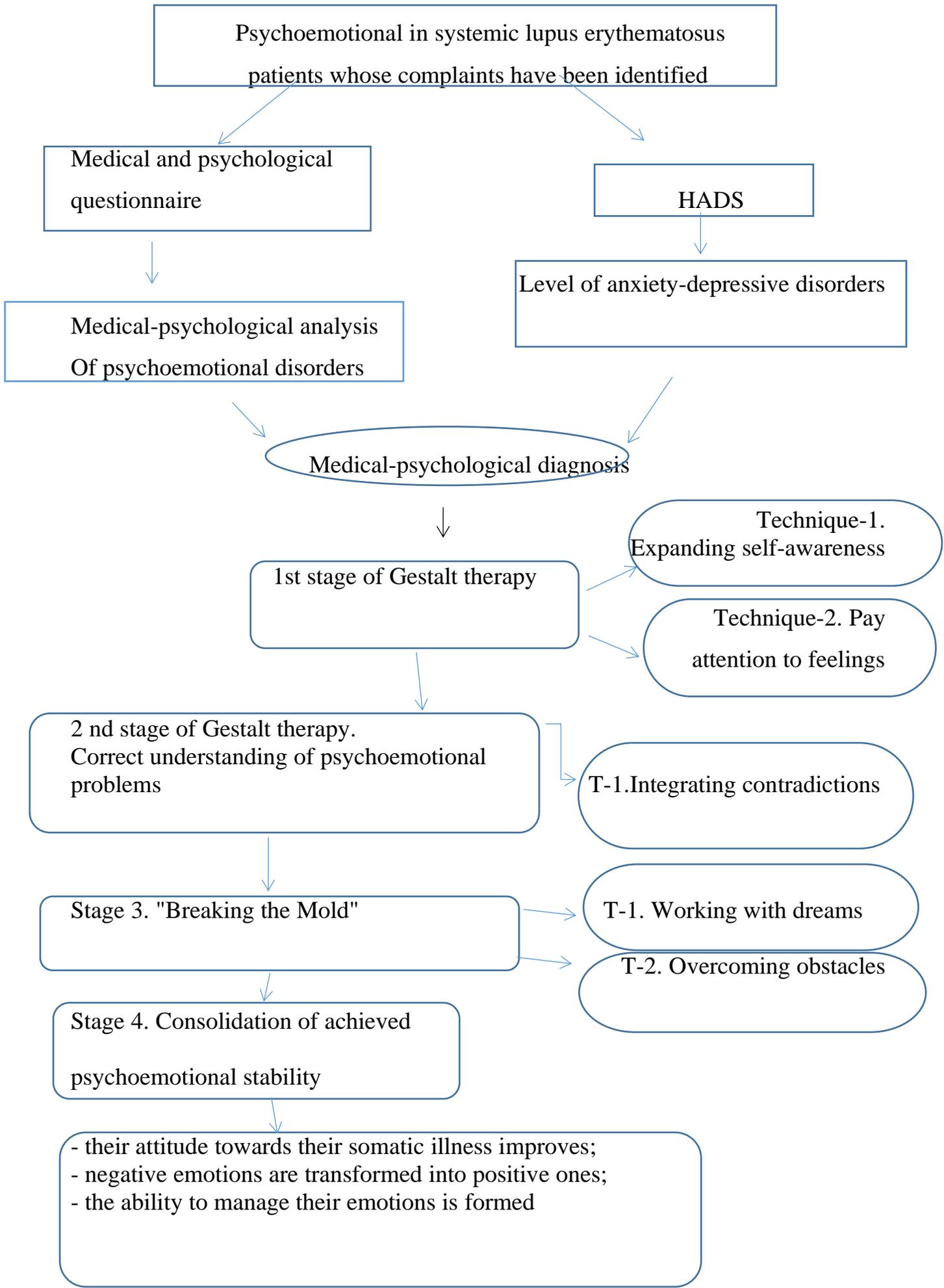
1. Disbelief - the client denies the tragedy in his life, does not understand it.
2. Pain - after realizing the denied situation, the person walks with the pain of asking "why did this happen?"
3. Aggression - because he cannot satisfy his pain, he behaves aggressively towards others.

4. Confusion - because the client cannot find a solution, he hesitates.

5. Seeing the world with a new perspective - eventually, the client begins to get used to the events that have happened and begins to see the situation from a different perspective.

**Contact** - one of the main concepts of Gestalt therapy. Just as the body cannot live in an environment without oxygen, the environment also cannot live without its flora and fauna. Similarly, a person cannot develop alone. Because people satisfy their desires and wishes only through contact with the outside world and others. The place where the body meets the environment is called the contact boundary. The more skillfully a person manages the contact boundary, the more fully he can satisfy his needs. If the contact boundary gets out of control, contact with the environment and other people becomes ineffective.

Accordingly, the following algorithm has been developed to correct psychoemotional disorders in patients diagnosed with SLE:



## **§ 2.6. Method of statistical analysis of results**

The statistical analysis methods available in the Microsoft Office Excel 2007 program were used to analyze the data. Generally accepted criteria were used to assess the reliability of the results obtained (Lakin B.F., 1990). Using variational parametric and nonparametric methods of statistics, the arithmetic mean (M) and standard deviation (m) were automatically calculated. The statistical reliability of the indicators was calculated using the Student's test (t). The result was considered reliable if the statistical reliability of the indicators was  $P < 0.05$ .

## **§ 2.7. Chapter summeries**

This chapter outlines tests aimed at identifying shifts in systemic lupus erythematosus across various stages, starting from the initial days of a patient's hospital stay. This includes evaluations via a medical-psychological questionnaire (combining objective and subjective measures), focusing on the psychoemotional aspect - anxiety and depression assessed using the HADS scale. Also, the document details how to evaluate the patients' quality of life employing the SF-36 questionnaire. These tests serve to detect anxiety and depressive disorders in systemic lupus erythematosus patients, particularly early on, with the aim of creating a psychological profile. The information is used to develop customized treatment plans based on each patient's identified psychoemotional issues. This approach is intended to improve disease management, enhance treatment outcomes, and refine the psychotherapeutic process by improving quality of life indicators, especially those related to psychological well-being.

## **CHAPTER III. STRUCTURE AND DYNAMICS OF ANXIETY- DEPRESSIVE DISORDERS IN SYSTEMIC LUPUS ERYTHEMATOSUS**

### **§3.1. Clinical and psychological analysis of patients with systemic lupus erythematosus**

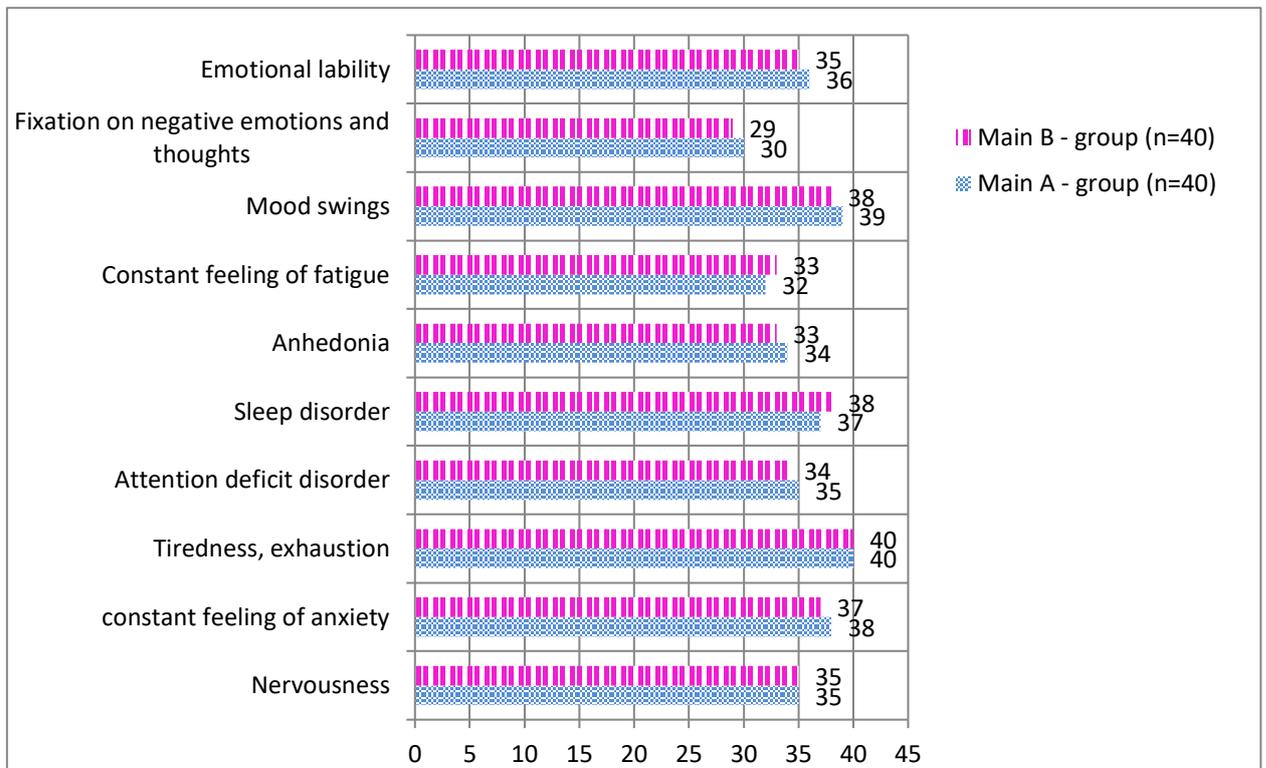
Anxiety and depressive disorders frequently occur in systemic lupus erythematosus and represent significant psycho-emotional issues within the illness's presentation. Failing to identify and address these issues promptly impairs treatment efficacy and hinders patients' ability to resume normal activities. Consequently, early detection and psychological intervention for psycho-emotional disorders in systemic lupus erythematosus is a pressing concern in contemporary rheumatology.

This study examined patients' medical histories across two groups, disease stages, physical and laboratory assessments, and any pre-existing health conditions.

A medical-psychological questionnaire was employed to evaluate patients' subjective experiences of anxiety and depression.

Accordingly, in the main group A, 38 (95%) patients had a constant feeling of anxiety, nervousness in 35 (87.5%) patients, fatigue and exhaustion in 40 (100%) patients, attention deficit disorder in 35 (87.5%) patients, sleep disorder in 37 (92.5%) patients, anhedonia in 34 (85%) patients, a feeling of constant fatigue in 32 (80%) patients, emotional lability in 36 (90%) patients, mood swings in 39 (97.5%) patients, a sense of fear in 32 (80%) patients, and a fixation on "bad" emotions in 30 (75%) patients.

In group B, 37 (92.5%) patients had a constant feeling of anxiety, nervousness, 35 (87.5%) patients had fatigue, exhaustion, 34 (85%) patients had attention deficit disorder, 38 (95%) patients had sleep disorder, 33 (82.5%) patients had anhedonia, a constant feeling of fatigue, 33 (82.5%) patients had emotional lability, 38 (95%) patients had mood swings, 30 (77.5%) patients had a feeling of fear, and 29 (72.5%) patients had fixation on "bad" emotions ( Figure 3.1.2.).



**Fig. 3.1.2. Analysis of psychoemotional symptoms in patients with systemic lupus erythematosus (main group n=80)**

Chronic illnesses like SLE are often associated with despair, worry, and sadness. In our research, individuals with SLE reported subjective experiences including persistent anxiety, unstable emotions, shifts in mood, sleep problems, feelings of fear, and a focus on negative feelings. This is partly due to the significant changes experienced by patients with SLE in their lives, including changes in physical abilities, social activity, and quality of life. Therefore, it is important to carefully monitor patients for changes in appetite, sleep patterns, feelings of sadness, or low mood. This allows for early detection of symptoms in patients and appropriate correction.

**3.2-§. Assessment of the psychoemotional state of patients in the main and control groups using the HADS scale**

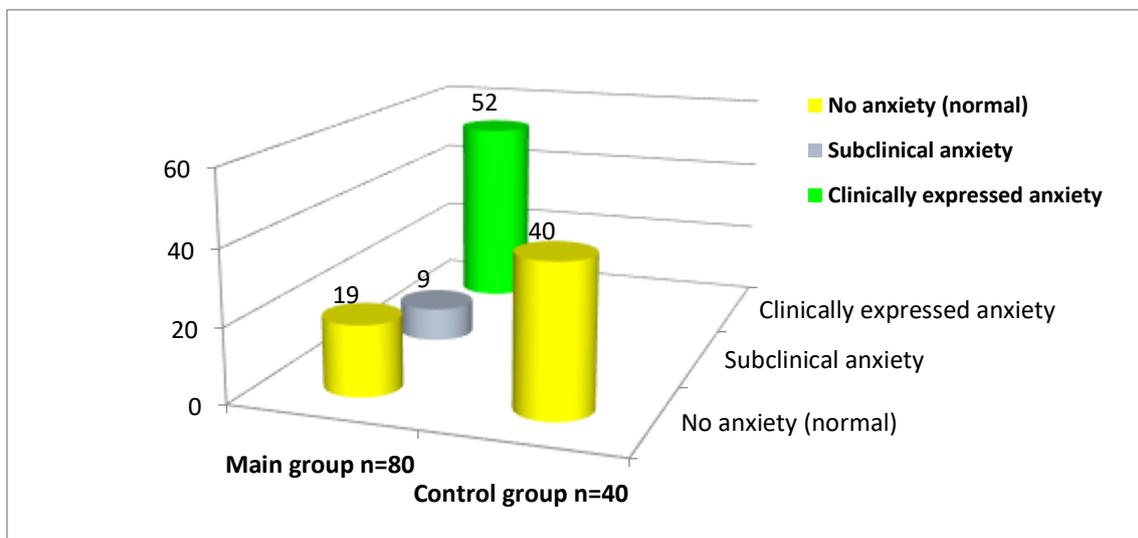
The presence of anxiety or depression or the severity of its clinical forms in patients with a diagnosis of SLE was analyzed using the HADS scale.

According to the analysis of the indicators of types of anxiety (clinical, subclinical anxiety) according to the HADS scale, in patients with a diagnosis of SLE in groups “A” and “B” (n=80), clinical anxiety was 66.0%, while subclinical anxiety was 10.7% (Table 3.2.1). (Figure 3.2.3 shows the distribution of anxiety indicators by the number of patients in the main and control groups)

**Table 3.2.1**

**Distribution of anxiety in the main and control groups (%)**

Anxiety	Main group n=80		Control group n=40	
	%	Score	%	Score
Clinically expressed anxiety	66,0±4,9	14±3,1	-	-
Subclinical anxiety	10,7±12,6	9±1,1	-	-
No anxiety (normal)	23,1±8,0 *	4±3,0	100*	3±2,7



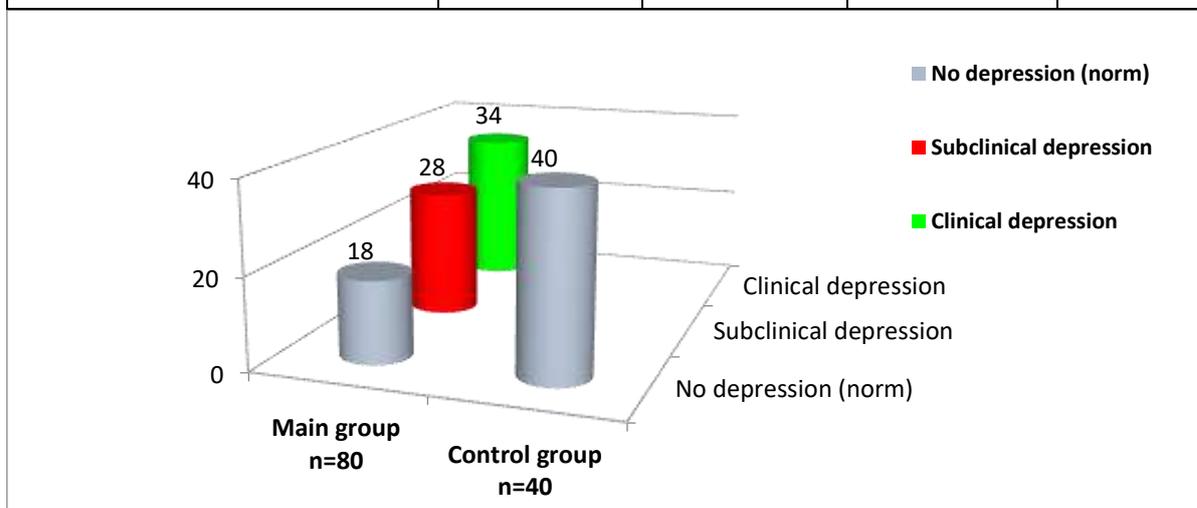
**Figure 3.2.3. Analysis of HADS scale by anxiety index in the main and control groups (%)**

According to the analysis of depression indicators in the main and control groups according to the HADS scale, clinical depression in the main (A and B) groups was higher than in the control group and amounted to 41.0%, while subclinical depression was 35.7% (Table 3.2.2). (Figure 3.2.4. shows the distribution of depression indicators by the number of people in the main and control groups)

**Table 3.2.2**

**Distribution of depression in the main and control groups (%)**

Depression	Main group n=80		Control group n=40	
	%	Балл	%	Балл
Clinical depression	41,0±6,3	14±3,1	-	-
Subclinical depression	35,7±6,6	9±1,1	-	-
No depression (norm)	23,3±7,3*	4±2,4	100*	3±2,4



**Figure 3.2.4. Analysis of depression according to the HADS scale in the main group (%)**

According to the above general data on the expression of anxiety and depression, patients in subgroups A and B were divided among the patients in the main group as follows (according to HADS) (see Table 3.2.3)

**Table 3.2.3**

**General indicators of anxiety and depression in groups “A” and “B” (%)**

<b>Symptom</b>	<b>Group A (n=40)</b>	<b>Group B (n=40)</b>
Clinical ADD	15 (37,5%)	15(37,5%)
Clinical A Subclinical D	9 (22,5%)	9(22,5%)
Clinical A,	5 (12,5%)	4 (10%)
Clinical D, Subclinical A	2 (5%)	2 (5%)
Subclinical ADD	2 (5%)	2(5%)
Clinical D	5 (12,5%)	5(12,5%)
Subclinical A	1 (2,5%)	1(2,5%)
Subclinical D	1 (2,5%)	2(5%)

The psycho-emotional indicators were divided equally into study groups according to the data presented in the table.

Systemic lupus erythematosus usually affects various organ systems throughout the body and causes widespread inflammation. Patients with SLE often experience a number of symptoms, such as chronic pain, fever, fatigue, and skin rashes. However, one of the most common and disturbing symptoms associated with SLE is anxiety.

Based on our research, patients diagnosed with SLE primarily experienced clinically significant anxiety and depressive syndromes rather than milder, subclinical versions. Anxiety disorders were common among the patients and presented in several forms, ranging from generalized anxiety and worry to full-

blown panic. Depressive disorders in SLE are characterized by symptoms such as lack of energy, difficulty concentrating, and thoughts of hopelessness. These conditions can be triggered by a variety of factors, including medical treatments, social situations, and worries about the future.

It is important to recognize how anxiety can affect patients with SLE and to provide appropriate support and treatment. Although this symptom can be difficult to manage, with proper psychotherapy, patients with SLE can live full and active lives.

### **§ 3.3. Pretreatment quality of life in patients with systemic lupus erythematosus**

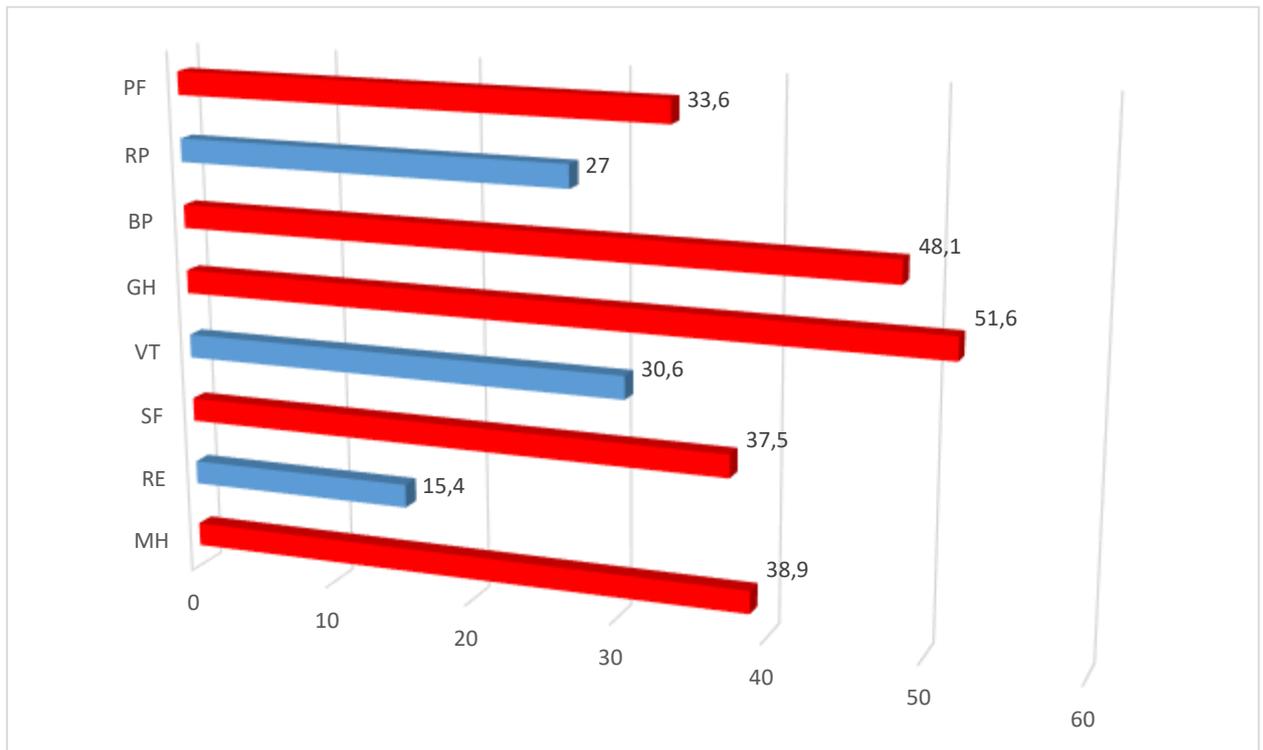
The impact of systemic lupus erythematosus on patients' quality of life can be significant, as it is a chronic disease that requires ongoing medical care and treatment. Patients with SLE often report a reduced quality of life due to chronic pain and inflammation, physical limitations, and emotional impacts of chronic diseases. However, maintaining a healthy lifestyle, seeking medical care in a timely manner, and following medical advice can help improve the overall well-being and quality of life of people with SLE.

Currently, our nation lacks a standardized system to evaluate quality of life. Thus, work is underway to modify existing international questionnaires for use in assessing the quality of life of patients dealing with different illnesses. In our study, we also used the SF-36 questionnaire to assess the quality of life of patients with SLE.

The results showed that there is a strong direct correlation ( $r=0.78\pm 0.11$ ) between systemic lupus erythematosus and the quality of life of patients, in which the duration of the disease ( $r=0.81\pm 0.24$ ) and the age of the patients ( $r=0.75\pm 0.21$ ) play an important role.

According to the results of the analysis of 8 indicators for assessing the quality of life in patients diagnosed with SLE, the highest indicator in patients was  $55\pm 5.3$ ,

which indicates that the disease has a significant impact on the quality of life of patients, the higher the indicator, the better the quality of life. (See Figure 3.3.5).



**Fig. 3.3.5. Results of assessment of patients diagnosed with SLE according to SF-36 criteria**

SLE patients showed low scores in criteria like physical difficulties affecting daily activities ( $RP=27.0\pm 7.3$ ), psycho-emotional problems in limiting life activities ( $RE=15.4\pm 8.5$ ), vitality ( $VT=30.6\pm 7.5$ ), while slightly high indicators were recorded for the general health status ( $GH=51.6\pm 5.3$ ) and pain intensity ( $BP=48.1\pm 5.6$ ). Even so, this doesn't mean these patients are in great overall shape or experiencing little pain; the scores are considerably lower compared to healthy people.

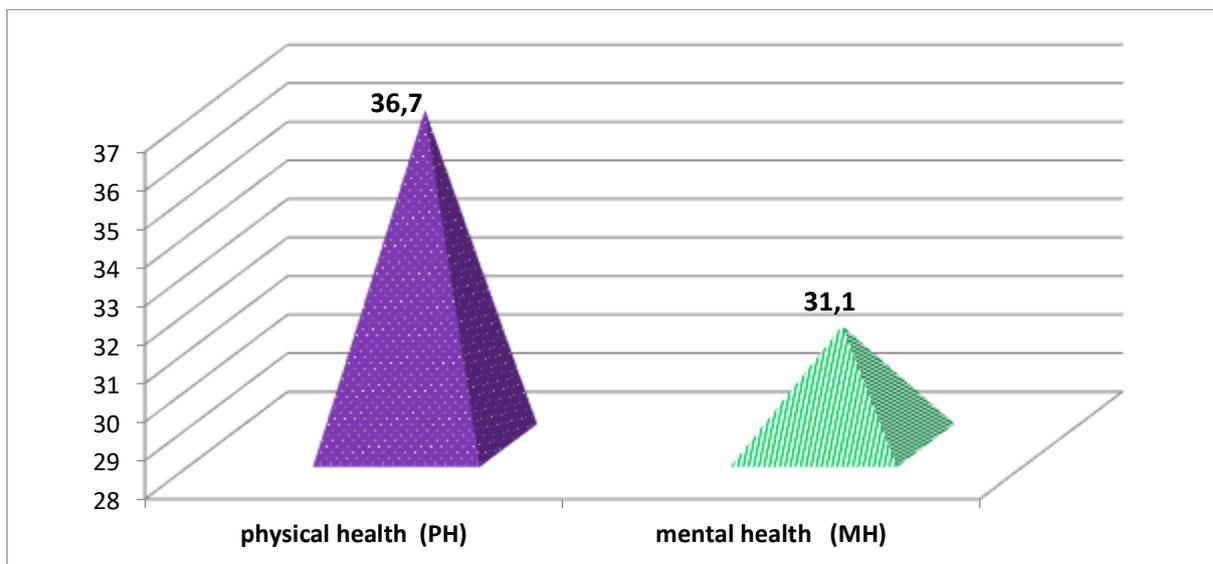
The SF-36 questionnaire's categories are split into two sections: physical and mental well-being. The physical component of health (PH) covers: physical functioning (PF), role limitations due to physical health (RP), bodily pain (BP), and general health perceptions (GH).

The mental component of health (MH) comprises: vitality (VT), social functioning (SF), role limitations due to emotional problems (RE), and mental health (MH).

In our study, patients diagnosed with SLE were assessed for both the physical and mental components of health.

In order to provide comprehensive care to patients, it is important to take into account not only their physical component, but also their mental component.

When analyzing the results obtained, the physical component indicators in patients amounted to ( $PH=36.7\pm 6.3$ ), and the mental component indicators to ( $MH=31.1\pm 6.7$ ). (Figure 3.3.6.).



**Fig. 3.3.6. Results of the assessment of physical and mental components of health in patients diagnosed with SLE (n=80)**

The diagram highlights that the physical aspect ( $PH=36.7\pm 6.3$ ) was more prominent than the mental aspect ( $MH=31.1\pm 6.7$ ) in the health evaluation of patients with SLE. The mental component of quality of life had a low indicator due to the patients' nervous tone, social activity, spiritual and emotional state and mental health.

It is important for healthcare professionals to work closely with patients to develop individual treatment plans that address the physical and emotional aspects of the disease. This is very important to ensure that patients with SLE receive the

comprehensive support they need to manage their condition and maintain their well-being. It is important to study and assess the quality of life in patients diagnosed with SLE at the initial stages of treatment. This is used in research as a factor determining the effectiveness of psychotherapy used in the later stages of psychorehabilitation.

### **§ 3.4. Chapter summaries**

This chapter demonstrates that anxiety-depressive disorders in systemic lupus erythematosus, alongside poor quality of life – particularly when the psychological aspect is negatively affected – serve as primary indicators for tailoring psychological support strategies for patients. The expediency of not only basic treatment of anxiety-depressive disorders in systemic lupus erythematosus with the help of pharmacotherapy, but also psychological correction of psychoemotional disorders observed in them was shown. A team-based method that includes mental health experts (such as medical psychologists, psychotherapists, and psychiatrists) and rheumatologists for the complete evaluation and treatment of these illnesses, specifically assessing the emotional well-being, is crucial. This collaborative approach enables proper early diagnosis of psychosomatic disorders, allowing for effective psychotherapy and medication.

## **Chapter IV. EFFECTIVENESS OF MEDICAL-PSYCHOLOGICAL SUPPORT IN SYSTEMIC LUPUS ERYTHEMATOSUS**

### **§4.1. Assessing the dynamics of clinical psychological symptoms in systemic lupus erythematosus after psychocorrection**

One of the main tasks of our dissertation work was to analyze the clinical structure of anxiety-depressive disorders in systemic syphilitic syndrome. In this case, the high effectiveness of the treatment results at a statistically significant level was ensured by the method of psychotherapy applied individually to each patient along with psychopharmacotherapy.

The next main task of our research work was to determine the effectiveness of Gestalt therapy in the correction of anxiety-depressive disorders in systemic syphilitic syndrome. We think treating anxiety-depressive disorders linked to systemic lupus erythematosus is most successful when combining medication and psychopharmacotherapy with psychotherapy. In managing these disorders through psychological means, we used Gestalt therapy and rational psychotherapy. To see how well the treatment worked, patients were split into two groups:

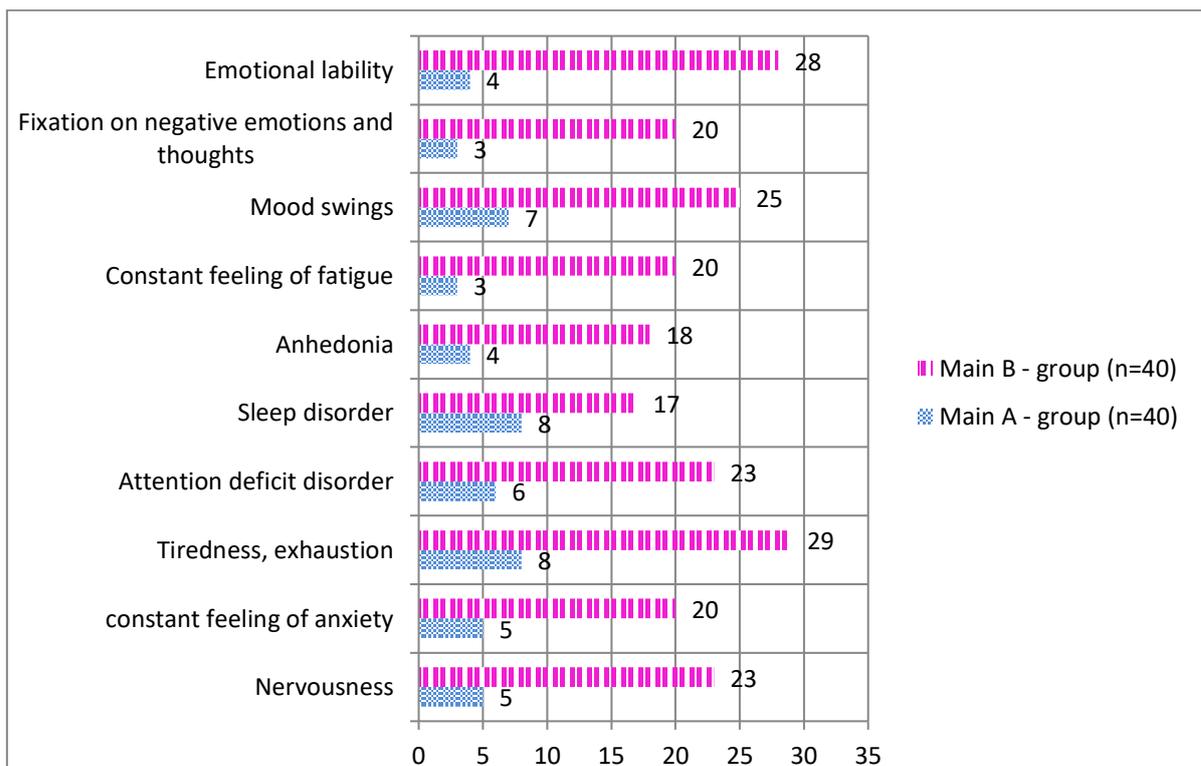
Group A (n=40) received basic treatment and PFT, a psychotherapeutic algorithm based on Gestalt therapy. This group was treated with Gestalt therapy in 4 stages based on individual techniques for each patient.

Group B (n=40) received rational psychotherapy in addition to standard treatment. Rational psychotherapy mainly consisted of psychological interviewing and problem identification.

Based on our study, after the application of basic treatment, PFT and psychocorrection, subjective symptoms of anxiety and depression were re-examined and assessed in patients in groups "A" and "B". Accordingly, in group A, where Gestalt therapy was used, 5 (12.5%) patients had irritability, 5 (12.5%) patients had a constant feeling of anxiety, 8 (20%) patients had fatigue, exhaustion, 6 (15%) had attention deficit disorder, 5 (12.5%) had vegetative symptoms, 8 (20%) had sleep disorders, 4 (10%) had anhedonia, 3 had a constant feeling of fatigue, 7 (17.5%) had

mood swings, 3 (7.5%) had a fixation on "bad" feelings, 6 (15%) had a feeling of fear, and 4 (10%) had emotional lability.

In group B, 23 (57.5%) patients had irritability, 20 (50%) had a constant feeling of anxiety, 29 (72.5%) had fatigue, exhaustion, 23 (57.5%) had attention deficit disorder, 28 (70%) had vegetative symptoms, 17 (42.5%) had sleep disorders, 18 (45%) had anhedonia, 20 (50%) had a constant feeling of fatigue, 25 (62.5%) had mood swings, 20 (50%) had fixation on “bad” feelings, 17 (42.5%) had a feeling of fear, and 28 (70%) had emotional lability (Figure 4.1.7.).



*The difference between groups A and B is  $p < 0.001$*

**Fig. 4.1.7. Analysis of psychoemotional symptoms in patients with systemic lupus erythematosus (after psychocorrection)**

The above results show that the psychoemotional indicators in group “A” with the use of PFT and GT showed a statistically significant positive dynamics ( $p < 0.001$ ) compared to group “B”.

## **§ 4.2. Assessing the dynamics of anxiety-depressive disorders in systemic lupus erythematosus after psychocorrection**

Anxiety-depressive disorders in systemic lupus erythematosus may be associated with significant changes experienced by patients in their lives, including changes in physical abilities, social activity, and quality of life. Unfortunately, currently, there are no established methods for treating SLE, but there are treatments that help control symptoms. One such treatment is psychopharmacotherapy, which involves the use of psychiatric medications to control the emotional and psychological symptoms associated with SLE. This form of therapy can be particularly helpful for patients who experience depression, anxiety, or other mental health problems in addition to the physical symptoms of the illness.

When used in conjunction with other treatments, such as corticosteroids and immunosuppressants, psychopharmacotherapy can help improve patient outcomes and overall quality of life. However, it is important for patients to work closely with their healthcare providers during treatment to ensure proper medication management and control side effects.

While the use of psychiatric medications can be difficult and intimidating for some patients, it is important to remember that these interventions are tailored to each individual's unique needs and circumstances. Based on this, the use of medications, psychotherapy, and relaxation techniques can be effective in reducing symptoms and improving the quality of life of patients.

Based on the objectives of our dissertation work, psychoemotional disorders in groups "A" and "B" after basic treatment, PFT, and psychocorrection were re-examined and assessed using the HADS scale 1 month and 3 months after psychocorrection.

The reduction in clinical signs of anxiety was clearly evident in group "A," that is, in which basic treatment, PFT, and Gestalt therapy were used. In particular, clinical anxiety in group "A" was 66.1% before the use of PFT and Gestalt therapy, and 20.0% after 1 month of the use of PFT and Gestalt therapy. According to this indicator, when patients were re-examined after 3 months, the rate of clinical

concern was equal to 7.4%. It can be seen that the clinical anxiety index decreased by 88.8% after psychocorrection methods used in group "A" patients.

In the subjects of group "B", the clinical anxiety level decreased from 66.1% to 51.0%, respectively, when examined after 1 month. When re-examined after 3 months, the indicators were 41.0%. According to the above data, after the psychocorrection methods applied to patients in group "B", the clinical anxiety indicators decreased by 37.8% (Table 4.2.4).

**Table 4.2.4.**

**Analysis of anxiety indicators on the HADS scale after 1 and 3 months of psychopharmacotherapy and psychotherapy (%)**

Groups	Norma		Subclinical anxiety		Clinical anxiety	
	After 1 month	After 3 months	After 1 month	After 3 months	After 1 month	After 3 months
<b>Group "A" (n=40)</b>	50,0±6,9	68,5±5,8	30,0±8,4	24,1±9,8	20,0±10,0	7,4±11,2
<b>Group "B" (n=40)</b>	20,0±10,0	26,0±9,2**	29,0±9,1	33,0±8,4	51,0±6,9*	41,0±7,2**

*Note: The difference between groups A and B \*\*P<0.001; \*P<0.05*

Therefore, a statistically significant positive dynamics (p<0.001) was observed in group A patients compared to group B.

When the depression indicators according to the HADS scale were checked and analyzed, clinical depression in group A patients was 41.0% before psychocorrection, then 20.0% after 1 month of using PFT and GT, and 1.8% after 3 months, that is, the indicator decreased by 88.8%.

When the depression indicators in group B patients were analyzed, clinical depression was 41.0% initially, 38.0% after 1 month of using PFT and rational

psychotherapy, and 12.0% after 3 months. According to the data obtained, after the psychocorrection methods applied to patients in group “B”, the clinical depression index decreased by 29.2% (Table 4.2.5).

**Table 4.2.5.**

**Analysis of depression indices on the HADS scale after 1 and 3 months of psychopharmacotherapy and psychotherapy (%)**

<b>Groups</b>	Norma		Subclinical depression		Clinical depression	
	After 1 month	After 3 months	After 1 month	After 3 months	After 1 month	After 3 months
<b>Group "A" (n=40)</b>	51,5±6,9	77,7±5,5	29,5±8,9	20,3±9,6	20,0±9,7	1,8±13,4
<b>Group "B" (n=40)</b>	42,7±7,3	65,0±5,6	19,3±9,8	23,0±9,3	38,0±7,7	12,0±9,3*

*Note: The difference between groups A and B \*p<0.001;*

The table demonstrates that the degree of clinical anxiety and depression in individuals in group A lessened to standard levels.

Per the analysis of anxiety and depression on the HADS scale, the patient group diagnosed with SLE exhibited high clinical and subclinical anxiety and depression readings. After PFT and Gestalt therapy, clinical anxiety and depression fell by 88.8% amongst patients in group A, whereas in group B, where PFT and rational psychotherapy were implemented, they reduced by 37.8% and 29.2%. Thus, a statistically significant positive dynamics was observed in patients in group 1 compared to group 2 (p<0.001).

Based on the analysis of anxiety and depression within the primary group of participants on the HADS scale, it was found that after the implemented

psychotherapeutic intervention, the clinical symptoms of anxiety and depression in patients considerably lessened, indicating the combined use of psychotherapeutic methods, specifically PFT and Gestalt therapy, presents a high efficacy.

#### **§ 4.3. Assessment of the quality of life (SF-36) in systemic lupus erythematosus in dynamics after psychocorrection**

WHO views the quality and availability of medical care as significant aspects impacting the patient's life quality, thus, their study is a crucial matter in healthcare.

WHO recommends determining the "functional status" of a person's ability to perform tasks that currently provide practical results. At the same time, the psycho-emotional state of a person, his level of freedom, his position in society, his personal beliefs (beliefs) and many other aspects that make up a person's full and valuable life are not taken into account at all, that is, functional status is one of the aspects of the concept of "quality of life".

Therefore, the investigation of quality of life is a new reliable and effective instrument for assessing the patient's condition before treatment, during treatment and during rehabilitation. Several international experiences have shown that the study of quality of life is a hopeful method for all departments of medicine.

In order to investigate the quality of life of patients associated with treatment, the SF-36 questionnaire was administered to patients in groups "A" and "B" before treatment, 1 month and 3 months after treatment. The results indicated that, compared to the period of treatment, patients in group A, i.e., the group receiving Gestalt psychotherapy, had greater indicators of all quality of life criteria than group B.

According to the results of our study, when patients with a diagnosis of SLE in group "A" were re-examined, physical activity (PF) indicators increased from  $33.6 \pm 6.7$  to  $45.2 \pm 7.3$  after 1 month of treatment with PFT and Gestalt therapy, while when patients in group "A" were re-examined after 3 months, the indicators improved by  $53.8 \pm 6.6$ . From these indicators, it was found that physical activity (PF)

in patients in group “A” increased by 37.5% after 3 months of treatment with basic treatment, PFT and Gestalt therapy.

In group “B”, physical activity (PF) was  $35.2 \pm 7.7$  when re-examined after 1 month, and  $39.1 \pm 6.9$  when re-examined after 3 months. From the above results, it is clear that after 3 months of PFT and rational psychotherapy, the physical activity (PF) index increased by 16.3% when re-examined in group “B” (Table 4.3.6).

**Table 4.3.6**

**Physical activity (PF) indices in groups “A” and “B”**

<b>PF</b>	<b>Group “A” (n=40)</b>	<b>Group “B” (n=40)</b>	<b>Difference between groups</b>
Before treatment	$33,6 \pm 6,7$ 95% CI =25,34-40,3*		
1 month after treatment	$45,2 \pm 7,3$ 95% CI**=37,9-52,5	$35,2 \pm 7,7$ 95% CI=27,5-42,9	+10,0
3 months after treatment	$53,8 \pm 6,6$ 95% CI=47,2- 60,4	$39,1 \pm 6,9$ 95% CI=32,2-46,0	+14,7

*\*The threshold value indicating the validity of the indicator when  $P=95$  (Fisher's test)*

*CI\*\* - confidence interval (boundary)*

*The difference between groups A and B is  $p < 0.05$*

When analyzing the results of physical problems (RP) in limiting life activities, it was noted that in patients in group "A" after 1 month of using PFT and Gestalt therapy, the indicators increased from  $27.0 \pm 7.3$  to  $46.2 \pm 7.3$ . When the patients were re-examined for the same indicator after 3 months, the indicator increased to 78.8. From these data, it can be seen that in patients in group "A" after

3 months, the RP indicator was almost 2.5 times higher than before the use of PFT and Gestalt therapy.

In the analysis of physical problems (RP) in the limitation of life activities in group “B”, the results increased by  $32.2 \pm 7.7$  after 1 month, and after 3 months the indicators were  $61.2 \pm 5.8$ . The results show that after 3 months of applying PFT and rational psychotherapy to patients in group “B”, the RP indicator increased by 1.0 times compared to the initial state (Table 4.3.7).

**Table 4.3.7**

**Physical problems (RP) indicators in life activity limitations in groups  
“A” and “B”**

<b>RP</b>	<b>Group “A” (n=40)</b>	<b>Group “B” (n=40)</b>	<b>Difference between groups</b>
Before treatment	$27,0 \pm 7,3$ 95% CI=19,7-34,3		
1 month after treatment	$46,2 \pm 7,3$ 95% CI=38,9-53,5	$32,2 \pm 7,7$ 95% CI=25,34-40,3	+14,0
3 months after treatment	$78,8 \pm 5,4$ 95% CI=73,4-8,2	$61,2 \pm 5,8$ 95% CI=61,4-73,0	+17,6

*Note: \* $p < 0.05$  compared to the groups being compared*

While analyzing the indicators of patients in groups “A” and “B” based on the pain or its intensity (BP) criterion of the SF-36 questionnaire, it was statistically confirmed that a significant difference existed between the groups ( $P < 0.001$ ). In particular, it was noted that in patients in group “A” after 1 month of using PFT and Gestalt therapy, the indicators increased from  $48.1 \pm 6.3$  to  $56.0 \pm 6.6$ . When the patients were re-examined after 3 months for this indicator, the results were

67.7±5.8. According to the results, it was noted that in patients in group “A” after 3 months of psychocorrection, the BP indicator increased by 28.9%.

In patients in group “B”, when the BP was re-examined after 1 month, the indicator was 50.4±6.9; after 3 months, it was 54.1±6.3. This shows that after the application of psychocorrection, the BP in patients in group “B” increased by 20.0% (Table 4.3.8).

**Table 4.3.8**

**Pain or its intensity (BP) criterion indicators in groups “A” and “B”**

<b>BP</b>	<b>Group “A” (n=40)</b>	<b>Group “B” (n=40)</b>	<b>Difference between groups</b>
Before treatment	48,1±6,3 95%CI=41,8-54,4		
1 month after treatment	56,0±6,6 95%CI=49,4-62,6	50,4±6,9 95%CI=43,5-53,7	+5,6
3 months after treatment	67,7±5,8 95%CI=61,9-73,5	54,1±6,3 95%CI=53,8-66,4	+7,6

*Note: \*p<0.05 compared to the groups being compared*

The evaluation of patients' general health (GH) is the most crucial standard of quality of life. The lower the general health metrics, the poorer the patient's overall condition.

Analysis of the results showed that in group “A” after 1 month of using PFT and Gestalt therapy, the indicators increased from 51.6±5.3 to 62.0±6.0, and when this indicator was re-examined after 3 months, the result was 73.8±7.0. From these

results it became clear that in group “A” after 3 months, the GH indicator increased by 28.1% compared to the use of psychocorrection.

In group “B”, after psychocorrection, the GH index was  $51.0 \pm 6.6$  after 1 month, and when re-examined after 3 months, it was  $63.0 \pm 6.0$ . This indicates that the GH index increased by 18.0% in group “B” where PFT and rational psychotherapy were used (Table 4.3.9).

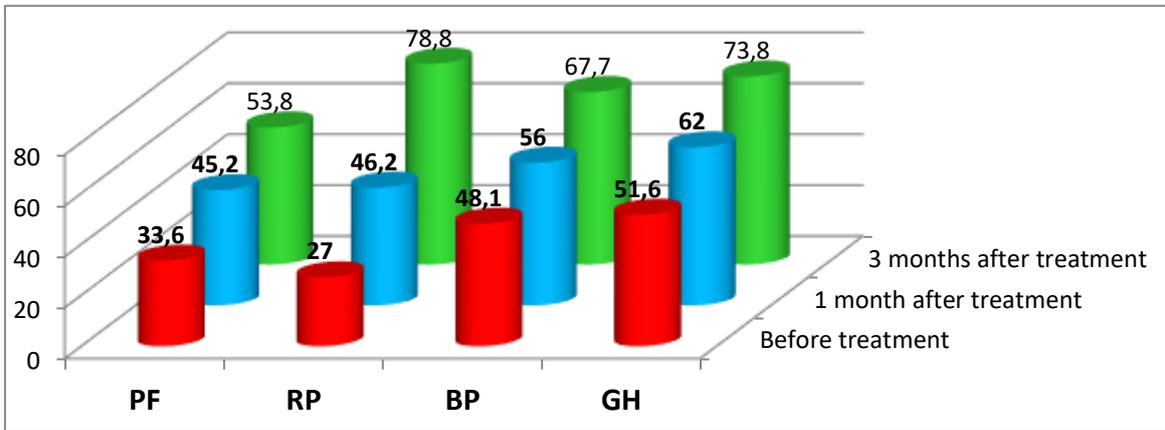
**Table 4.3.9**

**Results of the general health (GH) index of patients**

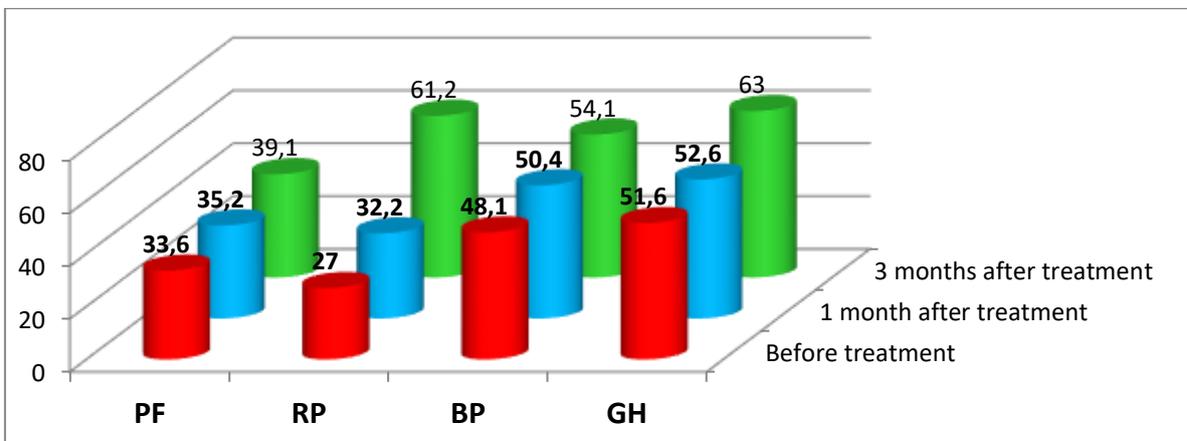
GH	Group “A” (n=40)	Group “B” (n=40)	Difference between groups
Before treatment	$51,6 \pm 5,3$ 95% CI=46,3-56,9		
1 month after treatment	$62,0 \pm 6,0$ 95% CI=56,0- 68,0	$52,6, \pm 6,6$ 95% CI=51,4-64,6	+11,0
3 months after treatment	$73,8 \pm 7,0$ 95% CI=66,8- 80,8	$63,0 \pm 6,0$ 95% CI=59,0-71,0	+10,8

*Note: \* $p < 0.05$  compared to the compared groups*

Based on these data, the dynamics of patients in groups "A" and "V" were evaluated by comparing the above parameters before psychocorrection and 1 and 3 months after medical and psychological support (Fig. 4.3.8 and 4.3.9)



**Figure 4.3.8. Indicators of quality of life criteria of patients in group “A” before the use of PFT and Gestalt therapy and 1 and 3 months after psychocorrection (n=40)**



**Fig. 4.3.9.-Fig. Indicators of quality of life criteria of patients in group “B” before the application of PFT and PFT and rational psychotherapy and 1 and 3 months after psychocorrection (n=40)**

● -before psychocorrection   ● - 1 month after psychocorrection   ● - 3 months after psychocorrection

When patients were assessed according to the SF-36 questionnaire over the past 4 weeks, the vital capacity, that is, the tonic tone (VT), was increased from  $30.9 \pm 6.3$  to  $67.4 \pm 5.8$  after 1 month of PFT and Gestalt therapy in group “A” patients,

and VT was  $74.5 \pm 5.6$  after 3 months. Accordingly, the tonic tone (VT) index increased by almost 2.5 times after 3 months in group “A” patients compared to the use of medical-psychological correction. In group “B” patients, the VT index was  $41.4 \pm 6.3$  after 1 month of the indicated medical-psychological correction, and  $57.0 \pm 5.8$  after 3 months. It follows that after PFT and rational psychotherapy applied to patients in group “B”, the VT index increased by 1.5 times (Table 4.3.10).

**Table 4.3.10**

**The indicators of the tone of the nervous system (VT) of patients in groups “A” and “B” according to the SF-36 questionnaire**

<b>VT</b>	<b>Group “A” (n=40)</b>	<b>Group “B” (n=40)</b>	<b>Difference between groups</b>
Before treatment	$30,9 \pm 6,3$ 95% CI=24.6-37,2		
1 month after treatment	$67,0 \pm 5,8$ 95% CI=61,2-72,8	$41,4 \pm 6,2$ 95% CI=25,6-38,0	+25,6
3 months after treatment	$74,5 \pm 5,6$ 95% CI=68,9-80,1	$57,0 \pm 5,8$ 95% CI=51,2-62,8	+17,5

*Note: \* $p < 0.05$  compared to the groups being compared*

Social activity (SF) in the SF-36 questionnaire, that is, the level of the patient's relationship with loved ones, relatives, and friends, was also studied. According to it, in group "A", after 1 month of using PFT and Gestalt therapy, the result changed from  $37.5 \pm 6.3$  to  $51.5 \pm 6.6$ . When the patients were re-examined according to the

same indicator after 3 months, the result was  $78.8 \pm 5.4$ . This shows that the social activity indicator in group "A" increased by almost 2.5 times after 3 months compared to the use of psychocorrection.

In patients in group "B", when the SF index was checked, the results were  $46.4 \pm 6.9$  after 1 month, respectively, and after the use of PFT and rational psychotherapy, the indicators were  $52.4 \pm 6.0$ . From the above results, it was noted that after the psychocorrection methods used in patients in group "B", the social activity index increased by 0.8 times (Table 4.3.11).

**Table 4.3.11**

**Social activity (SF), i.e. the level of the patient's relationship with loved ones, relatives, friends**

SF	Group "A" (n=40)	Group "B" (n=40)	Difference between groups
Before treatment	$37,5 \pm 6,3$ 95% CI=31,2-43,8		
1 month after treatment	$51,5 \pm 6,6$ 95% CI=44,9-58,1	$46,4 \pm 6,9$ 95% CI=39,5-53,3	+5,1
3 months after treatment	$78,8 \pm 5,4$ 95% CI=73,4-84,2	$52,4 \pm 6,0$ 95% CI=46,4-58,4	+26,4

Note: \* $p < 0.01$  compared to the groups being compared

When analyzing the psycho-emotional problems (RE) in limiting life activities according to the SF-36 questionnaire, it was noted that in patients in group "A" after 1 month of psychocorrection, the indicators changed from  $15.4 \pm 8.7$  to  $70.5 \pm 5.4$  (6.5 times). When re-examined after 3 months on this indicator, the result

increased to  $92.3 \pm 5.0$ , that is, the RE indicator increased by 8.0 times after 3 months compared to the use of PFT and Gestalt therapy in group “A”.

When the RE index was analyzed in patients in group “B”, the results were  $28.5 \pm 7.7$  after psychocorrection, and  $36.3 \pm 5.6$  tenge when re-examined after 3 months. From the results obtained, it was noted that the RE index increased by 6.0 times in the group where PFT and rational psychotherapy were used.

Psycho-emotional problems (RE) in the limitation of life activities in patients of group A after psychotherapeutic treatment formed the highest level of quality of life indicators ( $92.3$ ) ( $P < 0.05$ ) (Table 4.3.12.).

**Table No. 4.3.12.**

**Analysis of psycho-emotional problems (RE) in the limitation of life activities**

<b>RE</b>	<b>Group “A” (n=40)</b>	<b>Group “B” (n=40)</b>	<b>Difference between groups</b>
Before treatment	$15,4 \pm 8,7$ 95% CI=6,7-24,1		
1 month after treatment	$70,5 \pm 5,4$ 95% CI=65,1-75,9	$40,5 \pm 7,7$ 95% CI=32,8-48,2	+30,0
3 months after treatment	$92,3 \pm 5,0$ 95% CI=87,3-97,3	$70,3 \pm 5,6$ 95% CI=64,7-75,9	+22,0

*Note: \* $p < 0.05$  compared to the groups being compared*

The mental state of patients over the past 4 weeks is one of the important factors in combating any diseases.

When analyzing the mental health (MH) component of the SF-36 questionnaire, the result in patients in group “A” after 1 month of psychocorrection increased from  $38.9 \pm 6.3$  to  $64.0 \pm 6.0$  (50%), while after 3 months the indicators were

77.8±5.5. This shows that the indicator increased by 75.0% after 3 months compared to the use of PFT and Gestalt therapy.

In the analysis of the mental health component in patients of group “B”, the results were 46.5±6.9 tenge after 1 month of psychocorrection, and when re-examined after 3 months, the indicators were 61.4±7.7 tenge. This shows that after the psychocorrection used in patients in “B”, an increase in indicators by 50% was noted ( $p < 0.05$ ) (Table 4.3.13.).

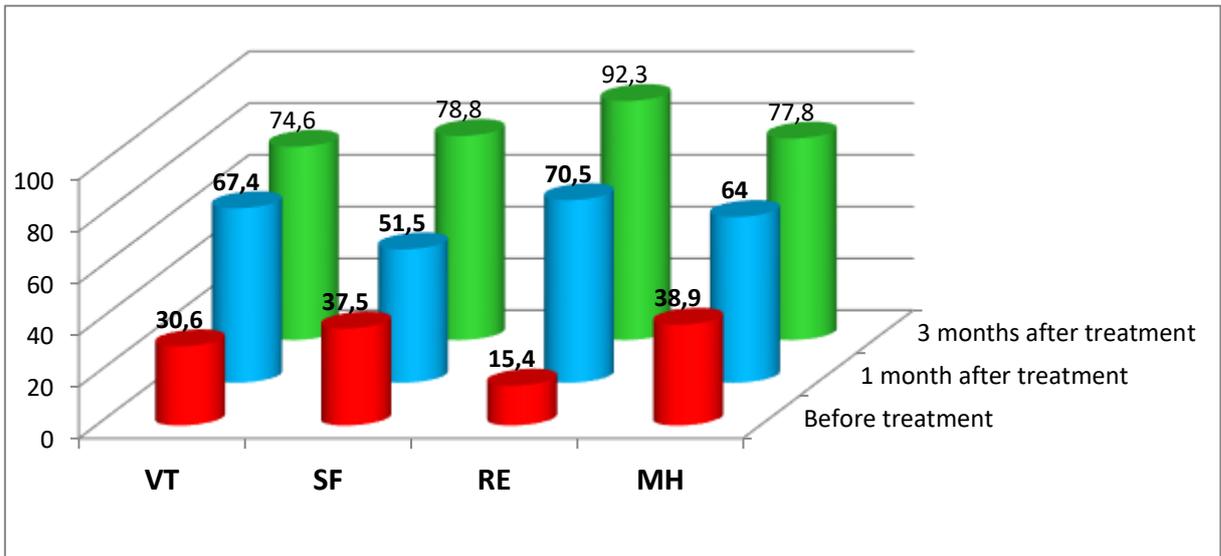
**Table 4.3.13.**

**Indicators of the mental health (MH) status of patients**

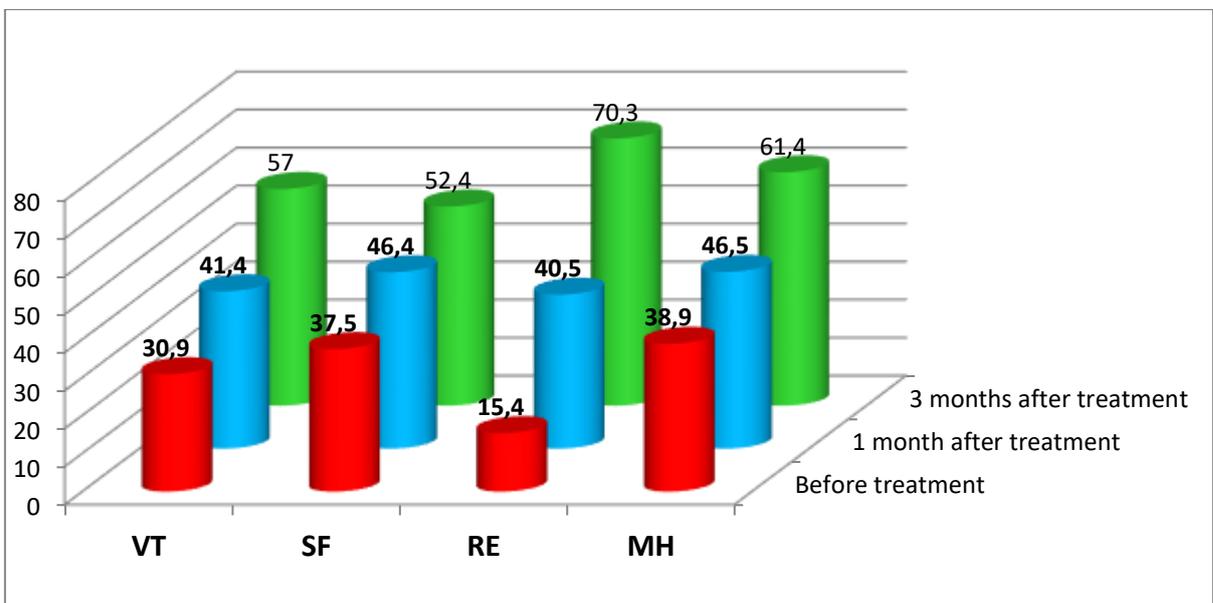
(MH)	Group “A” (n=40)	Group “B” (n=40)	Difference between groups
Before treatment	38,4±6,3 95% CI=31,2-43,8		
1 month after treatment	64,0±6,0 95% CI=58,0- 70,1	46,5±6,9 95% CI=39,6-53,4	+17,5
3 months after treatment	77,8±5,5 95% CI=72,3- 83,3	61,4±7,7 95% CI=53,7-69,1	+16,4

Note: \* $p < 0.05$  for the compared groups

Based on the above data, the dynamics of the SF-36 questionnaire VT, SF, RE and MH indicators of patients in groups “A” and “B” before psychocorrection and 1 and 3 months after medical and psychological assistance were compared ( $p < 0.05$ ) (Fig. 4.3.10.- and 4.3.11.).



**Fig. 4.3.10. Group “A” - indicators before the use of PFT and Gestalt therapy and 1 and 3 months after psychocorrection (n=40)**



**Fig. 4.3.11. Group “B” - indicators before the application of PFT and rational psychotherapy and 1 and 3 months after psychocorrection (n=40)**

● -before psychocorrection    ● -1 month after psychocorrection    ● - 3 months after psychocorrection

The above diagram shows that patients in group “A” had higher quality of life scores after 1 and 3 months compared to patients in group “B” on all quality of life measures (physical activity, role of physical problems in limiting life activities, pain,

general health, vitality, social activity, role of emotional problems in limiting life activities, mental health). This demonstrated the effective effect of Gestalt therapy combined with basic treatment, PFT, for patients with SLE.

According to the results of the assessment of the physical component of health according to the SF-36 questionnaire in patients with a diagnosis of SLE, in group "A" the indicators changed from  $33.7 \pm 6.3$  to  $38.0 \pm 7.7$  after 1 month of psychocorrection, and after 3 months to  $41.2 \pm 7.3$ , that is, after 3 months of PFT and Gestalt therapy, the indicator increased by 18.2%. When assessing the physical component of health in patients in group "B", it was noted that after 1 month of psychopharmacotherapy and rational psychotherapy, the indicators were  $34.2 \pm 8.2$ , respectively, and after 3 months the indicator was  $36.0 \pm 7.7$ . According to these results, it was noted that after the psychocorrection applied to the patients of "B" group, the indicators increased by 6.7% (table 4.3.14).

**Table 4.3.14**

**Assessment of the physical and mental component of health in patients of groups "A" and "B" before and after medical psychological correction**

	Before treatment	1 month after treatment		3 months after treatment	
		Group A	Group B	Group A	Group B
Physical component of health (FH)	$33,7 \pm 6,3$	$38,0 \pm 7,7$	$34,2 \pm 8,2$	$41,2 \pm 7,3$	$36,0 \pm 7,7$
Mental component of health (MH)	$31,0 \pm 6,7$	$40,5 \pm 7,7$	$38,5 \pm 7,7$	$57,6 \pm 6,3$	$49,4 \pm 6,9$

*Note: The difference between groups A and B does not exceed  $p < 0.05$*

The psychological component plays a crucial role in determining the quality of life of patients with systemic lupus erythematosus. Patients with SLE often experience anxiety, depression, and stress related to the impact of the disease on their daily lives. This significantly affects their mental and emotional well-being, leading to a decrease in their overall quality of life.

In our study, according to the results of assessing the mental component of health according to the SF-36 questionnaire in patients diagnosed with SLE, in group “A” after 1 month of using PFT and Gestalt therapy, the indicators increased from  $31.0 \pm 6.7$  to  $40.5 \pm 7.7$ , and after 3 months of using psychocorrection, it increased to  $57.6 \pm 6.3$ , that is, the indicator increased by 41.1% after 3 months compared to PFT and Gestalt therapy.

In group “B”, after using PFT and rational psychotherapy, the indicators increased by 20.0%, respectively.

The above table shows that the high assessment of the psychological component of health can be associated with the positive quality of Gestalt therapy used in group “A” patients. In particular, over the past 4 weeks, patients' nervous system tone, social activity (level of relations with friends, relatives, colleagues), spiritual mood (joy, peace, tranquility) have improved, and the role of emotional problems in limiting life activities has decreased. Therefore, it is advisable to use Gestalt therapy in patients with SLE along with the main treatment methods. This can lead to an improvement in the outcome of the disease and the quality of life for patients by early elimination and treatment of problems in the psychological component of patients diagnosed with SLE.

Table No. 4.3.20.

**Results of assessing the quality of life of patients with SLE after receiving treatment**

	Physical role functioning (PF)		The role of physical problems in limiting life activities (RP)		Bodily pain (BP)		General health (GH)		Vitality (VT),		Social functioning (SF),		Role of emotional problems in limiting life activities (RE),		Mental health (MH).	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
Before treatment	33,6		27,0		48,1		51,6		30,9		37,5		15,4		38,9	
1 month after treatment	45,2	40,2	46,2	39,2	56,0	50,4	62,0	58,0	67,4	61,4	51,5	46,4	70,5	40,5	64,0	46,5
After 3 months	53,8	49,1	78,8	67,2	67,7	60,1	73,8	65,0	74,6	69,5	78,8	62,4	92,3	70,1	77,8	61,4

*Note: Group A is the group that received basic treatment, psychopharmacotherapy and Gestalt therapy*

*Group B is the group that used basic treatment, psychopharmacotherapy and rational psychotherapy*

*The difference between groups A and B does not exceed  $p < 0,005$*

Compared to the period before the patients received treatment, patients in group A, i.e., the Gestalt psychotherapy group, had higher indicators on all quality of life criteria than patients in group B, i.e., psychopharmacotherapy and rational psychotherapy.

This confirmed that Gestalt therapy, used in combination with basic treatment and psychopharmacotherapy methods, was more effective than rational psychotherapy in patients diagnosed with SLE.

Studies have shown that Gestalt therapy can be effective in helping patients cope with the disease. Although there is currently no complete cure for SLE, Gestalt therapy can help people manage their symptoms and improve their overall quality of life.

Gestalt therapy is aimed at increasing self-awareness and maximizing their potential, which can be beneficial for people with chronic diseases such as SLE. By addressing underlying emotional issues and developing healthy coping mechanisms, people can reduce stress levels and improve their overall well-being. In addition, Gestalt therapy can help patients cope with feelings of isolation or anxiety associated with a diagnosis of SLE and can promote positive communication between patients and their healthcare providers.

Following the study's findings, it's possible to conclude that adding an algorithm, founded on Gestalt therapy, to the intricate treatment of anxiety-depressive disorders in SLE patients, will yield a better approach to care. This improvement will be mirrored in the progression of enhancing the patients' quality of life, as a result of comprehensive treatment.

#### **§ 4.4. Assessment of economic efficiency**

The protracted progression of the disease and the lengthy duration of treatment procedures in individuals with SLE can definitely cause financial difficulties. Furthermore, the expense of medical care, decline of work output due to disability, and a reduction in quality of life can bring about economic troubles. The emotional and psychological strain of patients further complicates the financial

issues by delaying treatment. Studies demonstrate that individuals with SLE have considerably greater healthcare costs than the general populace, especially in terms of hospitalization, medicines, and lab tests. In addition, the disease can affect work productivity, leading to missed workdays, reduced work hours, and even early retirement and, in many cases, disability. All of these factors can have a significant impact on the economic well-being of patients and their families. Despite the economic challenges of SLE, there are strategies that patients can use to improve their financial prospects. Proper disease management, including adherence to medications, can help reduce health care costs and improve overall health outcomes. Furthermore, seeking support services like financial counseling or vocational rehabilitation can offer resources and direction for individuals contending with the economic difficulties linked to systemic lupus erythematosus. Considering the above facts, in this study, we examined and evaluated the extent to which economic efficiency can be achieved through appropriate psychocorrection of psychoemotional disorders in patients.

Economic efficiency was assessed in accordance with Appendix 2 to the Order of the Ministry of Health of the Republic of Uzbekistan dated July 31, 2013 No. 254 "Calculation of the economic efficiency of reducing the cost of treatment". The calculation is carried out according to the following formula:

$$E_{vr} = [(M1-M2) + (C1-C2) + (B + E) \times 0.6] \times H - 0.15 \times K$$

M1-M2 is the reduction in the cost of medicines for treatment. As a result of the introduction of Gestalt therapy, the prescription of psychotropic drugs is no longer a necessary method of treating psychoemotional disorders (57,000 soums for 20 tablets, one tablet per day for 180 days or 513,000 soums for a course) and anxiolytics (50,000 soums for 15 tablets, two tablets per day for 30 days or 200,000 soums for a course);

C1-C2 – reduction of the length of stay in the hospital. The average duration of treatment of a patient in the rheumatology department with traditional therapy is 10 days;

B – there was no change in the cost of one bed day (therefore, we indicate 0), the cost per day was 35,845 soums;

E – the average amount of temporary disability benefits (sum/day) was not observed and there were no changes in the duration of treatment, so this did not affect economic efficiency (indicate 0);

0.6 – staff coefficient;

H – scope of implementation – this is 40 patients with diagnosed SLE, to whom the algorithm for correcting psychoemotional disorders using the Gestalt psychotherapy method was applied;

0.15 – normal coefficient of efficiency;

K- Costs for implementing the recommended scheme. The basic salary of a psychotherapist (medical psychologist) is 180,000 soums per hour or 11,250 soums. The recommended scheme is 4 sessions, 2 hours each, or 90,000 for each patient. K for 15 patients is 1,350,000 soums. This value is set for the normal efficiency coefficient, since during the implementation of this correction algorithm, the medical worker simultaneously performs his main work.

$$E_{vr} = [(M1-M2) + (C1-C2) + (B + E) \times 0.6] \times H - 0.15 \times K = [((113000 \times 2 \times 6 - 113000 \times 2 \times 3 + 66000 \times 3 - 66000) - 0) + (3 \times 2000000 - 2 \times 2000000) + (0 + 0) \times 0.6] \times 40 - 0.15 \times 3\,600\,000 = 111\,860\,000 \text{ sum.}$$

Accordingly, the cost of treating 40 patients using the Gestalt psychotherapy method is reduced by 111,860,000 soums, or 2,796,500 soums per patient

In conclusion, the economic impact of systemic lupus erythematosus can be significant, but with proper disease management, treatment, and psychological support, patients can minimize financial problems and focus on improving their quality of life.

#### **§ 4.5. Chapter summaries**

Based on the results of psychotherapy presented in this chapter, we conclude that the psychopharmacotherapy and Gestalt therapy used helped patients cope with the psychological stress that accompanies systemic lupus erythematosus, as well as emotional symptoms such as anxiety, depression, and social withdrawal. By teaching patients coping strategies and providing emotional support, psychotherapy helped improve their overall quality of life. It has been noted that a combination of psychotherapy and psychopharmacotherapy may provide the best results in combating emotional distress and mental health symptoms in patients diagnosed with SLE. It has been proven that it is possible to increase economic efficiency by applying an algorithm based on Gestalt psychotherapy to patients diagnosed with anxiety and depression in systemic lupus erythematosus.

## CONCLUSION

Systemic lupus erythematosus is one of the most pressing problems in rheumatology due to the high incidence of psychoemotional disorders, disability and, as a result, social maladjustment and high mortality rates.

As is known, the most common psychoemotional disorders in patients with chronic somatic diseases are anxiety and depressive disorders, which, due to the frequent overlap of common pathogenetic mechanisms, can be included in a single spectrum of anxiety-depressive disorders (ADD). The frequency of ADD in patients with chronic somatic diseases is 4-5 times higher than in the general population, and in patients with immunoinflammatory rheumatic diseases it is 7-15 times higher and reaches 89% [84,92].

Based on the study's findings, mood-depressive disorders were detected in 83% of patients diagnosed with systemic lupus erythematosus, depressive episodes in 40%, adaptation disorders in 24%, generalized mood disorders in 10%, and dysthymia in 9% of patients. Cognitive impairments were found in 7% of patients. [21].

Based on the literature analysis, it was affirmed that anxiety-depressive disorders seen in patients with SLE can be identified promptly, though they are not adequately corrected. This negatively affects treatment efficacy and the return to a full life. Thus, our study's objective was to enhance patient's quality of life via early detection of psychoemotional disorders in TQB and improvement of their medical and psychological rehabilitation.

This research study, conducted for the purpose of the dissertation, was conducted in 80 patients treated with systemic lupus erythematosus in the rheumatology department of the multidisciplinary clinic of the Tashkent Medical Academy during 2017-2019. The cohort consisted of patients aged 18-40 years, with an average age of  $28 \pm 9.2$ , all of whom were women. The studies were conducted in patients with a subacute course of systemic lupus erythematosus.

The clinical diagnosis of systemic connective tissue disease in the patient was conducted by the treating physician in the rheumatology ward of the hospital. To rule out chronic neurological conditions, besides a medical psychological assessment, the patients were also evaluated by a neurologist. Objective and rheumatological paraclinical examinations were done in all patients on the day of admission to the hospital.

The primary objective of our study was to assess both the objective and subjective aspects of the psycho-emotional sphere of patients, and for this purpose a medical-psychological questionnaire (Ibodullaev Z.R., 2018) was used. This medical-psychological questionnaire contains the necessary sections for collecting objective and subjective data, and can be used by all general practitioners.

Psychological tests were used to objectively assess the dynamics of the identified psycho-emotional disorders. For this purpose, the HADS (Hospital Anxiety and Depression Scale), which is widely used in clinical practice, was selected. This scale, developed by A.S. Zigmund and R.P. Schnait (1983), is adapted for patients treated in a hospital setting, and is considered to be very easy to use and draw conclusions. The scale is filled out by the patient. It takes 10-15 minutes to fill it out. When formulating the HADS scale questions, the authors excluded somatic symptoms of depression. This allows for a more accurate assessment of the patient's symptoms of pure depression and anxiety.

The study consisted of two stages. In the first stage, clinical and experimental studies of the state of the psychoemotional sphere and quality of life indicators were conducted in patients diagnosed with systemic lupus erythematosus before psychotherapy.

In the second stage, the state of the psychoemotional sphere and quality of life indicators were reassessed by applying psychotherapeutic correction in conjunction with standard therapy and psychopharmacotherapy. In the second stage, two different psychotherapy methods were used for psychocorrection in patients.

The algorithm for providing psychotherapeutic assistance to patients diagnosed with systemic lupus erythematosus included psychocorrection of anxiety and depressive disorders.

To compare the effectiveness of the applied psychotherapy and psychopharmacotherapy, 80 patients in the Main group were split into 2 groups: A) 40 (50%) patients who received Gestalt therapy and psychopharmacotherapy (PPT) (antidepressant and anxiolytic) plus basic treatment; B) 40 (50%) patients who received rational psychotherapy and PPT together with basic treatment; 2) 40 (100%) subjects in the control group - individuals with no organic or mental disorders (virtually healthy). As we know, depression is a mental disorder accompanied by various somatic complaints (sleep disturbance, attention deficit, fatigue, etc.). Accordingly, when subjective symptoms of anxiety and depression were studied in patients in our study, in the main group A, 38 (95%) patients had a constant feeling of anxiety, nervousness in 35 (87.5%) patients, fatigue and exhaustion in 40 (100%) patients, attention deficit disorder in 35 (87.5%) patients, sleep disorder in 37 (92.5%) patients, anhedonia in 34 (85%) patients, a constant feeling of fatigue in 32 (80%) patients, emotional lability in 36 (90%) patients, mood swings in 39 (97.5%) patients, a sense of fear in 32 (80%) patients, and a fixation on "bad" emotions in 30 (75%) patients were detected.

In group B, 37 (92.5%) patients had a constant feeling of anxiety, nervousness in 35 (87.5%) patients, fatigue and exhaustion in 40 (100%) patients, attention deficit disorder in 34 (85%) patients, sleep disorder in 38 (95%) patients, vegetative symptoms in 38 (95%) patients, anhedonia in 33 (82.5%) patients, a constant feeling of fatigue in 33 (82.5%) patients, emotional lability in 35 (87.5%) patients, mood swings in 38 (95%) patients, a feeling of fear in 30 (77.5%) patients, and fixation on "bad" emotions in 29 (72.5%) patients.

When the frequency of subjective symptoms of anxiety and depression in patients was compared, the level of occurrence of these symptoms in both groups did not differ statistically from each other.

Based on the data obtained, it can be concluded that anxiety-depressive disorders observed in SLE have a significant negative impact on the prognosis of this disease, the social life of patients, and their work activities, leading to social maladaptation. Therefore, effective treatment of anxiety-depressive disorders is one of the current urgent problems of psychosomatic medicine. For this reason, we used the Hospital Anxiety and Depression Scale (HADS) to determine anxiety and depression in patients. This scale is convenient to use, as it takes less time to fill out and the questions are understandable even for the patient himself.

Based on our research, through the examination of anxiety's existence or nonexistence using the HADS benchmark, clinical anxiety in the patient cohort was greater compared to the control group, accounting for 66.0%, whereas the subclinical anxiety was 10.7%. The anxiety in the undetected or normal control group was 3.0 times higher than in the main group.

According to the analysis of depression detection in the main and control groups according to the HADS criterion, the clinical depression in the patient group was higher than in the control group, amounting to 41.0%, while the subclinical anxiety was 35.7%. Since the level of clinically expressed anxiety and depression was not recorded in the control group, further studies were conducted only among the patients. The results of the study showed that the high level of clinically expressed anxiety and depression in patients is associated with their somatic disease, i.e., SLE.

According to data, only one fifth of patients suffering from rheumatic diseases and depression are ready to discuss their mood problems with a doctor, and only one quarter of patients receive adequate psychopharmacological and psychotherapeutic help [19].

Currently, there is little evidence to support the view that adequate psychopharmacotherapy, taking into account the specific features of the psychopathological structure of psychoemotional disorders, not only contributes to their reduction, but also improves the course and prognosis of rheumatic diseases. The variety of depression prevents us from restricting ourselves to the formal

inclusion of antidepressants and neuroleptics in the multifaceted therapy of rheumatic illnesses. This is since the essence of depression is mainly dictated by the individual's structure and the impact of stress elements. Considering the common pathogenetic mechanisms, the prescription of inappropriate psychopharmacotherapy might be linked to the worsening of rheumatic ailments. Simultaneously, the adjustment of mental conditions supports the anti-inflammatory outcome and the betterment of rheumatic maladies. In this regard, it's of considerable interest to examine the different influences of antidepressants and neuroleptics from distinct pharmacological classifications: predominantly serotonergic, noradrenergic, dopaminergic or with a dual effect [8,19,38].

Pharmacotherapy of ADD with the use of contemporary antidepressants, antipsychotics with antidepressant and anxiolytic qualities is a needed supplement to conventional medications in the multifaceted treatment of RD. With a sufficiently personalized prescription, besides the antidepressant effect, together with improving cognitive functions, these drugs have a positive influence on the asthenic syndrome in ADD [49,51,79,98].

We set the next task of our research to study and evaluate the effectiveness of Gestalt therapy and psychopharmacotherapy in order to correctly psychocorrect psychocorrection after identifying psychoemotional disorders in ADD. In accordance with this task, we used fluvoxamine as an antidepressant and afobazole as an anxiolytic. These drugs were prescribed according to the scheme. After the use of PFT, the psychoemotional sphere disorders in patients improved relatively.

The diversity of depressions displayed in psychopathological and pathogenetic levels does not permit us to restrict ourselves to including antidepressants and neuroleptics in the "complex treatment" of ADD in RD. This is because the character of depression is mainly defined by predisposition (affective structure) and the impact of stress factors. RD isn't a factor that dictates the nature of depression, but just necessitates a variety of therapeutic actions. Regarding this, the technique of individual psychotherapy based on the diagnosis of affective personality traits is pertinent for patients with RD. This strategy enables the

identification of the most vulnerable characteristics of a person for particular variants of psychotraumatic factors and to formulate the most suitable coping strategy for a given affective structure.

The concept of stress management encompasses a wide range of strategies for managing stress, reducing its regressive nature, and increasing the perception of personal control. Developing coping skills is important in the treatment of SLE, as the symptoms of pain and fatigue, in addition to the damage to the skin and vital organs, are stressful events in the patient's life. In patients with SLE, passive coping is predominant, with acceptance strategies being used [51].

Haija and Schultz have emphasized the need for alternative approaches to improve adherence to treatment in ADD and have recommended the inclusion of psychotherapy techniques that have been used as an adjunct to the treatment of a number of diseases, including cancer [43,62].

There are few studies evaluating the effectiveness of psychotherapy for autoimmune diseases. These studies have shown that psychotherapy and psychological support can improve quality of life in patients with SLE, leading to positive changes in depression, anxiety, interpersonal relationships, self-esteem, and overall health. However, they have some shortcomings, such as small sample sizes, lack of randomization, and positive results in only a few areas [88].

Céu T. M. C. et al. used a psychoanalytic psychotherapy method, introduced by Freud to alleviate psychological suffering, to correct psychoemotional disorders in patients with SLE. Over time, this approach has changed depending on the duration of the analysis (short duration), the number of participants (treatment), and the different diseases that started the treatment. After Alexander's input to psychosomatic medicine, Pierre Marty created a prominent psychoanalytic theory grounded on the notion of perception, which explains psychosomatic behavior. This concept is akin to alexithymia, where individuals experience trouble expressing and dealing with feelings. Therapy for such patients should be targeted, face-to-face once a week, focusing on observing body language, expressing emotions, and facilitating instinctive arousal [43].

To this end, we used the Gestalt psychotherapy method in our core group to correct psychoemotional disorders in patients with systemic lupus erythematosus. According to the analysis of the literature reviewed, the Gestalt psychotherapy method has not been used in patients with SLE to date. The advantage of this method is that it works primarily with emotions and balances the patient's current maladaptation. In this method, the patient is taught to make decisions for himself. The rules of living based on the principle of "here and now" are explained. According to the results obtained above, in order to improve the correct correction of psychoemotional disorders observed in patients, psychopharmacotherapy was prescribed to groups "A" and "V" from the first day of the medical-psychological examination. Gestalt therapy was applied to group "A" as a method of psychotherapy. Rational psychotherapy was applied to group "B" of the main group. In order to determine and analyze the results of treatment, patients in both groups were re-examined after 30 and 90 days, according to all the indicators listed above. When the obtained results were analyzed, the reduction of clinical symptoms of anxiety was evident in the group "A", that is, the basic treatment, PFT and Gestalt therapy were used. In particular, clinical anxiety in group "A" was 66.1% before the use of PFT and Gestalt therapy, after 1 month of PFT and Gestalt therapy it was 20.0%, and after 3 months the indicator was equal to 7.4%. It can be seen that the clinical anxiety index decreased by 88.8% after psychocorrection methods used in group "A" patients.

It was noted that the level of clinical anxiety decreased from 66.1% to 51.0% when examined after 1 month, and was equal to 41.0% when re-examined after 3 months. According to the data obtained above, after the psychocorrection methods applied to the patients of "B" group, the indicators of clinical anxiety decreased by 37.8%.

When examining and analyzing depression indicators according to the HADS scale, it was found that clinical depression in patients in group "A" was 41.0% before psychocorrection, 20.0% after 1 month of using PFT and Gestalt therapy, and 1.8% after 3 months, that is, the indicator decreased by 88.8%.

When analyzing depression indicators in patients in group “B”, clinical depression was 41.0% initially, 38.0% after 1 month of using psychopharmacotherapy and rational psychotherapy, and 12.0% after 3 months. According to the data obtained, it was noted that after the psychocorrection methods applied to patients in group “B”, the clinical depression indicator decreased by 29.2% ( $p < 0.01$ ). After the psychocorrection, patients in group A felt a significant improvement in their depressed mood, sleep disorders, and general health, and a significant decrease in the frequency of disturbing thoughts and fears.

According to patients with SLE, quality of life is the state of health, well-being, self-care, and the ability to work. Due to the specific symptoms of the disease, patients with SLE have a lower functional state, which leads to a decrease in the quality of life compared to the general population. Lack of confidence in the disease and obsessive thoughts about it, pain, and fatigue are stressors and contribute to a decrease in the patient's quality of life [4].

In a cohort study of patients with SLE, a notable decline in quality of life (QOL) measures was observed when compared to the general population [3].

Persistent illness in lupus patients, continuous consumption of glucocorticoid medications, and psychological conditions adversely influence the progression of the ailment, diminishing life quality and resulting in impairment in 25-57% of instances. Pain, fatigue, and limitations in daily activities worsen the quality of life of patients with systemic lupus erythematosus.

WHO views the quality and availability of medical care as significant factors influencing a patient's quality of life; hence, their research is an important matter in healthcare.

The subsequent objective of our study was to analyze the shifts in the quality of life of SLE patients. Thus, we employed the SF-36 questionnaire in groups “A” and “B” to examine the quality of life of patients prior to treatment, one month post-treatment, and three months following treatment. According to our results, it was

indeed found that patients diagnosed with SLE had low physical and mental components.

The results obtained showed that, compared to the period during which the patients received medical treatment, 1 month and 3 months after treatment, patients in group A, that is, the group in which Gestalt psychotherapy was used, had higher indicators of all quality of life criteria than group B.

Based on our study's findings, after a month of using PFT and Gestalt therapy in patients with SLE in group "A", upon re-evaluation of physical activity (PF), the indicators rose from  $33.6 \pm 6.7$  to  $45.2 \pm 7.3$ , and upon re-evaluation after 3 months, the indicators ameliorated to  $53.8 \pm 6.6$ . From these data, it was observed that in group "A" patients after 3 months of receiving the standard treatment, PFT and Gestalt therapy, physical activity (PF) improved by 37.5%. In group "B", physical activity (PF) was  $35.2 \pm 7.7$  when re-examined after 1 month, respectively; and  $39.1 \pm 6.9$  when re-examined according to this indicator after 3 months. According to the results obtained, the physical activity (PF) indicator increased by 16.3%.

When analyzing the results of physical problems (RP) in life activity limitation, it was noted that in patients in group "A" after 1 month of using PFT and Gestalt therapy, the indicators increased from  $27.0 \pm 7.3$  to  $46.2 \pm 7.3$ ; after 3 months, the indicator increased to 78.8. From these data, it can be seen that in patients in group "A" after 3 months, the RP indicator was almost 2.5 times higher than before the use of PFT and Gestalt therapy.

In group "B", the results of the analysis of physical problems (RP) in life activity limitation increased to  $32.2 \pm 7.7$  after 1 month, and after 3 months, the indicators were  $61.2 \pm 5.8$ . That is, after 3 months of using PFT and rational psychotherapy, the RP indicator increased by 1.0 times compared to the initial state.

When analyzing the indicators of patients in groups "A" and "B" according to the criterion of pain or its intensity (BP) of the SF-36 questionnaire, a significant difference was statistically confirmed between the groups ( $P < 0.001$ ). In particular, in patients in group "A" after 1 month of using PFT and Gestalt therapy, it was noted that the indicators increased from  $48.1 \pm 6.3$  to  $56.0 \pm 6.6$ . When the patients were re-

examined after 3 months, the results were  $67.7 \pm 5.8$ , and the BP indicator increased by 28.9%.

In patients in group “B”, the BP indicator was re-examined after 1 month, the indicator was  $50.4 \pm 6.9$ , respectively; after 3 months, it was  $54.1 \pm 6.3$ . It can be seen that after the application of psychocorrection, the BP index in patients in group “B” increased by 20.0%.

The assessment of patients' general health (GH) is the most important criterion for quality of life. The lower the general health index, the worse the patient's general condition.

Analysis of the results showed that in group “A” after 1 month of using PFT and Gestalt therapy, the index increased from  $51.6 \pm 5.3$  to  $62.0 \pm 6.0$ , and when this index was re-examined after 3 months, the result was  $73.8 \pm 7.0$ . That is, in group “A” after 3 months, the GH index increased by 28.1%.

In group “B”, the GH index after psychocorrection was  $51.0 \pm 6.6$  after 1 month, and  $63.0 \pm 6.0$  after re-examination after 3 months. This indicates that the GH index increased by 18.0% in group “B” where PFT and rational psychotherapy were used.

When patients were assessed according to their assessment of vitality, that is, their vital tone (VT) over the past 4 weeks according to the SF-36 questionnaire, in group “A” patients the index increased from  $30.9 \pm 6.3$  to  $67.4 \pm 5.8$  after 1 month of PFT and Gestalt therapy, and after 3 months VT was recorded at  $74.5 \pm 5.6$ . Accordingly, in patients in group “A”, the VT index increased by almost 2.5 times after 3 months of medical-psychological correction.

In patients in group “B”, the VT index was  $41.4 \pm 6.3$  after 1 month of the corresponding medical-psychological correction, and after 3 months it was  $57.0 \pm 5.8$ . It follows that after PFT and rational psychotherapy applied to patients in group “B”, the VT index increased by 1.5 times.

Social activity (SF) in the SF-36 questionnaire, that is, the level of the patient's relationship with loved ones, relatives, and friends, was also studied. According to it, in group “A”, the result changed from  $37.5 \pm 6.3$  to  $51.5 \pm 6.6$  after 1 month of PFT

and Gestalt therapy. According to this indicator, when the patients were re-examined after 3 months, the result was  $78.8 \pm 5.4$ . It can be seen that after 3 months the index of social activity increased by almost 2.5 times in patients of group "A" compared to the application of psychocorrection.

In group "B" patients, when the SF index was checked, the results were  $46.4 \pm 6.9$  after 1 month, respectively, while after the use of PFT and rational psychotherapy, the indicators were  $52.4 \pm 6.0$ . From the above results, it was noted that after the psychocorrection methods used in group "B" patients, the social activity index increased by 0.8 times.

When we analyzed the psychoemotional problems (RE) in the limitation of life activities according to the SF-36 questionnaire, it was noted that in group "A" patients, the indicators changed from  $15.4 \pm 8.7$  to  $70.5 \pm 5.4$  (6.5 times) after 1 month of psychocorrection. When re-examined after 3 months, the result increased to  $92.3 \pm 5.0$ , that is, after 3 months of applied PFT and Gestalt therapy, the RE indicator increased by 8.0 times.

When analyzing the RE indicator in patients in group "B", the results were  $28.5 \pm 7.7$  after psychocorrection, respectively, and when re-examined after 3 months, it was  $36.3 \pm 5.6$ . From the results obtained, it was noted that the RE indicator increased by 6.0 times in the group where PFT and rational psychotherapy were used.

Psycho-emotional problems (RE) in limiting life activities in group A patients after psychotherapeutic treatments reached the highest level of quality of life indicators (92.3) ( $p < 0.001$ ). The mental state of patients over the last 4 weeks is one of the important factors in combating any diseases.

When we analyzed the mental health (MH) component of the SF-36 questionnaire, the results in patients in group "A" increased from  $38.9 \pm 6.3$  to  $64.0 \pm 6.0$  (50%) after 1 month of psychocorrection, and after 3 months the indicators were  $77.8 \pm 5.5$ . This shows that after PFT and Gestalt therapy, the mental health index increased by 75.0%.

In the analysis of the mental health component in patients of group “B”, the results were  $46.5\pm 6.9$  after 1 month of psychocorrection, and  $61.4\pm 7.7$  after 3 months, i.e., an increase of 50% in the indicators after psychocorrection ( $p<0.001$ .)

According to the results of assessing the physical component of health according to the SF-36 questionnaire in patients with a diagnosis of SLE, in group “A” the indicators changed from  $33.7\pm 6.3$  to  $38.0\pm 7.7$  after 1 month of psychocorrection, and  $41.2\pm 7.3$  after 3 months, i.e., an increase of 18.2% after 3 months of PFT and Gestalt therapy.

When assessing the physical component of health in patients of group “B”, it was noted that after 1 month of psychopharmacotherapy and rational psychotherapy, the indicators were  $34.2\pm 8.2$ , respectively, and after 3 months, the indicator was  $36.0\pm 7.7$ . According to these results, after psychocorrection in patients of group “B”, the indicators increased by 6.7%.

According to the results of assessing the mental component of health according to the SF-36 questionnaire in patients with a diagnosis of SLE, in group “A”, after 1 month of PFT and Gestalt therapy, the indicators increased from  $31.0\pm 6.7$  to  $40.5\pm 7.7$ , and after 3 months of psychocorrection, the indicators increased by  $57.6\pm 6.3$ , that is, by 41.1%.

In group “B”, after the use of PFT and rational psychotherapy, the indicators were  $36.5\pm 7.7$ ;  $47.4\pm 6.9$ , respectively, an increase of 20.0%. It is precisely the high assessment of the mental component of health that can be associated with the positive quality of the Gestalt psychotherapeutic procedures performed in patients in group “A”. Specifically, over the past four weeks, the patients' anxious tone, social activity (level of connections with friends, relatives, colleagues), and spiritual state (joy, peace, tranquility) ameliorated, and the impact of emotional issues in restricting life activities lessened.

At present, the implementation of concepts and techniques from medical psychology within the clinic of somatic illnesses is swiftly advancing, attributed to a growing comprehension of the patient's character and socio-psychological elements in the genesis of the ailment, and in the treatment procedure. The existing

experience of psychologists in somatic medicine affirms the notion that there are common facets of the psychological reaction within disease conditions, irrespective of its nosological association, alongside the particular characteristics of this reaction in various somatic pathology forms. In turn, the traits of this reaction can significantly affect the illness's duration and the success of the treatment. Concerning this, a broad spectrum of psychological diagnostics tasks in the somatic clinic includes exploring the alterations the disease introduces in the patient's current mental state, their personality, and social engagement, in addition to the potential effects the human psyche might have during the course of the ailment, with one of its important objectives being the study of mechanisms by which a person adapts to the disease.

According to the above data, we achieved positive results by applying the diagnostic and psychotherapeutic correction algorithm used in our study. Thus, it's crucial to ascertain the psychoemotional condition of SLE patients from their initial hospital visit and administer psychocorrection. Following the established algorithm, data regarding the first indications of psychoemotional issues in patients is gathered and the required psychopharmacotherapy and psychotherapy techniques are progressively implemented for them.

In addition, by studying and assessing the quality of life of patients, the role of emotional problems in limiting vital activity, the impact of factors such as vitality, social activity, mental health on the course of the disease is studied. This ensures that anxiety or depression in patients does not progress to severe levels and that these psychoemotional disorders do not reduce the quality of life of patients.

**The advantages of using this diagnostic algorithm in rheumatological patients are:**

- 1) Early detection of dysthymic states, anhedonia, apathetic states, dyssomnia, demotivational syndromes, psychovegetative disorders;
- 2) Early detection of depressive-anxiety disorders;

3) Through studying and evaluating the quality of life, it permits determining the part of emotional issues in restricting essential capacity, social interaction, life functions, and mental well-being, and can be applied to boost the patient's influence on the underlying ailment and their adherence.

To achieve maximum effectiveness in the treatment of patients diagnosed with SLE, it is necessary to pay attention to several areas at once. In this case, taking into account the patient's cognitive functions, sensory-emotional sphere, and involving the patient's loved ones in restoring these functions has a very positive effect on the effectiveness of treatment.

That's why individual approach to each patient and choosing the right type of treatment is one of the main principles of patient rehabilitation.

## SUMMARY

Based on the research conducted on the thesis of Doctor of Philosophy in Medical Sciences (PhD) on the topic “Anxiety-depressive disorders in systemic lupus erythematosus and improvement of medical-psychological care in this case”, the following conclusions were presented:

1. When the psychoemotional state of patients diagnosed with systemic lupus erythematosus was subjectively assessed using a medical-psychological questionnaire, all of them possessed psychoemotional disorders (dysthymic states, anhedonia, apathetic states, dyssomnia, demotivational syndromes, psychovegetative disorders, anxiety, depressive disorders); clinical and subclinical anxiety and depression of various degrees were identified and analyzed in all those examined using the HADS scale.
2. As per the study results, subjective symptoms were effectively ameliorated by using psychotherapy (Gestalt therapy) and psychopharmacotherapy in the complex treatment of psychoemotional disorders in patients diagnosed with systemic lupus erythematosus. Based on the analysis of anxiety and depression according to the HADS criterion, clinical anxiety and depression decreased by 88.8% among patients in group A, and by 29.2% in group B.
3. When analyzing the quality of life of patients with systemic lupus erythematosus using the SF-36 questionnaire, a significant improvement was noted in all indicators, especially the mental component of health, in the group where Gestalt therapy was used (increased by 41.1%), and these results can be attributed to the positive effect of Gestalt therapy in patients in group A.
4. To enhance the offering of psychotherapeutic support to patients with systemic lupus erythematosus, a medical psychological questionnaire to assess their psychoemotional sphere, alongside a scale determining the level of anxiety and depression, and a Gestalt therapy-based algorithm for correcting the psychoemotional background, were created and implemented. Consequently, the

study highlighted a notable betterment in their psycho-emotional condition through the application of the designed algorithm, resulting in a positive shift in the quality of life progression. Specifically, during the prior 4 weeks, the patients' nervous system tone, social activity (relationships with friends, relatives, colleagues), and spiritual well-being (joy, peace, tranquility) improved, while the impact of emotional issues on limiting life activities diminished.

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## **LIST OF ABBREVIATIONS:**

AD – antidepressant

GT – Gestalt therapy

WHO – World Health Organization

CNS – central nervous system

PD – psychoemotional disorders

PT – psychotherapy

PFT – psychopharmacotherapy

RA – rheumatoid arthritis

MD – mental disorder

RD – rheumatic disease

SLE – systemic lupus erythematosus

ADD – anxiety-depressive disorder

PF – Physical role functioning

RP – Role of physical problems in limiting life activities

BP – Bodily pain

GH – General health

VT – Vitality

SF – Social functioning

RE – Role of emotional problems in limiting life activities

MH – Mental health

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