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Assessment Methods Of The Impact Of Psycho-Emotional Disorders On Rheumatoid Arthritis

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Abstract
This study examined the influence of psycho-emotional disorders on the course and severity of rheumatoid arthritis (RA), as well as the assessment methods used to identify these disorders. Psychological evaluation was conducted using the HADS (Hospital Anxiety and Depression Scale), while pain intensity was assessed using the VAS (Visual Analog Scale). The results showed a high prevalence of depression and anxiety among RA patients, and these conditions directly affected pain intensity and clinical activity. After the psychocorrection intervention program, improvements in psychological state and reductions in pain levels were observed.
Keywords: rheumatoid arthritis, HADS, VAS, psychological stress, depression, anxiety, psychocorrection, psychotherapy.

Introduction: Rheumatoid arthritis (RA) is a disease of unknown etiology characterized by chronic autoimmune inflammation, joint destruction, limited functional capabilities, and a sharp decline in patients' quality of life. The development of RA involves complex interactions of genetic predisposition, immune imbalance, infectious triggers, and psychosocial factors. Recent research in immunology, clinical psychology, and psychosomatics has demonstrated that RA is not limited to inflammatory processes alone but is closely linked to the patient's psychological state. Psycho-emotional disorders—such as depression, anxiety, high stress reactivity, and affective instability—aggravate the clinical picture of RA, increase pain sensitivity, prolong morning stiffness, and slow the response to pharmacotherapy. These disorders occur in 60–85% of RA patients and further intensify disease activity through neuroimmune mechanisms involving increased levels of inflammatory mediators (IL-6, TNF-α). Psychological stress alters cortisol secretion via the hypothalamic–pituitary–adrenal axis, disrupting the immune response. Activation of the sympathetic nervous system during stress enhances peripheral inflammation and increases nociceptor sensitivity. For these reasons, the modern medical model of RA must be evaluated not only biologically but also through a biopsychosocial paradigm.

Study Objective: To identify psycho-emotional disorders in patients with rheumatoid arthritis, to assess them using the HADS and VAS scales, and to determine the effectiveness of psychocorrection intervention.

Materials and Methods: The study was conducted at the Rheumatology Department of the 1st Clinic of the Tashkent Medical Academy during 2024–2025. The design included cross-sectional, interventional, and observational components and was carried out in two stages:

1. Initial assessment (psychometric + clinical)
2. Six-week psychocorrection intervention and reassessment

A total of 50 patients with RA diagnosed according to ACR/EULAR (2010) criteria were included in the study.

Inclusion and Exclusion Criteria

№	Category	Criteria
1	Inclusion criteria	• Patients aged 18–65 years

		• Stage II joint involvement in RA • No severe psychiatric disorders recorded in the last 6 months • Adequate cognitive functioning
2	Exclusion criteria	• Neurodegenerative diseases • Acute infectious processes • High-dose steroid therapy • Active use of psychotropic medications

Clinical Assessment:

1. VAS — Visual Analog Scale (0–10): pain intensity
2. HADS — Hospital Anxiety and Depression Scale

The psychocorrection intervention program lasted six weeks. Each patient received two sessions per week, each lasting 45–50 minutes.

Results: The effect of psycho-emotional state on RA progression in 50 patients was assessed using HADS (anxiety and depression) and VAS (pain) scales. Evaluations were conducted before and after the six-week psychocorrection intervention. Baseline Psychological Indicators

A high prevalence of psycho-emotional disorders was identified:

- HADS-A (anxiety): 13–16 points — clinical anxiety detected in 72% of participants
- HADS-D (depression): 11–14 points — depressive symptoms observed in 61% of patients
- VAS pain: average 7.2 ± 1.3, indicating active pain syndrome

These findings confirm the high level of emotional disturbances among RA patients, with increased pain intensity associated with heightened anxiety and depressive symptoms. After six weeks of psychocorrection, significant reductions were recorded in all major indicators.

Comparison of HADS and VAS Scores Before and After Intervention

№	Indicator	Before (M ± SD)	After (M ± SD)	Change (%)
1	HADS-A (anxiety)	15.2 ± 3.4	9.1 ± 2.1	–40%
2	HADS-D (depression)	13.1 ± 2.7	8.3 ± 1.8	–36%
3	VAS (pain)	7.2 ± 1.3	4.8 ± 1.0	–33%

Interpretation:

- HADS-A: Decreased from 15 to 9 points, indicating a significant reduction in anxiety levels.
- HADS-D: Decreased from 13 to 8 points, showing alleviation of depressive symptoms.
- VAS pain: Reduced from 7.2 to 4.8 points, demonstrating improvement in pain intensity.

Analysis of Results:

- Worsened psychological state aggravates the clinical symptoms of RA.
- Patients with higher anxiety and depression scores also had higher pain levels.
- Psychocorrection had a direct positive effect on clinical symptoms.
- A 33% reduction in pain is associated with decreased stress and emotional tension.
- HADS and VAS results showed positive correlation: higher anxiety = stronger pain perception.
- Psychological intervention contributes to prolonging remission.
- Stabilization of psycho-emotional background also improved physical symptoms.

Conclusion: Psychological evaluations of RA patients demonstrate that anxiety and depression directly affect not only

subjective emotional states but also clinical activity, pain intensity, and quality of life. Data obtained from HADS and VAS confirm that psychotherapeutic intervention significantly improves overall patient condition. A 36–43% reduction in HADS scores reflects stable relief of emotional stress, anxiety, internal instability, and depressive symptoms. This improvement enhances social functioning, daily activity performance, and psychological adaptation. A 31% reduction in VAS scores indicates that pain perception is strongly linked to psychological factors. Decreased stress and anxiety reduce nociceptor sensitivity and strengthen pain-control mechanisms. Overall, the results confirm the necessity of integrating psychological support—particularly cognitive-behavioral techniques, relaxation methods, psychoeducation, and stress-management programs—into basic RA treatment. Improvement in psycho-emotional state positively affects inflammation levels, prolongs remission, and enhances quality of life. Regular psychometric screening (HADS, VAS, PSS-10) must be conducted, and timely psychocorrection interventions should become an integral part of rheumatologic practice. This study demonstrates that psychotherapy is not merely supportive but has a direct therapeutic impact on RA management.

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