

Research Article

The Relationship Between Disease Activity, Comorbidity Burden, and Functional Status with Self-Esteem in Patients with Rheumatoid Arthritis

 Mehmet Ergin,  Özgül Soysal Gündüz,  Timur Pırıldar

Department of Internal Medicine, Manisa Celal Bayar University Faculty of Medicine, Manisa, Türkiye

Abstract

Objectives: Rheumatoid arthritis (RA) is a chronic inflammatory disease with systemic involvement that gives rise not only to physical but also to psychosocial consequences. The purpose of this study was to evaluate the relationship between self-esteem and disease activity, functional status, and comorbidities in patients with RA.

Methods: This cross-sectional study enrolled patients with a confirmed diagnosis of rheumatoid arthritis. Disease activity was measured using the DAS28 score, functional status was assessed with the Health Assessment Questionnaire (HAQ), and self-esteem was evaluated using the Rosenberg Self-Esteem Scale.

Results: A statistically significant association was found between increased disease activity, higher comorbidity burden, and lower self-esteem scores.

Conclusion: The psychosocial dimension must be taken into consideration when evaluating patients with RA.

Keywords: Rheumatoid arthritis, self-esteem, disease activity, comorbidity, functional status

Cite This Article: Ergin M, Soysal Gündüz Ö, Pırıldar T. The Relationship Between Disease Activity, Comorbidity Burden, and Functional Status with Self-Esteem in Patients with Rheumatoid Arthritis. EJMA 2026(2): 51-53.

Rheumatoid arthritis (RA) is a chronic, autoimmune, and inflammatory disease that constitutes a complex clinical entity affecting multiple systems, with the synovial joints bearing the primary burden.^[1] The disease follows a progressive course and may result in joint destruction, loss of function, and a marked deterioration in quality of life. Genetic susceptibility, environmental factors, and immunological mechanisms all play a role in the pathophysiology of RA.^[1,2]

RA is not solely a physical disease; it also encompasses psychological and social dimensions. Chronic pain, restricted

mobility, and the requirement for long-term treatment can lead to depression, anxiety, and diminished self-esteem in affected individuals.^[3] Self-esteem is an important psychological parameter that reflects a person's self-assessments and their perception of self-worth.^[4]

The literature indicates that self-esteem in patients with RA is associated with disease activity, functional status, and comorbidities. For this reason, psychosocial factors—in addition to purely clinical parameters—must be considered when evaluating patients with RA.^[5,6]

Address for correspondence: Mehmet Ergin, MD, Department of Internal Medicine, Manisa Celal Bayar University Faculty of Medicine, Manisa, Türkiye

Phone: +90 546 206 16 70 **E-mail:** mergin_68@hotmail.com

Submitted Date: May 1, 2026 **Accepted Date:** August 1, 2026

©Copyright 2024 by Eurasian Journal of Medical Advances - Available online at www.ejmad.org

OPEN ACCESS This work is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License.



Methods

This retrospective, single-center study was conducted at the Faculty of Medicine. The study protocol was reviewed by the Health Sciences Ethics Committee of Manisa Celal Bayar University Faculty of Medicine (decision date/no: October 21, 2020; 20.478.486/584). The study was conducted in accordance with the principles of the Declaration of Helsinki.

This study was designed as a cross-sectional investigation. Patients who had been diagnosed with rheumatoid arthritis were enrolled. All participants were evaluated with respect to demographic characteristics, disease duration, comorbid conditions, and current medications.

Disease activity was assessed using the Disease Activity Score 28 (DAS28). The DAS28 is a composite index that incorporates the number of tender and swollen joints, the erythrocyte sedimentation rate or C-reactive protein level, and the patient's global assessment.^[7]

Functional status was measured with the Health Assessment Questionnaire (HAQ), a validated and reliable instrument for assessing patients' ability to perform activities of daily living.^[8]

Self-esteem was evaluated using the Rosenberg Self-Esteem Scale, which measures both positive and negative attitudes an individual holds toward the self.

Statistical analyses were performed using appropriate parametric and non-parametric tests. A p-value of less than 0.05 was considered statistically significant.

Results

The majority of the patients included in the study were female. The mean age was in the middle-aged range. A considerable proportion of patients had at least one comorbid condition (Table 1).

An inverse relationship was observed between DAS28 scores and self-esteem scores. Patients with high disease activity demonstrated significantly lower self-esteem ($r = -0.42$, $p < 0.001$).

A negative correlation was identified between HAQ scores and self-esteem ($r = -0.46$, $p < 0.001$). Patients with greater functional limitation had lower self-esteem scores.

Self-esteem was found to decrease as the number of comorbidities increased ($p = 0.002$). This association was particularly pronounced in patients with cardiovascular disease and diabetes mellitus.

In multivariable regression analysis, DAS28 ($\beta = -0.31$, $p = 0.004$) and HAQ ($\beta = -0.35$, $p = 0.002$) remained independent determinants of self-esteem (Table 2).

Table 1. Demographic characteristics

Variable	n	%
Female	60	75
Male	20	25
Mean age (years)	52	—

Table 2. Clinical parameters

Parameter	Mean	SD
DAS28	4.5	1.2
HAQ	1.3	0.5
Self-esteem score	18	4

DAS 28: Disease activity score 28; HAQ: Health assessment questionnaire; SD: Standard deviation.

Discussion

This study demonstrated that self-esteem in patients with RA is associated with disease activity and comorbidities, findings that are consistent with the existing literature.

Chronic pain and functional loss in patients with RA generate considerable psychological stress. This burden can erode an individual's confidence and lead to a decline in self-esteem.^[9]

The presence of comorbid conditions adversely affects patients' overall health status and amplifies the psychological load they carry.^[9] Accordingly, patients with RA should be evaluated through a holistic approach that addresses both physical and psychological dimensions.^[10]

Psychosocial support and appropriate treatment strategies may help improve self-esteem and, in turn, enhance adherence to therapy.

Conclusion

Self-esteem in patients with rheumatoid arthritis is closely related to disease activity and comorbidities. Psychosocial factors must be incorporated into clinical assessments to ensure comprehensive patient care.^[10]

Disclosures

Ethics Committee Approval: This retrospective, single-center study was conducted at Manisa Celal Bayar University Faculty of Medicine. The study protocol was approved by the Health Sciences Ethics Committee (approval date: October 21, 2020; approval no: 20.478.486/584).

Conflicts of Interest: No conflict of interest was declared by the authors.

Funding: The author declares that this research received no external funding.

Use of AI for Writing Assistance: No artificial intelligence (AI)-assisted technologies, including Large Language Models (LLMs), chatbots, or image creators, were used in the production of this submitted work.

Authorship Contributions: Concept – ME, TP, ÖSG; Design – ME, TP, ÖSG; Supervision – TP; Data Collection or Processing – ME, ÖSG; Analysis or Interpretation – ME, TP; Literature Search – ME; Writing – ME; Critical Review – TP, ÖSG.

Peer-review: Externally peer-reviewed.

References

1. Smolen JS, Aletaha D, McInnes IB. Rheumatoid arthritis. *Lancet* 2016;388(10055):2023–38. [\[CrossRef\]](#)
2. Firestein GS. Etiology and pathogenesis of rheumatoid arthritis. In: Firestein GS, Budd RC, Gabriel SE, McInnes IB, O'Dell JR, eds. *Kelley's Textbook of Rheumatology*. 9th ed. Philadelphia: Elsevier; 2013. p. 1059–86. [\[CrossRef\]](#)
3. Matcham F, Rayner L, Steer S, Hotopf M. The prevalence of depression in rheumatoid arthritis: a systematic review and meta-analysis. *Rheumatology (Oxford)* 2013;52(12):2136–48. [\[CrossRef\]](#)
4. Rosenberg M. *Society and the adolescent self-image*. Princeton (NJ): Princeton University Press; 1965. [\[CrossRef\]](#)
5. Smolen JS, Landewé RBM, Bijlsma JWJ, Burmester GR, Dougados M, Kerschbaumer A, et al. EULAR recommendations for the management of rheumatoid arthritis with synthetic and biological disease-modifying antirheumatic drugs: 2019 update. *Ann Rheum Dis* 2020;79(6):685–99.
6. Fraenkel L, Bathon JM, England BR, e St Clair EW, Arayssi T, Carandang K, et al. 2021 American College of Rheumatology guideline for the treatment of rheumatoid arthritis. *Arthritis Care Res (Hoboken)* 2021;73(7):924–39.
7. van der Heijde DM, van 't Hof MA, van Riel PL, Theunisse LA, Lubberts EW, van Leeuwen MA, et al. Judging disease activity in clinical practice in rheumatoid arthritis: first step in the development of a disease activity score. *Ann Rheum Dis* 1990;49(11):916–20. [\[CrossRef\]](#)
8. Fries JF, Spitz P, Kraines RG, Holman HR. Measurement of patient outcome in arthritis. *Arthritis Rheum* 1980;23(2):137–45. [\[CrossRef\]](#)
9. Radner H, Yoshida K, Mjaavatten MD, Aletaha D, Frits M, Lu B, et al. Development of a multimorbidity index in rheumatoid arthritis. *Rheumatology (Oxford)* 2015;54(9):1666–73. [\[CrossRef\]](#)
10. Matcham F, Scott IC, Rayner L, Hotopf M, Kingsley GH, Norton S, et al. The impact of rheumatoid arthritis on quality-of-life assessed using the SF-36: a systematic review and meta-analysis. *Semin Arthritis Rheum*. 2014;44(2):123–30. [\[CrossRef\]](#)