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The spiritual well-being of patients with ankylosing spondylitis and rheumatoid arthritis

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Abstract

The aim of this study was to determine the spiritual well-being of patients with ankylosing spondylitis (AS) and rheumatoid arthritis (RA), as well as its relationship with disease activity. The study included a total of 91 patients (43 patients with AS and 48 patients with RA). The patients' demographic data, disease duration, and comorbidities were questioned. Disease activity was evaluated by Bath Ankylosing Spondylitis Disease Activity Index (BASDAI) for AS and by Diseases Activity Score-28 (DAS-28) for RA. The levels of spiritual well-being were evaluated with the Functional Assessment of Chronic Illness Therapy-Spiritual Well-Being (FACIT-Sp-12). The spiritual well-being scores of both patient groups were moderately high. However, RA patients had significantly lower FACIT-Sp-12 meaning and peace sub scores and total scores than AS patients (p=0.04; 0.01; 0.04, respectively). AS patients, on the other hand, had lower faith sub scores than RA patients (p=0.01). The mean DAS-28 was 2.83±0.16 for RA, and the mean BASDAI score was 2.73±0.23 for AS. There was no correlation between FACIT-Sp-12 scores and disease activity levels in both patient groups (p>0.05). We found moderate levels of spiritual well-being in the most common rheumatic diseases such as AS and RA. Although this study demonstrated no relationship between spiritual well-being and disease activity, we believe that as with the quality of life, the spiritual well-being level of patients is a psychosocial variable that should be prioritized in the treatment of chronic rheumatic diseases.

Keywords: Ankylosing spondylitis, Rheumatoid arthritis, Spiritual Well-being

Introduction

Ankylosing spondylitis (AS) is one of the most common rheumatic diseases affecting the sacroiliac joint and axial system, and rheumatoid arthritis (RA) is a common rheumatic disease with small joint involvement. In both diseases, the patient's life is adversely affected in physical, social, and psychosocial aspects due to the disability that occurs in the chronic process [1-5].

The meaning of the word "spirituality" is defined as "the condition or quality of being spiritual, devotion to spiritual values." The spiritual aspect of an individual is as important as the physical, emotional, and social aspects. The struggle for the existence of individuals with life-threatening diseases prepares the ground for feeling themselves better. Therefore, all healthcare professionals should adopt a holistic approach specific to the individual to provide physical comfort and social support, help people feel and discover that they are valuable creatures that came to this world, and accept death as a part of life [6].

Patients who are spiritually developed and more addicted to religion are physically, emotionally, and socially healthier. The significance of this issue, which has been especially emphasized in cancer patients, has been shown in recent studies to cope with chronic diseases such as RA [7,8]. A retrospective study examining the relationship between spirituality and the onset and/or outcome (including death) of cancer showed that those with a religious/spirituality feeling had a lower risk of developing cancer and possibly a better prognosis [9]. A study on chronic pain and fatigue concluded that multidimensional coping strategies, including spiritual well-being, should be adopted in the treatment of patients with chronic pain [10]. Likewise, Lin et al. emphasized the importance of integrating spirituality into the quality-of-life evaluations of RA patients [7]. Barlett et al. showed spirituality

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as an independent predictor of positive health perceptions in patients with RA. [8]. To our knowledge, this issue has not yet been addressed in patients with AS.

Objective

The aim of this study was to determine the spiritual well-being of patients with AS and RA and its relationship with disease activity.

Materials and Methods

A questionnaire was used for this study. The study included a total of 91 patients (43 AS patients and 48 RA patients) who were followed up in our hospital between January and November 2020. The approval for the study was obtained from the local ethics committee of clinical research with the decision number of 2020/252. The exclusion criteria were set as follows: the presence of psychiatric disorder and psychiatric drug use, perception disorder, communication problem, and hearing impairment.

Data Collection

The sociodemographic data of the patients were recorded. The patients' disease activity was evaluated by a physician using BASDAI for AS and DAS-28 for RA. The levels of spiritual well-being were evaluated with the Functional Assessment of Chronic Illness Therapy-Spiritual Well-Being (FACIT-Sp-12).

Bath Ankylosing Spondylitis Disease Activity Index (BASDAI)

BASDAI is a validated diagnostic test to evaluate disease activity in ankylosing spondylitis and consists of six questions [11]. In our study, a BASDAI score <4 was considered low disease activity, while a score of ≥4 was considered moderate-high disease activity.

Diseases Activity Score-28 (DAS-28)

DAS-28 describes the severity of rheumatoid arthritis using clinical and laboratory data, specifically ESR [12]. In our study, a DAS-28 score ≤3.2 was considered low disease activity and >3.2 moderate-high disease activity.

The Functional Assessment of Chronic Illness Therapy – Spiritual Well-Being Scale (FACIT-Sp-12)

The FACIT-Sp-12 (peace, meaning, and faith) helps delve too deeply into all components of spiritual well-being. The items of the scale are rated ranging from 0 to 4. The meaning sub-dimension (items 2,3,5,8) is scored between 0-16, the faith sub-dimension (Items 9,10,11,12) between 0-16, with a total score of 0-48 points [13]. The Turkish validity and reliability study of the scale performed by Akturk found a Cronbach's alpha total score of 0.87, ranging between 0.78 and 0.93 for meaning, peace, and belief sub-dimensions [14]. FACIT-Sp-12 has been shown to be a good assessment tool for spiritual well-being and can be used in different populations [15]. The scale can be completed in five to six minutes.

Statistical Methods

The SPSS 22.0 software package was used for the analyses of the study data. Descriptive statistics were expressed as mean±standard deviation for continuous variables and as numbers and percentages for nominal variables. Distribution analysis was performed using the Shapiro-Wilk test. Student's t-test and Mann-Whitney U test were used to compare independent variables. The level of statistical significance was set at $p<0.05$.

Results

The mean age of the patients who participated in the study was 50±12.2 years, with a diagnosis duration of 10.6±1.0 years for RA and 9.7±1.1 years for AS. Thirty-four (70%) of the patients with RA were female, while 14 (37%) of the patients with AS were female (p=0.01). Other demographic data of the patients are presented in detail in Table 1. Thirty-two (66%) patients with RA and 18 patients (42%) with AS had at least one comorbid chronic disease (p=0.01). The mean disease activity indices were as follows: DAS-28, 2.83±0.16 for RA; BASDAI, 2.73±0.23 for AS.

Cronbach's s alpha value of FACIT-Sp-12 was 0.81 for RA and 0.78 for AS.

The spiritual well-being scores were moderately high in both patient groups. However, RA patients had statistically significantly lower FACIT-Sp-12 meaning and peace sub scores and total scores than AS patients (p=0.04;0.01;0.04, respectively). In the faith sub-dimension, AS patients had lower scores than RA patients. (p=0.01) (Table 2) (Figures 1 and 2).

There was no correlation between age, disease duration, and FACIT-SP-12 scores. There was also no statistically significant difference between the groups with and without at least one chronic disease in addition to their primary diagnosis in terms of FACIT-SP-12 scores (p>0.05). The number of patients with a moderate-high disease activity level was 16 (33%) in the RA group and 11 (25%) in the AS group. We found no correlation between disease activity levels and FACIT-SP-12 scores in both patient groups (Table 3).

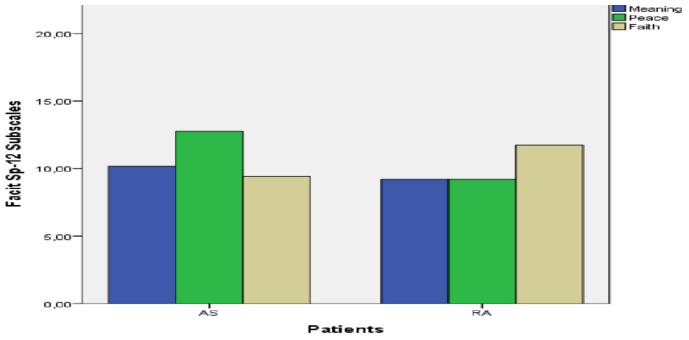

Figure 1. FACIT-Sp-12 Subscales of patients

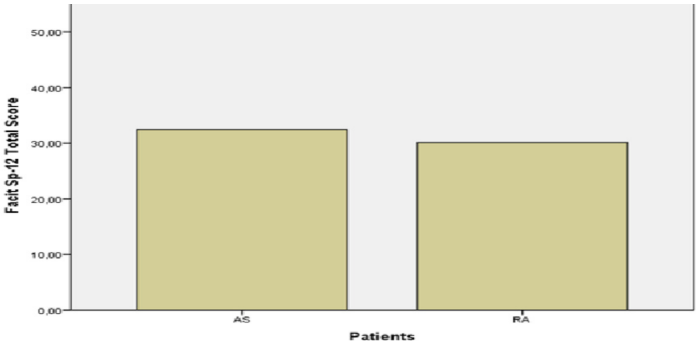

Figure 2. FACIT-Sp-12 Total scores of patients

Table 1. Descriptive characteristics of the patients who participated in the study

Descriptive characteristics	RA (n:48) n (%)		AS (n:43) n (%)		P-value
Age (years)	53.9±1.7		45.6±1.7		0.001
BMI (kg/m²)	27.2±0.7		26.5±0.6		0.4
Duration of disease (years)	10.6±1.0		9.7±1.1		0.4
Gender					
Male	34 (71)		16	37	0.001
Female	14 (29)		27	63	
Disease activity category					
Low	32 (67)		32	74	0.12
Moderate-severe	16 (33)		11	26	
Marital status					
Married	36 (75)		32	74	0.57
Single	12 (25)		11	26	
Education Level					
Illiterate	7	15	2	5	0.07
Primary school	31	65	22	51	
High school	5	10	11	25	
University	5	10	8	19	
Employment situation					
Employed	12	25	26	60	0.001
Unemployed	36	75	17	40	
Medical therapy					
NSAIDs	5	10	12	28	
Corticosteroids	17	35	0	0	
DMARDs	31	65	3	7	
TNF blocker	19	40	40	93	
Other biologics	6	13	0	0	
Additional Chronic Disease					
Yes	32	67	18	42	0.01
No	16	33	25	58	

RA: Rheumatoid Arthritis; AS: Ankylosing Spondylitis; BMI: Body Mass Index; NSAIDs: Non-steroidal anti-inflammatory drugs; DMARDs: Disease-modifying antirheumatic drugs; TNF blocker: Tumor necrosis factor blocker

Table 2. Spiritual well-being scores of patients who participated in the study

	RA (n:48) Mean±SD	AS (n:43) Mean±SD	P-value
Age (years)	53.9±1.7	45.6±1.7	0.001*
BMI (kg/m²)	27.2±0.7	26.5±0.6	0.4
Duration of disease (years)	10.6±1.0	9.7±1.1	0.4
FACIT-SP12			
Meaning subscale (0-16)	9.18±0.32	10.23±0.28	0.04**
Peace subscale (0-16)	9.18±0.38	12.93±0.52	0.01**
Faith subscale (0-16)	11.41±0.39	9.51±0.29	0.01**
Total score (0-48)	29.79±0.86	32.76±0.76	0.01**

BMI: Body mass index; FACIT-SP12: The Functional Assessment of Chronic Illness Therapy – Spiritual Well Being Scale12
*Independent t-test p<0.05. ** Mann-Whitney U test p<0.05

Table 3. FACIT-Sp 12 scores by disease activities

FAC-IT-SP12	RA Low Disease activity	RA Moder-ate-severe Disease activity	P value	AS Low Disease activity	AS Moder-ate-severe Disease activity	P value
Meaning subscale (0-16)	9.4±0.37	8.85±0.63	0.34	10±0.35	10.9±0.43	0.19
Peace subscale (0-16)	9.62±0.42	9.31±0.64	0.11	12.87±0.60	13.09±1.09	0.70
Faith subscale (0-16)	11.84±0.48	10.56±0.63	0.05	9.37±0.31	9.90±0.73	0.16
Total score (0-48)	30.87±0.98	27.62±1.58	0.15	32.37±0.91	33.90±1.37	0.46

*Mann-Witney U test p<0.05

Discussion

Our study demonstrated moderate levels of spiritual well-being in the most common rheumatic diseases such as AS and RA. However, RA patients had statistically significantly lower meaning, peace subs cores, and total scores. On the other hand, it was found in our patient series that the spiritual well-being of AS and RA patients did not correlate with sociodemographic characteristics or disease activity.

Spiritual well-being means an individual's feeling of spiritual wealth" [16]. Spiritual well-being gives meaning and direction to life. It is a dynamic form of energy that empowers individuals and reduces their stress, giving them an inner strength to overcome physical and psychological pain [17,18]. Akturk et al. demonstrated the validity and reliability of this scale for chronic diseases in the Turkish population [14]. Another study conducted by the same researchers on patients with spinal cord injury found the Cronbach's alpha value of the scale as 0.88, while in our study, it was found as 0.81 in the RA group and 0.78 in the AS group [15].

Our study showed no correlation between FACIT-Sp-12 total

scores and sub-scores and age. Studies on different patient groups have yielded different results regarding the relationship between spiritual well-being and age. While Peterman et al. found a positive correlation between age and FACIT-Sp-12 scores in cancer patients [13], Matehis et al. found no significant association between age and FACIT-Sp-12 scores in patients with spinal cord injury [19]. However, our study demonstrated only a higher belief sub-score but a lower meaning and peace sub-scores and total score in the RA patient group with a higher mean age.

Similarly, there was no correlation between FACIT-Sp-12 scores and disease duration. The mean disease duration for both disease groups was as long as 10 years. Furthermore, different studies including different patient groups could not clarify the relationship between disease duration and FACIT-Sp-12 scores. In their studies, Matheis et al. and Akturk et al. found a negative correlation between the duration of injury and the mental well-being of patients with spinal injury [15,19]. Marini and Glover-Graf observed that parameters related to religion and spirituality decreased 2 years after injury in patients with spinal cord injury [20]. In contrast, Litwinczuk and Groh found that AIDS patients with a disease duration exceeding 10 years had higher spiritual well-being scores [21].

In our study, on the other hand, FACIT-Sp-12 scores were not associated with sociodemographic data such as gender, marital status, and educational level in both patient groups. The RA group was predominantly female, as expected. Two-thirds of the patients in the RA group had at least one comorbid systemic chronic disease. Although there was no significant correlation between FACIT-Sp-12 scores and gender, age, and presence of chronic disease in the RA group, we are of the opinion that the lower scores could explain this difference. In a review assessing the spiritual well-being of patients with RA, the authors uncovered four consistent themes for the spiritual well-being of RA patients: living with the disease, regaining control, reshaping the situation, and promoting courage [7]. Similarly, Barlett et al. showed that although the spiritual well-being of patients with RA was not directly associated with disease activity, spirituality could facilitate emotional adaptation and flexibility and contribute positively to the quality of life of those with RA by experiencing more positive emotions and participating in the positive elements of their lives. For this reason, it should be kept in mind that spiritual well-being, as well as the use of all therapeutic and nursing interventions, should be considered in interventions to improve the quality of life of individuals with any chronic disease, including RA and AS [8].

Hypertension and type 2 diabetes mellitus were the most common comorbid diseases in our patients. Jafari et al. found poor spiritual well-being levels in patients with type 2 DM in Iran and showed the need for spiritual support in the care of diabetic patients [22]. Landis et al. emphasized that mental and spiritual well-being could be an important internal resource for those who must adapt to the uncertainty associated with long-term health problems such as diabetes mellitus [23]. A recent article found no relationship between coronary artery disease and religious welfare and well-being depending on the welfare scale used for the assessment [24]. We believe that the presence of at least one comorbid chronic disease in our RA group can be associated with low spiritual well-being.

Our study demonstrated no significant correlation between disease activity and spiritual well-being, which is the main hypothesis of our study. We believe that the moderate spiritual well-being levels of the patients included in this study were due to the long disease duration, receiving monotherapy or combined therapies for the disease by each patient, and therefore having a controlled disease activity.

Conclusion

The limitation of our study was that the pre-treatment spiritual well-being of the patients was not evaluated. We would like to emphasize that spiritual well-being is a psychosocial variable that should be considered as important as the quality of life in future studies to be conducted on different rheumatic diseases with larger patient groups of all chronic diseases.

Conflict of interests
The authors declare that they have no competing interests.

Financial Disclosure
All authors declare no financial support.

Ethical approval
This retrospective study recieved approval from scientific research and publication ethics committee of Inonu University (2020/252)

References

1. Van der Linden S. Ankylosing spondylitis. In: Kelley N, Ruddy S, Haris E, Sledge C (Ed). Textbook of Rheumatology. WB Saunders Company, Philadelphia; 1997.pp. 969-82.
2. Persson LO, Berglund K, Sahlberg D. Psychological factors in chronic rheumatic diseases, a review: the case of rheumatoid arthritis, current research, and some problems. Scand J Rheumatol. 1999;28:137-44.
3. Repping-Wut H, Uitterhoeve R, van Riel P, van Achterberg T. Fatigue as experienced by patients with rheumatoid arthritis (RA): a qualitative study. Int J Nurs Stud. 2008;45;995-1002.
4. Helland Y, Dagfinrud H, Kvien TK. Perceived influence of health status on sexual activity in RA patients: associations with demographic and disease-related variables. Scand J Rheumatol. 2008;37:194-9.
5. 5Shipley M, Newman SP. Psychological aspects of rheumatic diseases. Baillieres Clin Rheumatol. 1993;7:215-9.
6. Cetinkaya B, Altundag S, Azak A. Spirituel care and nursing. Meandros Med Dent J. 2007;8:47-50.
7. Lin WC, Gau ML, Lin Hc, Lin HR. Spiritual Well-Being in Patients With Rheumatoid Arthritis J Nurs Res. 2011;19:1-12.
8. Bartlett SJ, Piedmont R, Bilderback A, et al. Spirituality, well-being, and quality of life in people with rheumatoid arthritis. Arthritis Rheumatism. 2003;49:778-83.
9. MacArthur AC, Le N, Abanto ZU, Gallagher RP. Occupational female breast and reproductive cancer mortality in British Columbia, Canada, 1950–94. Occupational Med. 2007;57:246-53.
10. M Baetz, R Bowen. Chronic pain and fatigue: Associations with religion and spirituality. Pain Res Manage. 2008;13:383-88.
11. Karatepe AG, Akkoc Y, Akar S, Kirazli Y, Akkoc N. The Turkish versions of the bath ankylosing spondylitis and dougados functional indices: reliability and validity. Rheumatol Int. 2005;25:612-8
12. Aletaha D, Ward MM, Machold K, et al. Remission and active disease in rheumatoid arthritis. Defining criteria for disease activity states. Arthritis Rheum. 2005;52;2625-36.
13. Peterman AH, Fitchett G, Braddy MJ, et al. Measuring spiritual well-being in people with cancer: The functional assessment of chronic illness therapy-spiritual well-being scale (FACIT-Sp). Ann Behav Med. 2002;24:49-58.
14. Aktürk Ü, Erci B, Araz M. Functional evaluation of treatment of chronic

disease: Validity and reliability of the Turkish version of the Spiritual Well-Being Scale. Palliative/Supportive Care. 2017;15:684-92.

15. Aktürk S, Aktürk Ü. Determining the spiritual well-being of patients with spinal cord injury. J Spinal Cord Med. 2020;43:69-76.

16. Bekelman DB, Sydney M Dy, Becker DM, Wittstein IS, Hendricks DE, Yamashita TE, et al. Spiritual well-being and depression in patients with heart failure. J Gen Intern Med. 2007;22:470-7.

17. Greenstreet W. From spirituality to coping strategy: making sense of chronic illness. Br J Nurs. 2006;15:938-42.

18. Potter ML, Zauszniewski JA. Spirituality, resourcefulness, and arthritis impact on health perception of elders with rheumatoid arthritis J Holist Nurs. 2000;18:311-31; discussions 332-6.

19. Matheis EN, Tulsky DS, Matheis RJ. The relation between spirituality and quality of life among individuals with spinal cord injury. Rehabil Psychol 2006;51:265-71.

20. Marini I, Glover –Graf NM. Religiosity and spirituality among persons with spinal cord injury: attitudes, beliefs, and practices. Rehabil Coun Bull. 2015;54:82-92

21. Litwinczuk KM, Groh CJ. The Relationship Between Spirituality, Purpose in Life, and Well-Being in HIV-Positive Persons. J Assoc Nurses AIDS Care 2007;18:13-22.

22. Jafari N, Farajzadegan Z, Loghmani A, et al. Spiritual well-being and quality of life of iranian adults with type 2 diabetes. Evid Based Complement Alternat Med. 2014:619028.

23. Landis BJ. Uncertainty, spiritual well-being, and psychosocial adjustment to chronic illness. Issues Ment Health Nurs.1996; 17:217-31.

24. Armond RE, Armond JE, Konstantyner T, Rodrigues CL. Spiritual well-being and its association with coronary artery disease. J Relig Health. 2020 Nov 23. doi: 10.1007/s10943-020-01115-3. Online ahead of print.