

ORIGINAL ARTICLE

Assessment of Marital Adjustment and Sexuality in Women With Rheumatoid Arthritis

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Objectives: Physical distress in patients with rheumatoid arthritis (RA) may affect marital adjustment and sexual functioning. This study aims to investigate marital adjustment and sexuality in female patients with RA.

Patients and methods: The patient group consisted of 47 female patients with a diagnosis of RA between the ages of 18-55 (mean age 37.36±7.21 years), married and who have not entered menopause yet. Forty-five healthy women were included as a control group. Golombok Rust Inventory of Sexual Satisfaction (GRISS), Arizona Sexual Experiences Scale (ASEX), Dyadic Adjustment Scale, Beck Depression Scale, Beck Anxiety Scale, and Disease Activity Scores in 28 joints were evaluated.

Results: The mean disease duration was 4.77 ± 4.61 years. There was no significant difference between the groups with regard to total and subscale scores of Dyadic Adjustment Scale and GRISS total scores (p>0.05). A significant difference was found between the groups with regard to ASEX total score (p<0.05), ASEX-objective sexual arousal (p<0.05), ASEX-subjective sexual arousal (p<0.01), and GRISS-anorgasmia subscale (p<0.01). A positive correlation was found only between the number of tender joints and anorgasmia subscale of GRISS (p<0.05).

Conclusion: Rheumatoid arthritis does not affect marital adjustment of patients; however, may affect sexual functioning to some extent leading to a need for psychiatric care.

Keywords: Marital adjustment; rheumatoid arthritis; sexuality.

Rheumatoid arthritis (RA) is a systemic, progressive and inflammatory disease causing injuries in and around the joints, and further leading to deformities with a prevalence of 1%.¹ Physical restraints secondary to RA cause decreased self-esteem and changes in body perception which may all contribute to depression and anxiety leading to decreased quality of life.^{1,2} It has been reported in the literature that all chronic diseases including RA may cause temporary or permanent problems in social and family relationships, and adversely affect the patients' daily activities including occupational, marital and sexual relationships.³ The term "marital adjustment" has been used for evaluating the quality of marriage and family relationships, marital happiness, satisfaction and marital success.⁴ Spanier et al.⁵ defined marital adjustment as the "adjustment of spouses to daily living and to changing conditions in daily life". It has been demonstrated that marriage affects physical health, and a strong relationship exists between poor marital adjustment and poor general physical health.^{6,7} In a study with Moroccan women with RA; single women, women with problematic marriages, women with nonproblematic marriages and divorced/widowed women were compared, and it has been reported

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Tel: +90 212 - 373 50 00 e-mail: rabiaonem@gmail.com ©2014 Turkish League Against Rheumatism. All rights reserved. that RA tended to have an early onset with increased joint pain, higher biological and clinical activity, and more severe dysfunction in single women.⁸

Sexual life has been reported to affect marital adjustment.³ Sexual satisfaction was defined as the joy and the happiness that one feels from sexual relations.³ The joy an individual or a couple feels from sexual relation was associated with the sexual and general relationship status.³ It has been reported that 36-70% of the patients with RA are experiencing sexual problems, and these perceived problems are associated with the disease directly or indirectly.9 Sexual problems associated with RA include decreased sexual arousal, sexual desire and sexual satisfaction.9 Conditions including pain, limited physical functioning, fatigue, negative body image perception and depression contribute to the development of poor sexual health. Decreased physical functioning affects different components of the sexual function. Limitations in hand movements may limit the caressing of the partner, and limitations of bigger joints may negatively affect potential sexual intercourse positions.⁹ Areskoug-Josefsson et al.¹⁰ reported that the physical, psychological and emotional effects of RA might lead to sexual problems which further affect the close relations of the patients. El Miedany et al.¹¹ showed that 45.7% of the female patients with RA have a sexual dysfunction disorder (SDD), and secondary Sjögren syndrome, pain score, cardiovascular disorders, hip involvement, disease activity and the number of tender joints are associated with SDD. Oral administration of steroids and diseasemodifying drugs were not associated with SDD.¹¹ In a study investigating sexual functioning in RA, it was reported that the study and control groups were comparable in terms of sexual satisfaction, however, the study group had a relatively low sexual activity compared to the control group, particularly the female patients having trouble during intercourse due to joint discomfort.¹² In that study, the similarity between the groups in terms of sexual satisfaction was explained by associating sexual satisfaction with social and individual factors.12

In this study, we aimed to investigate the marital adjustment and the effects of RA on marital adjustment and sexual functioning in patients with RA by comparing them with a control group.

PATIENTS AND METHODS

Forty-seven married, sexually active and nonpregnant women with RA according to the European League Against Rheumatism diagnostic criteria,¹³ who were between the ages of 18-55 (mean age 37.36±7.21 years) and admitted to the Rheumatology Outpatient Unit of Şişli Etfal Training and Research Hospital between May 2012 and November 2012, were included. Since sexual life might be negatively affected after the menopause due to sexual hormonal changes, premenopausal patients having regular menstrual cycle with normal sexual hormonal regulations were included. All participants were capable of giving consent, able to read and write. A rheumatologist performed the routine clinical examination and blood analysis, and recorded the number of swollen and tender joints, erythrocyte sedimentation rates and the levels of C-reactive protein (CRP). Disease Activity Scores for 28 joints (DAS28)-CRP was used as the indicator of disease activity. In DAS28, a score of <2.6 was defined as remission, a score between 2.6-3.2 was defined as low, a score between 3.2-5.1 was defined as moderate, and a score of >5.1 was defined as high disease activity.¹⁴ The participants with a history of vaginal surgical procedure or hysterectomy, diabetes mellitus, hyperlipidemia, metabolic or endocrinal disorders, chronic renal or hepatic failure, autoimmune disease other than RA, cardiovascular disease and use of antihypertensive drugs were excluded due to the potential of interference of sexual functioning. Participants, whose disease activities were calculated, were referred for psychiatric evaluation on the same day. A senior psychiatrist evaluated all the participants using the Structured Clinical Interview for DSM-IV Axis I Disorders Research Version-DSM-IV (SCID-I), the sociodemographic form produced for the study, Beck Depression Inventory (BDI) and Beck Anxiety Inventory (BAI), Dyadic Adjustment Scale (DAS), Arizona Sexual Experiences Scale female form (ASEX), and Golombok-Rust Inventory of Sexual Satisfaction female form (GRISS). Participants with a diagnosis of any psychotic disorder, major depressive disorder, anxiety disorder, alcohol and substance use disorder or current use of antidepressants, anxiolytics, antipsychotics and antiepileptics were excluded. Of the patients referred for psychiatric evaluation, five were diagnosed with major depressive disorder and two were diagnosed with panic disorder; therefore, they were not included. As a result, a total of 47 participants were included in the patient group.

The control group consisted of 45 matched healthy women. Since only eight of the partners of the participants accepted to participate in the study, the marital adjustment and sexual functioning of the partners could not be evaluated. The study was approved by the institutional review board. After the procedure was fully explained, written consent was obtained from the participants.

Sociodemographic and clinical features form was developed by the investigators. Age, birth place, years of education, employment and economic status of the participants, the type and duration of marriage, number of children, disease duration, currently used drugs, the status of regular controls for RA, the attitude of spouse toward illness, effects of disease on marriage, the support of spouse during illness and effects on sexual life were recorded. The form for the control group was produced simply by excluding the questions involving RA.

Structured Clinical Interview for DSM-IV Axis I Disorders Research Version-DSM-IV was first developed by First et al.,¹⁵ and its reliability and validity for Turkish were assessed.¹⁶

Beck Depression Inventory was first developed by Beck et al.¹⁷ to measure the severity of depression. The reliability and validity of the Turkish version were demonstrated and a cut-off point of 17 was calculated.^{17,18}

Beck Anxiety Inventory is a self-rating scale developed by Beck et al.¹⁹ to measure the severity of anxiety. The reliability and validity for the Turkish version were demonstrated by Ulusoy et al.²⁰

Dyadic Adjustment Scale was developed by Spanier,⁵ and its Turkish version was shown to be reliable and valid by Fışıloğlu and Demir.²¹ DAS, which includes 32 items, was developed to measure a couple's relationship features as perceived by the partners, and is commonly used in the evaluation of partner adjustment as well as marriage satisfaction. DAS comprises of four subscales: (i) dyadic satisfaction subscale; (ii) dyadic cohesion subscale; (iv) dyadic consensus subscale; and (iv) affective expression subscale. Total score reflects the marriage satisfaction and reassurance. Total scores range between 0-151, and higher scores indicate better relationship or marriage adjustment.

The Arizona Sexual Experiences Scale was developed by McGahuey et al.²² to measure the sexual problems of patients' experiences in a userfriendly manner. It comprises of five Likert-type items evaluating the past week, and has different forms for both sexes. The reliability and validity of the Turkish version were demonstrated by Soykan²³ and a cut-off point of 11 was calculated in patients with terminal stage renal failure.

Golombok-Rust Inventory of Sexual Satisfaction is a 28-item Likert-type scale developed by Rust and Golombok²⁴ to define the quality of sexual relations and evaluate sexual dysfunction disorders in heterosexual males and females. GRISS was reported to be reliable and valid for Turkish by Tuğrul et al.²⁵ Higher scores indicate poorer sexual functioning and relations. GRISS comprises of seven subscales of which five are common in male and female forms. The common subscales are avoidance, dissatisfaction, noncommunication, infrequency and nonsensuality. The female form of GRISS additionally includes vaginismus and anorgasmia, whereas the male form includes premature ejaculation and impotence. Both forms include four additional questions regarding the quality of sexual relation. Raw scores are converted to standard scores, and scores of five and above indicate a "problem".

Statistical analysis

Statistical analyses were performed using the SPSS for Windows version 16.0 (SPSS Inc., Chicago, IL, USA) software program. Descriptive statistics were used for the control and the study group data. Categorical variables were compared by using the Chi-square test. Parametric data with a normal distribution were evaluated by the student's T test, whereas the parametric data with non-normal distribution were evaluated by the non-parametric Mann-Whitney U test. Correlations were analyzed by the Pearson correlation test. Spearman correlation analysis was performed for the relations between the number of swollen and tender joints, DAS28 and ASEX total scores, DAS total and subscale scores, GRISS total and subscale scores. All tests were two-tailed with an alpha value of 0.05.

RESULTS

There was no significant difference between the groups in terms of sociodemographic features such as the type and duration of marriage and number of children (p>0.05) except for the years of education (p<0.05). Mean BDI and BAI scores were also comparable between the groups (p>0.05). Clinical and sociodemographic features of the study groups are presented in Table 1.

Mean duration of the disease in the study group was 4.77 ± 4.61 years. The mean number of swollen joints was 3.83 ± 4.94 , the mean number of tender joints was 5.52 ± 5.40 , and mean DAS28 score was 3.66 ± 1.36 . Sixty-five percent (n=40) of the participants in the

patient group reported that they used their medications regularly, and 76.6% reported that they attended to outpatient clinic regularly. Fifty-five percent of the participants was taking methotrexate (10-25 mg/week) (n=26), 19% was taking salazopyrin (2 gr/day) (n=29), 59.6% was taking steroids (2-6 mg/day) (n=28), 44.7% was taking hydroxychloroquine (200-400 mg/day) (n=21), 2.1% was taking biological drugs (n=1), and 78.7% was taking combined treatment (methotrexate, salazopyrin, steroids) (n=36).

Considering the marital adjustment, there was no significant difference between the patient and the control groups in terms of mean DAS total and subscale scores. Seventy-eight percent of the patients declared that their marriage was affected by the disease mildly or was not affected. Additionally, 66% declared that their partner support was sufficient. Groups were also comparable with regard to the mean GRISS total scores (p=0.42). However, the mean anorgasmia subscale score (GRISS-7) was higher among the patient group compared to the control group, reflecting a dysfunction in orgasm (p=0.01) (Table 2).

	Study group (n=47)		Control group (n=45)				
	n	%	Mean±SD	n	%	Mean±SD	р
Age (years)			37.36±7.21			37.38±6.10	0.991
Employment status							
Employed	10	21.3		12	26.7		0.545
Unemployed	37	78.7		33	73.3		
Income status (in TL)							
Minimum wage or below	19	40.4		10	22.2		
Minimum wage (2,000)	22	46.8		32	71.1		0.248
2,000 and above	6	12.8		3	6.7		
Education							
Primary	41	87.2		25	55.6		
Secondary	3	6.4		9	20.0		0.001
High school	2	4.3		9	20.0		0.001
College	2	2.1		2	4.4		
Marriage duration (years)			17.15±6.56			16.62±7.61	0.723
Type of marriage							
Arranged marriage, wanted	29	61.7		26	57.8		
Arranged marriage, unwanted	5	10.6		4	8.9		0.889
Against family will	4	8.5		6	13.3		0.009
After a flirt period	9	19.1		9	20.0		
Number of children			2.15 ± 1.16			2.07±0.94	0.710
Beck Depression Inventory			10.38±6.47			7.95±7.63	0.106
Beck Anxiety Inventory			10.72±9.08			8.26±8.04	0.184
Duration of disease (years)			4.77±4.619				
Disease Activity Scores 28			3.66 ± 1.36				
Number of swollen joints			3.83±4.94				
Number of tender joints			5.52 ± 5.40				

	Study group	Control group	
	Mean±SD	Mean±SD	р
DAS-1 (satisfaction)	40.15±4.24	39.17±4.21	0.28
DAS-2 (cohesion)	17.26±4.20	17.59±4.39	0.720
DAS-3 (consensus)	30.150 ± 12.06	30.05±12.98	0.97
DAS-4 (affective expression)	7.74±2.62	7.51±2.92	0.694
DAS-total	95.30±12.06	94.20±10.30	0.64
GRISS-1 (infrequency)	3.85 ± 2.06	3.60±1.85	0.55
GRISS-2 (non-communication)	4.55 ± 2.41	4.16±2.63	0.46
GRISS-3 (dissatisfaction)	5.28±4.33	5.23±3.67	0.95
GRISS-4 (avoidance)	5.17±4.19	4.23±3.17	0.23
GRISS-5 (non-sensuality)	4.72±3.63	4.88±3.66	0.83
GRISS-6 (vaginismus)	6.04±3.37	6.74±2.76	2.85
GRISS-7 (anorgasmia)	7.13±3.72	5.35 ± 2.92	0.01
GRISS-total	36.74±15.57	34.21±14.20	0.42

Table 2. Comparison of mean Dyadic Adjustment Scale and Golombok-Rust Inventory of Sexual Satisfaction Scores between the groups

Mean ASEX total score of the patient group was significantly higher than the control group $(15.91\pm5.74 \text{ and } 13.49\pm5.05,$ respectively) (p=0.03). Scores in the categories of ASEX-subjective sexual arousal ("how easily are you sexually aroused?") (p=0.03) and ASEX-objective sexual arousal ("how easily does your vagina become moist?") (p=0.01) were significantly lower in the patient group than the control group. There was no significant difference between the two groups regarding the cut-off points. Eighty three percent (n=39) of the patient group had ASEX-total scores equal to or higher than the cut-off point (which was 11), while 76.7% (n=33) of the control group had scores equal to or higher than the cut-off point (p=0.46) (Table 3).

No correlation was found between the DAS28, the number of swollen and tender joints, scores of scales/subscales measuring marital adjustment (DAS scores), and sexual functioning and satisfaction scores (GRISS-total, ASEX-total

scores) (p>0.05) (Table 4). A significant correlation was only detected between the GRISS anorgasmia subscale score and the number of tender joints (p=0.02) (Table 4).

In the frequency analysis, 40.2% of the patients reported that pain affected their sexual functions; 29% reported that fatigue affected their sexual functions, and 25% reported that stiffness affected their sexual functions.

DISCUSSION

The most striking feature of our study is that there was no significant difference between the patient and control groups in the scales of marital adjustment, whereas there were differences in sexual functions to some extent. These results are compatible with some other studies.^{26,27} Except for the GRISS anorgasmia subscale scores, our results suggest that disease activity did not affect marital adjustment and sexual functions.

	Study group				Control group		
	n	%	Mean±SD	n	%	Mean±SD	р
Arizona Sexual Experiences Scale-total Arizona Sexual Experiences Scale-cut-off			15.91±5.74			13.49±5.05	0.037
<11	8	17.0		10	23.3		0.460
≥11	39	83.0		33	76.7		

	Number of swollen joints	Number of tender joints	DAS28
	р	р	р
ASEX-total			
r	0.118	0.196	0.141
р	0.435	0.192	0.350
GRISS-7 (Anorgasmia)			
r	0.170	0.335*	0.237
р	0.258	0.023	0.113
GRISS-total			
r	0.136	0.256	0.188
р	0.368	0.086	0.211
DAS-total			
r	-0.052	0.168	-0.010
р	0.729	0.263	0.946

Table 4 Correlations between Disease Activity Score 28 numbers of swollen and tender

All sociodemographic characteristics were matched with the control group except for the years of education, which was higher in the patient group. However, no correlation was found between the years of education and dyadic adjustment, and sexual functions measured with GRISS and ASEX. So, we may conclude that marital adjustment and sexual functions were not affected by the years of education. In contrast to our findings, Bermas et al.²⁸ reported that patients with RA who had higher levels of education had lower levels of marital satisfaction. The comparability of the DAS scores between the study and the control groups may be attributed to other factors besides education such as employment, socioeconomic status, cultural differences, and type of marriage, which also affect the dyadic adjustment.

The two groups in our study were comparable considering the dyadic adjustment. In accordance with our findings, previous studies investigating the dyadic adjustment reported that patients with RA and their spouses were generally satisfied with their marriage, and there was no association between physical functioning, pain and marital satisfaction.²⁹⁻³¹ In a study with female patients with arthritis by Blake et al.,³¹ marriage satisfaction was not associated with arthritis, but was related to sexual dysfunction and sexual dissatisfaction. Another explanation for a better marriage satisfaction in chronic diseases might be the positive support of spouses.^{32,33} Similarly, the majority of our patient group explained that RA had a mild or no effect on their marriage. In a study by Hill et al.,³² 65% of the patients reported that RA did not affect their marriage. In another study investigating RA, marriage and pain by Waltz et al.,³³ negative attitudes from spouses such as criticizing were associated with worsening of the complaints, particularly pain.

Although the scores of marital adjustment were not affected in our patients, the scores of the subscale of anorgasmia in GRISS and the total score of ASEX may indicate impaired sexual functions. This finding is in accordance with the literature.^{26,27,34} Similar to our study, another study from our country reported that sexual satisfaction was particularly low in RA patients.³⁵ Also, according to Karlsson et al.³⁶ and van Lankveld et al.,29 sexual satisfaction was decreased among patients with RA. Yoshino and Uchida³⁷ demonstrated decreased sexual satisfaction, decreased orgasm frequency, and decreased partner demand for sexual intercourse in these patients as well.

There was a significantly negative correlation between the anorgasmia subscale score of GRISS and the number of tender joints. In a study by Akkuş et al.,³⁵ disease activity according to DAS28 was shown to affect sexual functions negatively. Yılmaz et al.³⁴ also reported that there was negative correlation between disease activity and sexual dysfunctions. In contrast to these, Lankveld et al.²⁹ detected no correlation between disease activity, number of swollen joints, number of tender joints, and sexual satisfaction. In our study, the correlation between anorgasmia and the number of tender joints might be attributed

to the difficulty in reaching orgasm due to tender joints which may not alter other factors associated with sexual satisfaction such as communication. touching and frequency of relation. Considering the analysis between the groups, the total score and scores at categories of subjective sexual arousal and objective sexual arousal were higher in the patient group than the control group. However, we were unable to find any correlation between these scores and disease activity and the number of swollen and tender joints. This might be due to high scores of ASEX which may be attributable to high scores of sexual arousal, and these categories might be related to factors other than joint-related physical restraints. In the literature, these factors have been reported as change in self-esteem, mood, energy levels and pain, affecting sexual functioning.³⁸ Forty-two percent of our patients reported that pain affected their sexual life. However, when we divided them into two groups by those with and without pain, we were unable to find any significant difference in the scores of sexual function and satisfaction (GRISS and ASEX-total). The only factor affecting sexual function in our study was the number of tender points. Furthermore, the relatively short disease durations and the moderate levels of disease severity (DAS28: 3.6) may have affected these results. Yilmaz et al.³⁴ have shown a strong relationship between the DAS28 and sexual dysfunctions; however, the major limitation of this study was that they included patients with major depressive disorder, which may have strongly affected sexual functions. We excluded the participants with comorbid major depression and anxiety disorders, which were reported to be effective on sexual functions.^{38,39} Therefore, this was the strength of our study. The conflicting results across studies might indicate a need for further studies investigating the association between the disease severity and marriage.

Total scores of ASEX were equal to or higher than the cut-off point in the majority of the participants in both groups, which suggested that the patient and control group had impaired sexual functions. Similarly, in a study investigating sexual dysfunctions in patients with arthritis, Blake et al.⁴⁰ reported that the rates of sexual dysfunctions were high both in the study and control groups. The increased rates of sexual dysfunctions in both groups might be partly explained by the effects of other factors including type of marriage, which was accepted as a risk factor in Turkey according to one study.³⁸ Furthermore, the same study implicated arranged marriage and marriage at early ages as risk factors for the development of sexual dysfunctions.³⁸ Supportively, in our study, the rate for arranged marriage was high in both groups.

Although the scores in sexual functions were affected to some extent, half of the participants reported no sexual dysfunction. A "no" response was given to the question regarding sexual satisfaction by 48.9% of the patients in our study. In contrast to our country, this rate was reported higher in studies from different countries. For instance, the rate of sexual dysfunction among women with RA was reported to be 45.7% by El Miedany et al.,¹¹ and Josefson et al.¹⁰ found a rate between 36-70%. The sexual satisfaction of couples might be influenced by social and personal factors, and expectancies on sexuality might vary across cultures.^{31,33} Additionally, although sexual problems were common, it has been reported that these were considered as minor problems among patients with serious physical diseases. And patients, relatives and even doctors frequently ignored or did not examine the problems in sexuality.^{31,41} Likewise, Josefson et al.⁴² reported a rate of 75% for those who did not talk about their sexual problems.

The strengths of our study include the sampling design which consisted of patients who were diagnosed by a specialized rheumatology outpatient unit with regular follow-ups, and the exclusion of patients with a psychiatric comorbidity or treatment which may affect sexual functioning. On the other hand, the study's single-centered design and the exclusion of the spouses might be considered as limitations. Another important limitation was that we failed to measure any effects on sexual functioning caused by the medications since the majority of our patients had combined treatment, and thus we were unable to know which drug had any effect on sexual functioning. Conflicting results are present in the literature about the effects of drugs on sexual functions. In one study, it has been reported that disease modifying drugs and steroids did not lead to sexual dysfunction.¹¹

As a conclusion, the results of the current study suggest that RA may not influence marital adjustment, but may negatively affect some sexual functions. Rheumatology specialists should examine sexual and marital problems of patients, and refer them to psychiatric care when required.

Declaration of conflicting interests

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