Original article

Are the women with Sjögren’s Syndrome satisfied with their sexual activity?

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\begin{abstract}
Objective: Females with Sjögren’s Syndrome (SS) often experience vaginal dryness and dyspareunia, along with glandular and extraglandular symptoms. We aimed to evaluate sexual function and life quality in women with SS.

Methods: Forty-six premenopausal women with SS and 47 age-matched controls were studied. Age, duration of the disease, medications, and comorbid diseases were noted. Participants completed 36-Item Short Form Health Survey (SF-36) and Female Sexual Function Index (FSFI). Patients were asked about vaginal discharge and itching in the last month, and if they informed their rheumatologists about any sexual problems. Gynecologic examinations were performed and vaginal smears were taken on each participant.

Results: The median total scores of FSFI were significantly lower in the SS group than the controls [17.12 (2.4–27.8) and 27.4 (16.9–36.0), respectively, \( p < 0.001 \)]. In the SS group, 37 (80.4\%) and in the control group 18 (38.3\%) of patients were sexually dissatisfied (\( p < 0.001 \)). Vaginal dryness and lubricant use were significantly increased in patients with SS compared to controls (\( p < 0.001 \)). Life quality scores were significantly lower in patients with SS than the controls (\( p < 0.001 \)). Vaginal dryness was negatively correlated with FSFI total \( (r = -0.312, p = 0.035) \) and subcores except desire and arousal. Physical functioning, role physical and role emotional scores were positively correlated with total FSFI scores \( (r = 0.449, p = 0.002, r = 0.371, p = 0.011, r = 0.299, p = 0.043, \) respectively).

Conclusions: Women with SS experience less satisfaction with sexual activity, which can be affected by age, vaginal dryness, physical pain, and impaired function due to the disease. Therefore, rheumatologists should pay attention to these symptoms and management.

\end{abstract}

\begin{keywords}
Sjögren’s syndrome
Chronic dyspareunia
Sexual dissatisfaction
\end{keywords}

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As mulheres com síndrome de Sjögren estão satisfeitas com sua atividade sexual?

**RESUMO**

**Objetivo:** As mulheres com síndrome de Sjögren (SS) muitas vezes experimentam secundar vaginal e dispareunia, juntamente com sintomas glandulares e extraglandulares. Este estudo objetivou avaliar a função sexual e a qualidade de vida de mulheres com SS.

**Métodos:** Estudaram-se 46 mulheres pré-menopáusicas com SS e 47 controles pares por idade. Avaliou-se a idade, duração da doença, os medicamentos utilizados e as comorbidades. As participantes preencheram o questionário de qualidade de vida 36-Item Short Form Health Survey (SF-36) e o Female Sexual Function Index (FSFI). As pacientes foram questionadas quanto à presença de corrimento e prurido vaginal na última mês, e se haviam informado seus reumatólogos sobre quaisquer problemas sexuais. Realizaram-se exames ginecológicos e esfregaços vaginais de todas as participantes.

**Resultados:** A mediana do escore total do FSFI foi significativamente menor no grupo SS do que no grupo controle [17,12 (2,4 a 27,8) e 27,4 (16,9 a 36,0), respectivamente, p < 0,001]. Nos grupos SS e controle, 37 (80,4%) e 18 (38,3%) das pacientes estavam sexualmente insatisfeitas, respectivamente (p < 0,001). A presença de secundar vaginal e do uso de lubrificantes foram significativamente mais frequentes em pacientes com SS em relação aos controles (p < 0,001).

Os índices de qualidade de vida foram significativamente menores nas pacientes com SS do que nos controles (p < 0,001). A secundar vaginal esteve negativamente correlacionado com o FSFI total (r = -0,312 p = 0,035) e com todos os seus subescóres, exceto desejo e excitação. Os escores de capacidade funcional, aspecto físico e aspecto emocional se correlacionaram positivamente com a pontuação total do FSFI (r = 0,449, p = 0,002; r = 0,371, p = 0,011; r = 0,299, p = 0,043, respectivamente).

Conclusões: As mulheres com SS têm menor satisfação com a atividade sexual, o que pode ser afetado pela idade, secundar vaginal, dor física e função prejudicada em razão da doença. Portanto, os reumatólogos devem prestar atenção a estes sintomas e seu tratamento.

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**Introduction**

Sjögren’s Syndrome (SS) is a common multisystemic autoimmune disease, which mainly affects exocrine glands. The clinical symptoms are dryness of the mouth and eyes (sicca symptoms), due to dysfunction of salivary and lacrimal glands. Extraglandular symptoms such as disabling fatigue, interstitial lung disease, neurologic involvement, and arthritis are less frequently described. In the histopathology of SS, lymphocytic infiltration of the affected organs is seen. SS is a systemic disease classified as primary or secondary, each associated with specific symptoms. Rheumatoid arthritis is the main disease related to secondary SS.

The incidence and prevalence rates of primary Sjögren’s Syndrome (pSS) vary in different populations. In a systematic review and meta-analysis, the overall prevalence of pSS was 60.82 (95% CI 43.69–77.94) cases per 100,000 inhabitants and the overall age of pSS patients was 56.16 years (95% CI 52.54–59.78). Females are nine times more at risk for SS than men. Women with pSS often experience vaginal dryness and dyspareunia, along with glandular and extraglandular symptoms. Chronic dyspareunia may be the first presenting symptom of SSp. Vaginal dryness and dyspareunia affect life quality more than other SS symptoms.

SS is generally seen in sexually active women, which may have a serious impact on the patient’s quality of life; these include emotional, functional, psychological, sexual, and reproductive health matters. Sexual health impacts many aspects of an individual’s life, involving sexual activity and satisfaction. Sexual dysfunction has been reported in 24–72% of rheumatic disorders. In these diseases, pain, fatigue, stiffness, functional impairment, depression, treatment side effects, and reduced libido can affect sexual function as well. Vaginal dryness and dyspareunia may create sexual dissatisfaction.

Previous studies have largely focused on vaginal symptoms and dyspareunia, but only a few studies highlighted sexual dysfunction and distress in women with SS. In this study we aimed to evaluate life quality and sexual dysfunction in a group of Turkish women with SS. In addition, we aimed to assess whether social, physical and emotional functions undermine sexual function in these women.

**Materials and methods**

The study was conducted from January 2014 to February 2016 in a hospital at a state university, following approval of the local ethics committee. Patients with SS were between 28 and 48 years of age, and met the American College of Rheumatology (ACR) 2012 classification criteria for SS. Postmenopausal women, patients with severe systemic diseases and complications, and patients who were taking medications which may
cause a decrease in vaginal lubrication such as antidepres-
sants or diuretics were excluded from the study. Of eighty six
women who were diagnosed with SS at rheumatology out-
patient clinics, 46 of them who agreed to participate to the
study complying our inclusion criteria, included in the study
group. Age-matched 47 healthy, non-menopausal women
were included as a control group. Written informed consent,
compliant with the Helsinki Declaration, was obtained from
all participants.

Age, menstrual status, duration of the disease, medica-
tions, and comorbid diseases were noted in the medical
records. Participants were informed about the scope of the
study and asked to complete two questionnaires: 36-Item
Short Form Health Survey (SF-36) and Female Sexual Function
Index (FSFI). Any unclear questions were explained by the two
authors (H.I. and T.B.).

Patient health quality was assessed with the 36-Item Short
Form Health Survey (SF-36) questionnaire, which consists of
36 questions and 8 subgroups; it is a frequently-used scale,
developed by Ware and Sherbourne in 1992. Köçüç et al. in
1999 established its validity and reliability for Turkish people.
The domains of the SF-36 are physical functioning, role phys-
ical, bodily pain, general health, vitality, social functioning,
role emotional and mental health. Subjects answered all 36
questions within the allowed maximum 10-minute time. All
domains were scored, and the sum of subscale scores was cal-
culated. The lowest and highest possible scores were assigned
as 0 and 100, respectively, with the highest score indicating
better life quality.

The 19-item FSFI evaluated the patient’s sexual function,
as reported by Rosen et al.,18 and validated for Turkish people
by Oksuz et al. in 2005.19 Sexual function is measured in 6
subdomains: desire, arousal, orgasm, lubrication, satisfaction,
and pain. Each subdomain is calculated, with the sum yielding
the total FSFI, ranging from 2 to 36.19 A cut-off score of ≤26
is seen as sexual dysfunction in the Turkish version,20 with
higher scores indicating better sexual function.

Patients were asked about vaginal discharge and itching in
the last month, or at examination time, and asked if they had
informed their rheumatologists about any sexual problems.
Gynecologic examinations were performed on each partici-
pant, with vaginal smears taken at the same time. Treatment
was given for any infections.

Statistical analysis
Statistical analyses were performed with SPSS 18.0 software
(SPSS Inc., Chicago, IL, USA). The distribution of data was
determined via the Shapiro–Wilk test. Categorical variables
were presented as frequency and percentages and continu-
ous variables were presented as mean followed by standard
deviation and median with maximum–minimum. Continuous
variables were expressed as mean ± standard deviation, and
categorical variables were expressed as frequency and per-
cent. For statistical analysis, independent samples t test and
Mann–Whitney U test were used to compare the continuous
variables and Pearson Chi-square test was used to compare
categorical variables. Spearman’s Rho correlation test was
used to evaluate the relationship between FSFI score, life

<table>
<thead>
<tr>
<th>Table 1 – Demographic and disease characteristics of the patients.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographics</td>
</tr>
<tr>
<td>---------------</td>
</tr>
<tr>
<td>Age, mean ± SD (years)</td>
</tr>
<tr>
<td>Disease duration, median (min–max)</td>
</tr>
<tr>
<td>Comorbid disease, n (%)</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>RA</td>
</tr>
<tr>
<td>SLE</td>
</tr>
<tr>
<td>IL D</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>Medical Treatment, n (%)</td>
</tr>
<tr>
<td>HCQ</td>
</tr>
<tr>
<td>Corticosteroids</td>
</tr>
<tr>
<td>NSAIDs</td>
</tr>
<tr>
<td>HCQ + corticosteroid</td>
</tr>
<tr>
<td>HCQ + corticosteroid + NSAIDs</td>
</tr>
</tbody>
</table>
| RA, rheumatoid arthritis; SLE, systemic lupus erythematosus; ILD, interstitial lung disease; HCQ, hydroxychloroquine; NSAIDs, non-
teroid anti-inflammatory drugs. | | |
| a p = 0.674. | | |

<table>
<thead>
<tr>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographic and disease characteristics are shown in Table 1. There was no difference between the mean ages of SS patients and the controls (40.43 ± 5.1 and 39.77 ± 3.2, respectively, p = 0.674). The median disease duration was 5 (3–8) years. Approximately three-fourths of SS patients were free of comorbid disease (71.7%). Rheumatoid arthritis, systemic lupus erythematosus (SLE), and interstitial lung disease (ILD) were coexisting diseases with SS in 13 (27.3%) of the patients.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sexual function evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The median total score of FSFI was 17.12 (2.4–27.8) in the SS group and 27.4 (16.9–36.0) in the control group which was significantly lower in the SS group (p&lt;0.001) (Table 2). In the SS group, 37 (80.4%) of patients were sexually dissatisfied and 9 (19.6%) were satisfied and, in the control group 18 (38.3%) of patients were sexually dissatisfied and 29 (61.7%) were satisfied with sexual functions (p&lt;0.001). Moreover, all FSFI subscores (desire, arousal, orgasm, lubrication satisfaction and pain) in control group were significantly higher than the subscores of patients with SS (p&lt;0.001). Vaginal itching was present in 14 (35%) patients, and vaginal leucorrhea or infectious complaints were present in 19 (45%) patients in SS patients. There were no statistically significant difference in the frequencies of vaginal leucorrhea or infectious complaints between SS patients and controls (p = 0.613).</td>
</tr>
</tbody>
</table>

Cervicovaginal smear examination revealed vaginal atrophy in 3 (6.5%) of patients, inflammatory changes in 23 (50%) and normal in 20 (43.5%) of patients in SS group. The cervicov-
aginal smears of 17 (36.2%) patients in the control group were
inflammatory and of 30 (63.8%) were normal. More than half of the patients (n = 24, 52.2%) in SS reported use of lubricants due to vaginal dryness before sexual intercourse in the detailed questioning on medications. Vaginal dryness and lubricant use were significantly increased in patients with SS compared to controls (p < 0.001). Patients who used lubricants experienced that sexual satisfaction was improved with lubricant use, but the rest of them were unaware of the lubricants. Of the patients who used lubricants, 9 (37.5%) had satisfactory sexual scores, however none of the women who did not use the lubricants had satisfactory FSFI scores.

Quality of life assessment
All life quality scores – physical, emotional and social functions, bodily pain, general health, vitality, mental aspect and functional capacity – were significantly lower in patients with SS than the life scores of the control patients (Table 2).

Parameters related to sexual dysfunction
Age was negatively correlated with total FSFI score (r = −0.545, p < 0.001) and subscores in patients with SS. Vaginal itching and infectious symptoms were unrelated to total FSFI score and subscores. Vaginal dryness was negatively correlated with total FSFI (r = −0.312, p = 0.035) and subscores except desire and arousal (Table 3). Lubrication use was positively correlated with total FSFI scores (r = 0.695, p < 0.001), desire (r = 0.645, p < 0.001), arousal (r = 0.738, p < 0.001), lubrication (r = 0.667, p < 0.001), orgasm (r = 0.675, p < 0.001), satisfaction (r = 0.586, p < 0.001) and pain scores (r = 0.672, p < 0.001). Physical functioning, role physical and role emotional scores were positively correlated with total FSFI scores (r = 0.449, p = 0.002; r = 0.371, p = 0.011; r = 0.299, p = 0.043) (Table 3).

When patients were asked about whether or not they discussed their vaginal symptoms or sexual dysfunction with their rheumatologists, 26 (56.5%) women told that they did not talk about sexual dysfunction with their rheumatologists because they did not think sexual dysfunction was being assessed. Only 8 (17.3%) mentioned about their vaginal symptoms to their physicians. The rest 12 (26.2%) tried to talk about their vaginal dryness but they were ashamed to talk.

Discussion

Women with SS often experience vaginal dryness and dyspareunia which can lead to sexual dysfunction.⁶ We found that patients with SS had lower sexual function scores compared to age-matched controls and 80.4% of them were sexually dissatisfied according to previously determined cut-off values (FSFI score of <26).¹⁹ ²⁰ All domains of sexual function, including desire, arousal, orgasm, lubrication, pain, and satisfaction were affected in these women. Life quality subscores including role social, physical functioning, role emotional and general health scores were all significantly lower in SS patients than the controls. Since vaginal dryness was significantly increased in SS patients, the incidence of lubricant use is much higher in these patients when compared to controls. Vaginal dryness, lubricant use, physical functioning score, role physical score and role emotional score were correlated with sexual dysfunction. Vaginal dryness was the important symptom which had significant correlation with sexual dysfunction in women with SS.

### Table 2 - Sexual function, vaginal complaints and life quality of the patients with Sjögren Syndrome and healthy controls.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Patients with SS (n = 46)</th>
<th>Control (n = 47)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>FSFI total score, (range 2–36) median (min–max)</td>
<td>17.12 (2.4–27.8)</td>
<td>27.4 (16.9–36.0)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Sexual dysfunction, n (%)</td>
<td>37 (80.4%)</td>
<td>18 (38.3%)</td>
<td></td>
</tr>
<tr>
<td>Satisfactory sexual function, n (%)</td>
<td>9 (19.6%)</td>
<td>29 (61.7%)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>FSFI subscale scores</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desire (range 1, 2–6) median (min–max)</td>
<td>2.6 (1.2–4.8)</td>
<td>3.8 (2.4–6.0)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Arousal (range 0–6) median (min–max)</td>
<td>2.7 (0.0–4.8)</td>
<td>4.4 (2.4–6.0)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Orgasm (range 0–6) median (min–max)</td>
<td>2.6 (0–5.2)</td>
<td>4.7 (2.4–6.0)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Lubrication (range 0–6) median (min–max)</td>
<td>2.8 (0–6.0)</td>
<td>4.8 (2.7–6.0)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Satisfaction (range 0.8–6) median (min–max)</td>
<td>3.0 (0.0–5.6)</td>
<td>4.9 (3.2–6.0)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Pain (range 0–6) median (min–max)</td>
<td>3.1 (0.0–6.0)</td>
<td>4.6 (2.4–6.0)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Vaginal itching complaints, n (%)</td>
<td>14 (30.4%)</td>
<td>8 (17%)</td>
<td>0.130</td>
</tr>
<tr>
<td>Vaginal leukorrhea complaints, n (%)</td>
<td>19 (41.3%)</td>
<td>17 (36.2%)</td>
<td>0.613</td>
</tr>
<tr>
<td>Vaginal dryness, n (%)</td>
<td>37 (80.4%)</td>
<td>4 (8.5%)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Lubricant use, n (%)</td>
<td>24 (52.2%)</td>
<td>5 (10.6%)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>SF-36 domains (0–100)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical functioning median (min–max)</td>
<td>19.78 (10–30)</td>
<td>26.15 (18–30)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Role physical median (min–max)</td>
<td>0.85 (0–4)</td>
<td>3.64 (1–5)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Role emotional median (min–max)</td>
<td>0.80 (0–5)</td>
<td>2.47 (0–3)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Social functioning median (min–max)</td>
<td>5.67 (2–10)</td>
<td>7.26 (4–10)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Bodily pain median (min–max)</td>
<td>5.70 (3–11)</td>
<td>8 (5–11)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Mental health median (min–max)</td>
<td>16.98 (10–26)</td>
<td>20.57 (13–28)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Vitality median (min–max)</td>
<td>11.93 (6–21)</td>
<td>15.30 (6–22)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>General health, median (min–max)</td>
<td>16.87 (14–22)</td>
<td>18.13 (15–21)</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

* Chi-square test.
Table 3 – Relationship between sexual dysfunction, patient characteristics and patients’ clinical properties in study group (patients with Sjögren’s Syndrome).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Desire</th>
<th>Arousal</th>
<th>Lubrication</th>
<th>Orgasm</th>
<th>Satisfaction</th>
<th>Pain</th>
<th>FSFI total score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>$r = -0.441$</td>
<td>$r = -0.508$</td>
<td>$r = -0.521$</td>
<td>$r = -0.525$</td>
<td>$r = -0.508$</td>
<td>$r = -0.451$</td>
<td>$r = -0.545$</td>
</tr>
<tr>
<td>Disease Duration</td>
<td>$r = 0.002$</td>
<td>$p &lt; 0.001$</td>
<td>$p &lt; 0.001$</td>
<td>$p &lt; 0.001$</td>
<td>$p &lt; 0.001$</td>
<td>$p &lt; 0.001$</td>
<td>$p &lt; 0.001$</td>
</tr>
<tr>
<td>Comorbid disease</td>
<td>$r = 0.174$</td>
<td>$r = 0.158$</td>
<td>$r = 0.227$</td>
<td>$r = 0.256$</td>
<td>$r = 0.194$</td>
<td>$r = 0.210$</td>
<td>$r = 0.173$</td>
</tr>
<tr>
<td>Vaginal itching</td>
<td>$r = 0.266$</td>
<td>$r = 0.140$</td>
<td>$r = 0.132$</td>
<td>$r = 0.156$</td>
<td>$r = 0.167$</td>
<td>$r = 0.075$</td>
<td>$r = 0.114$</td>
</tr>
<tr>
<td>Vaginal dryness</td>
<td>$r = 0.047$</td>
<td>$r = 0.064$</td>
<td>$r = 0.074$</td>
<td>$r = 0.052$</td>
<td>$r = 0.069$</td>
<td>$r = 0.034$</td>
<td>$r = 0.062$</td>
</tr>
<tr>
<td>Lubrication use</td>
<td>$r = 0.645$</td>
<td>$r = 0.738$</td>
<td>$r = 0.667$</td>
<td>$r = 0.675$</td>
<td>$r = 0.586$</td>
<td>$r = 0.672$</td>
<td>$r = 0.695$</td>
</tr>
<tr>
<td>SF-36 physical functioning</td>
<td>$r = 0.250$</td>
<td>$r = 0.370$</td>
<td>$r = 0.431$</td>
<td>$r = 0.286$</td>
<td>$r = 0.388$</td>
<td>$r = 0.370$</td>
<td>$r = 0.371$</td>
</tr>
<tr>
<td>SF-36 score</td>
<td>$r = 0.180$</td>
<td>$r = 0.220$</td>
<td>$r = 0.310$</td>
<td>$r = 0.280$</td>
<td>$r = 0.312$</td>
<td>$r = 0.297$</td>
<td>$r = 0.299$</td>
</tr>
<tr>
<td>SF-36 mental health</td>
<td>$r = 0.271$</td>
<td>$r = 0.162$</td>
<td>$r = 0.198$</td>
<td>$r = 0.097$</td>
<td>$r = 0.110$</td>
<td>$r = 0.229$</td>
<td>$r = 0.175$</td>
</tr>
<tr>
<td>SF-36 vitality</td>
<td>$r = 0.292$</td>
<td>$r = 0.279$</td>
<td>$r = 0.344$</td>
<td>$r = 0.198$</td>
<td>$r = 0.218$</td>
<td>$r = 0.334$</td>
<td>$r = 0.270$</td>
</tr>
<tr>
<td>SF-36 general health</td>
<td>$r = 0.118$</td>
<td>$r = 0.215$</td>
<td>$r = 0.232$</td>
<td>$r = 0.154$</td>
<td>$r = 0.213$</td>
<td>$r = 0.241$</td>
<td>$r = 0.219$</td>
</tr>
<tr>
<td>SF-36 measure</td>
<td>$r = 0.216$</td>
<td>$r = 0.127$</td>
<td>$r = 0.251$</td>
<td>$r = 0.108$</td>
<td>$r = 0.174$</td>
<td>$r = 0.238$</td>
<td>$r = 0.172$</td>
</tr>
</tbody>
</table>

FSFI: Female Sexual Function Index; NS, non-significant; $r$: correlation coefficient.

Age was negatively correlated with sexual function in SS group, which was similar with the previous studies. Anyfanti et al. evaluated 557 patients with rheumatologic disease and found that older age was the only predictive factor for sexual dysfunction. They reported that age could also affect physical and psychological attitudes, in turn causing sexual dysfunction. Even if the age affects negatively on sexual functions in our study, SS patients had lower FSFI scores and more sexual dysfunction comparing healthy age-matched controls which shows SS has prominent negative impact on sexual functions after adjusting age.

Infectious vaginal complaints, leucorrhoea and itching were not correlated with sexual function in our study, in agreement with van Nimwegen et al. There were no difference between leucorrhoea and itching symptoms between study and control group. Even if rates of inflammatory changes and atrophy in vaginal smears were higher in SS patients, they were not statistically significant.

Vaginal dryness was present almost ten times more in SS patients than the controls. Likewise, lubricant use in SS patients was 5 times more. Lubricants are recommended by the International Menopause Society and the North American Menopause Society in the postmenopausal period. In this study we showed that SS women may need lubricants also in the perimenopausal period due to vaginal dryness. Patients who used lubricants experienced that sexual satisfaction was improved with lubricant use, so it can be advised to SS patients by their physician even if they are premenopausal. Moreover in our study women who reported more vaginal moisture than other participants had less sexual pain and better sexual pain scores ($r = -0.341$, $p = 0.020$, Table 3). Jozkowski et al. assessed women’s’ perceptions about lubricants and why they were more inclined to use them. Their findings showed that female preferred lubricants to feel more wet during intercourse. They concluded that lubricant use recommendations from health professionals and sex educators could be helpful.

Comorbid rheumatologic disease was found in 27.3% of our study group. However, the presence of RA or SLE with SS was not correlated with sexual dysfunction in our study. Anyfanti et al. evaluated cardiovascular risk factors as creating sexual dysfunction in patients with rheumatologic disease; they reported that traditional cardiovascular risk factors failed to explain the increased prevalence of sexual dysfunction. Our sample size is relatively small but we included comparatively young, premenopausal women in our study. We excluded women with severe systemic diseases and complications, and patients who were using antidepressants or diuretics to eliminate the unfavorable effect of them on the sexual function.

We sought to evaluate the differences between sexual function scores of Turkish women and those from other...
countries. Our FSFI scores both in SS patients [17.12 (2.4–27.89)] and control group [27.4 (16.9–36.0)] were lower than previous studies, 5,12,16 which may be explained by cultural differences. Van Nimwegen et al. reported median FSFI score of 20.6 in the SS patients and 30.3 in the controls. 13 Priori et al. reported a mean FSFI score of 19.1 ± 7.33 in the SS patients. Priori et al. also suggested that both premenopausal and postmenopausal women with SS have worse sexual quality of life which is similar to finding of our study. 16 Ferreira et al. reported the prevalence of sexual dysfunction as 18.4% in rheumatologic patients with the mean age of 40.4 years. Patients with fibromyalgia and SS had the highest sexual dysfunction (33%) which was lower than our finding of sexual dysfunction rate of 80.4% in SS patients in the similar age group. 12 Sexual attitudes can vary among cultures for social and psychosocial issues, so function scores vary accordingly. 5,15,16 This is the first study performed in Turkey on sexual function of SS patients. Sexual dysfunction incidence of healthy women was found as 28.6–48.3% in studies performed in different cities of Turkey. 5,24 In our study sexual dysfunction rate was 38.3% in the control group which was compatible with the previous reports.

One of the aims of our study was to assess life quality and its effects on sexual function in patients with SS. We found that physical function scores in life quality tests positively correlated with sexual function scores. If a patient has a better physical function and less physical restriction, she tends to have more satisfaction. Social functioning was not linked to sexual function. Mental domain scores, when the mental health score and emotional score were summed, were not correlated with FSFI scores (Table 3). Psychological aspects of sexual function were evaluated in previous studies. Anyfanti et al. stated that in rheumatologic patients, mental distress and sexual dysfunction are extremely common. 20 Researchers concluded that depression and anxiety were related to sexual dysfunction in rheumatologic disease, as well as in patients with SS. 13,27 Van Nimwegen et al. reported depression as being the most important predictor of sexual dysfunction in patients with SS. 13 We found decreased role emotional and mental health scores in SS patients when compared to controls similar to other studies in the SS population. 13,20 In this study we only evaluated psychological characteristics with only the subscales of the SF-36 questionnaire (role emotional and mental health) which could not be sufficient for detailed evaluation. We did not evaluated depression or anxiety with more specific questionnaires, which may be the limitation of our study. Even if emotional dysfunction were linked to sexual dysfunction in our study, we could not find correlation between mental health scores and FSFI scores.

In addition, we asked women if they had discussed sexual activities or problems with their rheumatologists. We found out that only eight (17.3%) of them talked about vaginal complaints. Women rarely talk about these topics with their physicians, as the medical field tends to neglect sexual dysfunction in rheumatologic disease. Many Turkish women are also hesitant to discuss sexual problems. We talked with patients in person. We felt sometimes that they might be embarrassed to answer questions about sexuality due to social pressure. Vaginal dryness is one of the symptoms of SS, so rheumatologists should bring up any issues regarding their patients’ intimate relationships. Women could then be referred to gynecologists or sexologists. Psychosocial support may be given to women and their partners to improve their relationship, as disabilities in communication and interrelation may increase sexual dysfunction and physical complaints. On the other hand, for women who have decreased performance in sexuality due to vaginal dryness or other vaginal symptoms, lubricants or estrogen can be recommended.

In conclusion, women with SS experienced low satisfaction with sexual activity, which could be affected by age, increased vaginal dryness and impaired physical and emotional function due to the disease. Lubricant use was associated with better sexual satisfaction and increase in FSFI total and subscores. Therefore, lubricants should be considered as a symptomatic treatment in SS. This study emphasizes common SS symptoms, which have typically been underestimated by rheumatologists. Further trials with larger study groups are necessary for the support of our results.

Conflicts of interest

The authors declare no conflicts of interest.

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REFERENCES


