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Original Article

Sexual problems and personality traits in female patients with Fibromyalgia Syndrome without diagnosis of sexual dysfunction

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Abstract

Aim: Fibromyalgia syndrome (FMS) is a disease characterized by generalized chronic pain accompanied by hypersensitivity in tender anatomic regions and by various psychiatric disorders. The aim of this study was comparing the relationships between FMS symptoms and the personal characteristics and sexual problems in patients.

Materials and Methods: The study was conducted at a Dr.Sadi Konuk Training and Research Hospital, Physical Therapy and Rehabilitation Unit in Istanbul. The study included 24 female patients were diagnosed with FMS without presence of sexual dysfunction. The demographic and anthropometric characteristics, the symptoms accompanying FMS and tender points were identified. Visual Analog Scale (VAS), Fibromyalgia Impact Questionnaire (FIQ), Beck Depression Inventory (BDI), Beck Anxiety Inventory (BAI), Minnesota Multiphasic Personality Inventory (MMPI) and Golombok Rust Inventory of Sexual Satisfaction (GRISS) were utilized.

Results: From MMPI scores, only "hysteria" sub-item score was above 70 (μ=73.63). The mean "feel good", "work missed" and "anxiety" subscale scores of FIQ had a statistically significant positive correlation with "vaginismus", "touching", "anorgasmia" subscale and "total" scale scores of GRISS. A statistically significant positive correlation was found between BDI and GRISS "communication" scores and between BAI and GRISS "touching" scores.

Conclusion: We found an association between FMS complaints and some symptoms of sexual dysfunction. The high mean MMPI "hysteria" score of patients indicates that they use suppression and denial quite often and they may have somatic complaints associated with anxiety. BDI and BAI scores were found to be high and associated with some symptoms of sexual dysfunction in our study.

Keywords: Fibromyalgia Syndrome; sexual problems; personality traits

INTRODUCTION

Fibromyalgia syndrome (FMS) is an extraarticular rheumatic disease that is characterized by generalized chronic pain accompanied by hypersensitivity in tender anatomic regions. According to the diagnostic criteria set out in 2010 by the American Rheumatology Society, for the diagnosis of FMS, there needs to be pain in identified body regions for at least 3 months accompanied by fatigue, awakening without rest and cognitive symptoms as well as a number of somatic symptoms such as headache, muscle weakness, nausea, nervousness, and numbness (1). Its prevalence is between 0.2% and 4.7% and it occurs 4 to 7 times more in women than in men (2,3). FMS is among the common causes of generalized chronic pain and known to be accompanied by various psychiatric disorders. Axis I disorders accompany it at a rate ranging from 48% to 77.3% and 19.4% to 34.8% of these consist of mood disorders and 11.6% to 32.2% anxiety disorders (4). There are a limited number of studies dealing with the axis II disorders accompanying FMS. While it was found to be 8.7%, which is lower than the rate in the general population, in one study, the rate was found as high as 96.7% in another (5). In a study using a control group, the rate of accompanying personality disorders was found to be 31.1% and the rate of obsessive compulsive, avoidant and passive aggressive personality disorders were observed to be higher than those of the control group (4). Obsessive compulsive personality disorder was found in three of the eight studies made on the subject, avoidant in two of them, histrionic in two and borderline personality disorder in one as the most frequent accompanying axis II disorders

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(6). FMS has also been found associated with sexual dysfunctions in many studies. The most common findings relate to sexual arousal, orgasm experience, decreased sexual activity and increased genital pain during sexual intercourse (7). FMS is thought to affect sexual function both psychologically due to depression and anxiety, and physiologically due to prevailing pains (8). Our hypothesis in this study is that some specific personal characteristics of women with FMS are associated with sexual problems. The anxiety, depression and BMI of women with FMS are related to sexual problems, as well.

Our study aimed to compare the relationships between the personal characteristics and psychological factors such as anxiety and depression associated with sexual problems in women with FMS.

MATERIALS and METHODS

The present study included 24 female patients aged 20 to 45 years who presented to the Physical Medicine and Rehabilitation outpatient clinic of Dr. Sadi Konuk Training and Research Hospital in 2017-2018 and were diagnosed with FMS as per the 1990 ACR classification criteria without presence of sexual dysfunction as per the DSM-IV TR diagnostic criteria. The study was approved by the Ethics Committee of the Dr. Sadi Konuk Training and Research Hospital (2011/23) and written informed consent was obtained from each subject prior to their participation. The study was conducted in accordance with the principles of the Declaration of Helsinki.

The sociodemographic and anthropometric characteristics, the symptoms accompanying FMS and the number of tender points were identified. The Visual Analog Scale (VAS) was used to assess pain and quality of sleep, the Fibromyalgia Impact Questionnaire (FIQ) to assess health-related physical functioning, the Beck Depression Inventory (BDI) and Beck Anxiety Inventory (BAI) to determine depression and anxiety levels, the Minnesota Multiphasic Personality Inventory (MMPI) to reveal personality profiles and the Golombok Rust Inventory of Sexual Satisfaction (GRISS) to assess sexual problems.

Sociodemographic Data Form
The standart data collection form which is designed by investigators includes age, number of children, weight, height and relationship status information. Data is gathered by self-report information.

Visual Analog Scale
This scale was used to assess pain and quality of sleep, to measure aspects of sleep and daytime functioning (9,10). A 10-cm VAS scale with “no pain” at one end and “worst possible pain” at the other end to rate the severity of pain. The patients were asked to mark a point on the line showing the current pain severity. The distance between this point and the zero point describes the severity of pain numerically. The quality of sleep was assessed using a similar scale with “had a good night's sleep” at one end and “had a bad night's sleep” at the other end. The patients were asked to mark a point on the line showing the quality of their sleep.

Fibromyalgia Impact Questionnaire (FIQ)
This form was used to assess the health-related physical functions of the patients. It measures physical functioning, work status (difficult days at work and in profession), depression, anxiety, morning tiredness, pain, stiffness, fatigue and wellbeing. The total score ranges between 0 and 100, higher scores indicating more severe symptoms (11). The validity and reliability of the Turkish version of the FIQ is performed by Sarmer et al. (12).

Beck Depression Inventory (BDI) and Beck Anxiety Inventory (BAI)
BDI was used to assess the depression levels of the patients. BDI is a 21-item inventory assessing the symptoms and experiences of depression and is scored by adding up the responses. Each item is scored between 0 and 3, higher scores indicating severer disease. The scores are summed up to obtain the total score, which is interpreted as follows: 0 - 10: no depression, 11 - 17: mild depression, 18 - 23: moderate depression and 24 and above: severe depression (13,14). BAI is a self-report consisting of 21 items that are expressed as the common symptoms of anxiety. The highest score obtainable from BAI is 63 (0 - 7: minimal anxiety, 8 - 15: mild anxiety, 16 - 25: moderate anxiety, 26 - 63: severe anxiety) (15). The validity and reliability study of BDI in Turkish version is adapted by Hisli. Ulusoy et al. performed the validity and reliability study of BAI for the Turkish population (16,17).

Minnesota Multiphasic Personality Inventory (MMPI)
MMPI was used to identify personality profiles. MMPI is a scale generally evaluating general psychopathology, possible psychiatric diagnosis, personality features, problems about relationships and psychological defense mechanisms that the person uses. It is a 566-item true/false inventory consisting of 13 personality scales together with 3 validity scales (18,19). These personality subscales are Lie, Frequency, Correction, Hypochondriasis, Depression, Hysteria, Psychotic Deviate, Male-female, Paranoia, Psychasthenia, Schizophrenia, Mania, Social introversion

The assessment of this inventory is based on scale elevations and profile models. A score of 70 or more in a scale means a pathological elevation. In multiple scale elevations, the interpretations are based on 2 or 3 scales with the highest elevations (20). The standardization and adaptation to Turkish population is conducted by Savasir and the validity study of Turkish version is performed by Erol (21,22).

Golombok Rust Inventory of Sexual Satisfaction (GRISS)
It is a Likert-type scale that enables assessment of the quality of sexual function separately for women and men in a relation of heterosexual couples. It can also be used to determine the presence and severity of problems relating to areas such as erectile dysfunction, premature

ejaculation, anorgasmia, vaginismus, frequency of sexual intercourse, communication, touching, avoidance, and satisfaction in women and men. The raw scores obtained may be converted into standard scores ranging from 1 to 9 and any score above 5 indicates the presence of a problem (23,24). The Turkish adaptation of GRISS and its validity and reliability study on a Turkish sample have been completed (25).

The exclusion criteria

Psychotic symptoms, recent suicide risk, substance abuse, neurological disease, a systemic disorder, pregnancy and schizophrenia-spectrum disorders, bipolar disorders including abnormal results of routine examinations.

The exceptions included tricyclic antidepressants, anticonvulsants, opioids, selective serotonin reuptake inhibitors (SSRIs), serotonin - noradrenalin reuptake inhibitors (SNRIs), monoamine oxidase inhibitors (MAOIs), antipsychotic drugs and nonsteroidal anti-inflammatory drugs (NSAIDs) and any non-pharmacological treatment for FMS within 2 months after enrollment.

Statistical Analyses

In this study, the statistical analyses were carried out using the NCSS (Number Cruncher Statistical System) 2007 Statistical Software (Utah, USA) package program. The data were evaluated using the descriptive statistical methods (means, standard deviations) and Spearman Rho was used for the variables not having a normal distribution to show their relationships between each other. The results were evaluated at $p<0.05$ significance level.

RESULTS

The ages of the women participating in the study ranged between 25 and 43 with a mean age of 34.38±5.22 years. Their mean height was 161.71±6.05 cm, mean weight 64±8.18 kg and mean body mass index 24.54±3.34 (Table 1). In their VAS scores, pain was assessed as 7.17±2.37 and sleep as 5.71±2.33 points (Table 1) (Figure 1). Among the FIQ items, the highest mean scores were obtained from "rested" (8.79±1.72), "fatigue" (8.38±1.64) and "anxiety" (8.17±1.88) (Table 1) (Figure 2). The mean BDI score was found to be 20.12±8.61 and the mean BAI score 25.04±13.31 (Table 1). In the GRISS scores, the mean scores of the items "satisfaction" (8.42±2.84) and "touching" (10.42±2.3) were more conspicuous than those of the other items (Table 1) (Figure 3). Looking at the MMPI scores, only the Hysteria sub-item (μ=73.63) was found above 70 points. The sub-items closest to 70 points were Hypochondriasis (μ=65) and Depression (μ=63.58) (Table 1) (Figure 4). There was a statistically significant positive correlation between the FIQ Feel good score and the GRISS Vaginismus score, between the FIQ Work missed score and the GRISS Touching, Anorgasmia and total GRISS scores, and between the FIQ Anxiety score and the GRISS Touching and Vaginismus scores ($p<0.05$) (Table 2). There was also a statistically significant positive correlation between the BDI score and the GRISS communication score and between the BAI score and the GRISS touching score ($p<0.05$) (Table 3).

Table 1. Sociodemographic data and mean scale scores of patients

		N	Mean± SD	Min-Max
Age		24	25±34.38	5.22-43
Height		24	152±161.71	6.05-175
Weight		24	50±64.00	8.18-83
BMI		24	17.99±24.54	3.34-30.78
Number of children		24	0±1.38	1.21-3
VAS*	Pain*	24	7.17±2.37	3-10
	Sleep*	24	5.71±2.33	0-10
FIQ	Physical Impair.	24	5.20±1.71	1.67-8
	Feel Good	24	7.08±2.00	1.43-10
	Work Missed	8	1.25±2.38	0-6
	Do Work	8	5.50±2.67	2-10
	Pain	24	7.46±2.08	4-10
	Fatigue	24	8.38±1.64	5-10
	Rested	24	8.79±1.72	4-10
	Stiffness	24	6.71±2.93	0-10
	Anxiety	24	8.17±1.88	3-10
	Depression	24	7.63±1.91	3-10
	FIQ Total	24	71.68±14.22	43.38-90
BDI		24	20.12±8.61	7-43
BAI		24	25.047±13.31	7-55
GRISS	Frequency	24	3.88±1.23	2-8
	Communication	24	4.13±2.05	0-8
	Satisfaction	24	8.42±2.84	3-12
	Avoidance	24	5.54±3.35	0-13
	Touching	24	10.42±2.30	6-16
	Vaginismus	24	5.42±2.55	0-11
	Anorgasmia	24	6.88±2.27	2-11
	Rusttop	24	54.00±9.90	34-81
MMPI*	Lie*	24	53.21±11.65	32-81
	Frequency*	24	51.00±8.53	38-76
	Correction*	24	47.71±10.18	35-72
	Hypochondriasis*	24	65.00±8.62	44-79
	Depression*	24	63.58±12.04	40-80
	Hysteria*	24	73.63±8.56	52-86
	PsychoticDeviate*	24	56.58±11.61	37-84
	Male-female*	24	49.83±9.99	34-64
	Paranoia*	24	55.33±10.89	31-74
	Psychasthenia*	24	60.17±9.73	42-82
	Schizophrenia*	24	58.00±12.58	37-93
	Mania*	24	49.79±8.07	37-64
	Social introversion*	24	60.75±9.80	45-83

Visual Analog Scale (VAS), Fibromyalgia Impact Questionnaire (FIQ), Beck Depression Inventory (BDI), Beck Anxiety Inventory (BAI), Minnesota Multiphasic Personality Inventory (MMPI), Golombok Rust Inventory of Sexual Satisfaction (GRISS), Body Mass Index (BMI)

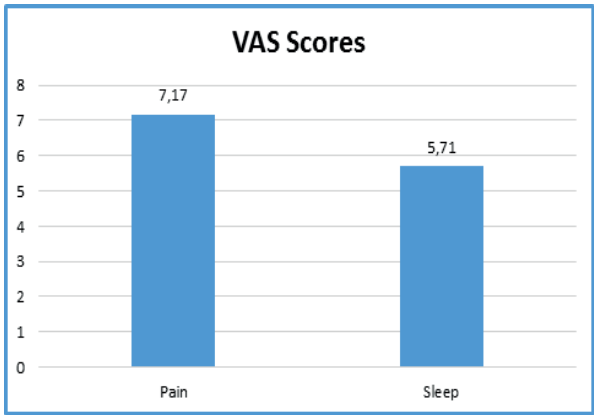

Figure 1. Mean Visual Analog Score (VAS) Pain and Sleep Scores

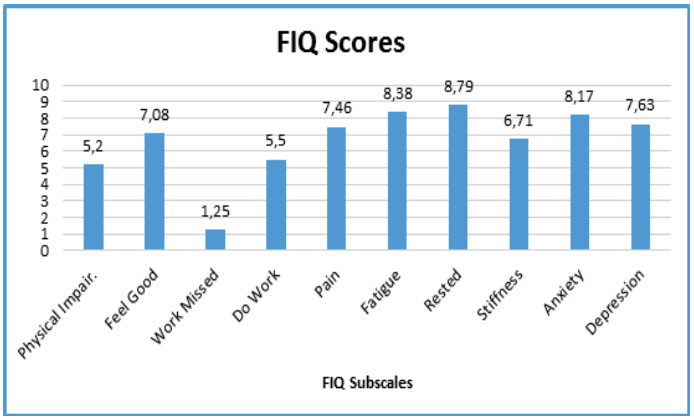

Figure 2. Mean Fibromyalgia Impact Questionnaire (FIQ) Subscale Scores

Table 2. Correlations between the patient's mean FIQ and GRISS scale scores

			GRISS							
			Frequency	Communication	Satisfaction	Avoidance	Touching	Vaginismus	Anorgasmia	Total
FIQ	Physical Impairment	r	0.291	0.099	-0.196	-0.001	-0.044	0.017	-0.14	-0.021
		p	0.168	0.644	0.359	0.995	0.837	0.939	0.514	0.921
	Feel Good	r	-0.333	-0.256	-0.083	-0.339	-0.17	**0.494**	-0.344	-0.311
		p	0.112	0.227	0.700	0.106	0.427	**0.014**	0.101	0.139
	Work Missed	r	-0.04	-0.54	-0.505	0.377	**0.932**	-0.582	**0.704**	**0.805**
		p	0.925	0.167	0.202	0.358	**0.001**	0.130	**0.049**	**0.016**
	Do Work	r	0.241	0.134	-0.148	-0.04	-0.503	0.306	0.101	0.029
		p	0.565	0.751	0.726	0.924	0.204	0.460	0.813	0.945
	Pain	r	-0.164	-0.136	0.172	-0.043	-0.15	-0.095	-0.024	0.046
		p	0.445	0.526	0.422	0.841	0.483	0.660	0.911	0.830
	Fatigue	r	0.219	-0.04	-0.147	0.16	-0.297	0.013	0.037	-0.035
		p	0.303	0.851	0.493	0.456	0.158	0.952	0.865	0.871
	Rested	r	0.338	0.069	0.134	-0.229	-0.109	-0.098	-0.04	-0.015
		p	0.107	0.747	0.532	0.282	0.612	0.648	0.851	0.943
	Stiffness	r	0.292	0.093	-0.115	0.101	-0.091	-0.088	0.014	0.065
		p	0.166	0.664	0.591	0.638	0.673	0.683	0.949	0.764
	Anxiety	r	-0.273	-0.254	0.011	-0.153	**0.409**	**0.405**	-0.188	-0.178
		p	0.196	0.231	0.960	0.475	**0.047**	**0.049**	0.378	0.407
	Depression	r	-0.132	-0.288	0.054	-0.008	-0.29	-0.19	-0.102	-0.039
		p	0.537	0.173	0.802	0.972	0.170	0.374	0.636	0.856
	FIQ Total	r	0.041	-0.13	-0.134	-0.025	-0.341	-0.28	-0.126	-0.093
		p	0.850	0.546	0.532	0.908	0.103	0.186	0.556	0.665

Spearman's Rho Correlation (r), Fibromyalgia Impact Questionnaire (FIQ), Golombok Rust Inventory of Sexual Satisfaction (GRISS)

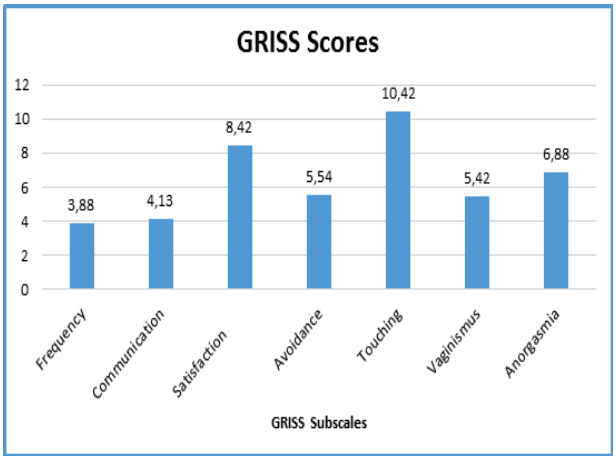

Figure 3. Mean GRISS Subscale Scores

Table 3. Correlations between the patient's mean BDI, BAI and GRISS scale scores

		BDI		BAI	
		r	p	r	p
GRISS	Frequency	0.076	0.726	0.195	0.362
	Communication	**0.496**	**0.014**	-0.204	0.339
	Satisfaction	0.063	0.768	-0.007	0.973
	Avoidance	0.291	0.167	0.357	0.086
	Touching	-0.365	0.08	**0.405**	**0.049**
	Vaginismus	-0.178	0.404	-0.227	0.286
	Anorgasmia	-0.297	0.159	-0.273	0.197
	Total	-0.149	0.486	-0.061	0.776

Spearman's Rho Correlation(r), Beck Depression Inventory (BDI), Beck Anxiety Inventory (BAI), Golombok Rust Inventory of Sexual Satisfaction (GRISS)

Table 4. Correlations between the patient's mean MMPI and GRISS scale scores

			GRISS							
			Frequency	Communication	Satisfaction	Avoidance	Touching	Vaginismus	Anorgasmia	Total
MMPI	Lie	r	-0.156	-0.331	**0.437**	0.26	-0.183	-0.37	-0.362	-0.381
		p	0.466	0.115	**0.033**	0.220	0.391	0.075	0.082	0.067
	Frequency	r	0.191	-0.338	0.095	0.196	0.06	-0.03	-0.182	0.08
		p	0.371	0.106	0.659	0.358	0.781	0.890	0.395	0.709
	Correction	r	-0.125	-0.054	-0.338	0.116	0.041	-0.198	-0.12	-0.141
		p	0.561	0.801	0.106	0.590	0.850	0.355	0.576	0.512
	Hypochondriac	r	0.349	-0.047	-0.261	0.391	-0.197	-0.034	-0.151	-0.007
		p	0.094	0.828	0.218	0.059	0.356	0.876	0.481	0.974
	Depression	r	-0.145	**0.431**	0.059	0.28	**0.477**	**0.486**	-0.352	-0.186
		p	0.499	**0.035**	0.786	0.186	**0.019**	**0.016**	0.092	0.384
	Hysteria	r	0.128	-0.272	-0.251	0.314	-0.363	**0.478**	-0.327	-0.28
		p	0.552	0.198	0.237	0.135	0.082	**0.018**	0.119	0.185
	Psychotic Deviate	r	0.103	**0.489**	0.083	0.194	-0.395	**0.416**	-0.363	-0.206
		p	0.632	**0.015**	0.699	0.364	0.056	**0.043**	0.081	0.334
	Male-female	r	0.396	0.122	-0.036	0.017	-0.243	0.163	0.007	-0.092
		p	0.056	0.570	0.868	0.937	0.253	0.446	0.975	0.669
	Paranoia	r	0.192	**0.405**	0.096	0.033	**0.455**	-0.180	-0.151	-0.203
		p	0.369	**0.049**	0.654	0.878	**0.025**	0.399	0.481	0.343
	Psychasthenia	r	-0.009	**0.411**	0.076	0.152	**0.444**	**0.444**	-0.349	-0.176
		p	0.966	**0.046**	0.724	0.479	**0.03**	**0.03**	0.094	0.409
	Schizophrenia	r	0.132	**0.469**	-0.021	0.273	**0.494**	**0.444**	**0.448**	-0.249
		p	0.537	**0.021**	0.924	0.198	**0.014**	**0.030**	**0.028**	0.241
	Mania	r	0.09	**0.417**	-0.061	0.189	-0.349	-0.372	-0.305	-0.301
		p	0.677	**0.043**	0.779	0.375	0.095	0.074	0.147	0.153
	Social introversion	r	-0.27	**0.496**	0.165	0.141	-0.244	-0.13	-0.138	-0.066
		p	0.201	**0.014**	0.442	0.512	0.251	0.546	0.519	0.758

Spearman's Rho Correlation(r), Minnesota Multiphasic Personality Inventory (MMPI), Golombok Rust Inventory of Sexual Satisfaction (GRISS)

Similarly, the GRISS communication score had a statistically significant positive correlation with the MMPI Depression, Psychopathic Deviate, Paranoia, Psychasthenia, Schizophrenia, Hypomania and Social Introversion scores, the GRISS Satisfaction score with the MMPI LIE score, the GRISS Touching score with the MMPI Depression, Paranoia, Psychasthenia and Schizophrenia scores, the GRISS Vaginismus score with the MMPI Depression, Hysteria, Psychopathic Deviate, Psychasthenia and Schizophrenia scores and finally the GRISS Anorgasmia score with the MMPI Schizophrenia score ($p<0.05$) (Table 4). There was a statistically significant positive correlation between body mass index and GRISS total score ($p<0.05$) (Table 5).

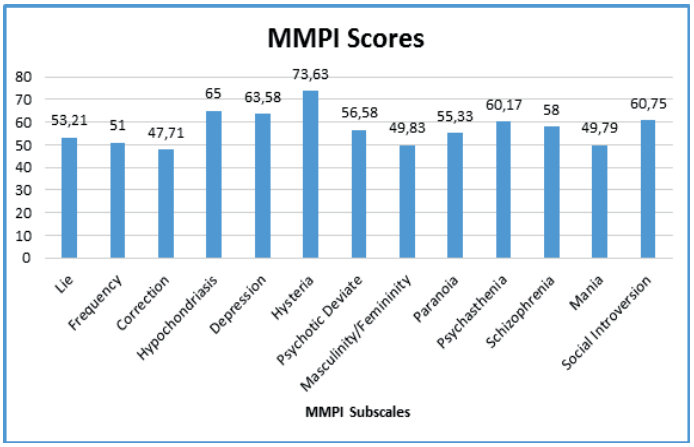

Figure 4. Mean MMPI Subscale Scores

Table 5. Correlations between patient's mean Age, BMI, VAS Pain & Sleep and GRISS scale scores

		Age		BMI		VAS Pain		VAS Sleep	
		r	p	r	p	r	p	r	p
GRISS	Frequency	-0.006	0.978	0.171	0.425	-0.217	0.309	-0.196	0.359
	Communication	-0.139	0.518	0.147	0.492	-0.246	0.247	-0.192	0.368
	Satisfaction	0.012	0.954	0.156	0.465	-0.037	0.865	-0.237	0.265
	Avoidance	0.292	0.167	0.291	0.168	-0.017	0.936	0.361	0.083
	Touching	0.088	0.683	0.140	0.513	-0.228	0.283	-0.066	0.761
	Vaginismus	-0.136	0.525	0.219	0.303	-0.220	0.301	0.087	0.686
	Anorgasmia	0.103	0.631	0.402	0.052	-0.117	0.586	-0.155	0.469
	Total	0.131	0.543	**0.459**	**0.024**	-0.122	0.569	-0.028	0.896

Spearman's Rho Correlation(r), Visual Analog Scale(VAS), Body Mass Index(BMI), Golombok Rust Inventory of Sexual Satisfaction (GRISS)

DISCUSSION

The physical complaints caused by fibromyalgia may influence dealing with stress and coping with stressful situations in daily living, resulting in impairment of interpersonal relationships and sexual functions. It is mentioned in the literature that approximately 45% of women have complained about sexual dysfunction at least once in their lifetime (26). Recent studies also mention that increased sexual dysfunction is frequently seen in individuals diagnosed with fibromyalgia (8). In our study, the mean scores of the items "satisfaction" and "touching" of the women with FMS came to the fore among those of the other items. It was also revealed in our study that the "touching", "vaginismus", "anorgasmia" and "total" sub-items of GRISS were affected by some of the symptoms of FMS. A review of these symptoms showed that the probability of occurrence of the above sexual problems was more in patients whose "feel bad", "work missed" and "anxiety" complaints caused by FMS were dominant. In their meta-analysis they published in 2012, Bazzichi et al. stressed the presence of a strong relationship between FMS and sexual dysfunction particularly in female patients. The major sexual problems in these women include decreased sexual desire together with decreased sexual arousal, drop in the frequency of orgasms and increased genital pain during sexual intercourse. Although physical factors such as generalized chronic pain, fatigue and sleeping problems that accompany psychological factors (anxiety, depression) are shown as the major causes of sexual dysfunction in patients with FMS, the side effects of the therapies used against FMS symptoms may also lead to sexual dysfunction (27). In their study comparing 96 individuals diagnosed with FMS and 94 healthy ones, Kayhan et al. reported that pain played the major role in the occurrence of sexual dysfunction in women with FMS (28).

The fact that the mean hysteria scale score of the patients participating in our study turned out higher than 70 in MMPI indicates that these people were egocentric, immature, emotionally changeable, physically or emotionally vulnerable to pain, reacting to stress by developing physical symptoms, manipulative and demanding in interpersonal

relationships and seeking attention and affection from other people. It also shows that these individuals used suppression and denial often and could have somatic complaints associated with anxiety. This is also confirmed by their elevated BAI scores. The hypochondriasis item score (65 points) turning out to be closest to 70 also points out people who are too much concerned about bodily functions, pessimistic, demanding, exaggerating their problems, wanting to attract attention, not showing their anger explicitly, trying to manipulate people around them with disease, and inclined to somatization of their unaccepted impulses. The studies using MMPI in the literature emphasize the "conversion V" profile, which consists of hysteria, depression and hypochondriasis. This profile may mean that individuals turn their emotional problems into somatic symptoms or express a psychological effect through physical symptoms (19). There are many studies in the literature describing the personal traits of patients with fibromyalgia. In their study with 489 female patients diagnosed with fibromyalgia, Molnar et al. showed that general perfectionism was not common among these women, but self-oriented or socially prescribed perfectionism was highly common (29). In a study comparing 40 women diagnosed with fibromyalgia to 38 women in the control group, the harm avoidance scores of those with fibromyalgia were found to be higher (30). In the study made in 2011 by Altunören et al. including 51 patients diagnosed with fibromyalgia and 51 controls, they found that the group with fibromyalgia had higher harm avoidance, lower self-management and lower persistence scores (31). In general, patients with fibromyalgia have been found to have higher scores in self-oriented and socially prescribed perfectionism and harm avoidance; lower scores in self-management and persistence; higher scores in neuroticism, alexithymia, psychastenia and indirect aggression; and lower scores in understandability level and loneliness. High self-oriented expectations, resulting work-oriented life style, perfectionism, inability to relax and dissatisfaction with life, denial of affective and interpersonal conflicts, inability to cope with anger and hostility, and childish needs such as dependency and need of care are defined as the characteristics of a pain-oriented personality (32).

The positive relationship between the MMPI "depression", "psychotic deviate", "paranoia", "psychasthenia" and "schizophrenia" scale scores, and the GRISS "communication", "touching", "vaginismus" and "anorgasmia" scores attracts attention in our study. The reason for this result may be that individuals with a paranoid character cannot sustain the intimacy required for a sexual relation because they are worried about being harmed. Emergence of sexual problems secondary to the fears of inadequacy and failure in individuals with a depressive character also substantiates these results.

Similar to those in the literature, the BDI (moderate depression) and BAI (severe anxiety) scores were found to be high in our study. Chronic fatigue and pain in FMS cause the patients to lead a sedentary life. The muscle strength, endurance and aerobic capacity of the patients diminish, leading to physical inadequacy (33). The symptoms of FMS can impair the ability of a person to do work and may also affect their moods. Studies have demonstrated that depression and anxiety are more common in individuals with FMS than in healthy individuals and the presence of depression and anxiety aggravate the severity of pain worsening their quality of life. Major depression has been shown to occur at a rate from 22% up to 68% in those with FMS. In a multicenter study, Hauser et al. compared 395 subjects with fibromyalgia to a healthy control group and found a possible depressive disorder to occur at a rate of 65.6% (n=259) and 4.8% (n=19) respectively (34). It was reported in a study comparing 51 patients diagnosed with fibromyalgia and 51 persons in the control group that 76.5% of the patient group received a psychiatric diagnosis as per the DSM-IV-TR criteria and one thirds of this group had depression followed by dysthymic disorder, anxiety, somatization and obsessive compulsive disorder in the order of prevalence (31).

In our study, there was a statistically significant positive correlation between the BDI and GRISS "communication" scores and between the BAI and GRISS "touching" scores. The interpretation of these results can be that the high anxiety and depression scores in fibromyalgia may have influenced the sexual functioning of the patients negatively. It has been reported that patients with a major depressive disorder experience 2-3 times more sexual dysfunction than those who are not depressive (35,36). Ware et al. have found that patients with anxiety disorders suffer more impairment in their sexual functions compared to controls and reported that especially decreased sexual desire is predominant in patients with a panic disorder (35). These results are compatible with the literature data which indicate that the anxiety and depression accompanying FMS lead more to sexual dysfunction than physical symptoms such as pain, fatigue and sleep disorder found in FMS (27).

In our study, a statistically significant positive correlation was found between body mass index and GRISS total scores. Previous studies also indicate that obesity is a complex condition affecting states such as anxiety, depression and consequently the health and life quality of a person. These studies also found a high rate of sexual dysfunction and co-morbidity in this group. Erbay et al. found that morbidly obese female patients show more impairments in all areas of sexual functions except sexual satisfaction rate when compared to the control group (37). Studies show that women who think that they do not have sexually attractive body prefer not to have sexual relation. This behaviour can be described as avoidance rather than a disorder of sexual functions (37,38). The major limitations of the study include small sample size, inclusion of only female patients and lack of a control group. In addition, the follow-up of the participants was not performed. Data collection was based on self-report.

CONCLUSION

In conclusion, when the personal characteristics of the women with FMS are examined, the histeria is found at first. Secondly, the hypochondriasis is observed. Depression levels are associated with GRISS Community subscale, and anxiety levels are associated with GRISS Touching. It is also found that there is a relationship between sexual problems and BMI in women with FMS.

The sexual dysfunction is a common condition in patients diagnosed with FMS and other psychiatric disorders such as accompanying depression and anxiety as well as the personality patterns of patients may deepen their susceptibility to this condition.

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