Cyberchondria and health anxiety in patients with fibromyalgia

Aslı Kazgan Kılıçaslan, Sevler Yıldız, Canan Gür, Kerim Uğur

Abstract

Aim: The purpose of the study is to investigate the cyberchondria attitudes, health anxiety and their correlation with each other in Fibromyalgia Syndrome (FMS) patients.

Method: 68 patients diagnosed with FMS according to the American College of Rheumatology (ACR) 2010 diagnostic criteria and 68 healthy individuals with similar sociodemographic characteristics and meeting the study criteria were included in the study. Sociodemographic Data Form, Cyberchondria Severity Scale (CSS), Fibromyalgia Impact Questionnaire (FIQ), and Health Anxiety Inventory-Short Version (HAI) were administered to all participants.

Results: The sub-dimensions of the CSS total, distress, excessiveness, reassurance, and mistrust of medical professional and the HAI body sub-dimension and total score of the patient group were found to be significantly higher than the scores of the control group (p<0.001). There is a significant positive correlation between HAI total score and FIQ score (p= 0.018) (r=.285). A positive and significant relationship was found between the CSS-total score and the HAI sub-dimensions and total score (p= 0.002, r=.377).

Conclusion: Our study shows that health anxiety and cyberchondria are high in patients with FMS and that disease severity and health anxiety increase in direct proportion. Due to these results, it may be wise to periodically check the cyberchondria and health anxiety levels of these patients and to include psychiatric view in the treatment of the patients. Doctors can refer patients who have health concerns and who have comorbid psychiatric symptoms for psychoeducation, as well as protect patients from uncontrolled anxiety by referring them only to reliable and accurate online sites.

cyberchondria; fibromyalgia syndrome; health anxiety

INTRODUCTION

Fibromyalgia Syndrome (FMS) is a clinical picture with unclear etiology and pathogenesis, charac-

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terized by chronic widespread pain, causing a decrease in functionality and often accompanied by symptoms of chronic fatigue and anxietyApproximately 90% of the patients are women, the average age is between 30-60. Its prevalence is 5-8% in hospitals [1]. As the report of prevalence as assessed by the fibromyalgia research survey criteria, the age – and sex – adjusted prevalence of fibromyalgia in the general population is 6.4% [2].

Studies conducted with patients diagnosed with fibromyalgia syndrome have shown the

relationship of FMS with chronic stress, and having a diagnosis of FMS has been defined as a predisposition to psychiatric diseases [3]. Chronic pain is frequently seen in somatic symptoms and related diseases, formerly known as somatoform disorders [4, 5]. Health anxiety is condition that is associated with all somatoform disorders, where the attention focuses largely on the symptoms in the body, although it is not a physical disease, the symptoms are exaggerated and misinterpreted [6]. Having high health anxiety increases somatization. In this way, the hypochondria causes excessive efforts and causes the person to use more health services [7].

With the popularity of the Internet, researches have shown that most people direct their own health based on the health information they get online. In Turkey, 65.9% of people searched for personal health information online in the first three months of 2016 [8]. Cyberchondria is a picture characterized by the overly compulsive nature of these online health studies and the resulting severe health anxiety. It is thought to be quite common in our country [9]. In cyberchondria, the person repeatedly tries to obtain information from the internet in fear and anxiety that his/her health may deteriorate [10]. Chronic pain is the most common symptom that prompts patients to seek treatment [11].

Looking at the relationship between anxiety and online information search, people with high levels of anxiety may tend to use the internet more easily and at a higher rate [12]. On the other hand, access to unclear and unproven information also increases people's health anxiety. When health anxiety is high, online environments are used more frequently and concerns increase after internet search [13]. An important problem for people with chronic conditions such as FMS is that they have pain and symptoms that can easily increase their health anxiety, together with the high rate of comorbid psychiatric diseases, and they do excessive health-related internet search to get information about them [14]. A study from 2019 analyzed information in terms of symptoms, causes, and treatments of the disease by searching for 'fibromyalgia' on website for standard health information quality criteria (JAMA score, HONcode) and mentioned the quality, completeness and accessibility of online health information was poor [15].

Long health research can mislead patients with unqualified online information, disrupt the therapeutic relationship between patient and physician, and even worsen their medical condition by delaying patients' access to the right treatment. Considering all these, we think that cyberchondria behavior will be higher in FMS patients suffering from chronic pain in our study due to the reasons mentioned. We hypothesized that cyberchondria rates may be higher in FMS patients than controls, and that these individuals may have a higher rate of health anxiety. Therefore, we think that our study will contribute to the literature, considering that the cyberchondria attitudes and health concerns in FMS patients and their relationship with each other are important and should not be overlooked.

MATERIAL AND METHOD

In the power analysis performed (Gpower 3.1), the sample number of the research was determined as 68 patients at the 95% confidence interval, at the significance level of 0.05 to reach 80% power. In the strength analysis, "The Effect of Cyberchondria Levels on Quality of Life and Number of Hospital Applications in Patients with Anxiety Disorder and Major Depressive Disorder" study was used as a source.

The study was planned as a case-control type study. Before the research, approval was obtained from The Ethics Committee of University of Turgut ÖzalUniversity Faculty of Medicine (Approval Date: April 22, 2021; Approval Number: 2021/11) and the research was conducted in accordance with the Declaration of Helsinki.

68 patients diagnosed with FMS according to the American College of Rheumatology (ACR) [16] 2010 diagnostic criteria by the physiotherapy doctor who were admitted to Elazığ Fethi Sekin City Hospital Physical Therapy and Rehabilitation Outpatient Clinic and 68 healthy individuals with similar sociodemographic characteristics and meeting the study criteria were included in the study. The healthy control group was composed of hospital staff and patient relatives. The questionnaire, which lasted about 20 minutes, was applied to the participants in a face-to-face interview after the diagnosis and treatment stages of the patient about the com-

plaint were completed. Written and verbal consents were obtained after the participants were informed about the purpose of the study before the questionnaire. Sociodemographic Data Form, Cyberchondria Severity Scale (CSS), Fibromyalgia Impact Questionnaire (FIQ) and Health Anxiety Inventory-Short Version (HAI) were administered to all participants.

Inclusion criteria for the patients: Having a diagnosis of FMS according to ACR, not having a diagnosis of another inflammatory-rheumatic disease (rheumatoid arthritis, ankylosing spondylitis, systemic lupus erythematosus, mixed connective tissue disease, etc.), patients' age range of 18-50, being literate, having no systemic and metabolic disease, no dementia, mental retardation, cognitive impairment or neurological disease, and currently not receiving psychiatric treatment (We resorted to Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) to explore any comorbid psychiatric disorders among the participants) [5].

Scales used

1. Sociodemographic data form: It was prepared by the researchers in line with the purposes of the study. It is a form that includes demographic data such as age, marital status, educational status, place of residence, employment status and economic status, clinical evaluation questions such as presence of psychosocial stress factors, history of inpatient treatment, and smoking or alcohol use.

2. Cyberchondria Severity Scale (CSS): It was developed by McElroy and Shevlin [10] in 2014 to evaluate the cyberchondria status of individuals. The score obtained is directly proportional to the level of cyberchondria. The scale is a 33-item, 5-point Likert type (Never: 1 point and Always: 5 points) and a five-dimensional measurement tool. These five dimensions are compulsion, distress, excessiveness, reassurance, and mistrust of medical professional. The mean score of the scale varies between 33 – 165 points. There is no cut point. Turkish validity and reliability were performed by Uzun et al. [9]. While the Cronbach Alpha coefficient calculated

for the reliability of the CSS is 0.89, it varies between 0.65 and 0.85 in the subscales [9].

3. Fibromyalgia Impact Questionnaire (FIQ): The scale developed by Burckhardt et al., [17] was used in studies to evaluate how much FMS affects the patient. It consists of 10 Likert-type questions, each of which is scored between 0 and 3. The first question consists of 11 sub-items questioning physical functions. The maximum score for each item is 10, and the total score is 100. While the score is 50 in moderately affected patients, the score is 70 and above in severely affected patients. The Turkish validity and reliability studies were conducted by Sarmet et al. [18]. The Cronbach alpha value is 0.89 for the FIQ first evaluation and 0.91 for the FIQ second evaluation [18].

4. Health Anxiety Inventory (HAI) (Short Version): It is a self-report scale developed by Salkovskis et al. [19]. In the short form, there are 18 items that are evaluated in 4-Likert type and these items represent 2 sub-dimensions, the Body and the Negative Results of the Disease. The increase in the scores obtained from the sub-dimensions and the total of the scale means that the health anxiety increases. The lowest score is 18, the highest score is 72. The Turkish version of the short version was made by Aydemir et al. [20]. The internal consistency value of the scale was calculated as .89 for the body dimension and .72 for the negative outcomes of disease dimension [20].

Statistical Analysis

The analyzes were evaluated in the SPSS (Statistical Package for Social Sciences; SPSS Inc., Chicago, IL) 22 package program. Descriptive data in the study were shown as n,% values in categorical data, and mean±standard deviation (Mean ± SD) and median interquartile range (25-75 percentile values) in continuous data. Chi-square analysis (Pearson Chi-square) was used to compare intergroup categorical variables. The compliance of continuous variables to normal distribution was evaluated with the Kolmogorov-Smirnov Test. In comparison of paired groups, student t-test was used for variables with normal distribution,

and Mann Whitney U – test was used for variables that did not show normal distribution. In examining the relationship between continuous variables, Pearson correlation test was used for those with normal distribution, and Spearman correlation test for those who did not show normal distribution. The statistical significance level was accepted as p<0.05 in the analysis.

RESULTS

A total of 136 participants, including 68 FMS patients and 68 control groups, were included in the study. The patient and control groups were all women. The mean age of the patient group was found to be 37.1±7.5 and the mean age of the control group was found to be 34.1±8.0, and a significant difference was found between the groups in terms of age (p=0.026). The ratio of married people in the patient group (79.4%) was found to be significantly higher than that

of the control group (60.3%) (p=0.015). The rate of graduation from high school and above in the patient group (60.3%) was found to be significantly lower than the rate of graduating from high school and above (76.5%) in the control group (p=0.043). The rate of employed subjects in the patient group (39.7%) was found to be significantly lower than the rate of employed subjects in the control group (79.4%) (p<0.001). There was no alcohol/substance user in the patient group, but 6 (8.8%) people in the control group were using alcohol/substance (p=0.028). No significant difference was found between the patient group and the control group in terms of location, economic status, additional organic disease, continuous drug use, previous psychiatric treatment history, family history of psychiatric illness, and smoking (p>0.05).

The average duration of FMS diagnosis of the patients was found to be 3.1±2.4 years, and 7.4% of them were hospitalized due to FMS (Table 1).

Table 1. Comparison of the patient and control groups according to sociodemographic and disease characteristics

		Patient (n = 68)	Control (n=68)	Total (n=136)	p*
		n (%)	n (%)	n (%)	
Age, Mean±SD		37.1±7.5	34.1±8.0	35.6±7.8	0.026**
Marital status	Single	14 (20.6)	27 (39.7)	41 (30.1)	0.015
	Married	54 (79.4)	41 (60.3)	95 (69.9)	
Educational status	Secondary	27 (39.7)	16 (23.5)	43 (31.6)	0.043
	High school and up	41 (60.3)	52 (76.5)	93 (68.4)	
Residence	Village	7 (10.3)	4 (5.9)	11 (8.1)	0.345
	City	61 (89.7)	64 (94.1)	125 (91.9)	
Economical condition	Low	11 (16.2)	10 (14.7)	21 (15.4)	0.390
	Mod.	50 (73.5)	55 (80.9)	105 (77.2)	
	High	7 (10.3)	3 (4.4)	10 (7.4)	
Profession	Working	27 (39.7)	54 (79.4)	81 (59.6)	<0.001
	Unemployed	41 (60.3)	14 (20.6)	55 (40.4)	
Comorbid organic disease	Yes	12 (17.6)	5 (7.4)	17 (12.5)	0.071
	No	56 (82.4)	63 (92.6)	119 (87.5)	
Continuous use of medication	Yes	9 (13.2)	5 (7.4)	14 (10.3)	0.259
	No	59 (86.8)	63 (92.6)	122 (89.7)	
Previous history of psychiatric treatment	Yes	10 (14.7)	5 (7.4)	15 (11.0)	0.171
	No	58 (85.3)	63 (92.6)	121 (89.0)	
Family history of psychiatric illness	Yes	6 (8.8)	12 (17.6)	18 (13.2)	0.129
	No	62 (91.2)	56 (82.4)	118 (86.8)	

Smoking	Yes	23 (33.8)	26 (38.2)	49 (36.0)	0.592
	No	45 (66.2)	42 (61.8)	87 (64.0)	
Alcohol/Substance use	Yes	0 (0)	6 (8.8)	6 (4.4)	0.028
	No	68 (100.0)	62 (91.2)	130 (95.6)	
Duration of FMS diagnosis, Mean±SD		3.1±2.4	-	3.1±2.4	-
Hospitalization due to FMS	Yes	5 (7.4)	-	5 (7.4)	-
	No	63 (92.6)	-	63 (92.6)	

* Chi-square analysis, ** student t-test were used. SD: standard deviation, FMS: Fibromyalgia Syndrome

The median of the CSS-total score of the patient group was found as 81.5 (58.0-103.0), the median of the CSS-total score of the control group was 51.0 (42.0-62.5), and a statistically significant difference was found between them (p<0.001) (Table 2).

The median HAI-total score of the patient group was found as 23.0 (18.5-28.5), and the median HAI-total score of the control group was 9.5 (6.5-14.5), and a statistically significant difference was found between them (p< 0.001) (Table 2).

Table 2. Comparison of the patient and control groups according to the scale scores

	Patient	Control	p^*
	Median (IQR)	Median (IQR)	
CSS-compulsion	11.0 (10.0-14.0)	11.0 (10.0-14.0)	0.594
CSS-anxiety	23.0 (14.5-28.0)	12.0 (10.0-16.0)	<0.001
CSS-extremism	22.0 (16.0-30.0)	12.0 (9.0-16.0)	<0.001
CSS-relieve	14.5 (9.5-21.0)	8.5 (7.0-11.0)	<0.001
CSS-distrust for the doctor	7.0 (5.0-8.0)	5.0 (3.0-8.0)	0.022
CSS-total	81.5 (58.0-103.0)	51.0 (42.0-62.5)	<0.001
HAI-body	19.0 (15.0-22.5)	5.0 (3.0-9.0)	<0.001
HAI-negative results	3.5 (2.0-6.0)	4.0 (2.5-5.0)	0.566
HAI-total	23.0 (18.5-28.5)	9.5 (6.5-14.5)	<0.001
FIQ	58.0 (50.0-69.5)	10.0 (6.6-15.7)	<0.001

*MannWhitney U test used. CSS: Cyberchondria Severity Scale, FIQ: Fibromyalgia Impact Questionnaire, HAI: Health Anxiety Inventory

The median FIQ score of the patient group was 58.0 (50.0-69.5), the median FIQ score of the control group was 10.0 (6.6-15.7), and a statistically significant difference was found between them (p<0.001) (Table 2).

The sub-dimensions of distress, excessiveness, reassurance and mistrust of medical professional belonging to the cyberchondria severity scale of the patient group were found to be significant-ly higher than the scores of the control group (p<0.001) (Table 2, Figure 1).

The HAI body sub-dimension and total score of the patient group were found to be significantly higher than the score of the control group (p<0.001) (Table 2, Figure 1).

It was observed that there was a significant negative correlation between the duration of FMS diagnosis and CSS-mistrust of medical professional.

Table 3. Correlation of scale scores

		Duration of FMS	CSS – compulsion	CSS – distress	CSS – excessiveness	CSS – reassurance	CSS – mistrust of medical professional	CSS-total	HAI-body	HAI-negative	HAI-total
CSS-compulsion	r	-0.146									
	p	0.236									
CSS-distress	r	0.002	0.382								
	p	0.987	0.001								
CSS-excessiveness	r	-0.076	0.511	0.625							
	p	0.538	0.000	0.000							
CSS-reassurance	r	-0.130	0.566	0.696	0.651						
	p	0.289	0.000	0.000	0.000						
CSS-mistrust of medical professional	r	-0.409	0.323	0.202	0.125	0.245					
	p	0.001	0.007	0.099	0.310	0.044					
CSS-total	r	-0.096	0.664	0.861	0.822	0.886	0.312				
	p	0.436	0.000	0.000	0.000	0.000	0.010				
HAI-body	r	0.044	0.188	0.363	0.264	0.277	0.291	0.383			
	p	0.720	0.125	0.002	0.029	0.022	0.016	0.001			
HAI-negative	r	-0.213	0.225	0.063	0.184	0.154	0.305	0.188	0.325		
	p	0.082	0.065	0.609	0.133	0.211	0.011	0.125	0.007		
HAI-total	r	-0.054	0.219	0.332	0.281	0.267	0.339	0.377	0.940	0.588	
	p	0.664	0.073	0.006	0.020	0.027	0.005	0.002	0.000	0.000	
FIQ	r	0.123	-0.223	0.346	0.198	0.232	-0.056	0.231	0.361	-0.012	0.285
	p	0.316	0.068	0.004	0.105	0.057	0.650	0.059	0.002	0.922	0.018

CSS: Cyberchondria Severity Scale0. FIQ: Fibromyalgia Impact Questionnaire, FMS: Fibromyalgia Syndrome, HAI: Health Anxiety Inventory

Anxiety scores of FMS patients were found to be significantly higher. Accordingly;

- A significant positive correlation was found between the CSS-compulsion sub-dimension and the other CSS sub-dimensions and the CSS total score (Table 3, Figure 2).
- A significant positive correlation was found between the CSS-distress and the other CSS sub-dimensions, CSS total score, HAI body score, HAI total and FIQ score (Table 3, Figure 2).
- A significant positive correlation was found between the CSS-excessiveness sub – dimension and the other CSS sub-dimensions, the CSS total score, the HAI body score, and the HAI total score (Table 3, Figure 2).
- A significant positive correlation was found between the CSS-reassurance sub-dimension and the other CSS sub-dimensions, the CSS total score, the HAI body score, and the HAI total score (Table 3, Figure 2).
- A positive significant correlation was found between the CSS-mistrust of medical professional and the CSS sub-dimensions, total score, and HAI sub-dimensions and total score (Table 3, Figure 2).

- A positive and significant relationship was found between the CSS-total score and the HAI sub-dimensions and total score (Table 3, Figure 2).
- There is a significant positive correlation between HAI-body and HAI-negative results, HAI total score and FIQ score (Table 3, Figure 2).
- There is a significant positive correlation between HAI-negative results and HAI total score (Table 3, Figure 2).
- It was observed that there was a positive and significant correlation between the HAI total scores and FIQ (Table 3, Figure 2).
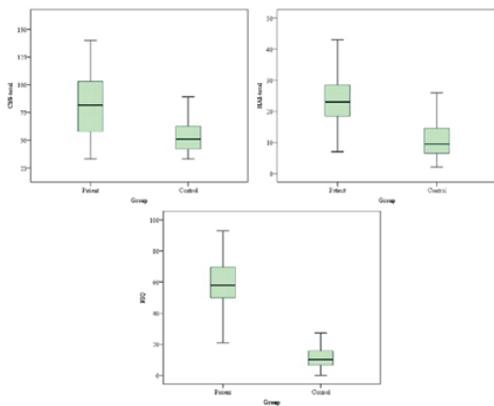
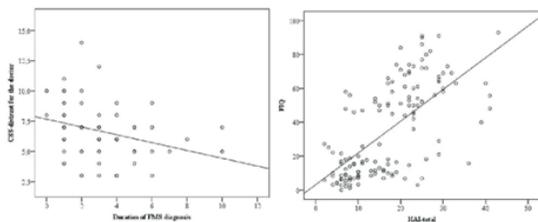**Figure 1.** Comparison of the scale scores of the patient and control group

Figure 2. The correlation between duration of FMS diagnosis and CSS-mistrust of medical professional score and HAI total score and FIQ score

In patients with FMS; those with the FIQ scores of 70 and above (high FIQ) had significantly higher only the HAI-body scores compared with those below 70 (low-medium FIQ) (p=0,028) (Table 4).

Table 4. Comparison of the CSS and HAI scores according to the FIQ scores in FMS patients

	FIQ scores		
	>70	<70	
	Median (IQR)	Median (IQR)	p
CSS – compulsion	10.0 (9.0-11.0)	11.0 (10.0-15.0)	0.065
CSS – distress	26.0 (12.0-33.0)	22.0 (15.0-28.0)	0.492
CSS – excessiveness	18.0 (15.0-30.0)	23.0 (17.0-30.0)	0.635
CSS – reassurance	16.0 (10.0-27.0)	14.0 (9.0-21.0)	0.411
CSS – mistrust of medical professional	7.0 (5.0-8.0)	6.0 (5.0-8.0)	0.533
CSS-total	81.0 (59.0-105.0)	82.0 (58.0-103.0)	0.848
HAI-body	22.0 (19.0-23.0)	18.0 (14.0-22.0)	0.028
HAI – negative results	3.0 (3.0-5.0)	4.0 (2.0-7.0)	0.606
HAI-total	25.0 (22.0-26.0)	23.0 (17.0-29.0)	0.115

CSS: Cyberchondria Severity Scale, FIQ: Fibromyalgia Impact Questionnaire, HAI: Health Anxiety Inventory

DISCUSSION

In our study, FMS patients had significantly higher health anxiety and cyberchondria levels compared to the control group. Besides, as the cyberchondria severity of the patients increased, their health concerns increased significantly. Our results support the literature. It was shown in the literature that there is a direct correlation between health anxiety and cyberchondria [21]. In a series of studies by Muse et al., [13] it was found that searching for health information online increased health anxiety and those with high health anxiety looked for health information online at a higher rate and for a longer time. Similarly, in the study of Baumgartner and Hartmann, it was reported that the higher an individual's health anxiety is, the more often s/he will tend to make health-related searches

and the person will be much more anxious after the search [22].

In our study, significantly higher scores were obtained in the subgroups of cyberchondria total, distress, excessiveness, reassurance and mistrust of medical professional. Cyberchondria excessiveness averages were found to be significantly higher. It is seen that the patients conduct a serious amount of research on health information in online environments compared to the control group. Similarly, significantly higher scores in the reassurance dimension predicted that patients' search for health information on the Internet could direct them to doctors. Anxiety scores of FMS patients were found to be significantly higher. Therefore, anxiety levels increase as a result of searching the symptoms of patients on the internet. Also, the high mistrust of medical professional scores give hints that the patients trust doctors less than the internet. No significant results were obtained in the compulsion sub-dimension compared to the control group, and it can be said that the patients were not affected much by the compulsion dimension.

As the excessiveness and reassurance scores of the patients increased, their health anxiety body scores increased significantly. The relieve-seeking behaviors of the patients to eliminate repetitive behaviors and anxiety related to the same symptoms from different sources, which may lead to spending more time on the Internet, increased their health concerns. As the patients' mistrust of medical professional scores increased, their health anxiety and negative result subscale scores increased significantly. This shows us that patients' attitude of being more confident in their own diagnosis increases their health concerns and negative expectations related to diseases.

In our study, a significant positive correlation was found between the FIQ scores of the patients and the HAI total and all subgroups, and the distress dimension of the CSS. In other words, as the severity of the patients affected by fibromyalgia increased, cyberchondria distress and health concerns increased. There is a case report in the literature showing that cyberchondria increases the severity of chronic central pain in a patient with myofascial pain syndrome [23]. On the other hand, normal and abnormal somatic feelings can be interpreted negatively by causing fear and anxiety. In other words, the individual may think that there is a serious health problem and this will lead to negative consequences. For this purpose, researching repetitive and long-term disease and treatment information may increase anxiety and make it chronic. Besides, reading unconfirmed misinformation of which the sources is not confirmed may result in unnecessary anxiety, and increased anxiety may worsen the pain of patients or cause them to become chronic [24]. On the other hand, chronic pain has psychological as well as physical consequences. Mental disorders from 30% to 100% accompany patients with chronic pain [25]. Stress and anxiety are factors that cause pain to become chronic [24, 26].

Simon et al. stated that chronic pain caused by unsuccessful diagnoses and treatments obtained from online searches in FMS patients caused central sensitization symptoms, and that as a result of central sensitization, patients respond with prolonged and increased pain to external factors that would not normally cause pain [24].

The FMS patients in our study exhibited cyberchondria severity at a median of 81 points. As far as we know, we cannot compare this score since there are no research data on cyberchondria in FMS patients. However, our findings from a behavioral point of view seem to support the literature. In a study in which Ataoğlu et al. examined the behaviors of coping with pain in patients with FMS and osteoarthritis, they found that attempts to seek medical remedies in FMS patients were used more than patients with osteoarthrosis [27]. The use of the internet for self-diagnosis and treatment can have alarming and dangerous consequences for physical therapy patient groups and practices. In a recent study conducted, it was found that online groups are used extensively by patients with FMS to share their disease experiences and investigate their complaints [28]. Baker has a study showing that FMS patients tend to use electronic support groups. In addition, in this study, they mentioned that those with unclassified somatic diseases and syndromes may be demanding in using electronic support groups [29]. Another study mentions that patients who experience chronic pain may develop health anxiety by searching for information on the internet because of their catastrophic pain. The same study

shows that pain catastrophizing predicted variance of all dimensions in cyberchondria. Accordingly, people with chronic pain experience intense anxiety about their symptoms and look for a concrete reason. On the other hand, exposure to repetitive information may increase patients' health concerns even more. The authors emphasized the importance of cyberchondria research in the chronic pain population, noting other factors such as pain intensity, location, and catastrophizing [14].

The doctor-patient relationship may be adversely affected by cyberchondria [30]. In our study, as the duration of FMS disease increased, the patients' mistrust of medical professional decreased significantly. Having a chronic disease such as fibromyalgia may have made individuals a habit of living with their diseases after a while and made them do less search on the internet. Besides, the uncertainty about the disease in newly diagnosed people can be thought to increase their cyberchondrial attitude.

In terms of sociodemographic characteristics, the patient group was predominantly high school and below, unemployed, and married. Chronic pain is much more common in people with low socioeconomic status [31]. Although the frequency of FMS increases with age, the average age of onset is 30-50 years [32]. The mean age of the patients in the study was found to be 37.1±7.5. Although our study is a case-control group and our group is heterogeneous, the characteristics of our case group are similar to the studies in the literature.

The strength of our study is that it was conducted face-to-face clinically in a specific patient group such as FMS. Current information about cyberchondria is limited, and studies have generally been conducted over the internet and with healthy volunteers [33].

The limitations of our study are that the sample was composed of women only, it was in a cross-sectional design, and it was conducted in a short period of time. The fact that the patient population admitted during this period may differ may have limited the study.

As a result of our findings, it can be said that since FMS patients are one of the patient groups experiencing chronic and intense pain, they tend to access information about their disease on their own from the internet.

CONCLUSION

The results of this study show that health anxiety and cyberchondria are high in patients with FMS and that disease severity and health anxiety increase in direct proportion. These results may suggest that in FMS patients, cyberchondria may be a behavioral pattern that strongly increases anxiety, patients may use more health services unnecessarily, and may disrupt the therapeutic relationship between patient and doctor. Therefore, it may be wise to periodically check the cyberchondria and health anxiety levels of these patients and to include psychiatric view in the treatment of the patients. Doctors can refer patients who have health concerns and who have comorbid psychiatric symptoms for psychoeducation, as well as protect patients from uncontrolled anxiety by referring them only to reliable and accurate online sites.

Declaration of conflicting interests

The authors declared no conflicts of interest with respect to the authorship and/or publication of this article.

Funding

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