Coronaphobia in Patients With Fibromyalgia.

Sevinc Kulekcioglu (✉ sevinckulek@gmail.com)

Bursa Yüksek İhtisas Eğitim ve Araştırma Hastanesi: Bursa Yuksek Ihtisas Egitim ve Arastirma Hastanesi <https://orcid.org/0000-0003-3248-4014>

Merve Akyüz

Bursa city hospital

Özenç İnan

Bursa city hospital

Alp Çetin

Ankara Hacettepe University

Research

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Abstract

Background: Throughout the world, the coronavirus disease (COVID-19) pandemic has had a significant effect on human health and daily life. Recent data in literature showed that the COVID-19 pandemic has increased mental health problems. One of these problems, including specific phobia called as “coronaphobia”. The aim of this study was to measure the level of specific phobia created by the COVID-19 pandemic in fibromyalgia (FMS) patients, and to compare this with levels of coronaphobia in patients without FMS.

Results: Sixty-one patients participated in the study. Thirty patients diagnosed with fibromyalgia were included in the fibromyalgia group and 31 patients without a diagnosis of fibromyalgia in the control group. The sociodemographic data of all the patients and the presence of chronic disease were determined. All the patients in both groups were instructed to complete the COVID-19 Phobia Scale (C19PS). The C19PS total score and psychological, psychosomatic, social, and economic subgroups scores were determined to be statistically significantly higher in the FMS group than in the control group (23.2 vs 16.3, 10.9 vs 7.1, 18.4 vs 12.1, and 10.5 vs 6.5 respectively).

Conclusion: The results of this study demonstrated that FMS patients have more concerns in this extraordinary global pandemic situation. Early determination of COVID-19 phobia in individuals predisposed to psychological disorders, such as those with FMS, must be kept in mind in respect of providing timely psychological support and being able to keep the disease under control.

Introduction

The novel coronavirus disease (COVID-19) started in Wuhan, China, in December 2019, and with a rapid spread across the world was declared a global pandemic on 11 March 2020 by the World Health Organisation (WHO).¹ Throughout the world, the COVID19 pandemic has had a significant effect on human health and daily life. Long-term social isolation, quarantine, fear of the disease, financial problems, and uncertainty about the future have led to psychosocial and economic stresses causing effects beyond physical diseases. Constant exposure to news of COVID-19 in written, visual, and social media with the continuing increase in COVID-19 deaths and the fact that the virus is still not under control has increased levels of concern and fear in people.²

It is known that these types of diseases can cause different psychological difficulties such as fear and panic in society. Fear and anxiety disorders have been reported to have increased in previous similar pandemics (H1N1, SARS, MERS, Ebola, Zika).³⁻⁵ There are recent data in literature showing that the COVID-19 pandemic has increased mental health problems such as anxiety disorders, depression, and acute stress disorder.⁶⁻⁹ Phobias are specific anxiety disorders defined as an excessive and continuous fear of an object or situation and they are classified in 3 groups as social phobias, agoraphobia, and specific phobias.¹⁰ Examples of specific phobias include fear of the environment, fear of animals and fear of blood (needles, taking blood, etc). Specific phobias are the most widely seen psychiatric disorders

worldwide and may trigger other anxiety disorders.^{2,11,12} It has been predicted that “coronaphobia” as developed as a specific phobia of the new coronavirus in the COVID-19 pandemic, and a scale, the COVID-19 Phobia Scale (C1P-S), has been developed to measure this specific phobia.¹³

Fibromyalgia syndrome (FMS) is a chronic disease characterized by symptoms such as widespread musculoskeletal system pain, fatigue, sleep disorder, cognitive problems, depression and anxiety. It is one of the most frequently observed musculoskeletal system diseases, seen more often in females than males and with an estimated prevalence of 24% in the general population.¹⁴ FMS patients may have accompanying anxiety, anxiety disorders and depression at levels varying between 20% and 80%.¹⁵ Furthermore, the emergence of new difficulties in accessing treatment because of the COVID-19 pandemic together with their health condition can increase pre-existing anxiety for individuals struggling with chronic pain. The aim of this study was to measure the level of specific phobia created by the COVID19 pandemic in FMS patients, and to compare this with levels of coronaphobia in patients without FMS.

Materials And Methods

The study included 61 patients who presented at the Physical Medicine and Rehabilitation (PMR) outpatient clinic of xxx between 01.08.20 and 01.10.20. Two groups were formed as Group 1, comprising 30 patients newly diagnosed or under follow-up for a diagnosis of FMS made according to the 2016 ACR criteria, and group 2, comprising 31 patients who presented at the PMR outpatient clinic with any locomotor system complaint and not diagnosed with FMS. The patients included were aged >18 years and had completed at least 5 years of education. Patients were excluded from the study if they had any severe systemic disease, a malignancy, acute infection, pregnancy, or breast-feeding, or if they had a history of psychiatric or neurological disease. Patients who met the criteria were informed about the study and signed informed consent was obtained from all the patients for voluntary participation in the study. All the procedures were applied in compliance with the principles of the Helsinki Declaration. The study protocol was approved by the Ethics Committee of xxx. The sociodemographic data (age, gender, height, weight, education, occupation, and marital status) of all the patients and the presence of chronic disease were determined. All the patients in both groups were instructed to complete the CP19-S. The CP19-S was developed by Arpacı et al. to measure the levels of fear related to COVID-19. The items of the scale were formed on the basis of an extensive review of existing scales of fear, specialist evaluations and the opinions of participants. The validity and reliability of the CP19-S for a Turkish population was examined, and the scale items were seen to have high differentiation and high reliability values [13]. The scale is evaluated with 5-point Likert type responses where 1 state *I completely disagree* and 5 states *I completely agree*. The scale is evaluated in psychosomatic, social, and economic subscales. The total scale points, ranging from 20 to 100, are obtained as the total of the subscale points, with high points indicating a high level of fear of COVID-19.

STATISTICAL ANALYSIS

Data obtained in the study were analyzed statistically using IBM SPSS vn. 20.0 software (IBM Corp., Armonk, NY, USA). Demographic data were expressed as mean $\pm$ standard deviation values, number, and percentage. For the comparison of the C19P-S results between groups, the Independent Samples t-test was used.

Results

The demographic parameters of the patients are shown in Table 1. No significant differences were determined between the FMS patients and the control group in respect of age, gender, height, weight, and marital status. Professions and educational status of the study group are given in Table 2 and 3. The results of the C19P-S are shown in Table 4. The C19P-S total score and psychological, psychosomatic, social, and economic subgroup scores were determined to be statistically significantly higher in the FMS group than in the control group. ($p < 0.001$)

Table 1
Descriptive statistics of the participants in study

	FMS Group (n:30)	Control Group (n:31)	p*
Age (year) (mean + SD)	43.2 $\pm$ 9.3	49 $\pm$ 10.7	.082
Gender n (%)	28(93.3)	27 (87.1)	.417
Female	2(6.7)	4(12.9)	
Male			
Height (cm) (mean + SD)	163.2 $\pm$ 9.7	164.9 $\pm$ 7.3	.137
Weight (kg) (mean + SD)	71.1 $\pm$ 13.5	71.1 $\pm$ 13.8	.874
Marital status n (%)	22(73.3)	27(87.1)	.180
Married	8(26.7)	4(12.9)	
Single			

FMS: fibromyalgia

*Mann Witney U

Table 2
Professions of the study population

<i>Professions</i>	<i>FMS Group</i>	<i>Control Group</i>
	<i>n (%)</i>	<i>n (%)</i>
Housewife	16(53.3)	15 (48.4)
Student	-	1 (3.2)
Worker	6(20)	5(16.1)
Retired	2(6.7)	4 (12.9)
Secretary	-	1(3.2)
Operator	-	3 (9.7)
Sales consultant	-	2(6.4)
Technician	1(3.3)	-
Farmer	1(3.3)	-
Accountant	1(3.3)	-
Security guard	30 (100)	31 (100)
Teacher		
Nurse		
Total		

Table 3
Education status of the study population

Education status	FMS Group	Control Group
	n (%)	n (%)
Primary school	15(50)	12(38.7)
High school	11(36.7)	11(35.5)
Bachelor's degree	4(13.4)	8(25.8)
Total	30(100)	31 (100)

Table 4
Comparison of C19P-S scores of groups

C19P-S Score [¶]	FMS Group (n:30)	Control Group (n:31)	p*
Psychological	23.2 ± 5.0	16.3 ± 6.5	< 0.001
Psychosomatic	10.9 ± 4.4	7.1 ± 2.9	< 0.001
Social	18.4 ± 4.5	12.1 ± 5.4	< 0.001
Economic	10.5 ± 3.3	6.5 ± 3.4	< 0.001
Total	63.3 ± 12.7	41.7 ± 15.9	< 0.001

C19P-s: Covid-19 Phobia Scale

¶ Independent samples T test

*Significant at $p < 0.05$

Discussion

As a result of this cross-sectional, controlled study, coronaphobia was determined at a statistically significantly higher level in the FMS patients than in the control group. The combination of FMS and anxiety disorders is well known. Previous studies have shown that FMS patients are affected more than healthy individuals by concerns and anxiety triggered by stress factors.¹⁶

Several studies have shown that the majority of patients with FMS have various psychosocial problems and psychiatric disorders including depression, anxiety, somatization and phobias.¹⁷ It has been stated in literature that 19.4%-34.8% of FMS patients have emotional disorders, and 11.6 %-32.2% have anxiety and anxiety disorders. Uğuz et al. reported that specific phobias are seen more frequently in FMS patients but there are insufficient studies that have investigated specific phobia types in FMS.¹⁸ To the best of our knowledge, this is the first study to have examined coronaphobia in FMS patients. In addition to the physical threat and destruction caused by COVID-19, it has led to stress reaction and trauma created by what has been experienced related to the disease, making it necessary to consider the process and its aftermath from a psychological aspect. When the WHO declared the disease a pandemic, precautions started to be taken globally. Preventative measures such as mandatory isolation, quarantine and temporary closures of schools and businesses implemented by governments and health authorities, although necessary to prevent the spread of infections and reduce the effects on healthcare systems, gave rise to and fed fear and anxiety. These precautions are known to have negative psychological, psychosomatic, social, and economic results. Especially as the debates related to the treatment process, an effective vaccine and the routes of virus transmission have not reached a clear conclusion, this pandemic has created fear, anxiety and desperation in people and this has been reported to have negative

effects on behavior.¹⁹ In addition to environmental conditions, specific phobias may emerge associated with the existing psychological status, diseases, temperament, genetic and physiological precursors.¹⁰ It is thought that the psychological status, temperament, and personal characteristics of FMS patients facilitate the development of specific phobias.²⁰⁻²³ The difficulties experienced by FMS patients because of the COVID-19 pandemic in many activities, exercise, and accessing regular medical treatment are thought to have increased anxiety and phobic reactions.

In a study by Haktanir et al,²⁴ there was reported to be no difference between patients with and without chronic disease in respect of fear of COVID-19. In that study, the Fear of COVID-19 Scale was used in the evaluation of the fear of COVID-19, but individuals previously diagnosed with anxiety were excluded from the evaluation. Therefore, it cannot be said to reflect the general population. In the current study, the results demonstrated that the presence of FMS as a chronic disease increased the risk of coronaphobia.

It has been reported from several countries that the COVID-19 pandemic has significant psychological, social and economic negative effects. The negative psychological effects of COVID-19 started to be investigated first in China where the pandemic first occurred and then in countries such as Italy and Spain where severe effects of the pandemic were seen.²⁵⁻²⁷ In a study conducted on 7143 university students in China after the COVID-19 outbreak, symptoms of anxiety were reported to have been experienced by 0.9% of the students at an intense level, at a moderate level by 2.7%, and at a mild level by 21.3%.²⁵ Similarly in another study in China of 1210 individuals, the psychological effects of the pandemic were examined and it was reported that 16.5% of the participants showed symptoms of depression from a moderate to severe level, 28.8% had moderate to severe level anxiety symptoms, and 8.1% showed moderate to severe level stress symptoms.²⁸ A study of 3550 adults conducted over the internet in Spain determined anxiety disorder in 32.4% of the respondents, depression in 44.1%, and stress disorder in 37%.²⁹ To examine the effect of the pandemic and quarantine period on psychological health, Rossi et al²⁷ conducted an online questionnaire with 18147 respondents in Italy, and reported that post-traumatic stress symptoms were seen in 37%, anxiety symptoms in 20.8%, depression symptoms in 17.3%, sleep problems in 7.3%, and perceived high levels of stress in 21.8%.²⁷ In the current study, a significant difference was found in the psychological and psychosomatic phobia parameters in the FMS patient group. The anxiety and fear created by the nature of the pandemic can also affect interpersonal relationships in daily life. For example, more than half of the people who quarantined with the suspicion that they had been in contact with a SARS-infected person reported that weeks later they tried to distance themselves from anybody who sneezed or coughed, 26% stayed away from crowded or indoor places, and 21% avoided all areas open to the public.^{30,31} In the current study, the social phobia parameters were found to be high in the FMS patient group. The economic parameters in the current study were also found to be high in the FMS patients of the current study for reasons such as having to continue with existing work, not going to work because of social isolation, being made redundant, and difficulties finding new work.

For the evaluation of specific phobias, it is recommended to use evaluation questionnaires specific to that fear. Thus, a need arose for evaluation of the fear of COVID-19 and different scales have been

developed for this.³² In the current study, the C19P-S questionnaire was used, which was developed to evaluate coronaphobia. The C19P-S has been tested for validity and reliability in a Turkish population. A previous review showed that the C19P-S is one of the few scales that attempts to comprehensively evaluate mental health problems related to COVID-19.³³ In a study by Celenay et al. using the C19P-S, the levels of coronaphobia were compared in subjects who stayed at home during the pandemic and those who continued to work. However, apart from those with severe psychological problems, other health problems were not taken into consideration.³⁴ It is possible that the presence of additional diseases has an effect on coronaphobia. A substantial amount of evidence has been shown that the COVID-19 pandemic has deep psychological and social effects. The psychological sequelae of the pandemic will probably continue for months and years in the future.³⁵ Therefore, in this extraordinary situation in which we find ourselves, it is vital that individuals with a predisposition to psychological disorders are identified from different groups, and thus with the implementation of appropriate psychological strategies, techniques and interventions, the mental health of the general population can be protected and improved.³⁶ The determination of COVID-19 phobia, and the provision of timely psychological support are important to be able to keep FMS disease under control.^{37,38}

The most important limitations of this study were the cross-sectional design and limited number of cases. Therefore, it is not possible to provide information about why coronaphobia is seen more often in FMS patients or what causes the development of coronaphobia in FMS. Consequently, there is a need for further studies to show the cause and effect relationships.

Conclusion

The results of this study demonstrated that FMS patients have more concerns in this extraordinary global pandemic situation. Early determination of COVID19 phobia in individuals predisposed to psychological disorders, such as those with FMS, must be kept in mind in respect of providing timely psychological support and being able to keep the disease under control. This study can be considered of value as it is the first study in literature to show the presence of coronaphobia in FMS patients.

Declarations

- Ethical Approval and Consent to participate: Bursa city hospital ethics committee approval and Turkish Ministry of Health publication approval was obtained.
- Ethical Approval and Consent to participate: Informed consent form and consent form for publication were obtained from the patients.
- Competing interests: The authors declared no conflicts of interest with respect to the authorship and/or publication of this article.
- Funding: The authors received no financial support for the research and/or authorship of this article.
- Availability of supporting data: The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

- Authors' contributions:

SK, made important contributions to the concept and design of the work. Helped to obtain data.

MA, analyzed and interpreted the patient data regarding. She helped to obtain data.

Öİ, helped to obtain data.

AÇ, made important contributions to the concept and design of the work. He revised the study.

All authors read and approved the final manuscript.

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