



ORIGINAL ARTICLE

Are fibromyalgia and failed back surgery syndromes actually “functional somatic syndromes” in terms of their symptomatological, familial and psychological characteristics? A comparative study with chronic medical illness and healthy controls

Fibromiyalji ve başarısız bel cerrahisi sendromları semptomatolojik, ailesel ve psikolojik özellikler açısından aslında “fonksiyonel somatik sendrom” mudur? Kronik hastalık ve sağlıklı kontrol grupları ile yürütülen karşılaştırmalı bir çalışma

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Summary

Objectives: The aim of this study was to investigate whether Fibromyalgia and Failed Back Surgery Syndromes (FMS-FBSS) may be evaluated under the single heading of Functional Somatic Syndromes (FSS) with respect to their symptomatological characteristics such as intensity, frequency, age of onset, duration, painful areas, fear of pain, and pain coping styles; familial characteristics such as family history of chronic medical illness, psychopathology and pain; and psychological characteristics such as manner of dealing with pain, fear of pain, alexithymia, symptom interpretation, somatosensory amplification and depression.

Methods: The study comprised 150 individuals, separated into 3 groups; The FSS Group comprised 47 patients who were referred to the Physical Medicine and Rehabilitation Clinic at Istanbul University’s Faculty of Medicine with FMS (n=35) and FBSS (n=12), the healthy control group (HC Group) comprised 47 individuals, and the chronic medical illness control group (CMIC Group) was made up of 56 individuals. Turkish versions of the Toronto Alexithymia Scale, Symptom Attribution Inventory, Somatosensory Amplification Scale and Beck Depression Inventory, along with a semi-structured form questioning general health, pain and demographics were administered to all participants.

Results: FMS and FBSS participants (FSS Group) did not differ as a function of the major familial, symptomatological and clinical features considered in this study. Additionally, this group significantly differed from the HC and CMIC Groups with respect to almost all these features.

Conclusion: This study is Important Insofar as it simultaneously evaluated FMS and FBSS groups in the presence of a control group. The results suggest that FMS and FBSS, currently treated as two different diagnostic categories in general medical practice, may be evaluated under the single heading of FSS.

Key words: Failed back surgery syndrome; fibromyalgia syndrome; functional somatic syndrome; somatization.

Özet

Amaç: Bu araştırmanın amacı; Fibromiyalji ve Başarısız Bel Cerrahisi Sendromlarının (FMS-BBCS) kronik tıbbi hastalık, ağrı ve psikopatoloji soy geçmişi gibi ailesel; ağrı süresi, sıklığı, şiddeti, ağrı beklenti korkusu, ağrılı bölge sayısı ve ağrı ile baş etme tarzları gibi semptomatolojik; ve bu semptomatolojiyi etkileyebileceği düşünülen aleksitimi, semptom yorumlama, bedensel duyumları abartma ve depresyon düzeyleri gibi psikolojik özellikler açısından Fonksiyonel Somatik Sendrom (FSS) ortak dili anlayışıyla değerlendirilip değerlendirilmeyeceğinin araştırılmasıdır.

Gereç ve Yöntem: Bu araştırma; FSS grubunda, İstanbul Üniversitesi İstanbul Tıp Fakültesi Fiziksel Tıp ve Rehabilitasyon Polikliniği’ne başvurmuş olan FMS’li 35 ve BBCS’li 12 katılımcıdan oluşan toplam 47, Sağlıklı Kontrol (SK) grubunda 47 ve Kronik Tıbbi Hastalıklı Kontrol (KTHK) grubunda da 56 olmak üzere toplam 150 katılımcı ile yürütülmüştür. Gruplara Toronto Aleksitimi Skalası’nın yanı sıra Semptom Yorumlama Anketi, Bedensel Duyumları Abartma Ölçeği ve Beck Depresyon Envanteri uygulanmıştır. Araştırmada yer alan bütün katılımcıların genel sağlık durumları, demografik ve ağrı ile ilgili bilgileri için yarı yapılandırılmış formlar kullanılmıştır.

Bulgular: FMS ve BBCS gruplarının araştırmada yer alan ailesel, semptomatolojik ve psikolojik özelliklerin tamamında birbirlerinden farklılaşmadıkları; ancak bu iki klinik görüngünün söz konusu değişkenlerin neredeyse tamamında diğer kontrol gruplarından (SK-KTHK) farklılaştıkları görülmüştür.

Sonuç: Bu araştırma FMS ve BBCS tanısı almış olan hastaları aynı anda bir arada kontrol grupları ile de karşılaştırarak değerlendiren bir yöntem izlemesi bakımından önem taşımaktadır. Aynı zamanda FMS ve BBCS gruplarının ilgili değişkenler açısından farklılık göstermemesi bu grupların FSS başlığı altında ele alınabileceğine işaret etmekte olup bu durum ileriki çalışmalarda ve tıbbi uygulamalarda söz konusu vakalara yaklaşım biçimi açısından önem arz etmektedir.

Anahtar sözcükler: Başarısız bel cerrahisi sendromu; fibromiyalji sendromu; fonksiyonel somatik sendrom; somatizasyon.

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Submitted: 07.03.2014 Accepted after revision: 14.08.2014

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Introduction

In medical practice, patients consult to physicians in order to seek help for their physical symptoms. In this case, physician needs to diagnose the patient with a disease providing a complete explanation about the patient's symptoms. A symptom depends on patient's any subjective experience, while a disease depends on objectively observable abnormalities in the body. However, a serious problem arises when either the physician can find no objective changes to express the patient's symptoms, or no symptom relief is achieved despite convenient treatment for their medically explained symptoms. If the physician does not have a diagnostic restraint, there is no problem in calling these symptoms such as functional or somatization.^[1] The problem intrudes when these clinical phenomena are diagnosed differently in different disciplines. For example, while it is called as somatic symptom disorders in Diagnostic and Statistical Manual for Mental Disorders-Fifth Edition (DSM-5; APA, 2013) (or somatoform disorders according to DSM-IV-TR) in psychiatry, it's called as Fibromyalgia Syndrome (FMS) or Failed Back Surgery Syndrome (FBSS) in physical rehabilitation, Chronic Fatigue Syndrome (CFS) in internal medicine, or Irritable Bowel Syndrome (IBS) in gastroenterology.^[2]

Although, these specific diagnoses indeed share almost the same symptomatology such as back and joint pain, weakness, fatigue, sleep disorders, bowel problems, distress, numbness, dizziness, vertigo and concentration problems;^[3] patients with identical symptoms may be diagnosed differently either because of their salient presenting symptomatology compositions or mostly because of the tendency of specialists to focus on only the symptoms relevant to their specialty.^[4] However, due to these overlap of symptoms, many researchers in the area offer a single diagnosis under the heading of "Functional Somatic Syndromes" (FSS).^[4,5,6] In general meaning, we describe an FSS as one that, after both clinician's physical examination and accurate medical investigation, no symptom can be clarified by any known conventional medical disease, or that even if an underlying organic pathology is detected, symptom alleviation is not achieved through medical treatment.^[7] Therefore, it can be said that the existence of these specific diagnoses derived from FSS is mainly an artefact of medical specialisation.^[8]

There are studies which support this single FSS diagnosis hypothesis. For instance, in a study which was carried out with 58 FMS, 54 CFS, 43 IBS and 129 noncardiac chest pain patients, all the participants' symptoms were investigated by semi-structured clinical interview assessing symptom overlap among them. Results showed that the complete overlap of these diagnostic categories was 95% (95% CI 93.1–96.0; kappa 0.86, $p < 0.001$).^[9] However, there are lots of studies indicating that existence of this overlap does not vary when only dominant symptoms of these single syndromes are taken into account as well. Aaron et al.^[10] exhibited that number of tender points within different segments of body which is one of the main diagnostic criteria for FMS according to the American College of Rheumatology (ACR) was reported not to change as a function of FMS, CFS and temporomandibular disorders.

In addition to these symptom oriented similarities, these patients' behavioral/cognitive/emotional patterns seem to be alike as well. That is, in patients with FSS, among the common features proposed to be resulting from diagnostic imprecisions are illness behavior such as the disproportionately utilization of health services, leading to frustrations and harassment towards their physicians.^[11] Moreover, literature signify a close-relatedness between these groups with respect to cognitive structures such as somatosensory amplification, somatic attribution style, or personality characteristics, i.e. alexithymia or psychopathological presentation as depression.^[12]

Although, these patients are responsible for almost one third of the consultations, they aren't pleased of any treatment provided for them.^[13] All these features make these patients one of the most important problems of the health care system. Therefore the ongoing diagnostic imprecision necessitates an urgent clarification and validation of whether these distinct symptom groups are indeed members of the same category of FSS.^[8–14]

Therefore, the aim of the present study is to illuminate whether two distinct phenomena, however characterized by chronic pain, namely FMS and FBSS can be evaluated under the unique title of FSS, regarding their familial, symptomatological and psy-

Table 1. Demographic characteristics of four groups

| | FMS | | FBSS | | Chronic medical illness control | | Healthy control | | Statistical test |
|------------------------|--------|------|-----------|------|---------------------------------|------|-----------------|------|------------------------|
| | (n=35) | | (n=12) | | (n=56) | | (n=47) | | |
| | n | % | n | % | n | % | n | % | |
| Age (years), (Mean±SD) | 41±9.7 | | 44.25±5.8 | | 42.8±8.5 | | 41.8±8.7 | | F=0.562 |
| Education | | | | | | | | | |
| Elementary school | 11 | 31.4 | 6 | 66.7 | 27 | 48.2 | 17 | 36.2 | X ² =11.450 |
| Middle school | 8 | 22.9 | 2 | 22.2 | 7 | 12.5 | 9 | 19.1 | |
| High school | 7 | 20 | 1 | 11.1 | 7 | 12.5 | 13 | 27.7 | |
| Graduate-postgraduate | 9 | 25.7 | 0 | 0 | 15 | 26.8 | 8 | 17 | |
| Income | | | | | | | | | |
| Low-middle | 26 | 74.3 | 8 | 66.7 | 38 | 69.1 | 32 | 71.1 | X ² =0.384 |
| High | 9 | 25.7 | 4 | 33.3 | 17 | 30.9 | 13 | 28.9 | |
| Marital status | | | | | | | | | |
| Married | 26 | 76.5 | 11 | 100 | 50 | 90.0 | 39 | 83 | X ² =5.705 |
| Others | 8 | 23.5 | 0 | 0 | 5 | 9.1 | 8 | 17 | |
| Occupational status | | | | | | | | | |
| Working | 13 | 40.6 | 4 | 33.3 | 20 | 38.5 | 22 | 50 | X ² =1.815 |
| Non-working | 19 | 59.4 | 8 | 66.7 | 32 | 61.5 | 22 | 50 | |

FMS: Fibromyalgia syndrome; FBSS: Failed back surgery syndrome.

chological features. With this purpose, these groups will be compared with one another and individuals with and without chronic medical illness, in terms of symptomatological constructs such as intensity, frequency, age of onset, duration, painful areas, fear of pain, and pain coping styles; familial constructs such as family history of chronic illness, psychopathology and pain; and psychological constructs such as pain coping styles, fear of pain, alexithymia, symptom interpretation, somatosensory amplification and depression. It is expected that, if FMS and FBSS are different presentations of though the same clinical phenomena, namely FSS, they should be similar to one another but different from the other two groups in terms of all variables described above.

Materials and Methods

Participants

The participants were 150 individuals; 47 with FMS (n=35) and FBSS (n=12) in FSS group, 47 in Healthy Control (HC) and 56 in Chronic Medical Illness Control (CMIC) groups. The research was conducted between January 2011 and March 2013. The socio-demographic characteristics of the study and control

participants were presented in Table 1. According to this table, it can be said that there were no differences in terms of age, education, income, marital and working status between four groups.

FSS groups were eligible from the patients who attended to Physical Medicine and Rehabilitation department of Istanbul Medicine Faculty and diagnosed with FMS and FBSS.

The inclusion criteria for the FSS groups were as follows: being female, aged 18–65 and having at least primary school education; absence of any systemic diseases such as cardiovascular, chronic diabetes or hepatitis except for chronic pain according to the results of necessary physical, radiological, neurological and laboratory examination; absence of any problem in reading, understanding and perception of the forms given; and diagnosed with FMS (n=35) according to the ACR criteria and FBSS (n=12) after both physical examination and accurate medical investigation conducted by one of the researchers (AK) who is a physician specialized in Physical Medicine and Rehabilitation.

Table 2. Symptomatological characteristics of FMS and FBSS groups

| | FMS (n=35) | | FBSS (n=12) | | Statistical test |
|------------------------|-------------|------|-------------|------|------------------|
| | n | % | n | % | |
| Pain intensity | | | | | |
| Mild-moderate pain | 10 | 28.6 | 4 | 33.3 | $\chi^2=0.097$ |
| Unbearable-severe pain | 25 | 71.4 | 8 | 66.7 | |
| Visual analogue scale | 7.31±1.67 | | 6.66±2.14 | | $t=1.074$ |
| Frequency of pain | | | | | |
| A few times in a week | 9 | 25.7 | 2 | 16.7 | $\chi^2=0.410$ |
| A few times in a day | 8 | 22.9 | 3 | 25 | |
| Constant pain | 18 | 51.4 | 7 | 58.3 | |
| Duration of pain | 7.41±7.38 | | 9.04±8.70 | | $Z=-0.331$ |
| Painful areas of body | 22.08±11.18 | | 16.18±9.32 | | $Z=-1.547$ |
| Fear of pain | | | | | |
| Yes | 20 | 62.5 | 5 | 50 | $\chi^2=0.494$ |
| No | 12 | 37.5 | 5 | 50 | |
| Age of onset of pain | 33.38±8.68 | | 34.58±8.70 | | $t=-0.412$ |
| Pain coping styles | | | | | |
| Passive | 25 | 80 | 8 | 80 | $\chi^2=0.002$ |
| Active | 12 | 37.5 | 5 | 50 | |

Data are given as Mean±SD or case number (%); FMS: Fibromyalgia syndrome; FBSS: Failed back surgery syndrome.

A psychological assessment was performed by one of the researchers (BD) for all the patients in the FSS groups especially for the purpose of understanding whether if the patients had a major psychopathology as the underlying problem than pain which could discourage the experience of the pain. Therefore, we excluded four patients who were observed to have a major psychopathology seen as a main problem of their lives.

Both control groups (HC-CMIC) shared the main criteria as follows: being female; aged 18–65; having at least primary school education; without pain complaints for at least three months and any psychiatric disorder diagnosed by a psychiatrist or psychologist at the time study was conducted. Participants in the control group were collected via students of the Istanbul University Faculty of Letters, Psychology Department volunteering to help for data gathering. These students helped the researchers only to find participants compatible with the inclusion criteria for both control (HC-CMIC) groups. At this point; from the participants obtained via students which

were measured up to the main criteria of the control groups; while, those who hadn't any type of chronic illness were included to the HC group, those who had a chronic medical illness such as diabetes, hypertension and asthma were included to the CMIC group. This study has been ethically approved by the Scientific Committee of Istanbul University Institute of Social Sciences.

Instruments

Besides General Health Survey (GHS) for investigating health status of the participants and a semi-structured form questioning socio-demographics, all participants were administered Twenty-item Toronto Alexithymia Scale (TAS-20) and its Difficulty Identifying Feelings (TAS-20 DIF) and Difficulty Describing Feelings (TAS-20 DDF)^[15] subtests to measure alexithymia. Additionally, the cognitive components of all the participants were measured through Symptom Interpretation Questionnaire (SIQ)^[16] with its "number of symptoms", "psychologizing", "soma-tising" or "normalising" subtests, and Somatosensory Amplification Scale (SAS)^[17] Beck Depression Inventory (BDI)^[18] was used for measuring depression. FMS

Table 3. Familial characteristics of four groups

| | FMS | | FBSS illness control | | Chronic medical | | Healthy control | | Statistical test |
|-----------------------------------|-----|------|-------------------------|------|--------------------|------|--------------------|------|----------------------|
| | n | % | n | % | n | % | n | % | |
| Family history of chronic illness | | | | | | | | | |
| Yes | 29 | 85.3 | 8 | 72.7 | 30 | 56.6 | 22 | 46.8 | $\chi^2=13.520^*$ |
| No | 5 | 14.7 | 3 | 27.3 | 23 | 43.3 | 25 | 53.2 | |
| Family history of psychopathology | | | | | | | | | |
| Yes | 17 | 50 | 5 | 50 | 7 | 12.5 | 4 | 8.5 | $\chi^2=27.613^{**}$ |
| No | 17 | 50 | 5 | 50 | 49 | 87.5 | 43 | 91.5 | |
| Family history of pain | | | | | | | | | |
| Yes | 27 | 81.8 | 8 | 72.7 | 22 | 41.5 | 7 | 15.2 | $\chi^2=38.273^{**}$ |
| No | 6 | 18.2 | 3 | 27.3 | 31 | 58.5 | 39 | 84.8 | |

Data are given as case number (%); FMS: Fibromyalgia syndrome; FBSS: Failed back surgery syndrome; * $p<0.01$; ** $p<0.001$.

and FBSS patients were presented with Pain Location Body Diagram (PLBD)^[19] to determine number of painful body segments and with Pain Assessment Form (PAF)^[20] to evaluate their pain features such as type, time, severity, frequency and the onset of pain. Their pain intensity were evaluated through both Visual Analogue Scale (VAS)^[21] and pain intensity categories.

Results

The mean age of all participants was found to be 42.18 ± 8.68 . The mean age of FMS and FBSS patients were 41 ± 9.7 (19–62) and 44.25 ± 5.8 (34–52) respectively while they were 41.8 ± 8.7 (24–60) and 42.8 ± 8.5 (20–60) in HC and CMIC groups respectively. The demographic characteristics of four groups of participants are shown in Table 1.

Firstly, analyses regarding variables of symptomatological constructs such as painful areas, pain intensity measured through VAS and pain intensity categories, frequency, age of onset, duration and fear of pain, and pain coping styles, based on comparisons between only FMS and FBSS groups, as only these two groups are characterized by pain, will be presented in this section.

While, majority of both FMS and FBSS patients stated that they had “Unbearable-Severe Pain” (71.4%–66.7%; respectively) this difference was, as expected, not significant ($\chi^2_{(1)}=0.097, p>0.05$) (Table 2). Further,

another pain severity variable measured with VAS also didn’t show a significant difference between these two groups of patients ($t_{(45)}=1.074, p>0.05$) (Table 3). FMS and FBSS groups had a similar distribution in terms of categories of frequency of pain where over half of the patients in both groups indicated constant pain (51.4%–58.3%, respectively). Although, duration of pain and painful areas of body scores of both FMS and FBSS groups appeared as distinct from each other at first glance, there were no significant differences between two groups in these variables as well ($Z=-0.331, p>0.05$; $Z=-1.547, p>0.05$) (Table 2). Furthermore, fear, age of onset of pain and pain coping styles didn’t vary significantly according to FMS and FBSS groups ($\chi^2_{(1)}=0.494, p>0.05$; $t_{(45)}=-0.412, p>0.05$; $\chi^2_{(1)}=0.002, p>0.05$; respectively) (Table 2).

Following section is comprised of comparisons between four study groups concerning both familial constructs such as family history of chronic illness, psychopathology and pain; and psychological features such as alexithymia, symptom interpretation, somatosensory amplification and depression.

As seen in Table 3, 85.3% (n=29) of FMS patients and 72.7% (n=8) of FBSS patients stated that they had a family history of chronic illness, while these ratios were 56.6% (n=30) and 46.8% (n=22) in CMIC and HC participants respectively. Chi square test showed that these differences were significant ($\chi^2_{(3)}=13.520, p<0.01$) (Table 3). On the other hand, fifty percent (n=17 in FMS; n=5 in FBSS) of both FMS and FBSS

Table 4. Psychological characteristics of four groups

| | FMS (n=35) | FBSS (n=12) | Chronic medical illness control (n=54) | Healthy control (n=47) | Statistical test |
|----------------|---------------|----------------|---|---------------------------|---------------------|
| | Mean±SD | Mean±SD | Mean±SD | Mean±SD | |
| SIQ | | | | | |
| Psychologizing | 32.85±7.90 | 28.36±9.77 | 25.98±6.27 | 23.29±5.90 | F=13.162* |
| Somatizing | 31.85±8.79 | 31.36±9.33 | 22.05±5.71 | 18.04±4.23 | H=58.333* |
| Normalising | 24.97±6.08 | 24.18±8.60 | 28.12±6.89 | 27.08±8.16 | F=1.833 |
| NOS | 9.25±2.64 | 8.75±1.91 | 5.41±3.14 | 3.25±2.29 | F=37.257* |
| TAS-20 | | | | | |
| Total | 58.97±14.36 | 62.91±14.24 | 48.98±9.81 | 45.18±8.34 | H=28.741* |
| DIF | 20.48±6.62 | 21.66±7.58 | 15.35±5.47 | 12.52±4.16 | H=37.193* |
| DDF | 16.57±5.29 | 16.50±5.83 | 12.19±4.17 | 11.80±3.82 | H=28.862* |
| SAS | 33.68±5.05 | 32.41±7.97 | 30.27±6.80 | 25.54±6.39 | F=11.845* |
| BDI | 21.82±9.82 | 21±11.59 | 13.05±8.20 | 7.12±5.35 | H=52.940* |

FMS: Fibromyalgia syndrome; FBSS: Failed back surgery syndrome; SIQ: Symptom interpretation questionnaire; NOS: Number of symptoms; TAS-20: Twenty-item toronto alexithymia scale; DIF: Difficulty identifying feelings; DDF: Difficulty describing feelings; SAS: Somatosensory amplification scale; BDI: Beck depression inventory. *p<0.001.

patients indicated that they had a family history of psychopathology while this count was found to be 12.5% (n=7) in CMIC group and 8.5% (n=4) in HC group. These results differed significantly as well ($X^2_{(3)}=27.613$, $p<0.001$) (Table 3). In terms of family history of pain; majority of both FMS and FBSS patients stated that they had a family history of pain (81.8%, n=27; 72.7%, n=8; respectively) in contrast to ratios of CMIC and HC groups which were less than 50% (41.5%, n=22; 15.2%, n=7; respectively). These distributions also revealed significant differences ($X^2_{(3)}=38.273$, $p<0.001$) (Table 3). In sum, it can be seen that FMS and FBSS are similar to each other but different from the two other control groups in terms of all above criteria.

With respect to psychological constructs, results revealed significant differences across four groups in all measures of SIQ-Somatizing/NOS/Psychologizing, TAS-20 Total/DIF/DDF, SAS and BDI ($Chi-Square_{(3)}=58.333$, $p<0.001$; $F_{(3-140)}=37.257$, $p<0.001$; $F_{(3-140)}=13.162$, $p<0.001$; $Chi-Square_{(3)}=28.741$, $p<0.001$; $Chi-Square_{(3)}=37.193$, $p<0.001$; $Chi-Square_{(3)}=23.862$, $p<0.001$; $F_{(3-143)}=11.845$, $p<0.001$; $Chi-Square_{(3)}=52.940$, $p<0.001$) except for SIQ-Normalising scores ($F_{(3-142)}=1.833$, $p>0.05$) (Table 4).

According to post-hoc tests, in none of the compari-

sons, FMS did not differ from FBSS ($p>0.05$). However, these two groups scored significantly higher than CMIC and HC in terms of SIQ-Somatizing, SIQ-NOS, TAS-20 Total, TAS-20 DIF and BDI scores ($p<0.001$). CMIC group scores were found to be significantly higher than HC as well ($p<0.001$), except for TAS-20 DDF scores ($p>0.05$). On the other hand, CMIC was similar to FBSS ($p>0.05$) but significantly lower than FMS and significantly higher than HC in SAS scores ($p<0.001$). With respect to SIQ-Psychologizing scores, only FMS differed significantly from CMIC and HC ($p<0.001$).

Discussion

There is an extensive continuing argumentation on how various somatizations such as chronic pain syndromes widely observed in clinical practice should be identified and classified. Terms such as Medically Unexplained Symptoms (MUS) and FSS have been mostly used and suggested for these clinical phenomena in the past decade. However, recent studies demonstrate clear evidence for offering FSS not only for medically unexplained but for medical situations as well.^[22] In fact, the recent edition of DSM, DSM-5 no longer keep the criteria of MUS for somatic symptoms, which were named as Somatoform Disorders in DSM-IV, however as Somatic Symptom Disorders in its fifth version.^[23] In this context, this controlled study

aimed to provide a scientific data concerning whether two distinct syndromes characterized by chronic pain experience, FMS and FBSS, can be utilized under the single title of FSS with respect to familial, symptomatological and psychological aspects, as emphasized as diagnostic criteria in DSM-5.

With this purpose, this study demonstrated that overall, while FMS and FBSS patients showed similar patterns in all variables of familial, symptomatological and psychological constructs, except for normalization attributes measured by SIQ-normalizing; these groups showed different patterns in almost all variables from chronic medical illness and healthy controls (10 of 12 variables in FMS group; 9 of 12 variables in FBSS group).

There are studies, though scarce, comparing FMS and FBSS groups in terms of variables relevant to our study. In one of these recent studies, it was indicated that there were no differences between FMS and FBSS groups in terms of VAS scores.^[24] In another study which was conducted with 32 FMS and 19 FBSS patients in order to compare temporomandibular disorder prevalence,^[25] it was shown that VAS scores didn't change according to both patient groups as demonstrated in our study. Additionally, researchers of this study also found that depression scores obtained from The Symptom Check List 90-R (SCL 90-R) did not differ significantly between FMS and FBSS groups. Although, depression was measured by a different scale (SCL 90-R) than used in our study (BDI), nevertheless this result supports our data.

However, some cautions should be pointed out while comparing the results of these studies with ours. Firstly, none of these studies aimed to determine specifically if FMS and FBSS can be evaluated under the grand title of FSS. Secondly, these studies did not include any type of control groups.

On the other hand, there are some studies including control groups that compare different somatization situations in the literature. For instance, in a study^[26] conducted with 40 patients with Somatoform Disorder (SD) and 29 patients with chronic medical illness, results showed that SD group scored significantly higher on TAS-20 than medically ill; this is in line with what we found in our study. Additionally,

a study conducted by Kooiman et al.^[27] partly supports our findings. In this study, whereas TAS-20 DIF scores were greater in MUS group than in Medically Explained Symptom (MES) group, which is just as we have observed; MUS group didn't differ from MES in other alexithymia dimensions or total alexithymia score, which we found to differ between FMS/FBSS and CMIC.

There is another controlled study which is totally contradicting with what we have observed. According to this study,^[28] both all dimensions of TAS-20 and SAS scores were higher in control group than chronic pain group. But, it should be indicated that the control group in this study included patients referred to psychiatry clinic. The authors discussed that this unexpected reverse difference could stem from the more elevated symptomatology of psychopathology. However, if we pay attention on these three studies run with control groups, none of them, unlike our study, put an emphasis on FSS phenomena. Thus, one should be cautious while comparing these data with ours.

While evaluating our results, it's important to mention limitations. Firstly, one can claim that the undetected differences between FMS and FBSS can be due to small sample size of FBSS group (n=12). This is a true limitation, however, even with this sample size, this group significantly differed from other controls in many aspects. Nevertheless, these results need to be replicated in larger group of patients. Secondly, all data concerning psychosocial variables were obtained from self-report measures. Some researchers^[29] argue that it's not a proper way of obtaining data with FSS patients because of their lack of insight which may affect patients' accuracy in answering. Finally, many studies demonstrated that socio-cultural dimensions of illness experience such as patient-physician communication is a crucial role on these patients' illness perception and symptom pattern.^[5] Therefore, the lack of socio-cultural dimensions of illness experience which may have overwhelmed the potential distinction that we revealed between study and control groups can be suggested as another limitation.

In conclusion, despite these limitations, it can be stated that this is the first study evaluating FMS and

FBSS groups one at a time that compares these two so suggested FSS groups with controls.

With this in hand, this study provides acceptable support for the hypothesis that FMS and FBSS patients should be evaluated under the unique title of FSS^[4,5,6] in terms of their familial, symptomatological and psychological characteristics. This finding may firstly pave way for a different conceptualization while assessing FBSS patients in that they are very similar with FMS in many aspects, and secondly implicates a necessity for a renewed multidisciplinary framework regarding FSS.

Acknowledgement

This work was supported by Scientific Research Projects Coordination Unit of Istanbul University, with project number UDP-41417.

Conflict-of-interest issues regarding the authorship or article: None declared.

Peer-review: Externally peer-reviewed.

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