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Perspectives of physical medicine and rehabilitation specialists and rheumatologists towards fibromyalgia syndrome in Turkey

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ABSTRACT

Objective: Fibromyalgia syndrome (FMS) is a chronic disorder characterized by widespread, unexplained pain in the muscles, including the head, neck, and sides of the hips, and fatigue. We aimed to evaluate the familiarity of physical medicine and rehabilitation and rheumatology physicians with fibromyalgia syndrome (FMS) in Turkey by means of a survey and to determine if these physician groups followed the 1990 FMS diagnostic criteria and 2010 FMS classification criteria for diagnosis.

Material and Methods: The survey questions consisted of two parts; the first part consisted of 10 questions about demographics and professional experience, as well as the number of patients who had been diagnosed, treated, and followed up with in the prior 3 months by physicians. The second part consisted of 15 questions about perspectives on the 1990 FMS diagnostic criteria and 2010 FMS classification criteria.

Results: One hundred and seventy one physicians participated in this survey. The majority of physicians $105 \ (99.1\%)$ from physical medicine and rehabilitation and $59 \ (90.8\%)$ rheumatologists could diagnose FMS. The rate of diagnosis and the rate of follow-up for FMS patients were significantly higher with physical medicine and rehabilitation specialists than with rheumatologists (p= 0.013 and p = 0.000; respectively) and were statistically significant.

Conclusion: Differences in the awareness and descriptions of as well as approaches to FMS by physical medicine rehabilitation physicians and rheumatologists were examined in this study.

Key words: Awareness, fibromyalgia, rheumatologists, physical and rehabilitation medicine specialist

INTRODUCTION

Fibromyalgia syndrome (FMS) is a chronic disorder characterized by widespread, unexplained pain in the muscles, including the head, neck, and sides of the hips, and fatigue (1, 2). The prevalence of FMS is reported to be 0.1%-1.0% (3). It occurs in all ethnic groups and across all ages and both genders, but it primarily affects 85%-90% of women aged 40-60 years (3).

FMS is a significant health problem associated with a decreased health-related quality of life. For this reason, in clinical practice, it is important to diagnose FMS. Obtaining an FMS diagnosis can be frustrating for patients and physicians alike because many of its symptoms overlap with those of various chronic conditions. There are considerable differences in the aetiology and lack of reliable treatment methods (4).

The 1990 diagnostic criteria of the American College of Rheumatology (ACR) classify patients as having FMS when there is widespread pain that has lasted for at least three months and tenderness in at least 11 of the 18 points on finger palpation with the application 4 kg of pressure per square inch (2). Fatigue and cognitive impairment were not included in the 1990 ACR diagnostic criteria.

In 2010, the ACR published new criteria that are helpful when it is difficult to obtain a diagnosis owing to the reduced number of identified tender points in patients whose symptom severity has decreased (5).

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Thus, the current study's main objective was to evaluate the familiarity of physical medicine and rehabilitation and rheumatology physicians with FMS in Turkey by means of a survey, to determine whether these physician groups followed the 1990 criteria or 2010 criteria for diagnosis, and to determine the perspectives of these groups on whether FMS is an inflammatory systemic disease or a noninflammatory chronic widespread pain syndrome.

MATERIAL and METHODS

Physicians working in physical medicine rehabilitation and rheumatology clinics in Turkey were contacted via email (using addresses obtained from the relevant specialist associations) to fill a survey comprising 25 questions. The study protocol was approved by Baskent University Medical Faculty Research Council (Date: 04/04/2017, No: KA17/101).

The survey consisted of two parts. The first part consisted of 10 questions about demographic and professional experience and the number of patients who were diagnosed, treated, and followed up in the last three months by physicians. The second part consisted of 15 questions about attitudes toward FMS. The questionnaire sent to physicians in this email survey is included in the appendix.

We divided physicians' age ranges into four groups: 20-29 years, 30-39 years, 40-49 years and age 50 years and older. We also grouped the physicians according to how long they had been working for 1-10 years, 11-19 years, 20-29 years and \geq 30 years.

The number of patients diagnosed with FMS in the last three months was categorized into three groups (1-20), (21-50), and (≥51). The number of FMS patients who received treatment and follow-up in the last three months were categorized into three groups (1-20), (21-50), and (≥ 51).

The questionnaire about attitudes toward the 1990 FMS diagnostic criteria and 2010 FMS classification criteria was based on 15 items (Table 3). These questions were generally answered on a 5-point Likert scale; 1= strongly agree, 2= somewhat agree, 3= neither agree nor disagree, 4= somewhat disagree, 5= strongly disagree. The scale results were spread over a width of 5.00-1.00 = 4.00. By dividing this width into five, the ranges of team leaders' effectiveness of their conflict management styles were determined. According to this; 1.00-1.79 score range is evaluated as "very low," 1.80-2.59 "low," 2.60-3.39 "medium," 3.40-4.19 "high," and 4.20-5.00 "very high." The mean (standard deviation) and variance of all physician responses were calculated for each item in the questionnaire.

Physicians voluntarily completed the survey, for which payment was not made.

Statistical analysis: Statistical analysis was performed using SPSS version 23.0. The Kolmogorov-Smirnov distribution test was used to examine normally distributed data. Because normal distribution was not in evidence, participation levels of the physical medicine and rehabilitation and rheumatology physicians were assessed using the Mann-Whitney U test. Pearson's chi-square and Fisher's exact tests were used to determine the correlation between an FMS diagnosis and treatment provided by the physicians.

The results were evaluated using a 95% confidence interval. Stastistical significance was set at p ≤ 0.05

RESULTS

A total of 171 physical medicine and rehabilitation and rheumatology physicians completed a detailed questionnaire. Table 1 presents the demographic background of the participating physicians. The survey included responses from 106 physicians from the Physical Medicine and Rehabilitation Department and 65 physicians from the Rheumatology Department. Their mean age was 40.4 ± 8.9 years. The majority of physicians were women 98 (57.3%).

Regarding their medical positions, 29 (17.0%) participants were professors, 16 (9.4%) were associate professors, 8 (4.7%) were assistant professors, 86 (50.3%) were specialists, 15 (8.8%) were research assistant and 17 (9.9%) were minor research assistant. The majority of the physicians (n=63, 36.8%) had worked for 11-19 years.

One hundred and sixty-four (96%) of the physicians had been diagnosed with FMS and 157 (92%) were followed up with patients diagnosed with FMS. The majority of the physician's 105 (99.1%) of the physical medicine and rehabilitation physicians and 59 (90.8 %) of the rheumatologists diagnosed FMS as outlined in Table 2. The rate of diagnosis and followup of a patient diagnosed with FMS was 98.1% (n=104) for physical medicine and rehabilitation physicians and 81.5% (n=53) for rheumatologists.

The rates of diagnosis and follow-up of FMS patients were significantly higher for physical medicine and rehabilitation specialists than for rheumatologists (p=0.013 and p=0.000 respectively), and the difference was statistically significant.

No statistically significant difference were found between the physical medicine and rehabilitation and rheumatology specialists in terms of the number of patients (categorized as 1 - 20, 21 - 50, and \geq 51 patients, respectively) diagnosed (as well as treated and followed-up with) over the previous 3 months (p=0.590 and p=0.172, respectively) (**Table 2**).

These 3-month data were obtained from their career. Since no variables related to patients were used, this study relied on the amount of time physicians could recall their clinical practice, which was the previous three months, based on the number of patients that physicians remembered.

Diagnoses (as well as treatment and follow-up) over the last 3 months were higher in rheumatologists for 1 - 20 patients (46% and 46%), but diagnoses (plus treatment and follow-up) over the previous 3 months for ≥ 50 patients was higher for physical medicine and rehabilitation physicians (32% and 36%, respectively).

Answers from physical medicine and rehabilitation physicians were compared with those from rheumatology physicians in response to 15 statements about FMS (**Table 3**).

Physical and rehabilitation physicians said more for the following statements, respectively: "FMS is a common pain syndrome" (p=0.060), "This disease is a somatization disorder, according to the 2010 somatic and functional criteria developed by the ACR to establish an FMS diagnosis" (p=0.424), "FMS is over-diagnosed with the use of the 2010 somatic and functional criteria developed by the ACR to

establish an FMS diagnosis" (p=0.407), "FMS has been identified as an exclusion disease with the use of the 2010 somatic and functional criteria developed by the ACR to establish an FMS diagnosis" (p=0.895), "A new diagnostic criteria set to diagnose FMS is urgently required" (p=0.451), "FMS is a disease that is best diagnosed by clinical experience" (p=0.501), and "A multidisciplinary team, on which there is psychiatric representation, is required to treat an FMS patient" (p=0.282).

However, none of these statements were statistically significant.

In addition, rheumatologists stated more for the following statements, respectively, but a statistically significant difference was not found between these specialists regarding the statements that "FMS is a psychiatric disorder" (p=0.144), "The etiopathogenesis of FMS has been clarified" (p=0.478), and "I use the 1990 diagnostic criteria developed by the ACR as a basis for establishing an FMS diagnosis" (p=0.064).

The difference in correlation between the physicians regarding the statement that "FMS is an inflammatory disease" was found to be statistically significant (p=0.001).

A higher number of physical medicine and rehabilitation physicians agreed with this statement than rheumatologists.

Fewer physical medicine and rehabilitation physicians than rheumatologists made the statement that "An FMS diagnosis is of little importance to these patients. A definition was created simply to describe their pain." The difference in this regard between the groups was statistically significant (p=0.047).

The difference in the extent to which the physicians expressed the view that the "use of the criteria regarding the identification of tender points developed by the 1990 ACR is essential in establishing an FMS diagnosis" was found to be statistically significant (p=0.011). Rheumatologists believed this to be the case more than physical medicine and rehabilitation physicians.

More physical medicine and rehabilitation physicians stated that "I use the 2010 diagnostic criteria developed by the ACR as a basis for establishing an FMS diagnosis" than rheumatologists. The difference in this regard between the groups' mean values was statistically significant (p=0.017).

The difference in the belief that "It is necessary to consider the socio-cultural and psychosocial factors of each country when making an FMS diagnosis" between the two groups of physicians was found to be statistically significant (p=0.018). More physical medicine and rehabilitation physicians made this statement than rheumatologists (Table 3).

Table 1. Demographics and professional characteristics of the physicians

	1 0	
		n (%)
Department $(n = 171)$	Physical Medicine and Rehabilitation	106 (62.0)
(1, 2, 2)	Rheumatology	65 (38.0)
Gender	Women	98 (57.3)
(n = 171)	Men	73 (42.7)
Age (years)	20–29	16 (9.4)
(n = 171)	30–39	72 (42.1)
	40–49	51 (29.8)
	≥ 50	32 (18.7)
	1–10	50 (29.2)
Duration of work (years)	11–19	63 (36.8)
(n = 171)	20–29	43 (25.1)
	≥ 30	15 (8.8)
TT. 1	D 6 D	20 (17.0)
Title	Professor Dr.	29 (17.0)
(n = 171)	Associate Professor Dr.	16 (9.4)
	Assistant Professor Dr.	8 (4.7)
	Specialist	86 (50.3)
	Research Assistant/Assistant	15 (8.8)
	Minor Research Assistant/assistant	17 (9.9)
	University hospitals	62 (36.5)
Institution	Training and research hospitals	42 (24.7)
(n = 170)	State hospitals	30 (17.6)
	Private hospitals	26 (15.3)
	Clinic	5 (2.9)
	Branch center	5 (2.9)

Data are shown as n (%) unless otherwise stated.

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Diagnosis of and follow-up with FMS patients		Departments		
		Physical Medicine and Rehabilitation	Rheumatology	
		n (%)	n (%)	p
Status of diagnosing FMS	Yes	105 (99.1)	59 (90.8)	0.013*
	No	1 (0.9)	6 (9.2)	
Follow-up status of patients	Yes	104 (98.1) 53 (81.5)	53 (81.5)	0.000^{*}
with FMS	No	2 (1.9)	12 (18.5)	
Number of patients diagnosed with FMS in the previous three months	1-20	40 (40.4)	26 (45.6)	
	21 - 50	27 (27.3)	17 (29.8)	0.590
	≥ 51	32 (32.3)	14 (24.6)	
Number of patients treated and followed- up with in the previous three months	1-20	30 (30.6)	22 (45.8)	
	21-50	33 (33.7)	11 (22.9)	0.172
	≥ 51	35 (35.7)	15 (31.2)	

Table 2. A comparison of the correlation of the number of physicians diagnosing and following-up with fibromyalgia syndrome (FMS) patients and the number of patients diagnosed, treated, and followed-up with in the previous three months

Table 3. A comparison of the correlation of agreement between physical medicine and rehabilitation physicians and rheumatology physicians in response to statements about fibromyalgia syndrome (FMS)

Statements made by the participating physicians		Physical Medicine and Rehabilitation physicians		Rheumatology physicians	
	n	Mean \pm SD	n	$Mean \pm SD$	
FMS is an inflammatory disease	105	2.5 ± 1.2	64	1.9 ± 0.9	0.001^{*}
FMS is a common pain syndrome	106	4.5 ± 0.8	65	4.3 ± 0.9	0.060
The etiopathogenesis of FMS has been clarified	106	2.0 ± 1.0	64	2.1 ± 1.0	0.478
FMS is a psychiatric disorder	106	2.7 ± 1.2	65	3.0 ± 1.2	0.144
An FMS diagnosis is of little importance to these patients. A definition was created simply to describe their pain	106	2.1 ± 1.2	65	2.4 ± 1.3	0.047*
I use the 1990 diagnostic criteria developed by the ACR as a basis for establishing an FMS diagnosis	105	2.4 ± 1.2	65	2.7 ± 1.1	0.064
Use of the criteria regarding the identification of tender points developed by the 1990 ACR is essential in establishing an FMS diagnosis	106	2.4 ± 1.2	65	2.8 ± 1.1	0.011*
I use the 2010 diagnostic criteria developed by the ACR as a basis for establishing an FMS diagnosis	104	3.7 ± 1.1	65	3.4 ± 1.1	0.017*
This disease is a somatization disorder, according to the 2010 somatic and functional criteria developed by the ACR to establish an FMS diagnosis	106	3.5 ± 1.0	64	3.4 ± 1.1	0.424
FMS is over-diagnosed with the use of the 2010 somatic and functional criteria developed by the ACR to establish an FMS diagnosis	106	3.4 ± 1.0	65	3.3 ± 1.0	0.407
FMS has been identified as an exclusion disease with the use of the 2010 somatic and functional criteria developed by the ACR to establish an FMS diagnosis	106	3.3 ± 1.2	64	3.3 ± 1.0	0.895
A new diagnostic criteria set to diagnose FMS is urgently required	106	3.6 ± 1.1	65	3.5 ±0.9	0.451
It is necessary to consider the socio-cultural and psychosocial factors of each country when making an FMS diagnosis	105	4.2 ± 0.9	65	3.9 ± 0.9	0.018*
FMS is a disease that is best diagnosed by clinical experience	106	3.9 ± 1.0	65	3.9 ± 0.9	0.501
A multidisciplinary team, on which there is psychiatric representation, is required to treat an FMS patient	106	3.9 ± 1.1	65	3.8 ± 1.1	0.282

ACR:American college of rheumatology; FMS: Fibromyalgia syndrome; * Significant difference (p ≤ 0.05).

DISCUSSION

This study evaluated the perceptions of physical medicine and rehabilitation physicians as well as rheumatologists about FMS and their perspectives on FMS diagnostic criteria.

The rate of FMS is 5% –6% in internal and family medicine settings (6). In one study from Israel, most FMS patients suffering from chronic musculoskeletal pain syndrome were referred to orthopaedic surgeons during the early stages of the disease (7).

There is a high incidence of FMS diagnosis in rheumatology clinics, where 12%-20% of patients presenting for the first time are diagnosed with it (7). On average, it takes 2–3 years from the time of a patient's first consultation with a rheumatologist to be diagnosed with FMS.

One survey from Saudi Arabia received responses from 104 medical practitioners. Rheumatologists reported 28.8% referrals while pain physicians reported 22.1%. This might explain why a high percentage of FMS patients are usually seen by rheumatologists and pain physicians (8). Rheumatologists and pain physicians were more familiar with FMS than were other medical practitioners. This reflects a greater level of expertise in managing such conditions among rheumatologists and pain physicians.

In our survey, it is interesting to note that the rate of diagnosis of FMS in the group of 1-20 patients and the rate of treatment and follow-up in the last 3 months were higher for rheumatologists. On the other hand, the rate of diagnosis, treatment and monitoring of ≥ 50 patients in the prior 3 months was higher for physical and rehabilitation physicians. Rheumatologist may refer patients to physical and rehabilitation physicians after diagnosis and follow up. In Turkey, physical and rehabilitation physicians are usually the point of first contact for patients with chronic pain.

It is not surprising that physicians are unable to demonstrate FMS as a visible disease (9). Many physicians believe that a true disease is pathologic and changes tissue, whether macroscopically or microscopically; otherwise, if an ailment fails to show these changes, it will be considered a "nondisease" or a "psychological entity." In our survey, the difference in correlation between the physicians regarding the statement that "FMS is an inflammatory disease" was found to be statistically significant (p=0.001). A lower number of rheumatologists agreed with this statement than did physical medicine and rehabilitation physicians. Our findings regarding this statement are compatible with the findings of previous studies. In a survey among only rheumatologists in Scotland (10), most rheumatologists believed that FMS is a distinct clinical but not pathological entity, and another study in France showed that only a quarter (23%) of their rheumatologists considered FMS a disease (11).

In another study, most rheumatologists (92.5%) from Southeast Asia reported FMS is a distinct clinical entity and that this condition is considered an illness rather than a disease (6).

In our study, rheumatologists said more and a statistically significant difference was not found between the physical medicine and rehabilitation and rheumatology specialists regarding the statement that "FMS is a psychiatric disorder" (p=0.14). A study by Arshad et al. (6) showed that 9% of rheumatologists believed that FMS is primarily a psychological illness. Other studies by Merskey and Capen have shown that FMS is a psychological condition rather than a physical disease (12,13).

Despite the fact that FMS patients tend to minimize or deny psychological symptoms, the evidence supports the claim that the burden of psychiatric disease is higher in comparison to controls (14).

At the beginning of this study, it was predicted that rheumatologists who viewed diseases as systemic diseases would use the 2010 ACR classification FMS criteria (5) more in clinical practice whereas rheumatologists used the 1990 diagnostic criteria more (2). On the other hand, we also found that physical medicine and rehabilitation physicians used the 2010 FMS criteria more when we expected them to use the 1990 FMS criteria.

In the current study, the difference in the extent to which physicians expressed the view that the "use of the criteria regarding the identification of tender points developed by the 1990 ACR is essential in establishing an FMS diagnosis" was found to be statistically significant (p=0.011). More rheumatologists believed this to be the case than physical medicine and rehabilitation physicians. In addition to tender point examination, rheumatologists also perform physical examinations and should also identify other inflammatory diseases such as connective tissue diseases (e.g., systemic lupus erythematosus) and vasculitis (e.g., Behçet's disease). Additionally, this group of physicians spent less time using the 1990 diagnostic criteria than the 2010 ACR classification criteria in clinical practice.

In this survey, more physical medicine and rehabilitation physicians stated that "I use the 2010 classification criteria developed by the ACR as a basis for establishing an FMS diagnosis" than rheumatologists. The difference in this regard between the groups' mean values was statistically significant (p=0.017). Questions from the 2010 ACR criteria may be too time consuming for clinical practice.

A study by Blotman et al. reported that the highest proportion of physicians aware of the 1990 diagnostic criteria were rheumatologists and the least familiar were family physicians; this discrepancy was attributed to differences in pain education (11).

The present study determined that rheumatologists preferred using the 1990 ACR criteria to diagnose FMS while physical medicine and rehabilitation physicians favoured the 2010 ACR criteria to diagnose FMS. Only the 1990 ACR criteria were evaluated in the survey by Perrot et al. (15) and it was determined that these criteria were most commonly used by rheumatology physicians (83%), which is similar to the findings of the present study, and used second-most by physical medicine and rehabilitation physicians (77%).

In a survey of Southeast Asian rheumatologists, only 60% used the 1990 ACR criteria to make a diagnosis (6).

In a study in Canada, similar to the current study, 284 physicians were asked about the 1990 diagnostic criteria and the 2010 classification fibromyalgia criteria. In this study, nine physical medicine and rehabilitation specialists (n = 58) used only 1990 criteria (15.5%), 25 (43.1%) used only 2010 criteria; on the other hand, rheumatologists (n = 29), 4 (13.8%) used only 1990 criteria, and 9 (31.03%) used only 2010 criteria. Similar to the present study, 43.1% of physical medicine and rehabilitation specialists were more likely to use the 2010 criteria (16).

In the current study, more physical and rehabilitation physicians than rheumatologists made the following statement, although the difference between the groups was not statistically significant: "FMS is a disease that is best diagnosed by clinical experience" (p=0.501). One of the questions from the present study was similar to a question asked by Choy et al.; physicians were asked if they were aware of the ACR criteria and had been diagnosed with FMS in patients in the previous two years (n = 725), and 26.0% responded that they did not use the ACR criteria when diagnosing fibromyalgia in their clinical practice (17).

In another study that used only the 1990 ACR FMS criteria, 79 (54.5%) of 145 general practitioners responding to a statement similar to our statement that "FMS is a disease that is best diagnosed by clinical experience" answered that "the diagnosis is clinical and exams are for the differential diagnosis" (18).

The difference in the belief that "it is necessary to consider the socio-cultural and psychosocial factors of each country when making an FMS diagnosis" between the two groups of physicians was found to be statistically significant (p=0.018). More physical medicine and rehabilitation physicians made this statement than rheumatologists (Table 3). This might be because the rate of diagnosing, treating, and monitoring ≥ 50 patients in the previous 3 months was higher for physical and rehabilitation physicians. Additionally, this group of physicians consulted with more patients, and the long implementation period of the 2010 FMS criteria as well as longer communication with the patient resulting from additional questions may have induced physical and rehabilitation physicians to better distinguish socio-cultural and psychosocial levels of patients.

rheumatologists than physical medicine rehabilitation physicians made the statement that "An FMS diagnosis is of little importance to these patients. A definition was created simply to describe their pain." The difference in this regard between the groups was statistically significant (p=0.047). In the study by Choy et al., 24% of physicians strongly agreed and 40% somewhat agreed that it is difficult for patients to explain symptoms of fibromyalgia to a physician (17).

In a study by Hayes et al. (19) that evaluated approaches to diagnosing and treating FMS using the 1990 ACR criteria among 189 general practitioners and 139 specialists (anaesthesiologists, neurologists, physiatrists, psychiatrists, and rheumatologists), two-thirds of physicians (63% of general practitioners and 66% of specialists) characterized FMS as diagnosable. Participants (41% of general practitioners and 37% of specialists) reported unclear diagnostic criteria as a barrier in their identification of fibromyalgia in a question similar to our study's statement that "new diagnostic criteria for FMS are urgently required." However, the analysis was performed by evaluating the specialists as a single group.

Perrot et al. compared the approaches used by 1622 physicians. Among them, 206 rheumatologists and 202 pain specialists across eight countries (six European countries, Mexico and South Korea) reported difficulties diagnosing FMS (15) using the 1990 FMS diagnostic criteria. The number of FMS patients seen in a month, the number of patients diagnosed with FMS over the last two years, and the extent of FMS knowledge was greater (with statistical significance) for the 206 rheumatologists than for the 202 pain specialists. In addition, the pain specialists were

significantly more likely than the rheumatologists to agree that making an FMS diagnosis was difficult and that it was necessary to give patients more time to identify their symptoms and to effectively distinguish FMS symptoms from others. Unlike the current study, the number of pain specialists and rheumatologists was similar.

Physical medicine rehabilitation and physicians, rheumatology specialists, general practitioners, anaesthesiologists, neurologists, and psychiatrists frequently see FMS patients with primary diseases. However, it has also been reported that depression, insomnia, muscle aches, and muscle weakness are frequently seen in cancer patients and that oncologists may also make an FMS diagnosis. Thus, in this group of oncology patients, it is likely that the use of the 1990 and 2010 FMS criteria may be insufficient to ensure accurate diagnosis (20).

In this regard, the 2010 FMS criteria can be used in clinical practice as an alternative to the 1990 criteria when it is not possible to make a diagnosis based on symptoms because a finger palpation assessment cannot be performed accurately for oncology patients, such as breast cancer patients, or might be carried out incorrectly. Conversely, it may be difficult to evaluate oncology patients according to the 2010 criteria as patients can experience generalized and widespread pain due to malignancy, chemotherapy, and radiotherapy (20).

The current study has several limitations. This was an ambiguous survey using generalized statements that likely relied upon participants' recollections or perceptions. Additionally, this was a de novo questionnaire that reflected perceptions of FMS based on the number of FMS patients that physical medicine and rehabilitation physicians and rheumatologists remembered from clinical practice as well as their perspectives on FMS diagnostic criteria. To overcome this limitation, expanding the surveyed perceptions of and approaches to FMS to include other physicians may be the next research goal.

Another limitation was the exclusion of family physicians, psychiatrists, neurologists, internal medicine specialists, orthopaedic surgeons, and oncologists. The sample size was small. Other limitations might be minimized by adding to the questionnaire statements about the use of treatment modalities, blood tests, or radiologic tools to rule out FMS in undergraduate curricula. Physical medicine and rehabilitation physicians as well as rheumatologists from Turkey were invited to respond; these responses may not reflect global practices. It could also be determined whether physicians' knowledge was impacted by clinical experience. A final limitation was the exclusion of questions regarding the countries in which physicians worked and the countries in which patients lived; if these questions had been included, physicians may have distinguished socio-cultural and psychosocial factors of each country.

CONCLUSIONS

Physical medicine and rehabilitation physicians as well as rheumatologists comprise an important point of early contact between FMS patients and the medical community. It is extremely important to maximize their proficiency and awareness regarding the spectrum of FMS and related symptoms.

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Differences in the awareness and descriptions of and approaches to FMS by physical medicine rehabilitation physicians and rheumatologists were examined in this study.

We tried to determine whether physicians from rheumatology or physical medicine and rehabilitation followed the 1990 criteria or the 2010 criteria for diagnosis.

No such study has been performed in this region with these two groups of physicians and with these two sets of fibromyalgia criteria. This questionnaire was determined by physicians from both branches according to the patients they remembered and their comments on the criteria.

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Ethical approval: The study was conducted according to the guidelines of the Declaration of Helsinki and approved by Local Ethical Committee. This study was approved by Baskent University Medical Faculty Research Council (Date: 04/04/2017, No: KA17/101).

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