




## ORIGINAL RESEARCH

# Evaluation of Traditional and Complementary Medicine Methods in Patients Undergoing Physical Therapy for Chronic Musculoskeletal Pain

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### Abstract

**Objective:** Nowadays, due to the complaints of musculoskeletal pain, patients apply to traditional and complementary medicine (T&CM) methods in combination with conventional medical treatments. In our study, we aimed to determine the frequency and socio-demographic features of applying to T&CM in patients undergoing conventional physical therapy.

**Material-Method:** Our study is a survey study conducted between January 2020 and March 2020. Patients included in the study were divided into groups in terms of gender and age.

**Results:** 59 (12%) of 470 physiotherapy patients included in the study tried T&CM treatment at least once due to pain. Cupping therapy has been applied most frequently. It was found that the application to T&CM was significantly higher in patients who received physical therapy before ( $p = 0.001$ ). T&CM applications of patients who received medical treatment for pain previously were found to be significantly higher ( $p = 0.048$ ). When the patients were evaluated according to their gender, body mass indexes, ages, marital status, smoking, pain localizations, there was no significant relationship between T&CM applications.

**Conclusion:** T&CM therapies have started to reach all patient groups regardless of age and gender. Medical and physical therapy in conventional medicine is preferred for musculoskeletal pain, but patients have also begun choice T&CM methods. More information with should be provided about the effectiveness of T&CM methods, applied by physicians.

**Keywords:** Traditional and Complementary Medicine, Physical Therapy Modalities, Musculoskeletal Pain, Acupuncture

### INTRODUCTION

The definition of Traditional and Complementary Medicine (T&CM) in the world and in our country is expressed as various health practices used for the protection and improvement of health, prevention and treatment of diseases. T&CM applications can be used alone or in combination with conventional medicine approaches<sup>1</sup>. Physical therapy means the use of various physical agents for medical treatment. It has found application in many diseases from the ancient history to the present day. Physical medicine and rehabilitation is used most often for conventional pain relief in

musculoskeletal system pain. Apart from this, soft tissue rheumatism, muscle spasm, contractures, hematoma resolution, arthritis, chronic inflammation, peripheral painful neuropathies, joint stiffness, spasticity treatment, pre-exercise preparation are just some of the areas of use<sup>2</sup>. Physical agents are generally classified in three sections as thermal, mechanical and electromagnetic modalities. According to the clinician's indication, more than one physical therapy agent can be prescribed by a physical medicine and rehabilitation specialist. Physical



agents are very safe treatment options with very few side effects, when used in the correct indication.

Physiological effects of physical agents often occur when it helps to reduce and control pain. Effectiveness in treatment does not always mean eliminating the disease. For clinicians, the process of reducing symptoms and/or giving time to other treatments often means effectiveness in treatment. Patients who do not get a definitive result with physical therapy methods, evaluate the cessation of physical therapy or accompanying medical treatment and the application of T&CM methods. Our aim in this study is to determine the socio-demographic characteristics of patients who received T&CM, due to chronic musculoskeletal pain that applied to the physical medicine and rehabilitation outpatient clinic and the frequency of admission to T&CM applications.

## MATERIALS AND METHODS

Our study is a survey study conducted between January 2020 and March 2020. Patients who applied to the physical medicine and rehabilitation outpatient clinic due to musculoskeletal pain and diagnosed with knee, hip, shoulder, foot osteoarthritis, cervical and lumbar discopathy, cervical and lumbar spinal stenosis, lateral epicondylitis, myofascial pain syndrome, and fibromyalgia were examined. Patients aged 18 and over who were treated in the physical therapy unit with complaints of pain were included in the study. In the study, the demographic data like gender, age, BMI and marital status of the participants, habit of smoking, concomitant diseases, duration of pain complaints, pain relief uses, side effects of the pain relievers and exercise status were asked.

In addition, it was questioned whether they had previously received physical therapy and whether they had traditional medicine or not. Patients included in the study were divided into groups as genders and ages.

Approval was obtained from the ethics committee of Bakirkoy Dr. Sadi Konuk Training and Research Hospital for our study. Ethics committee approval was received with the number 2020-387.

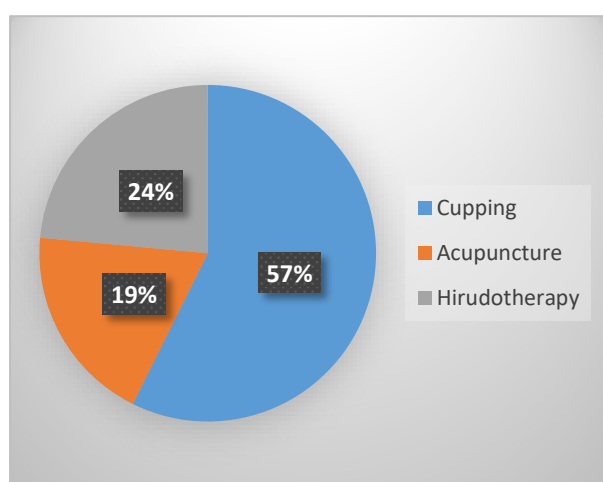
## Statistical analysis

Statistical study was done with SPSS program version 24.0. Descriptive data are expressed as mean  $\pm$  standard deviation and / or percentage. For continuous variables, the difference between the two groups was done using Mann-Whitney U test and independent variable t test, chi-square Pearson test for categorical variables.  $P < 0.05$  was considered statistically significant.

## RESULTS

Data obtained from 470 patients who received physical therapy in the physical therapy unit of our hospital due to chronic musculoskeletal pain were evaluated. It was seen that 410 of the patients were female and 60 were male. The mean age of the patients was calculated as 55.6 ( $\pm$  14.2). The youngest patient was 18 years old, while our oldest patient was 91 years old. Considering the marital status of the patients, 377 were married and 93 were single. Body mass indices (BMI) were found to be 29.3 ( $\pm$  5.3) on average. It was observed that there were 104 patients with BMI between 18-25, 173 patients with BMI between 25-30, 123 patients with BMI between 30-35, 60 patients with BMI between 35-40 and 15 patients with BMI of over 40. It was determined that 399 of the patients had never smoked before. When the duration of pain was evaluated, the mean was 64.6 ( $\pm$  92.8) months, the shortest duration of pain was 6 months, and the longest was 60 years. Foot pain was present in 10 patients, 156 patients low back pain, 88 patients neck pain, 3 patients elbow pain, 97 patients knee pain, 16 patients hand pain, 11 patients hip pain, 76 patients shoulder pain, 9 patients applied to the outpatient clinic due to back pain. 294 patients said that they had received medical treatment due to similar complaints before. In 49 of these patients, drug-related side effects were observed. They had to discontinue the drug most often due to stomach pain. 59 (12%) of the patients tried T&CM treatment at least once due to pain. The most common was cupping therapy and then they received acupuncture and hirudotherapy, respectively (Graphic 1). Our patients did not prefer other T&CM methods.

When the patients were asked whether they had received physical therapy before, it was observed that 45 patients received 4 or more times, 34 patients received 3 times, 64 patients received 2 times, and 105 patients received once before. 222 patients were receiving treatment for the first time. When patients' complaints were compared with T&CM applications, it was seen that the application to T&CM increased statistically significantly as the duration of complaints increased ( $p$  value  $<0.001$ ).



**Graphic 1.** T&CM methods that patients have previously applied with pain complaints

Comparing those who received physical therapy before and those who did not, it was seen that the application to T&CM was significantly higher in patients who received physical therapy before ( $p$  value  $<0.001$ ). T&CM applications of patients who received medical treatment for pain before were found to be significantly higher ( $p$  value is 0.048). When the patients were evaluated according to their gender, BMI, age, marital status, smoking, and pain localizations, there was no significant relationship between T&CM applications (Table1). Pearson test used in Gender, Marital Status, Smoking, Medical treatment before. Mann-Whitney U test and independent variable t test used in age, BMI, Physical therapy before, pain location.

## DISCUSSION

Today patients with musculoskeletal pain complaints, use traditional and complementary medicine methods along with conventional medical

treatments. According to World Health Organization 2000 data, the frequency of T&CM applications is 80% in Africa, 70% in Canada, 48% in Australia, 42% in the USA, 38% in Belgium and 49% in France. In our country, the frequency of T&CM applications is reported as 42% -70%<sup>3</sup>. The first legal regulation on T&CM in our country is the acupuncture treatment legislation enacted in May 1991 and was revised in 2002. The Ministry of Health published the "Traditional and Complementary Medicine Practices Regulation" in the official newspaper on October 27, 2014<sup>4</sup>. The regulations include acupuncture, ozone, mesotherapy, prolotherapy, hypnosis, hirudotherapy, reflexology, homeopathy, phytotherapy, osteopathy, chiropraxia, maggots applications, apitherapy, cupping and music therapy methods. Evidence-based data on efficacy, safety and mechanisms of action are not yet sufficient. However, there is a growing interest in the community and among healthcare professionals<sup>5</sup>.

In our study, 59 (12%) patients tried T&CM at least once due to pain complaints. The most common cupping therapy was tried, followed by acupuncture and hirudotherapy, respectively. In the literature, there is a wide range in the frequency of T&CM use in studies from different countries, and the most important indication for use is muscular and skeletal system pain<sup>2,6</sup>. In a study conducted with 219 patients diagnosed with degenerative osteoarthritis, it was reported that the rate of T&CM application was 35.6%, the rate of benefit was 43.6%, and the frequency of side effects was 3.8%<sup>7</sup>. In two studies conducted in our country on rheumatological diseases, it was reported that the rate of using T&CM methods in patients with rheumatoid arthritis and ankylosing spondylitis was 30.8% and 46.2%, respectively<sup>8,9</sup>. We think that the number of professionals who will apply methods that have indications for musculoskeletal pain such as mesotherapy, osteopathy or prolotherapy is insufficient. Therefore, these therapy methods were not encountered in our study. The reason for the low number of patients applying for T&CM in our study compared to the

**Table 1.** Demographic data of patients, smoking, duration of complaints, medical treatment uses and pain localizations are available. The results of the p values are shown.

Gender (n(%))	T&CM* applications			p value
	Yes(n(%))	No(n(%))		
Female	410(%87,2)	51(%12,4)	359(%87,6)	0,589
Male	60(%12,8)	8(%13,3)	52(%86,7)	
Age (mean(±stan. Dev.))	55,6(±14,2)	59(%12,6)	411(%87,4)	0,236
BMI (mean(±stan. Dev.))	29,3(±5,3)	59(%12,6)	411(%87,4)	0,18
Marital Status (n(%))				
Married	377(%80,2)	44(%11,7)	333(%88,3)	0,542
Single	93(%19,8)	15(%16,1)	78(%83,9)	
Smoking (n(%))				
Yes	71(%15,1)	7(%9,6)	64(%90,4)	0,303
No	399(%84,9)	52(%13)	347(%87)	
Complaint period (month) (Mean)	64,6(±92,8)	59(%12,6)	411(%87,4)	0,001
Physical Therapy before (n(%))				
No	222(%47,2)	15(%6,8)	207(%93,2)	0,001
1 time	105(%22,3)	24(%22,9)	81(%77,1)	
2 times	64(%13,6)	4(%6,3)	60(%93,7)	
3 times	34(%7,2)	7(%20,6)	27(%79,4)	
≥4 times	45(%9,6)	9(%20)	36(%%80)	
Medical treatment before (n(%))				
Yes	294(%62,6)	44(%15)	250(%%85)	0,048
No	176(%37,4)	15(%8,5)	161(%91,5)	
Pain Location (n(%))				
Low Back	156(%33,2)	24(%15,4)	132(%84,6)	0,768
Neck	88(%18,7)	7(%7,8)	81(%92,2)	
Shoulder	76(%16,2)	12(%15,7)	64(%84,3)	
Foot	10(%2,1)	1(%10)	9(%90)	
Back	9(%1,9)	1(%11,1)	8(%88,9)	
Knee	97(%20,6)	13(%13,3)	84(%86,7)	
Hand	16(%3,4)	1(%6,3)	15(%93,7)	
Others	18(%3,8)	2(%11,1)	16(%88,9)	

\* T&CM: Traditional and Complementary Medicine

literature may be that the patients are currently receiving physical therapy and they want to continue the treatment with conventional methods. In our study, it was observed that 45 patients received 4 or more treatments, 34 patients 3 times, 64 patients 2 times, and 105 patients received 1 treatment before. 222 patients were receiving treatment for the first time. When the patients who had received physical therapy before and those who did not, it was observed that the application to T&CM was significantly higher in patients who received physical therapy before (p=0.001).

Among the reasons for T&CM application in the literature, diseases with back and neck region pain are in the first place<sup>6</sup>. In our study, patients most frequently received physical therapy for low back pain (33%). Among these patients, T&CM application was also the most common in patients with low back pain. Shoulder area follows the low back area. There was no statistically significant difference between the areas where physical therapy was applied and T&CM treatment. In some of the studies in the literature, they stated that women and patients with a high level of education,

use T&CM more frequently, because of the lower pain threshold of women and the high interest in new treatment methods<sup>8,10,11</sup>. On the other hand, there are studies in the literature showing that the application to T&CM methods and age, gender and education level are not related<sup>7,12</sup>.

In our study, when the gender, BMI, age, marital status and smoking were evaluated, no significant relationship was found between T&CM applications. T&CM methods applied by physicians have started to reach all patient groups regardless of age and gender. Some patients use T&CM methods to avoid or delay surgical and invasive treatments, while others consider it as a treatment option they can try if their doctor recommends<sup>13</sup>.

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## CONCLUSION

In this study, due to reasons such as musculoskeletal pain, which increases in direct proportion to the increase in the life span of individuals, fear of the undesirable effects of conventional medicine drugs, the public's interest has been directed to T&CM and it is thought that this interest will increase even more in the future. In our study, we saw that both physical therapy and traditional and complementary medicine methods were tried many times to relieve patients' pain. With the high evidence-based researches about these methods that have been used in recent years, we should increase the knowledge about their effectiveness and direct the patients to the right methods when necessary.