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ORIGINAL ARTICLE – OPEN ACCESS

Methods of Pain Self-Care Used by Patients with Chronic Musculoskeletal Pain During the COVID-19 Pandemic in Türkiye

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ABSTRACT

Objective: The aim of this study was to determine the methods of pain self-care used by patients in Türkiye with chronic musculoskeletal pain who could not access a healthcare provider during the coronavirus 2019 (COVID-19) pandemic.

Materials and Methods: A total of 255 participants (mean age 40.8±13.2 years) diagnosed with chronic musculoskeletal pain were included in the study. The Nordic Musculoskeletal Questionnaire and a form created by the researchers were used to assess the prevalence of musculoskeletal symptoms and methods of pain management.

Results: The primary site of symptoms during the previous 12-month period was the low back, neck, and upper back regions (69%, 64.7%, and 60% respectively). The detailed assessment revealed that in the prior 7 days, patients experienced symptoms most often in the lower back (56.9%), upper back (45.1%), and neck (43.9%). The most frequently used methods of pain self-care were massage (71%), pain relief medication (68.2%), and topical analgesics (55.3%).

Conclusion: Patients most often reported symptoms in the spinal area, and the most used means of self-care for pain management were massaging the painful area, pain medication, and topical analgesics. Self-care initiatives can be very valuable, however, at least some initial guidance from health professionals is advisable. Additional exploration of technological means of intervention and awareness of appropriate self-care could be of substantial benefit individuals and society.

Keywords: Chronic musculoskeletal pain, COVID-19, pain self-care, prevalence, self-isolation

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INTRODUCTION

Worldwide, approximately 1.71 billion people have musculoskeletal symptoms and 30% to 45% will consult a physician about musculoskeletal problems (1, 2). Although some patients can resolve symptoms with medication, exercise, advice, and therapy, for many (39–45%) the problems become chronic (1). Chronic pain can have a significant effect on occupational absence, quality of life, and the need for health services. Therefore, encouraging active patient involvement in pain management and providing methods of self-care has great value (3). Nicholas and Blyth noted that various guidelines have recognized that in order to reduce chronic pain at the population level, individuals will have to play a central role in management of their pain (4).

Self-care is defined as the ability of individuals to promote and maintain their own health, and manage illness or disability without or with limited healthcare support. Self-care can include modern and traditional methods, and encompasses medications, counselling, and other techniques that can often be used with little or no health worker supervision (5). The most commonly used pain self-care methods are physical therapy modalities (including transcutaneous electrical nerve stimulation, therapeutic heat/cold, magnetic therapy), and forms of complementary and alternative medicine, such as massage, acupuncture, and herbal medicine (6–8). Tele-rehabilitation and online self-management programs have been reported to be a promising approach to providing self-management strategies for the treatment of chronic diseases (9, 10).

Coronavirus 2019 (COVID-19) is a respiratory disease that first appeared in Wuhan, China, in December 2019 and was subsequently determined to be caused by the severe acute respiratory syndrome 2 virus. COVID-19 spread rapidly and became a pandemic. The prioritization of COVID-19 cases and isolation measures implemented to control the spread had a variety of impacts, including the inability to seek treatment and manage chronic pain. Patients who did not have an emergency treatment indication could not access physical therapy and rehabilitation services during the worst of the pandemic (10). The Turkish Ministry of Health launched a rehabilitation support program (KOREH) for patients who were unable to attend physical therapy and rehabilitation sessions. An individual exercise program was created by a physiotherapist and delivered via video (11). However, the program could not benefit patients who could not access this service or had indications for a physiotherapy approach other than exercise therapy.

The aim of this study was to determine the methods of self-care pain management used by patients in Türkiye with chronic musculoskeletal pain who could not access a healthcare provider due to the COVID-19 pandemic.

MATERIALS and METHODS

This descriptive and cross-sectional study was conducted at the Denizli State Hospital Outpatient Physical Therapy and Rehabilitation Clinic in Türkiye between July and December 2020. The study was performed in accordance with the principles of the Declaration of Helsinki and approved by the Pamukkale University Clinical Research and Ethics Committee on July 28, 2020 (28.07.2020/14). The patients were informed about the study and provided written consent.

The study inclusion criteria were a diagnosis of chronic musculoskeletal pain and having undergone physical therapy for pain at least once in the previous 2 years. Patients were excluded if they were illiterate. A total of 583 patients were assessed for eligibility; 328 patients were excluded either because they did not meet inclusion criteria (n=166) or declined to participate (n=162). A total of 255 patients diagnosed with chronic musculoskeletal pain were included in the study. The sample of the current study represents 43.7% of the total population.

Demographic data (age, gender, marital status, educational status) of the patients and the methods of pain self-care were recorded using a form prepared by the researchers consisting of 15 questions. The prevalence of musculoskeletal symptoms was assessed with the Turkish version of the Nordic Musculoskeletal Questionnaire (NMQ) (12). The NMQ uses 27 items to examine the presence of musculoskeletal symptoms in 9 body regions during the previous 12 months and the last 7 days. All of the items have yes/no responses. The internal consistency, re-test reliability, and construct validity of the Turkish NMQ was 0.57–0.90, 0.896, and 0.57–0.59 respectively (12).

Statistical Analysis

The data were analyzed using IBM SPSS Statistics for Windows, Version 21.0 software (IBM Corp., Armonk, NY, USA). Continuous variables were expressed as the mean± SD and categorical variables as number and percent.

RESULTS

A total of 255 patients (73 male and 182 female) were enrolled in this study (mean age: 40.8±13.2 years). Descriptive data of patients are shown in Table 1.

The primary sites of symptoms of the previous 12-month period were the low back, neck, and upper back regions (69%, 64.7%, and 60% respectively). The detailed assessment revealed that in the prior 7 days, patients experienced symptoms most often in the lower back (56.9%), upper back (45.1%), and neck (43.9%), as presented in Table 2.

The most used methods of pain self-care were massage (71%), followed by painkillers (68.2%), and topical analgesics (55.3%). Of the group, 38.4% of the patients searched for musculoskeletal pain management options online, 38.8% searched for exercise videos, and 26.3% used a smartphone application. The tele-rehabilitation usage rate was quite low (2.4%) (Table 3).

The study results indicated that 72.2% of low back pain sufferers used pain medication, 68.2% used massage, and 55.1% used topical analgesics to manage their pain. Among neck pain sufferers, 69.7% preferred pain relief medication, 69.1% massage, and 61.8% topical analgesics. In the group that experienced upper back pain, 73.2% used massage, 71.2% pain medication, and 59.5% topical analgesics.

Table 1. Demographic data of the participants

Variables	n	%	Mean±SD	Min–Max
Age (years)			40.8±13.2	20–78
Body mass index			25.9±5.2	17–46
Gender				
Female	182	71.4		
Male	73	28.6		
Employment status				
Employed	172	67.5		
Retained	28	11		
Not employed	55	21.6		
Marital status				
Married	184	72.2		
Widowed	19	7.5		
Single	52	20.4		
Education status				
Literate	9	3.5		
Elementary school	32	12.5		
Middle school	22	8.6		
High school	46	18		
Undergraduate	130	51		
Postgraduate	16	6.3		

SD: Standard deviation; Min: Minimum; Max: Maximum

Table 2. Prevalence of musculoskeletal pain by region

Variables	Pain/discomfort in the past year		Pain in the past week	
	n	%	n	%
Neck	165	64.7	112	43.9
Shoulders	149	58.4	101	39.6
Elbows	57	22.4	26	10.2
Wrists/hands	89	34.9	49	19.2
Upper back	153	60	115	45.1
Lower back	176	69	145	56.9
Hips/thighs	81	31.8	60	23.5
Knees	110	43.1	79	31
Ankles/feet	82	32.2	51	20

DISCUSSION

This study aimed to determine the methods of pain self-care used by patients in Türkiye with chronic musculoskeletal pain who could not access a healthcare provider due to the COVID-19 pandemic. The results showed that the most frequently experienced symp-

Table 3. Pain management techniques used

Methods of pain management	n	%
Pain relief medication	174	68.2
Heat/cold application	112	43.9
Self-massage	181	71
Internet search for options	98	38.4
Smartphone apps	67	26.3
Online exercise videos	99	38.8
Telehealth service	6	2.4
Topical analgesic	141	55.3
Massage device	88	34.5
Supportive medical equipment	70	27.5
Special bed	49	19.2
Special pillow	74	29
Herbal therapy	122	47.8
TENS device	34	13.3
Porous plaster	58	22.7

TENS: Transcutaneous electrical nerve stimulation

toms were low back, neck, and upper back pain. The most common method of pain self-care was massaging the painful area, followed by painkillers and topical analgesics, without significant difference according to pain region.

It has been reported in the literature that musculoskeletal pain is most commonly associated with the spine (13–16). In some studies, the area of pain has been grouped as related to the spine, lower extremity, upper extremity, or widespread, while in others, 9 anatomical regions were evaluated, as in the current study. Our findings using the NMQ indicated that the patients most often reported pain in the lower back, neck, and upper back regions, which is consistent with much of the literature.

Literature reports vary regarding the use of pain medication by those with chronic pain; there is research indicating use by 33% and as much as 96.7% (14, 17). The results of the current study indicated that patients with chronic musculoskeletal pain most often used massage, painkillers, and topical analgesics as pain self-care methods. Though massage was the most preferred method, the rate of pain medication usage was 68.2%. Self-care can include modern medical and traditional methods (18), however, unmonitored use of pain relief medication is a source of potential concern that merits attention due to the hazards of uncontrolled use of pain relief drugs.

Herbal treatments have been reported to be a popular complementary or alternative medicine approach to reduce pain in the United States (19). The current study results showed that 47.8% of the patients used herbal treatment options to relieve their pain, indicating that there is also significant interest in these options in Türkiye. The potential risks associated with self-administered herbal medicine also require attention.

Access to and use of mobile devices has increased around the world. Several benefits to the use of smartphone applications and computer-based programs in decreasing pain and preventing recurrence have been noted (20, 21). Access to interventions regardless of geographical location provides important value (22). We observed that 38.4% of the patients with chronic musculoskeletal pain in this study used the internet to explore pain management options, 38.8% downloaded exercise videos, and 26.3% used smartphone apps. This active participation in self-care using technology is encouraging, but notably, the rate of tele-rehabilitation was quite low (2.4%). Additional promotion of this service is warranted.

An informed self-care approach focusing on a healthy lifestyle will benefit individuals and society. Greater emphasis on an appropriate management strategy rather than symptomatic treatment could be very helpful to those with chronic pain and be cost-effective. Pain self-care becomes even more important in extraordinary situations such as the COVID-19 pandemic. Physiotherapists provide pain self-care support to their patients during treatment sessions, including appropriate exercise programs, ergonomic advice, and the use of heat agents as complementary care. Many of these techniques can easily be applied at home (23). Physiotherapists can contribute to improved chronic pain management through informational seminars and by informing their patients about methods of self-care during treatment sessions.

Limitations

This study has some limitations. A broad-based study with more participants would contribute to a more detailed examination of this topic. However, to the best of our knowledge, the current study is the first to investigate the self-care methods used by patients with chronic musculoskeletal pain to address pain during the COVID-19 pandemic in Türkiye.

CONCLUSION

This study investigated the methods of pain self-care used by patients with chronic musculoskeletal pain who could not access a health care provider due to the COVID-19 pandemic. The findings revealed that the most commons site of pain was the spinal region and that the patients mostly preferred traditional methods of self-care to cope with the pain. Increased awareness among this patient group of simple self-care methods that they can use in their own homes, including options that incorporate technology, could be very valuable. The results of this study provided new insights into how physiotherapists and other health professionals can contribute to improved standards of self-care.

Ethics Committee Approval: The Pamukkale University Clinical Research Ethics Committee granted approval for this study (date: 28.07.2020, number: 28.07.2020/14).

Informed Consent: Written informed consent was obtained from patients who participated in this study.

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Author Contributions: Concept – ŞŞ; Design – FA; Supervision – NY; Resource – FA; Materials – FA; Data Collection and/or Processing – ŞŞ; Analysis and/or Interpretation – ŞŞ; Literature Search – NY; Writing – ŞŞ; Critical Reviews – NY.

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