

# Complementary and alternative treatment methods in chronic rheumatic diseases in the Central Anatolia

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## ABSTRACT

**Background:** The aim of the study is to identify the kind of traditional practices used for the rheumatic diseases in the central Anatolia.

**Materials and Methods:** A total of 440 volunteer patients with chronic rheumatic diseases including osteoarthritis (OA), fibromyalgia, rheumatoid arthritis (RA), spondyloarthropathy (SpA), familial Mediterranean fever (FMF), Behçet's disease (BD), systemic lupus erythematosus (SLE), and mixed connective tissue disease (MCTD) were enrolled in the study. All patients were administered a 36-item questionnaire.

**Results:** Of the patients, 49.3 % were using CAM. Herbal medicine was the most commonly (58.1 %) preferred methods. The CAM was used by 86 (48%) of 179 patients with OA and by 51 (60%) of 85 patients with RA. The difference in the CAM use across the disease groups was not statistically significant ( $\chi^2=7.343$ ;  $p=0.290$ ). When the patients using or not using CAM were assessed according to their education status, it was found that CAM was used by 59 (66.3%) of 89 patients with university degree and indicating a statistically significantly higher number of patients from higher education status among the CAM users ( $\chi^2=17.651$ ;  $p=0.001$ ).

**Conclusions:** Our study results suggest that among patients with rheumatic disease, patients with RA more commonly resort to the methods of CAM.

**Keywords:** rheumatic disease, central anatolia, alternative treatment, complementary medicine

## INTRODUCTION

Complementary and alternative medicine (CAM) is a concept that is used for applications other than conventional treatments (1). CAM is widely used throughout the world (2). However, the CAM methods vary according to geographical and cultural characteristics (3-5). Rheumatic diseases are inflammatory diseases or non-inflammatory chronic diseases. Conventional treatment methods (e.g., drugs, physical therapy, surgical treatment, rehabilitation programs) are used successfully in rheumatic diseases. However, the treatment methods used are not curative and sometimes they can be insufficient in the treatment of these diseases. Therefore, patients with rheumatic disease try to use CAM methods (6-9).

In previous clinical trials, the rates of CAM use for rheumatic diseases are different as well as preferred CAM methods (10-14).

We should note that in the relevant literature, there are limited number of clinical studies on the use of CAM in Turkish patients with rheumatic disease, which needs to be explored. Additionally, in previous clinical trials, only one rheumatic disease was investigated and both cultural and religious values of Turkish patients were not considered.

In this study, we aimed to determine the frequency of CAM use and the most commonly used CAM methods in Turkish patients with rheumatic disease in the central Anatolia. We further aimed to determine patients with which rheumatic disease were more tend to use CAM methods.

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## PATIENTS AND METHODS

We recruited 440 consecutive patients (296 females, 144 males; mean age:  $47.40 \pm 14.09$  years; range: 17-84 years) who were diagnosed with a rheumatic disease including osteoarthritis (OA), fibromyalgia (FMS), rheumatoid arthritis (RA), spondyloarthritis (SpA), familial Mediterranean fever (FMF), Behçet's disease (BD), systemic lupus erythematosus (SLE), and mixed connective tissue disease (MCTD) (13) in the outpatient and inpatient clinics of Physical Therapy and Rehabilitation Department of Cumhuriyet University, Medical School were enrolled in this study between September 2011 and June 2012 in the Central Anatolia. All participants were included on the basis of voluntary enrollment and none of them had a communication problem which precluded the administration of the questionnaire. Patients with communication disorder that interfered with the patient's ability to complete the questionnaire, patients with any psychiatric disorder, and patients who did not give consent to complete the questionnaire were excluded.

This study was approved by our University Ethics Committee and was conducted in accordance with the principles of the Declaration of Helsinki. A written informed consent was obtained from each study participant.

## THE QUESTIONNAIRES

Face-to-face interviews were performed in the majority of the patients and a 36-item survey was completed after providing CAM definition. The questionnaire was developed by a rheumatologist, statistician, and an anthropologist. Before administration of the questionnaire, comprehensibility and applicability of the questions were confirmed by administering the questionnaire to a pilot group of 50 participants. (validation rate %92;  $\alpha=0.874$ ). The questionnaire was therefore deemed suitable for use in the present study.

## CAM

A treatment that is not prescribed or included within the biomedical frame in the treatment of rheumatic diseases (16). The survey addressed socio-demographic characteristics (name, surname, date of birth, gender, educational status, occupation, monthly income, current residence, marital status, coverage of health insurance, educational status of parents, availability of healthcare services in the place of residence), medical characteristics (diagnosis, patient's level of information on their disease, treatment modality, date of diagnosis comorbid conditions, current or previous therapies), source of information about CAM, beliefs and expectations regarding CAM, reason for CAM use, whether they informed their clinicians regarding non-medical therapies, frequency of CAM use, CAM methods used (lead, tomb visit, good-luck charms, praying, coiling up with fish, leech, knotting, coiling up with wool and stones electromagnetic devices, supportive devices, tapes, and drug advertised in TV), references for CAM and cost, which period they tried CAM and whether they used CAM simultaneously with medical treatments, benefits or adverse effects and reasons for not trying CAM if the patient did not attempt to use CAM.

In the evaluation of obtained data, SPSS version 22.0 software was used for statistical analysis. Chi-square or Fisher's Exact test, if necessary, was used in the comparison of categorical data. Normal distribution of data was analyzed using the Kolmogorov-Smirnov test. Student's t-test, variance analysis, and One-way AANOVA Tukey test were used when parametric test assumptions were met. Descriptive data were expressed as the number of individuals, percentage, and mean  $\pm$  standard deviation in the tables. A p value of  $<0.05$  was considered statistically significant.

## RESULTS

A total of 440 patients completed the questionnaire. Sociodemographic characteristics of the participating patients are shown in **Table 1**. Distribution of the participating patients according to diagnosis are shown in **Table 2**. Of the patients with rheumatic diseases who participated in this study, 217 (49.3%) were found to use the CAM method. There was no statistically significant difference between rheumatic diseases groups regarding the CAM use ( $p > 0.05$ ). However, patients with RA were found to tend to CAM methods more. The CAM use of patients with rheumatic diseases participating in this study is shown in **Figure 1**.

**Table 1:** Presents socio-demographic characteristics of the patient with chronic rheumatic diseases

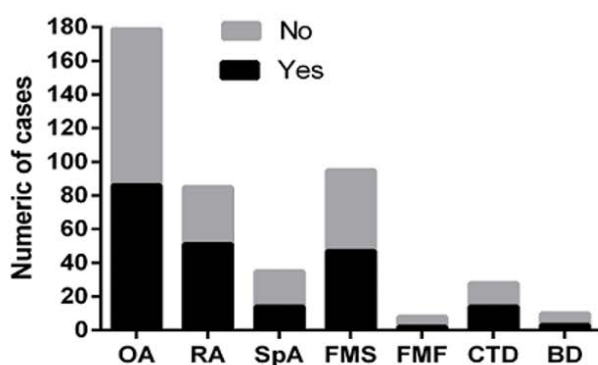
		Mean(SD)
	Age	47.40 ± 14.09
		<b>n (%)</b>
<b>Gender</b>	Male	144 (32.7)
	Female	296 (67.3)
<b>Marital status</b>	Married	356 (80.9)
	Single	57 (13)
	Divorced	5 (1.1)
	Widow	22 (5)
<b>Education</b>	Illiterate	42 (9.5)
	Primary school	214 (48.6)
	Secondary school	95 (21.6)
	University	89 (20.2)
<b>Occupation</b>	Officer	61 (13.9)
	Worker	36 (8.2)
	Student	22 (5)
	Housewife	222 (50.5)
	Retired	52 (11.8)
	Other	47 (10.7)
<b>Income</b>	<500 USD	191 (43.4)
	500-1500 USD	207 (47)
	> 1500 USD	42 (9.5)
<b>Place of residency</b>	Urban	405 (92)
	Rural	35 (8)

USD: United States dollars

**Table 2:** Disease groups

	n (%)
OA	179 (40.6)
FMS	95 (21.6)
RA	85 (19.3)
SpA	35 (8)
CTD	28 (6.4)
BD	10 (2.3)
FMF	8 (1.8)

BD; Behçet's disease, CTD; connective tissue disease, FMF; familial mediterranean fever, FMS; fibromyalgia OA; osteoarthritis, RA; rheumatoid arthritis, SpA; spondyloarthritis,



OA: Osteoarthritis, RA: Rheumatoid Arthritis, SpA: Spondyloarthropathy, FMS: Fibromyalgia Syndrome, FMF: Familial Mediterranean fever, CTD: Connective Tissue Disorder, BD: Behçet's Disease

**Figure 1:** Relationship between diagnosis and CAM use in patients included

**Table 3: CAM use**

		n (%)
Method	Herbal remedies	126 (58.1)
	Tomb visit	6 (2.8)
	Coiling up with fish	2 (0.9)
	Leech	10 (4.6)
	Knotting	2 (0.9)
	Coiling up with wool	10 (4.6)
	Products advertised	38 (17.5)
	Other	23 (10.6)
Reason for CAM use	Belief for recovery	164 (75.6)
	Due to difficulties in access to healthcare services	1 (0.5)
	As no benefit from medical therapy	11 (5.1)
	To avoid drug adverse effects	25 (11.5)
	Manipulation by other people	11 (5.1)
	Curiosity	4 (1.8)
	Other reasons	1 (0.5)
Reference	Family and social network	114 (52.5)
	Other patient	28 (12.9)
	Clinician	6 (2.8)
	Media	69 (31.8)

CAM: Complementary and alternative medicine

**Table 4: CAM use relationship between education status and income**

	CAM (+) n (%)	CAM (-) n (%)
<b>Education</b>		
Illiterate	17 (40.5)	25 (59.5)
Primary school	92 (43)	122 (57)
Secondary school	49 (51.6)	46 (48.4)
University	59 (66.3)	30 (33.7)
P=0.001		
<b>Income</b>		
<500 USD	78 (40.8)	113 (59.2)
500-1500 USD	113 (54.5)	94 (45.5)
>1500 USD	26 (61.9)	16 (38.1)
P=0.028		

CAM: Complementary and alternative medicine, USD: United States dollars

**Table 5: CAM use relationship between disease duration**

	CAM (+) n (%)	CAM (-) n (%)
<b>Disease duration</b>		
Less than 1 year	18 (31)	40 (69)
1-10 years	168 (70.9)	69 (29.1)
10-20 years	26 (70.3)	11 (29.7)
20-30 years	3 (50)	3 (50)
Over 30 years	2 (100)	0 (0)

CAM: Complementary and alternative medicine, P=0.001

The CAM methods used, the reason for using it, and who suggested it are shown in **Table 3**.

CAM was preferred by patients with a higher level of education and income. This was found to be statistically significant ( $p < 0.05$ ). The use of CAM by the level of education and income is shown in **Table 4**. As the duration of disease was prolonged, the rate of CAM use was also found to increase. This relationship was found to be statistically significant ( $p < 0.05$ ). The duration of disease and the use of CAM are shown in **Table 5**.

The mean cost of CAM use was 48 (range: 1 to 1.300) United States dollars (USD)  $\chi^2 = 60.167$ .

## DISCUSSION

In this study, the use of CAM was found to be common in individuals with the chronic rheumatic disease. The use of CAM in individuals with the rheumatic disease was found to be related to the level of education and income. It was further observed that university graduates and those with high-income levels were more likely to use CAM. These findings in our study are consistent with the literature (17-20). In addition, unlike the literature, we found out that the use of herbal remedies among the CAM methods was more common in Turkish patients with rheumatic disease (18), which is one of our contributions to the literature. However, among individuals with the rheumatic disease, patients with RA were found to be more likely to prefer CAM in our study. It was further observed that physicians were less likely to encourage the use of CAM in individuals with rheumatic disease, unlike other studies in the literature. These findings in our study are new findings which are different from the literature (18,21).

Despite the improvements in conventional treatment methods for chronic diseases, current evidence suggests increasing use of alternative treatment methods. A very insufficient published data exists as to CAM is used for what type of diseases and in which social classes (21). In the present study, the use of CAM was more common in patients with university education and in the patients with a higher level of income. The use of CAM brings about increasing healthcare costs. One study in the US reported an average cost of 27.6 USD for the use of CAM, whereas the average cost to the patient in the present study was 48 USD (22,23).

Rheumatic diseases have a relapsing-remitting disease pattern and there is no cure for these groups of disorders. The studies have shown that patients make a trial of CAM methods before or after the diagnosis of pain relief or to treat the disease (24). The present study found that patients with a longer disease duration more commonly resorted to CAM methods. The use of CAM in rheumatic diseases is steadily increasing in recent years (25-28). It was demonstrated that patients with rheumatic disease commence the use of CAM methods for various reasons. Patients in the developed countries use CAM as per the physician's advice, whereas patient's relatives and media are the main elements promoting the use of CAM methods (29). In the present study, only 2.8% of the patients used CAM as per the physician's advice, whereas family and social circle had a share of 52.5%. Although chiropraxis, acupuncture, massage, herbal remedies, and homeopathy are the most common CAM methods used by the patients with rheumatic disease in many countries, dietary modification and body-based practices, such as massage, manipulation and traction are the most commonly employed CAM method in Turkey (18). Unlike other studies, the use of herbal CAM methods was more common in patients with rheumatic disease in our study. We should note that Turkish patients with rheumatic diseases used CAM methods, including their cultural and religious beliefs.

The preference for CAM use varies depending on geographic location, ethnicity, educational level, socioeconomic factors, religious beliefs, and culture (30-32).

Patients with non-inflammatory rheumatic disease comprised the majority of patients with rheumatic disease using CAM in studies evaluating the use of CAM methods, whereas in Turkey, patients with RA were found to be more prone to the use of CAM (18,21). In a survey by Cronan et al. (25), 84% of the patients with OS or RA reported CAM use in the last six months. In the studies by Chandrashekar (26) and Zaman et al. (27), approximately 43% of patients with RA used CAM, whereas 46.9% of patients with RA in the study by Tokem et al. (28) used CAM. In the study by Ulusoy et al. (18), approximately half of the patients with rheumatic disease (46.2%) experienced at least one method of CAM. Similar to other studies, patients with rheumatic disease in the present study (49.3%) have used CAM since the diagnosis. The use of CAM was found to be the most common in patients with fibromyalgia syndrome among other rheumatic diseases. Lind et al. (21) reported CAM use in 91% of patients with fibromyalgia and 63% of patients with other rheumatic diseases.

There is an increasing rate of CAM use in rheumatic diseases despite the improvement in conventional treatment programs. One of the important drawbacks in this regard is the lack of knowledge about the effects and side effects of CAM method among physicians and the patients. The physicians are required to gain sufficient knowledge of evidence-based CAM methods with the advanced in modern medicine and technology. The limitations of the present study include small number of patients and conduction of this study in a local area.

In conclusion, the use of CAM is common in patients suffering from a chronic rheumatic disease and the use of herbal CAM methods is even more common in Turkey. Among patients with rheumatic disease, patients with RA more commonly resort to the methods of CAM. The use of CAM is more common in patients with university education and in patients with higher level of income. Physician's advice encouraging the use of CAM is less often in patients with rheumatic disease compared to the other studies. Further clinical studies are required to evaluate the rate of CAM use in patients with chronic rheumatic disease.

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