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Araştırma Makalesi/ Research Article

THE EFFECT OF COMPLEMENTARY AND SUPPORTİVE MEDİCİNE PRACTİCES ON SLEEP AND QUALİTY OF LİFE İN PATİENTS WİTH RHEUMATOİD ARTHRİTİS: A CROSS-SECTİONAL STUDY

ROMATOİD ARTRİT HASTALARININ TAMAMLAYICI VE DESTEKLEYİCİ TIP KULLANIM DURUMLARININ UYKU VE YAŞAM KALİTESİNE ETKİSİ: KESİTSEL BİR ÇALIŞMA

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Abstract

Introduction: Rheumatoid Arthritis (RA) is an autoimmune inflammatory rheumatic disease of unknown etiology with a chronic course involving multiple joints and systems. RA may induce pain, swelling in the joints, and loss of function in individuals. there has been no published study to date that examined the use of CAM in RA patients in terms of sleep and quality of life.

Objective: This study aimed to determine the CAM (Complementary and Supportive Medicine) methods used by patients with RA (Rheumatoid Arthritis) and the effects of CAM methods on sleep and quality of life.

Material and methods: This research was conducted cross-sectionally. 190 patients with RA were included in the study. Data were collected using a patient information form, the Quality-of-Life Measurement for Rheumatoid Arthritis, and the Pittsburgh Sleep Quality Index. The demographic, socioeconomic, disease, and treatment characteristics of CAM and non-CAM users were determined.

Results: Demographic, socioeconomic, disease and treatment characteristics of CAM users and users were determined. While 60.5% of the patients stated that they used at least one type of CAM, 39.5% stated that they did not use CAM. There was no significant difference between CAM users and non-CAM users in terms of age, gender, education level, marital status and income status. CAM use approaches and reasons differ according to the expectation and choice of patient, patient's sociocultural background, and religious properties. In this study, it was observed that RA patients using TAT had high average quality of life scores and high average sleep quality scores.

Conclusions: The results of this study showed a high rate of CAM use. Moreover, patients attended regular check-ups and used CAM methods together with drug treatment. Patients who used CAM did not inform their doctor or nurse about this issue, and they used CAM methods because they thought that they were beneficial. Healthcare professionals are advised to ask patients about the TAT methods they use and to assess their sleep patterns and quality of life.

Key words: Rheumatoid arthritis, Complementary and supportive medicine, sleep quality, quality of life.

Özet

Giriş: Romatoid Artrit (RA), bireylerde ağrı, eklemlerde şişlik ve fonksiyon kaybına neden olabilir. RA hastalarında uyku ve yaşam kalitesi açısından Tamamlayıcı ve Destekleyici Tıp (TAT) kullanımını inceleyen yayınlanmış bir çalışma bulunmamaktadır.

Amaç: Bu çalışmada RA'lı hastaların kullandığı yöntemleri ve TAT yöntemlerinin uyku ve yaşam kalitesine olan etkilerini belirlemek için yapıldı.

Yöntem: Bu araştırma kesitsel olarak yapıldı. Çalışmaya 190 RA'lı hasta dahil edildi. Veriler hasta bilgi formu, Romatoid Artrit için Yaşam Kalitesi Ölçeği ve Pittsburgh Uyku Kalitesi İndeksi kullanılarak toplandı. TAT kullanan ve kullanmayanların demografik, sosyoekonomik, hastalık ve tedavi özellikleri belirlendi.

Bulgular: Hastaların %60,5 en az bir tür TAT kullandığını bildirirken, %39.5 TAT kullanmadığını belirtti. TAT kullananlar ve TAT kullanmayanlar arasında yaş, cinsiyet, eğitim düzeyi, medeni durum ve gelir düzeyi açısından istatistiksel olarak anlamlı bir fark yoktu. TAT kullanım yaklaşımları ve nedenleri hastanın beklenti ve seçimine, hastanın sosyokültürel geçmişine ve dini özelliklerine göre farklılık göstermektedir. Bu çalışmada TAT kullanan RA'lı hastaların yaşam kalitesi puan ortalaması ve uyku kalitesi puan ortalamasının yüksek olduğu görüldü.

Sonuç: Bu araştırmada TAT kullanım oranının yüksek olduğu belirlendi. Hastaların düzenli olarak sağlık kontrollerini yaptırdıkları ve ilaç tedavisinin yanı sıra TAT yöntemlerini de kullandıkları saptandı. TAT kullanan hastalar bu konuda doktor veya hemşirelerine bilgi vermediklerini, faydalı olduğunu düşündükleri için TAT yöntemlerini kullandıklarını belirttiler. Sağlık çalışanlarının, hastaların kullandıkları TAT yöntemlerini sorgulamaları ve uyku düzenleri ve yaşam kalitelerinin değerlendirmeleri önerildi.

Anahtar Kelimeler: Romatoid artrit, Tamamlayıcı ve destekleyici tıp, uyku kalitesi, yaşam kalitesi.

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INTRODUCTION

Rheumatoid arthritis (RA) is an autoimmune rheumatic disease of unknown cause that affects joints and body systems. (1). RA may induce pain, swelling in the joints, and loss of function in individuals. Pain and loss of function can affect psychological and social functions as well as physical health (2). Accordingly, problems that limit activities of daily living include impaired quality of life, sleep problems, and increased morbidity (3,4). Current treatment approaches aim to relieve pain, increase function, reduce sleeplessness, inhibit disease progression, and enhance quality of life. Recently, there have been great advances in the pharmacological treatment of RA (5). In particular, options for reducing inflammation have increased among pharmacological options. Despite the success of pharmacological treatment, some patients have not been completely treated. Patients mostly complain of physical and psychological symptoms such as chronic pain, loss of movement and strength in joints, fatigue, sleep disturbance, anxiety, and depression (6,7). When patients who suffer from these symptoms do not respond adequately to medical treatment, they refer to complementary alternative medicine (CAM) practices (8,9). The National Center for Complementary and Alternative Medicine (NCCAM) in the United States of America defines CAM as "practices and products that are not currently regarded as a part of conventional medicine but are included in various fields of medicine and the healthcare system"(10). One of the most common diseases associated with sleep disturbances is rheumatoid arthritis. Individuals with rheumatoid arthritis who experience sleep problems tend to have more difficulties in their daily lives and overall health, a decline in their quality of life, and an increased need for assistance in terms of time and energy (9-11). CAM is classified into five tips: Biology-based practices, including diet, natural product supplements, and herbal treatments; body-based practices, including massage and manual therapies; mind and body practices, including meditation, yoga, relaxation therapy, breathing techniques, biofeedback, and hypnosis; energy therapies, including prayer and Reiki practices; and medical therapies (10,11). RA patients prefer these methods include their willingness to control the disease and their belief that CAM does not inflict any harm (12). A review of the literature revealed that there has been no published study to date that examined the use of CAM in RA patients in terms of sleep and quality of life. Therefore, this study aimed to determine the CAM methods used by outpatients with RA and their effects of CAM methods on sleep and quality of life.

Research question: Do complementary and alternative medicine practices used by patients with rheumatoid arthritis affect sleep and quality of life?

MATERIALS AND METHODS

Design and sample

The descriptive and cross-sectional study was conducted in the outpatient clinics of the Rheumatology Department of a hospital between March 2022 and December 2023.

Study population and sample

The population consisted of patients diagnosed with RA for follow-up and treatment between the study dates. The sample consisted of patients who volunteered to participate in the study and met the study criteria. The study population consisted of 190 patients who agreed to participate in the study and met the study criteria (of these patients, 115 were found to be using CAM and 75 patients did not use CAM). In the statistical evaluation performed according to the known universe sample calculation, the required sample size for the study was determined to be at least 127 people with 95% confidence, p=0.5 probability, and d=0.05 deviation. The inclusion criteria were as follows: agreeing to participate in the study; being 18 years of age or older; being diagnosed with RA by a rheumatologist for at least 6 months; communicate in Turkish; not diagnosed with a neurological disease; and not diagnosed with any psychiatric disorder. Exclusion criteria for the study; participants with uncontrolled comorbid conditions for

whom treatment was changed or new treatment was initiated depending on the comorbid condition.

Data collection tools

Study data were collected using the patient information formula, the Rheumatoid Arthritis Quality of Life Measure, and the Pittsburgh Sleep Quality Index. Data collection tools were given to patients at a time when they were available. Literate patients answered questions on the forms. The researchers read the forms to illiterate the patients and asked them to answer the questions. It took approximately 30-35 minutes to complete the forms.

Patient Information Form

This form was prepared based on literature. This form consists of 17 questions, including five questions about the socio-demographic characteristics of the patients, four questions about the disease process, and eight questions about their use of CAM (2-8).

*Quality-of-Life Measurement for Rheumatoid Arthritis:*Developed Ünal et al., developed the scale in 2017. Scale determined the quality of life of patients with RA (13). This is a Likert-type scale. The scale consists of four subscales: sexuality and sociability, pain, mood, and functionality. The Likert type scale is scored between 0 and 5. The items were rated as never = 0 and always = 5. The lowest score=0, the highest scores=150. The scale was assessed based on the total score. A high score on the scale indicates a high quality of life. Cronbach's alpha for the scale was 0.88. In this study, the Cronbach's alpha value was found to be 0.86.

*Pittsburgh Sleep Quality Index (PSQI):*Buysee et al. developed the scale in 1989 (14). Ağargün et al. (1996) conducted a Turkish validity and reliability study (15). The scale consists of 7 sub-dimensions. These dimensions are; "subjective sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbances, use of sleeping pills and daytime dysfunction". The scale evaluates sleep quality over the last month. The index consists of 19 items, with each item rated between 0-3 points. The total score is between 0 and 21 points. Each of the seven subscales was first assessed within itself, and then the scores of the seven subscales were summed. A total PSQI score ≤5 indicates "good sleep," and >5 means "poor sleep.". Cronbach's alpha for the scale was 0.80. In this study, the Cronbach's alpha value was found to be 0.80.

Ethical Considerations

This study was conducted in accordance with the principles of the Declaration of Helsinki. Permission to use the scales employed in the research was obtained via email from the respective authors. Additionally, ethical approval was secured from the Non-Interventional Research Ethics Committee of the Faculty of Health Sciences (approval no: 81829502.903/69). Written permission was obtained from the relevant hospital to conduct the study. Permission was obtained via e-mail to use the scales used in the study. Participants were informed about the purpose and methodology of the study, were made aware that their participation was entirely voluntary, and provided their written consent. It was also clearly stated that the data collected would remain confidential.

Data analysis

SPSS for Windows 18.0 software was used to carry out the statistical analyses of the data. Descriptive statistical methods (rate, mean, standard deviation, and frequency) were used to analyze the data. Nonparametric tests (Mann Whitney-U) were performed according to the distribution of the data.The chi-square test was used to analyze the qualitative data. The significance of the p value was set at $p < 0.05$.

RESULTS

The demographic, socioeconomic, disease, and treatment characteristics of CAM and non-CAM users were determined. One hundred and fifteen patients reported using some form of CAM (60.5%), whereas 75 (39.5%) were non-users of CAM. Age, sex, educational level, marital status, and income level were not statistically significant differences between

Table 1. Demographic characteristics of the patients using CAM

Use of CAM	CAM Users (115) n (%)	Non-users (75) n (%)	Total (190) n (%)	X^2, t and p value
Age				
18-60	65(56.5)	32(42.6)	97 (51.1)	t:0.978
≥61	50(43.5)	43(57.4)	93(48.9)	p>1.20
Gender				
Male	48(41.7)	32(42.6)	80 (42.1)	t:.345
Female	67(58.3)	43(57.4)	110 (57.9)	p<0.008
Educational Level				
Illiterate	26(22.6)	14(18.6)	40(21.0)	x^2=4.36
Literate	38(33.0)	26(34.6)	64(33.6)	p<0.211
Primary education	31(26.9)	22(29.3)	53(27.8)	
High School and higher	20(17.5)	13(17.5)	33(17.6)	
Marital Status				
Married	78(67.8)	52(69.3)	130(68.4)	x^2=0.63
Single	37(32.2)	23(30.7)	60(31.6)	p>1.20
Income Level				
Income < expenditure	51(43.3)	33(44.0)	84(44.2)	x^2=4.66
Income = expenditure	48(41.7)	31(41.3)	79(41.5)	p<0.211
Income >expenditure	16(15.3)	11(14.7)	27(14.3)	
Duration of diagnosis				
1-5 years	32(27.8)	12(16.0)	44(23.1)	x^2=3.856
6-10 years	47(40.8)	36(48.0)	83(43.6)	p<0.001
≥11 years	36(31.4)	27(36.0)	63(33.3)	
Status of receiving medication				
Yes	80(69.5)	58(77.3)	138(72.6)	x^2=4.081
No	35(30.5)	17(22.7)	52(27.4)	p<0.001
Status of going to doctor check-ups regularly				
Yes	78(67.8)	57(76.0)	135(71.0)	x^2=2.862
No	37(32.2)	18(24.0)	55(29.0)	p<0.001
Presence of another chronic disease	105(91.3)	60(80.0)	165(86.8)	x^2=11.45
Yes	10(8.7)	15(20.0)	25 (13.2)	p<0.001
No				

x^2 Chi Square test / t Independent samples t test, CAM: complementary and alternative medicine

CAM and non-CAM users. There were statistically significant differences between patients who used and did not use CAM methods in terms of diagnosis duration, medication, regular doctor visits, and the presence of other chronic diseases (Table 1, p > 0.05).

In the present study, 59.1% of the patients received CAM treatment for 1–5 years. While 89.5% knew whether their doctor or nurse had used CAM to reduce tender and swollen joint, 40% of the patients using manual therapies used CAM to alleviate joint pain and fatigue, 39.2% used CAM treatments, 59.3% did not. A total of 46.9% used CAM treatments because they believed that they were useful.

When the patients' purposes of using CAM were examined; it was determined that 40% of patients using behavioral supplements used CAM to feel better emotionally, 46.9% of the patients using herbal supplements used CAM to increase the effect of drugs, 50.5% of the patients using dietary supplements used CAM of the patients who received massage therapy used CAM to reduce tender and swollen joint, 39.1% of the patients exercising used CAM to

reduce pain, 45.3% of the patients taking vitamin and mineral supplements used CAM to strengthen the immune system, and 46.0% of the patients on a diet used them to increase the effects of medications (Table 2).

Table 2. Purposes of CAM Use (N: 115)

CAM Methods	Purpose of Use	n	%
Behavioral Supplements	Feeling better emotionally	46	40.0
	Religious practices	34	29.5
	Feeling hopeless and seek help	35	30.5
Herbal Supplements	Increasing the effect of medication	54	46.9
	Anti-inflammatory effects	33	28.6
	Strengthening the immune system	28	24.5
Dietary Supplements	Reducing pain	35	30.4
	Strengthening the immune system	22	19.1
	Reducing tender and swollen joint	58	50.5
Manuel Therapies	Reducing stiffness, and swelling	38	33.0
	Reducing joint pain intensity	46	40.0
	Moving freely	31	27.0
Massage	Relaxing	28	24.3
	Relieving joint stiffness problems	42	36.5
	Reducing tender and swollen joint	45	39.2
Exercise	Alleviating pain	45	39.1
	Reducing inflammation	37	32.1
	Reducing tender and swollen joint	33	28.8
Vitamin And Mineral Supplements	Alleviating pain	27	23.4
	Raising blood values	36	31.3
	Strengthening the immune system	52	45.3
Diet	Increasing the effect of medication	53	46.0
	Reducing inflammation	32	27.8
	Alleviating pain	30	26.2

Quality of life total mean scores (85.37±19.45) were higher in all subscales including in the sexuality and sociability (8.23±4.88), Pain (42.54±8.66), Mood (16.20±3.88) and Functionality (18.40±2.05) subscales in the CAM users than in the non-CAM users, (Table 3). The total mean quality of life scale ($Z = -10.86$, $p < 0.001$) and mean scores of pain ($Z = -8.725$, $p < 0.001$), mood ($Z = -9.270$, $p < 0.001$), and functionality ($Z = -8.961$ $p < 0.001$) were significantly higher in CAM users than in non-CAM users (Table 3).

PSQI total mean scores (3.06±2.05) were higher in all subscales including the Subjective Sleep Quality, (0.17±0.23), Sleep Latency, (0.36±0.56), Sleep Duration, (0.96±0.38), Habitual Sleep Efficiency (0.84±0.20), Sleep Disturbances (0.18±0.22), and Daytime Dysfunction (0.55±0.46) subscales in the CAM users compared to the non-CAM users, (Table 5). The total mean PSQI scores of CAM users ($Z = -9.862$, $p < 0.001$), as well as their mean scores for Subjective Sleep Quality ($Z = -6.521$, $p < 0.001$), Sleep Latency ($Z = -4.098$, $p < 0.001$), Sleep Duration ($Z = -3.420$, $p < 0.05$), Habitual Sleep Efficiency ($Z = -2.725$, $p < 0.05$), Sleep Disturbances ($Z = -4.820$, $p < 0.001$), and Daytime Dysfunction ($Z = -6.745$, $p < 0.001$) were significantly higher than the mean scores of non-CAM users (Table 3).

DISCUSSION

Patients with rheumatoid arthritis complain of joint pain, joint swelling, morning stiffness, fatigue, and sleep disorders (16,17). In particular, these patients have difficulty in falling asleep and maintaining sleep, daytime napping, an inability to fall asleep, and continuous sleep interruption at night (18,19).

Table 3. Comparison of the Quality of life and PSQI of the RA patients (N= 190)*

	CAM Users Mean±SD	Non-users Mean±SD	Total Mean±SD	Z	p
Quality of Life total score	85.37±19.45	55.35±16.49	45.36±17.97	-10.86	p<0.001
Sexuality and sociability	8.23±4.88	8.06±4.20	8.14±4.54	0.652	p>0.05
Pain	42.54±8.66	26.22±6.08	24.28±7.37	-8.725	p<0.001
Mood	16.20±3.88	10.32±3.60	13.26±3.74	-9.270	p<0.001
Functionality	18.40±2.05	10.72±2.63	14.41±2.34	-8.961	
PSQI total score	3.06±2.05	9.00±5.55	6.03±3.80	-9.862	p<0.001
Subjective sleep quality	0.17±0.23	1.36±0.72	0.76±0.47	-6.521	p<0.001
Sleep latency	0.36±0.56	1.56±1.08	0.96±0.82	-4.098	p<0.001
Sleep duration	0.96±0.38	1.20±0.20	1.08±0.29	-3.420	p <0.05
Habitual sleep efficiency	0.84±0.20	1.34±1.28	1.09±0.74	-2.725	p <0.05
Sleep disturbances	0.18±0.22	1.98±1.07	1.08±0.64	-4.820	p<0.001
Use of sleeping medication	0.00±0.00	0.00±0.00	-	-	-
Daytime dysfunction	0.55±0.46	1.56±1.20	1.05±0.83	-6.745	p<0.001

PSQI: Pittsburg sleep quality index, RA: Rheumatoid arthritis, Z: Mann-whitney u test

The overall health condition of patients with sleep problems is also negatively affected. The fear of losing independence and difficulty in engaging in activities of daily living affects their quality of life. Patients may resort to the use of CAM according to their geographical regions and cultural characteristics in order to cope with these conditions (20). We believe that this study is important as it is the first to assess the effect of CAM use on sleep and quality of life in patients with rheumatoid arthritis.

This study revealed that patients with RA used CAM methods (60.5%). The use of CAM by individuals with chronic diseases in the world and in Turkey has been reported to increase gradually (21-37). When studies conducted in different countries with RA patients were reviewed, it was reported that the frequency of CAM use was between 33% and 66% (28-34). Studies conducted in Turkey showed that this rate was between 32% and 46%, and patients used at least one CAM method (27,32-34). Rao et al. (1999) found that the rate of CAM use in RA patients was 45% (35). A study conducted in Mexico reported that this rate was 59.2% (36). The results of this study showed that the rate of CAM use was high. This is attributed to factors such as the perceived severity of the disease, the presence of symptoms that limit the patient's life, society and cultural factors in which the participants reside (eastern Turkey), and easy access to CAM methods.

This study revealed that patients who were diagnosed for 6–10 years, used CAM along with medication, had regular doctor visits, and had different chronic diseases using CAM. Similarly, Almuhareb et al. (2019) reported in their study with RA patients that 66.7% of the patients used CAM and they were using CAM

along with drug treatment for an average of 11 years (37). Another study reported that 90% of rheumatic patients who regularly attended doctor visits used CAM (35).

This study found that the majority of patients were using CAM for 1–5 years, their doctor or nurse was not aware of their CAM use, and they used CAM since they believed in the benefits of CAM methods. Likewise, a study by Robinson et al. (2004) revealed that the rate of RA patients who informed healthcare professionals was 23% (38). The same study reported that the reasons why the patients failed to disclose that they used CAM were that they were not asked about it by the physician, they forgot to tell the physician, and they feared being disapproved by the physician (38). Another study found that the reasons why the patients who used CAM did not tell their doctors were that there was no point in telling their doctors, that the medical profession did not have enough knowledge about CAM, and that they did not think that their doctors wanted to know that they used CAM (39). A study conducted in the USA reported that only 14.4% of patients informed their doctors about the use of CAM (40). On the other hand, it was reported that only 8.3% of patients in Saudi Arabia discussed their CAM use with their physicians (41). In their study, Irazu´ Contreras-Ya´ñez et al. (2020) found that the reasons why patients preferred to use CAM were that the cost of CAM methods was affordable and they believed that CAM methods were reliable and beneficial (42).

This study analyzed the most frequently used CAM methods and the purposes of their use and found that patients used dietary supplements to reduce tender and swollen joints and herbal supplements to increase the effect of medications. The results of the present study are similar to the results of other studies conducted in Turkey (43,44). Almuhareb et al. (2019) reported that the most frequently used CAM methods were herbal, vitamin, and mineral supplements, and the purpose of use was the belief that they "provided additional benefits."(37)

The most frequently used CAM methods may differ according to the sociocultural background, religious characteristics, ethnic origins, and geography of the population. For example, a study conducted among Iranian patients reported that the most commonly used CAM methods were prayer and spiritual healing (45,46). Another study conducted among Korean patients reported that the most commonly used types of CAM were exercise therapy and vitamin intake (47). It was emphasized that Chinese patients mostly preferred herbal medicines(48), while Latino patients most frequently used dietary therapies, spiritual healing, and physical methods such as massage and acupuncture (42). In Saudi Arabia, CAM practices are mostly based on Quranic traditions and the Sunnah (the recommendations and teachings of the Prophet Muhammad) (37,45,46).

A comparison of the quality of life and sleep quality of patients who used CAM and those who did not use CAM in this study showed that the quality of life and sleep quality of patients who used CAM were statistically significant compared to those who did not use CAM. The present study revealed that pain, functionality, and mood were effective in the assessment of quality of life and sleep in patients with RA. In general, physiological and psychosocial problems lead to sleep problems in RA patients (49). Patients experience sleep problems, especially due to pain. It has been reported that patients with sleep problems have difficulty accomplishing their daily routine tasks, which leads to a poor quality of life, and they resort to seeking help for this problem (50,51). Patients often experience sleep problems, particularly due to pain. Among the psychological problems that cause sleep problems are anxiety and depression. The causes of anxiety and depression in patients include the irreversible, chronic, progressive nature of the disease, serious deformities and disabilities, as well as the difficulties individuals experience in coping, loss of independence, inability to perform daily living activities, job loss, changes in family roles, economic and social problems

(10,50,51). Studies have reported that the CAM methods used by patients provide functional freedom of movement by relieving pain and swelling in the joints (42,52).

CONCLUSION

The results of this study showed a high rate of CAM use. Moreover, patients attended regular check-ups and used CAM methods together with drug treatment. Patients who used CAM did not inform their doctor or nurse about this issue, and they used CAM methods because they thought that they were beneficial. When the CAM methods used by the patients and their purposes of use were examined, it was determined that they used dietary supplements to reduce tenderness and swelling in the joints, and herbal supplements to increase the effectiveness of medications. When comparing the quality of life and sleep quality of patients who used CAM with those who did not, it was determined that the quality of life and sleep quality of patients who used CAM were statistically significant. The use of CAM has become popular among Turks in recent years. It is believed that the cure for most diseases is natural. Traditional attitudes and beliefs, ease of access, and low cost may explain the popularity of medicinal herbs among the Turkish population.

Limitation

The sample was limited, and the study was conducted only in the outpatient clinics of the hospital's Rheumatology Department.

Ethical Considerations

Before starting the study, approval from the non-invasive research ethics committee of the Kafkas University Faculty of Health Sciences (date: 28/02/2022 and number: 81829502.903/21) and written permission from the hospitals where the study was conducted were obtained. The participants were informed about the purpose and method of the study and that participation was entirely voluntary, and written consent was obtained. The research was conducted in accordance with the Principles of the Declaration of Helsinki.

Authors'Contributions

All the authors listed in the article have approved the article assubmitted and takefull responsibility for the article. All the authors have participated in the concept and design,analysis,and interpretation of data the article (ZAŞ and YD).

Conflict Interest

No conflict interest between the authors and /or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

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