

## The Use of Complementary and Alternative Treatment in Headache Patients

### Baş Ağrısı Hastalarında Tamamlayıcı ve Alternatif Tedavi Kullanımı

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#### ABSTRACT

**Objective:** Complementary and alternative treatment methods (CAM) are used frequently for patient have primary headache patients and many studies investigate why it is used. Our aim is to determine reason of using CAM and application locations of CAM in our country.

**Methods:** Two hundred patients who were diagnosed primary headache and accepted to participate in our study were enrolled. We investigate sociodemographic data, CAM usage frequency, preferred CAM, satisfaction rates, thought on CAM use, recommendation sources, whether medical treatment continues or not and reason of CAM usage.

**Results:** The 26% of patients were using CAM and 55,7% of those using CAM were satisfied with the treatment. Patients using CAM were younger than those who did not use ( $p=0,033$ ). Unemployed, students and all-day employees; single people and well-educated people were using CAM more often ( $p=0,042$ ;  $p=0,026$ ;  $p=0,009$ , respectively). The most frequent reason of CAM usage was 'effective treatment of headache of this treatment methods'. 85% of CAM users had also continued medical treatment.

**Conclusion:** We found single and well-educated patients more likely candidate for CAM. High rates of CAM and medical treatment usage indicates that CAM only treatments are not generally accepted in our country.

**Key Words:** Headache, complementary treatment, alternative treatment

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#### ÖZET

**Giriş:** Dünyada baş ağrısında tamamlayıcı ve alternatif tedavi (TAT) yöntemleri kullanımına yönelik çalışmalar artan sıklıkta yapılmakta ve hastaların bu tedaviye başvurma nedenleri araştırılmaktadır. Çalışmamızın amacı ülkemizdeki baş ağrısı hastalarında TAT yöntemlerinin yerini ve nedenlerini belirlemektir.

**Yöntem:** Çalışmamıza nöroloji polikliniğinde primer baş ağrısı tanısı konulmuş çalışmaya katılmayı kabul eden 200 hasta dâhil edildi. Hastaların sosyodemografik verileri, TAT kullanım sıklığı, tercih edilen TAT yöntemi, memnuniyet oranları, TAT'a bakış açısı, tavsiye kaynakları, tıbbi tedaviye devam edip etmedikleri ve TAT'a başvuru sebepleri sorgulandı.

**Bulgular:** Hastaların % 26'sı TAT kullanırken, TAT kullananlarda tedaviden memnuniyet oranı % 55,7 bulundu. TAT kullananlar kullanmayanlara göre daha gençti ( $p= 0,033$ ). TAT kullanımı işsiz, öğrenci, tam gün çalışan gruplarında diğer meslek gruplarına göre ( $p= 0,042$ ), bekârlarda evlilere oranla ( $p= 0,026$ ) ve eğitim düzeyi yüksek olanlar da düşük olanlara göre ( $p= 0,009$ ) daha fazlaydı. En sık TAT'a başvuru sebebinin 'Bu tedavinin baş ağrısını etkili şekilde tedavi ettiğine inanma' olduğu bulundu. TAT kullanan hastaların % 85'i önerilen tıbbi tedaviye de devam etmişti.

**Sonuç:** Bekâr ve eğitim düzeyi yüksek bir hastanın TAT kullanımı için daha yüksek oranda aday olduğunu saptadık. Hastalarımızın önemli oranda TAT ile birlikte medikal tedaviye devam etmesi ülkemizde TAT'lerin tek başına kullanımının halen genel kabul görmediğini göstermektedir.

**Anahtar Sözcükler:** Baş ağrısı, alternatif tedavi, tamamlayıcı tedavi

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**INTRODUCTION**

Complementary and alternative treatment methods (CAM) with or without conventional medical treatments are frequently used for headache (1-6). A study shows that patients with headache use 3 different CAM methods on average (9). Other studies from United Kingdom showed 47% of patients used CAM at least once in their life and CAM usage prevalence was 20-28% (7-8). The most frequent (48%) reason of CAM usage was unsatisfactory results from all of the conventional medical treatments (9).

There is only one study about this topic in our country which investigates known and used methods and utility of CAM. In addition to these questions, we also investigated the thought on CAM use, recommendation sources, whether medical treatment continued, and the reason of CAM usage, so we aimed to find out the importance of and reason for CAM usage by patients with primary headache in our country.

**PATIENTS and METHODS**

This prospective study included 200 primary headache patients who had been admitted to the outpatient headache clinic. Local ethics committee approval and informed consent from patients were obtained. All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. The data of the patients with migraine, episodic tension-type headache(TTH) and chronic TTH according to criteria of the International Headache Committee (IHC) such as sociodemographic data, headache features and the first time when headache began were recorded. The questionnaire form used in a study performed in UK was modified to be used in this study (9). The patients using the alternative treatment methods were questioned about which treatment method they were using, their thoughts about this treatment, the frequency of use, recommendation sources, whether they continue their medical treatment, and the reason for use and the satisfaction rates (Table 1).

**Table 1.** Various techniques of CAM presented to the patients and their frequencies

CAM methods	Frequency n (%)
Massage therapy	29 (33)
Cold	14 (15.9)
Herbal medicine	12(13.7)
Exercise	8(9.1)
Vitamins/Nutritional supplements	6(6.8)
Other alternative treatments	5(5.7)
Autogenic training/Support groups	4(4.6)
Folk remedies	3(3.4)
Color/dance/Music therapy	2(2.3)
Aromatherapy	1(1.1)
Detoxification/Specific diet	1(1.1)
Mediation	1(1.1)
Yoga	1(1.1)
Energy/Spiritual healing	1(1.1)
Others*	0

\*Others include craniosacral therapy, osteopathy, homeopathy, iridology, Alexander technique, reflexology, hypnosis, Reiki, chiropractic, acupressure, oxygen/ozone therapy.

*Statistical Analyses*

Mean±SS, median (minimum-maximum) and number percentage and interquartile range were used to describe numerical variables and for categorical variables, respectively. Frequency distributions (e.g. gender, marital status...) among CAM users and non-users were analyzed by chi-square test. Kruskal-Wallis test was used to compare quantitative data. A p-value of less than 0.05 was used as the criterion of significance. All computations were made using SPSS 11.5 (SPSS Inc., Chicago, IL, USA).

**RESULTS**

*Characteristics of surveyed population*

Two hundred patients were evaluated during study. 158 (79%) of patients are female, 46 (23%) of patients had migraine, 71 (35,5%) of patients had episodic TTH, and 83 (41,5%) of patients had chronic TTH.

The average age of all patients was 36.81±12.7, for migraine patients was 34.43±11.63, for episodic TTH patients was 36.45±12.92, and for chronic TTH patients was 38.68±13.31.

Ninety-one (45.5%) of patients were housewives, 59 (29.5%) of patients were full-time employees, 23 (11.5%) of patients were student, 15 (7.5%) of patients were retired, 6 (3%) of patients were unemployed, and 6(3%) of patients were self-employed.

A hundred and fifty one (75.5%) of patients were married. 52(26%) of patients graduate from a university while 44(22%) of patients were high school and 100(50%) of patients were primary school graduates. 4(2%) of patients were illiterate.

Age, gender, education level, marital status, and job were not statistical significant different between headache groups. We used visual analog scale to determine headache intensity. VAS scores were not statistical significantly different between headache groups (Table 2) but patients with chronic TTH had more frequent headaches and this was found to be statistically significant (p<0.001). Patients with episodic TTH had relatively shorter headache durations (p=0.043).

**Table 2.** Headache type, duration, frequency and VAS scores of patients

Headache Type	Migraine	Episodic TTH	Chronic TTH	p
<b>Duration(hour)</b>	12(6-24)	9(3-36)	12(3-12)	
Median (IQR 25-75)				0.043
<b>Frequency (monthly)</b>	4(2-8)	4(2-10)	30(30-30)	
Median (IQR 25-75)				<0.001
<b>VAS</b>	8,08 ±1,50	7,16 ±1,85	7,36 ±2,02	0.10

TTH: Tension-Type Headache, VAS: Visual Analog Scale, IQR: Interquartile Range

*CAM use in the study population*

Fifty two (26%) of patients used CAM and the most used method was massage (Table 1). One method used by 32, two methods by 12, three and four methods by 3 patients, five and six methods by 1 patient.

Forty five of patients using CAM are female. 33 of patients were married, 17 of patients were single and 2 of patients were divorced. 23 of patients had chronic TTH, 15 of patients had episodic TTH, and 14 of patients had migraine. The patients using CAM were found to be younger. The patients suffer from headache for longer time were using CAM more frequently but this was not statistically significant (p=0.6). These patients were using CAM after they used different medical treatments.

Unemployed participants and students were using CAM more often. It was also observed that full-day employees were often using CAM often (p=0.042). Singles and university graduates were using CAM more frequently (p=0.026; p=0.009, respectively).

There was no statistically significant difference in gender (p=0,13), headache frequency (p=0.89), and headache type (p=0.67) between those using and not using CAM (Table 3).

**Table 3.** VAS, age, headache frequency, headache durations of patients who do and do not use CAM

		Headache Type Migraine (n:14)	Episodic (n:15)	TTH	Chronic TTH (n:23)	P
<b>CAM Users</b>	Age (Mean±SD)	33.64±11.77	32.66±15.28		34.91±12.63	0.735
	Monthly Headache Frequency (Median- IQR)	3.5(2-8.5)	4(2-10)		30(15-30)	< 0.001
	Headache Duration (Median-IQR)	24(7.5-39)	4(2-24)		12(5-24)	0.099
	VAS (Median-IQR)	8.07±1.26	7.13±1.99		7.56±1.92	0.629
<b>Non-CAM Users</b>		Migraine (n:32)	Episodic (n:56)	TTH	Chronic TTH (n:60)	
	Age (Mean±SD)	34.78±11.74	37.46±12.17		40.13±13.39	0.340
	Monthly Headache Frequency (Median- IQR)	4(1.25-7.5)	4(2-9.5)		30(30-30)	<0.001
	Headache Duration (Median-IQR)	12(5.25-24)	12(3-45)		12(3-12)	0.149
	VAS (Median-IQR)	8.09±1.61	7.17±1.84		7.28±2.07	0.016

TTH: Tension-Type Headache, VAS: Visual Analog Scale, IQR: Interquartile Range, CAM: Complementary and Alternative Medicine

Forty four (85%) of the CAM users also continued a medical treatment prescribed by a doctor and 25 of them had a reduced headache but 3 of them had increased headache frequency. Satisfaction rate with CAM is 55.7% in all CAM users while it is 71.4% in migraine patients, 53.3% in episodic TTH patients, and 47.8% in chronic patients. The reasons for using this treatment in 52 patients who use CAM was that it was believed to treat headache effectively in 35, the last resort in 9, the doctor recommendation in 5, and not satisfactory results from conventional medical treatments in 3. Sixteen of the patients who used the CAM reported that they did not tell the doctors because the doctors did not ask about it.

## DISCUSSION

We found that primary headache patients who are single, highly educated, unemployed or students are more likely to resort to CAMs and lots of them continued their conventional medical treatments without interruption. Use of CAM by these patients may be caused by the belief that there is no important side effect of using CAM but this belief was sometimes wrong.

CAM rates may vary among countries. Studies from UK and Italy showed these rates differed from 29 to 40 percent but in the USA, Germany and Austria, it is above 80 percent (3-8). Our findings are in parallel with those in Italy and UK. Studies have shown that CAM is more common in patients with severe and frequent headache and longer headache duration (4,6,13). There was no difference in headache durations and frequencies, and VAS scores among those who did or did not use CAM. In addition, no difference was found between headache types and CAM usage as in a previous study (6).

In this study, we found that the most common reason for using CAM was the belief that it is effective treatment of headache while in other studies, it was found that CAM was applied as a last resort for the reason that unsatisfactory results were obtained in all the conventional medical treatments (6,8,14,15). There was no relationship between marital status and the use of CAM, but there was some controversy between job, education, gender and age (4,6,11,13,16). Contrary to previous studies, we found that singles were using CAM more frequently than the married (4,13). Some studies also found that CAM users generally older than non-users, but some studies found no difference (4,6,11,13). Interestingly in our study, we found CAM users were younger than non-users.

Half-time employees were less frequently using CAM. A previous study found that employees were using CAM more frequently than the unemployed but others did not support this finding (9-13).

Acupuncture, massage, herbal medicine, exercise, and vitamins/nutritional supplements are the most commonly used CAM methods in the literature (3-6,10,11). Likewise in the literature, our study showed that massage, herbal medicine, cold and exercise are the most used CAM methods.

Unlike other studies showing that CAM methods are often suggested by relatives and friends (4,5,17,18), our study found 65% of patients using CAM began by themselves. This may be related to their higher education levels.

Satisfaction rate was 55.7% in CAM users but 85% of CAM users were continuing medical treatment suggested by medical doctor. Reduced headache frequency and relatively high satisfaction rate may be the result of the medical treatment received. Similarly, in a study conducted in UK, the satisfaction rate was 60%, also no patients deteriorated and only 8% of patients left medical treatment (9). Thus, using CAM and medical treatment together may be related to increased satisfaction rate with CAM.

In the literature, patients with migraine and tension-type headache suffered for longer times and more frequently than our patients (3-5,9,12). This difference may be related to different satisfaction rates. Also, differences in evaluation of CAM effectiveness may cause different results.

In our study, the patients reported the use of CAM to the doctor at a higher rate than other studies (9). One of the most important reason for of this may be the widespread positive opinion on CAM. High rates of CAM and medical treatment usage indicate that CAM-only treatments are not generally accepted in our country.

We would like to draw attention to the fact that the use of CAM for patients who are single and have higher education levels is more frequent in line with the results of our study.

A major limitation was that this study was conducted at a single headache clinic which represents a single region and limited number of patients, so it is not clear to what extent this study can be generalized to the country population. There is an obvious need for bigger sample-sized studies that reflect the entire population.

## Conflict of interest

No conflict of interest was declared by the authors.

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