RESEARCH ARTICLE

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The Relationship Between Epilepsy Knowledge Level and Complementary and Alternative Medicine Use in Adults with Epilepsy

Epilepsili Yetişkinlerde Epilepsi Bilgi Düzeyi ile Tamamlayıcı ve Alternatif Tıp Kullanımı Arasındaki İlişki

ABSTRACT

Objective

The aim of this study was to determine the characteristics of complementary and alternative medicine (CAM) use in individuals with epilepsy and assess its relationship with disease awareness.

Material and Methods

The study was conducted between October 2024 and January 2025 with 325 people with epilepsy (PWE) in a province in Eastern Turkey. A personal information form containing 16 questions about CAM usage characteristics and an epilepsy knowledge scale were used to collect data. Chi-square, t-test, ANOVA, and Pearson correlation analysis were used to analyze the data. Analyses were performed with IBM SPSS Statistics 27 software at a 95% confidence interval and a significance level of $p<0.05$.

Results

The average duration of epilepsy was 5.58 ± 3.44 years. It was found that 45.5% of PWE used levetiracetam, 21.8% used a CAM method for epilepsy, 63.4% used CAM to improve general health, 87.3% preferred herbal methods, and 50.7% reported moderate positive effects. CAM usage was significantly more common among individuals with low income, generalized epilepsy, and those not using medication ($p=0.003$; $p<0.001$; $p=0.000$).

Conclusion

One-fifth of the participants used CAM methods, with herbal medicines being the most preferred method. Those with generalized epilepsy and those not using antiseizure drugs (ASDs) were more inclined to use CAM. Including information on CAM use in medical histories taken by healthcare professionals can help identify potential CAM users, thus contributing to the treatment process of epilepsy.

Key Words

Epilepsy awareness, Epilepsy knowledge, Complementary medicine

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ÖZ

Amaç

Bu çalışmanın amacı, epilepsili bireylerde tamamlayıcı ve alternatif tıp (TAT) kullanım özelliklerini belirlemek ve hastalık farkındalığı ile ilişkisini değerlendirmektir.

Gereç ve Yöntemler

Çalışma, Ekim 2024 ile Ocak 2025 tarihleri arasında Türkiye'nin doğusundaki bir ilde 325 epilepsi hastası ile yürütüldü. Veri toplamak için TAT kullanım özellikleri hakkında 16 soru içeren kişisel bilgi formu ve epilepsi bilgi ölçeği kullanıldı. Verilerin analizinde ki-kare, t-testi, ANOVA ve Pearson korelasyon analizi kullanıldı. Analizler, IBM SPSS Statistics 27 yazılımı ile %95 güven aralığında ve $p<0,05$ anlamlılık düzeyinde gerçekleştirildi.

Bulgular

Ortalama epilepsi süresi 5,58 ± 3,44 yıldır. Katılımcıların %45,5'inin levetirasetam kullandığı, %21,8'inin epilepsi için bir TAT yöntemi kullandığı, %63,4'ünün genel sağlıklarını iyileştirmek için TAT kullandığı, %87,3'ünün bitkisel yöntemleri tercih ettiği ve %50,7'sinin orta düzeyde olumlu etkiler bildirdiği bulundu. TAT kullanımı, düşük gelirli bireylerde, yaygın epilepsi hastalarında ve ilaç kullanmayanlarda ($p=0,003$; $p<0,001$; $p=0,000$) anlamlı derecede daha yaygındı.

Sonuç

Katılımcıların beşte biri TAT yöntemlerini kullanmış ve en çok tercih edilen yöntem bitkisel ilaçlar olmuştur. Yaygın epilepsi hastaları ve antinöbet ilaç kullanmayanlar, TAT kullanmaya daha yatkındı. Sağlık uzmanları tarafından alınan tıbbi öykülerde TAT kullanımı hakkında bilgi verilmesi, potansiyel TAT kullanıcılarının belirlenmesine ve böylece epilepsi tedavi sürecine katkıda bulunmaya yardımcı olabilir.

Anahtar Kelimeler

Epilepsi farkındalığı, Epilepsy bilgisi, Tamamlayıcı tıp

INTRODUCTION

Epilepsy is a chronic, non-communicable neurological condition that can manifest across all age groups. With an estimated global prevalence of nearly 50 million individuals, it ranks among the most common neurological disorders worldwide (1). In Türkiye, the prevalence of epilepsy is estimated to be 5.3 per 1,000 individuals, which is higher than in many developed countries (2). Evidence-based medical approaches remain the cornerstone of epilepsy treatment. Most epileptic seizures can be controlled with antiseizure drugs (ASDs). Surgical interventions aimed at removing epileptogenic lesions may also halt seizure activity. The ketogenic diet is a metabolic therapy that has been used for over a century, with well-documented efficacy particularly in patients with drug-resistant epilepsy. Characterized by a high-fat and very low-carbohydrate composition, this diet induces ketosis and results in metabolic changes that may influence seizure threshold (3). Clinical studies have shown that the ketogenic diet and its variants are effective in reducing seizure frequency, especially in pediatric epilepsy syndromes. Currently, the ketogenic diet is recognized as an evidence-based treatment option and is used alongside antiepileptic medications in selected patient populations (4,5). In the management of epilepsy, there are not only pharmacological and evidence-based approaches but also supportive practices that patients may turn to. Despite the lack of clear evidence regarding its efficacy based on scientific methods, people with epilepsy (PWE) explore complementary and alternative medicine (CAM) as an alternative treatment option. The use of CAM has been reported worldwide (3). Across several countries in Asia and Africa, CAM represents a primary source of healthcare. During the last decade, there has been a marked growth in scholarly and public interest in CAM (6).

Among epilepsy patients, the prevalence of CAM usage is remarkably high, varying between 7.5% and 76% across different regions and studies (3,7). Biological approaches, often referred to as natural products, comprise elements such as herbs, vitamins, dietary supplements, antioxidants, and minerals. A study conducted in Malaysia found that 71.2% of participants used CAM, with herbal products being the most popular form (8). In contrast, mind–body practices involve methods like acupuncture, aromatherapy, cupping, massage, spiritual healing practices (including the use of holy water, amulets, or talismans), as well as physical activities such as Zumba. Aromatherapy, yoga, meditation, and homeopathy are commonly discussed by individuals with epilepsy and their caregivers (9). International epilepsy organizations emphasize the need for cautious integration of such approaches within comprehensive epilepsy care (10). In this context, regulatory frameworks also play an important role; for example, in Australia, complementary medicines and related products are overseen by the Therapeutic Goods Administration to ensure quality and safety, underscoring the importance of professional guidance when these approaches are considered in epilepsy care (10,11,12).

When evaluating the use of complementary and alternative medicine (CAM) in epilepsy management, the level of disease-related knowledge among people with epilepsy (PWE) is of critical importance, particularly with respect to seizure control. Insufficient knowledge regarding factors that may precipitate seizures is inevitably associated with increased seizure frequency (12). Inadequate medical knowledge has been linked to poorer clinical outcomes, increased mortality rates, and higher healthcare costs. In contrast, adequate knowledge and understanding of the disease have been shown to reduce epilepsy-related anxiety, fear, misconceptions, and stigma. Enhancing disease-related knowledge among people with epilepsy may contribute to improved treatment adherence, better clinical outcomes, and additional health-related benefits (12,13). Numerous studies in the literature have examined CAM usage patterns among PWE and their level of knowledge about epilepsy. However, no studies have been identified that measure knowledge levels according to CAM usage. The aim of this study was to determine the CAM usage characteristics of PWE and assess their relationship with disease-related knowledge.

MATERIALS and METHODS

The study was conducted in a descriptive and correlational type between October 2024 and January 2025 at an Education and Research Hospital located in Van, in the Eastern Anatolia region of Turkey. Based on the study conducted by Eren et al. (2019), a power analysis was performed using the G*Power 3.1.9.2 program, which determined that the minimum sample size required was 273, considering an effect size of d = 0.219, a confidence interval of 0.95, and an error margin of $\alpha = 0.05$ (14). A review of the medical records of patients with epilepsy who visited the hospital in the past year identified a total of 512 individuals. Among these, those who did not meet the inclusion criteria (n=177) and those who declined to participate during data collection (n=10) were excluded. Consequently, the study was completed with 325 participants. The inclusion criteria for the study were as follows: being over 18 years old, having a well-documented diagnosis of epilepsy, having been diagnosed with epilepsy for at least six months, using ASDs, having experienced at least one seizure in the past two years, being able to understand and speak Turkish, and being willing to participate in the study. Additionally, participants were asked about other comorbidities that could significantly impact their quality of life (such as cognitive impairment or major depression), and those who reported such conditions were excluded from the study. Data was collected when patients visited the clinic for routine follow-ups, either by self-administered questionnaires or through researcher-administered interviews. Each interview lasted approximately 17 minutes.

A personal information form and the Epilepsy Knowledge Scale (EKS) were used for data collection in the study. Personal Information Form, prepared by the researchers, consisted of a total of 16 questions: 10 questions assessing personal characteristics such as age, gender, marital status, and educational level, as well as disease-related characteristics such as disease duration, seizure frequency, seizure type, and antiepileptic drug usage; and 6 questions evaluating CAM usage characteristics.

Epilepsy Knowledge Scale (EKS) was developed by Aydemir et al. (2008). It evaluates the medical aspects of the disease (e.g., causes, treatment, and seizure triggers), social aspects (e.g., whether patients can work in regular jobs or attend public schools), and knowledge regarding first aid and interventions during seizures (e.g., exposing the patient to onion fumes or pouring water on their face). The scale items were answered as "true," "false," or "I don't know." The total score ranges from 0 to 16, with higher scores indicating greater knowledge about epilepsy. The scale's Kuder-Richardson 20 internal consistency coefficient is 0.72 (15).

The demographic and clinical characteristics of the participants were determined using descriptive statistical methods. Numerical data were presented as mean ± standard deviation and minimum/maximum values, while categorical data were expressed as frequencies and percentages. The characteristics of patients who used CAM methods and those who did not were compared using the chi-square test. The epilepsy knowledge scores were compared across demographic and clinical variables using an independent samples t-test or ANOVA. For continuous variables such as age and epilepsy duration, Pearson correlation analysis was applied. All analyses were conducted using IBM SPSS Statistics 27 software, with a 95% confidence interval and a significance level of $p<0.05$.

Prior to initiating the study, ethical approval was obtained from the Ethics Committee of the Van Yüzüncü Yıl University Faculty of Medicine. Approval was granted on 24.06.2024 with the approval number 2024/07-27. During face-to-face interviews, participants were provided with a form containing necessary explanations regarding the purpose of the study and data collection, and written informed consent was obtained. The study was conducted in accordance with the Helsinki Declaration of Human Rights.

RESULTS

A total of 325 adult patients were included in this study. Table I presents various demographic and clinical characteristics of the participants, such as age, gender, age at epilepsy onset, and epilepsy type. Among the participants, 71.7% (n=233) were female. The age range of the participants was between 19 and 61 years, with a mean age of 33.14 ± 9.07 years. In terms of educational level, 21.8% (n=71) had primary education, 29.2% (n=95) had secondary education, 34.5% (n=112) had high school education, and 14.5% (n=47) had a university degree or higher. Additionally, 65.2% (n=212) of the participants were married, 32.3% (n=105) were unemployed, and 69.8% (n=227) had a middle-income level. When examining the distribution by epilepsy type, 5.5% (n=18) of the patients had generalized epilepsy, while 93.2% (n=303) lacked sufficient knowledge about their epilepsy type. The duration of ep-

ilepsy ranged from 1 to 20 years, with a mean duration of 5.58 ± 3.44 years. A total of 55.1% (n=179) of the patients experienced seizures once a month or less, and 50.8% (n=165) were receiving monotherapy (Table I).

Table I. Demographic and clinical characteristics of participants.

Variables (n=325)	n (%)
Gender	
Female	233 (71.7%)
Male	92 (28.3%)
Education level	
Primary school	71 (21.8%)
Middle school	95 (29.2%)
High school	112 (34.5%)
University and higher	47 (14.5%)
Marital status	
Married	212 (65.2%)
Single	113 (34.8%)
Employment status	
Employed	99 (30.5%)
Unemployed	105 (32.3%)
Unemployed due to epilepsy	7 (2.2%)
Housewife	96 (29.5%)
Student	18 (5.5%)
Monthly income level	
Low	86 (26.5%)
Medium	227 (69.8%)
High	12 (3.7%)
Epilepsy type	
Generalized	18 (5.5%)
Focal	3 (0.9%)
Combined (Generalized and Focal)	1 (0.3%)
Insufficient information	303 (93.2%)
Seizure frequency	
None in the past year	118 (36.3%)
Once a month or less in the past year	179 (55.1%)
None in the past year	28 (8.6%)
Antiepileptic drug regimen	
Monotherapy	165 (50.8%)
Polytherapy	82 (25.2%)
No medication	78 (24.0%)
Age (mean ± SD) [Range]	33.14 ± 9.07 [19-61]
Epilepsy duration (mean ± SD) [Range]	5.58 ± 3.44 [1-20]

Additionally, Table II presents the distribution of antiepileptic drugs used by the patients. The most commonly prescribed ASD was levetiracetam, used by 45.5% (n=148) of the study group. Another frequently prescribed medication was valproate, which was used by 28% (n=91) of the participants.

Table II. Distribution of used antiepileptic drug types.

Used Antiepileptic Drug Type	n (%)
Leetiracetam	148 (45.5
Valproate	91 (28.0%
Lamotrigine	45 (13.8%
Topiramate	41 (12.6%
Carbamazepine	15 (4.6%)
Fenitoin	9 (2.8%)
Other	3 (0.9%)

Among the 325 patients included in the study, 71 (21.8%) reported using a CAM method for epilepsy management. Of those using CAM, 63.4% (n=45) stated that they chose these methods to improve their overall health. The most commonly preferred CAM methods were herbal medicine (87.3%, n=62), exercise (52.1%, n=37), and prayer (31%, n=22) (Table III).

Table III. Findings related to the use of CAM methods.

Questions	n (%)
Do you use CAM methods for your epilepsy?	
Yes	71 (21.8%)
Reason for Using CAM	
Improve general health	45 (63.4%)
Because they are natural and safe	20 (28.2%)
To protect from antiepileptic drug side effects	6 (8.5%)
Which CAM methods did you use?	
Herbal medicines	62 (87.3%)
Exercise	37 (52.1%)
Prayer	22 (31.0%)
Massage therapy	11 (15.5%)
Recitation by a religious person	9 (12.7%)
Aromatherapy	6 (8.5%)
Meditation	5 (7.0%)
Acupuncture	5 (7.0%)
Yoga	3 (4.2%)
Did the CAM method have a positive effect on seizure control?	
High level of effect	30 (42.3%)
Medium level of effect	36 (50.7%)
Very little effect	2 (2.8%)
No effect	3 (4.2%)
Did not answer	30 (42.3%)
Did you experience any side effects from the CAM method?	
Yes	1 (1.4%)
Did you inform your doctor about using CAM?	
Yes	11 (15.5%)

Regarding the perceived effectiveness of CAM, 42.3% (n=30) of the users reported a high level of positive effects, while 50.7% (n=36) experienced a moderate effect. Additionally, 42.3% (n=30) of the respondents did not provide an answer regarding its effectiveness. Only 1.4% (n=1) of the participants reported experiencing side effects associated with CAM use. Furthermore, only 15.5% (n=11) of CAM users informed their doctors about their use of these methods (Table III). Figure 1 illustrates the proportional distribution of the CAM methods used. Table IV presents a comparison of the demographic and clinical characteristics of individuals using and not using CAM. No statistically significant difference was found between CAM users and

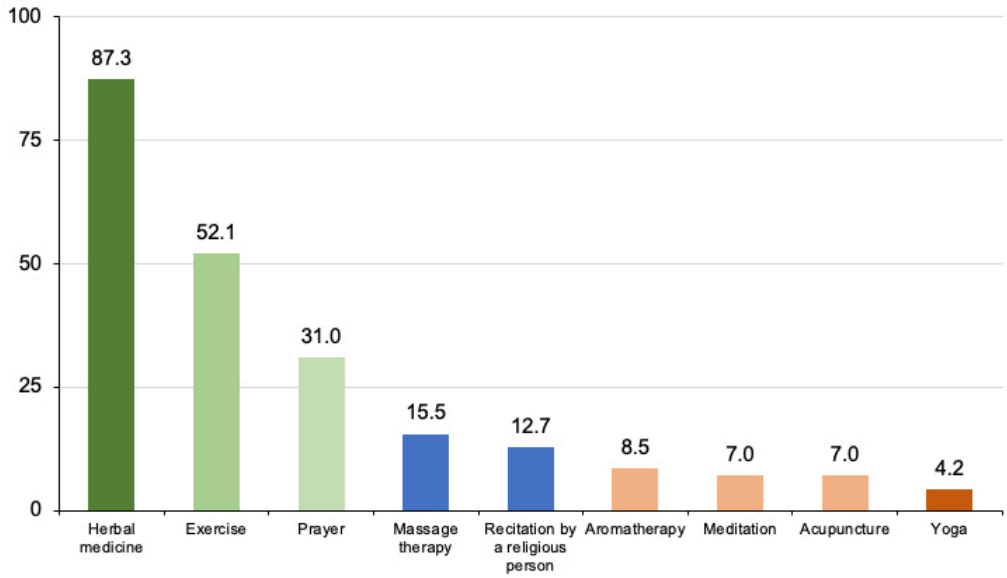


Figure 1. Distribution of used CAM methods (%)

non-users regarding gender (p=0.788), educational level (p=0.254), marital status (p=0.075), employment status (p=0.580), or seizure frequency (p=0.290). However, a significant difference was identified based on the monthly income level (p=0.003). Individuals with a low-income level had a higher CAM utilization rate (34.9%) compared to those with middle (17.2%) and high-income levels (16.7%). This finding suggests that participants with lower income levels are more inclined to use CAM methods. A significant difference was also found based on epilepsy type (p<0.001). The CAM utilization rate was high among individuals with generalized epilepsy (55.6%), while those with focal epilepsy did not use CAM. Additionally, all individuals with combination-type epilepsy reported CAM use, although it should be noted that there was only one patient in this category. Lastly, a significant relationship was found between CAM utilization and the ASD regimen (p=0.000). The CAM utilization rate was considerably low among individuals receiving monotherapy (7.9%), whereas it was significantly higher among those not using any medication (64.1%) (p=0.000, Table IV).

Table IV. Characteristics of patients using and not using CAM methods.

Variable (n=325)		Users (n=71)	Non-users (n=254)	p-value*
Gender	Female	50 (21.5%)	183 (78.5%)	0.788
	Male	21 (22.8%)	71 (77.2%)	
Education level	Primary school	17 (23.9%)	54 (76.1%)	0.254
	Middle school	22 (23.2%)	73 (76.8%)	
	High school	27 (24.1%)	85 (75.9%)	
	University and above	5 (10.6%)	42 (89.4%)	
Marital status	Married	40 (18.9%)	172 (81.1%)	0.075
	Single	31 (27.4%)	82 (72.6%)	
Occupation	Working	27 (27.3%)	72 (72.7%)	0.580
	Not working	19 (18.1%)	86 (81.9%)	
	Not working due to epilepsy	1 (14.3%)	6 (85.7%)	
	Student	4 (22.2%)	14 (77.8%)	
	Housewife	20 (20.8%)	76 (79.2%)	
Monthly income level	Low	30 (34.9%)	56 (65.1%)	**0.003**
	Medium	39 (17.2%)	188 (82.8%)	
	High	2 (16.7%)	10 (83.3%)	
Epilepsy type	Generalized	10 (55.6%)	8 (44.4%)	**<0.001**
	Focal	0 (0.0%)	3 (100.0%)	
	Combined (Generalized and Focal)	1 (100.0%)	0 (0.0%)	
	Insufficient information	60 (19.8%)	243 (80.2%)	
Seizure frequency	None in the last year	22 (18.6%)	96 (81.4%)	0.290
	Once or less a month in the last year	40 (22.3%)	139 (77.7%)	
	Once or more a month in the last year	9 (32.1%)	19 (67.9%)	
Antiepileptic drug regimen used	Single drug treatment	13 (7.9%)	152 (92.1%)	**0.000**
	Multiple drug treatment	8 (9.8%)	74 (90.2%)	
	No drug use	50 (64.1%)	28 (35.9%)	

*Chi-square test used; p < 0.05

In our study, patients' knowledge levels regarding epilepsy were assessed using the EKS, with scores ranging from 8 to 16. The average knowledge score was calculated as 14.09 ± 1.22. Compared to the maximum possible score of 16 on the EKS, these results indicate that participants' knowledge levels were quite high, reaching 88.1%. This finding suggests that participants generally possess sufficient knowledge about epilepsy. Table V presents the comparison of epilepsy knowledge scores based on demographic and clinical variables. The analyses revealed no statistically significant relationship between knowledge scores and gender (p=0.470), educational level (p=0.542), marital status (p=0.971), employment status (p=.721), monthly income level (p=0.995), age (p=0.678), or epilepsy duration (p=0.173). Furthermore, no significant association was found between knowledge levels and epilepsy type (p=0.261), seizure frequency (p=0.404), or the ASD regimen used (p=0.069).

Table V. Comparison of epilepsy knowledge scores based on demographic and clinical findings.

Variables (n=325)	x̄±s	t/F	p value*
Gender			
Female	14.25±0.94	0.724	0.470
Male	14.16±0.92		
Education level			
Primary school	14.32±0.95	0.718	0.542
Middle school	14.12±0.96		
High school	14.26±0.93		
University and higher	14.20±0.88		
Marital status			
Married	14.22±0.94	-0.036	0.971
Single	14.23±0.94		
Employment status			
Employed	14.28±0.83	0.445	0.721
Unemployed	14.25±0.92		
Student	14.18±0.88		
Housewife	14.14±1.06		
Monthly income level			
Low	14.22±0.99	0.005	0.995
Medium	14.22±0.92		
High	14.25±0.97		
Epilepsy type			
Generalized	14.06±0087	-1.158	0.261
Focal	14.67±0.58		
Seizure frequency, n (%)			
None in the past year	14.20±1.05	0.910	0.404
Once a month or less in the past year	14.20±0.86		
None in the past year	14.46±0.90		
Antiepileptic drug regimen, n (%)			
Monotherapy	14.26±0.90	2.690	0.069
Polytherapy	14.34±0.89		
No medication	14.01±1.03		
Age	Pearson r=-0.023		0.678
Epilepsy duration (year)	Pearson r=0.077		0.173

* Independent samples t-test or ANOVA were used. x= mean; s= standard deviation; t/F = test value ; $p < 0.05$

DISCUSSION

In our study, which aimed to explore the relationship between CAM usage characteristics and epilepsy awareness in individuals with epilepsy, the identified results were discussed in light of the literature. Approximately 22% of the participants indicated that they used a CAM method. It is estimated that more than 40% of the population in Western countries and more than 80% of the population in developing countries use CAM for various health issues (16). There are also studies reporting that individuals with epilepsy express personal needs for ASDs but are concerned about the side effects of ASDs (16,17).

In this study, the rate of CAM usage among PWE was found to be similar to that in other countries, for example, 31.3% in Seoul, South Korea, 32% in North India, 34.6% in the United Kingdom (18–20). 39% in the Midwest United States and 49.1% in Taiwan (21,22). This contradicts the claim that more than 80% of the population in developing countries relies on CAM and suggests that local PWE prefer traditional medications over CAM for their condition (23). Moreover, insufficient understanding or trust in their quality, safety, and effectiveness may contribute to the lower-than-expected usage rates. In our study, the majority of those using CAM methods indicated that they did so to improve their general health. Similar to our findings, previous studies have shown that PWE use CAM to improve their general health and, particularly, to manage their seizures or overall condition (3,21). This reflects that most CAM users consider CAM beneficial for general health and believe that epilepsy is part of a broader set of health issues they want to address, including other coexisting diseases.
On the other hand, it is estimated that between 2.6% and 43% of CAM users experience adverse effects (3). In this study, only one participant reported experiencing adverse effects from the CAM they used.

In the present study, herbal remedies were identified as the predominant form of CAM, followed by physical exercise and prayer. This distribution is broadly consistent with prior reports. Herbal preparations and dietary supplements are frequently preferred in epilepsy, largely due to perceptions of natural safety and ease of access; however, their efficacy remains unproven, and certain agents may interact with antiepileptic drugs or exhibit proconvulsant effects (24). Exercise as the second most common modality is likewise supported in the literature, with evidence for improvements in quality of life, psychological outcomes, and, in some cases, seizure frequency (25). Prayer, ranked third in our sample, reflects cultural and religious influences, which have been shown to play a significant role in coping strategies among patients with epilepsy, particularly in countries such as Turkey (26). Collectively, these findings mirror global and regional patterns of CAM use and emphasize the importance of clinician awareness of potential herb–drug interactions and the need to address CAM use in routine clinical encounters (24). A recent

study conducted in Türkiye has reported comparable patterns of complementary and alternative medicine use, emphasizing cultural, familial, and belief-based influences on treatment preferences (27).

Recent studies indicate that approximately half of PWE report a significant positive impact of CAM on seizure control, whereas the other half report a moderate effect. In Poland, 58% of PWE were found to use CAM, with herbal remedies being the most common modality (24). Similarly, in Malaysia, CAM practices commonly included prayer, traditional herbal remedies, massage, and acupuncture, with only 33.3% of PWE disclosing CAM use to their physicians (28). In contrast, a study in Iran reported that 70% of PWE believed CAM could be beneficial in the management of epileptic seizures (29). The prevalence of adverse effects associated with CAM varies, ranging from 2.6% to 43% in previous reports; in our cohort, only one PWE (1.4%) reported negative effects from CAM (30). Despite perceived benefits, most PWE do not intend to discontinue ASDs in favor of CAM (31). Furthermore, a U.S. study found that 79% of participants believed that combining conventional and alternative therapies was preferable to using either approach alone (30). In our sample, only 15% of PWE informed their physicians about the CAM methods they used. Research indicates that PWE often refrain from disclosing CAM use, commonly because physicians do not inquire (32). This underscores the importance of prescribers actively assessing PWE's intentions and actual CAM use, as voluntary disclosure may not always occur. Clinicians should also be equipped with knowledge about CAM to guide PWE on safe use. Accordingly, CAM practices and education should be integrated into future medical and health sciences curricula (28). Moreover, as PWE are willing to discuss CAM with healthcare providers, professionals—including pharmacists—should be prepared to provide accurate information to enhance PWE's understanding of CAM and ASDs.

When comparing the demographic and clinical characteristics of participants who used CAM methods with those who did not, the analysis based on monthly income levels revealed that individuals with a low income had a higher rate of CAM usage compared to those with medium and high-income levels (29). This finding suggests that participants with lower incomes tend to turn to CAM methods. Furthermore, in our study, it was found that individuals with generalized epilepsy had a higher rate of CAM usage, while individuals with focal epilepsy did not use CAM, and individuals with combination-type epilepsy used CAM exclusively. However, there is only one patient in this group. The rate of CAM use was found to be quite low in individuals receiving single-drug and multiple-drug treatments, while it was significantly higher in individuals not using medication (31). Additionally, in the majority of patients who used a CAM method alongside their antiepileptic drug, seizure control was achieved. When interpreting the significant relationship between household income and CAM use, the authors believe that PWE with lower incomes are more likely to prefer CAM options due to their relatively safer financial situation. A study conducted in Malaysia reported that CAM use was significantly related to age, education, income, presence of chronic diseases, and unmet health needs (33). Another study conducted in the United States, focusing specifically on PWE, found that gender, socioeconomic status, and perceptions regarding the safety of CAM were independently associated with previous CAM use (18). A study conducted in Taiwan reported that CAM use was related to gender, seizure frequency, parents' educational level, and religious beliefs (22). The results mentioned above were not similar to the current study due to differences in the socio-demographic/religious backgrounds of the participants, as well as the different variables explored.

It has been observed that the epilepsy knowledge levels of the participants were at a very high level, with a rate of 88.1%. This finding suggests that the participants generally have sufficient knowledge about epilepsy. In one study, it was emphasized that elderly epilepsy patients need more information about their condition to facilitate better care management (34). In another study, it was found that most children with epilepsy had quite good knowledge about medications, half of the children knew specific safety precautions, and they were able to describe their seizures well (35). A study conducted in Lithuania found that a significant portion of PWE (people with epilepsy) were unaware of their condition. In the same study, it was also found that participants did not know how to describe and name their seizures, how to cope with pregnancy, how to reduce seizure frequency, or what to do when someone had a seizure (36). It is necessary to increase the knowledge levels of PWE through options such as education and seminars so that they can be involved in decision-making mechanisms in their treatment and follow-up processes and better understand treatment options. These seminars can be effectively managed through well-organized educational programs using mass media such as school and university health education programs, radio, and television in both developed and developing countries. Having accurate information is crucial for managing epilepsy and reducing comorbidities associated with the disease.

Limitations

This study has certain limitations. Its single-center design in Van restricts generalizability to the broader epilepsy population in Türkiye. The cross-sectional nature prevents causal inferences between CAM use and epilepsy knowledge. Reliance on self-reported data may have introduced recall and social desirability biases. Finally, including only Turkish-speaking individuals without cognitive impairment limits representativeness of the wider patient spectrum.

CONCLUSION

In the study, it was found that one-fifth of the participants used CAM, with herbal medicines being the most commonly used method. Nearly half of the CAM users reported that the method they used had a highly positive effect on seizure control. The use of CAM was higher in individuals with generalized epilepsy and those not using ASDs. Among PWE using both ASDs and CAM, the majority achieved seizure control. Additionally, the vast majority of participants had a very high level of knowledge about epilepsy. It was found that nearly half of the participants used levetiracetam, which was identified as the most commonly prescribed ASD. To prevent the adverse effects or drug interactions caused by CAM, we recommend timely and patient-centered education by healthcare professionals. Moreover, during patient follow-ups, information about CAM usage should be included in the medical history to identify potential CAM users, which would contribute to the treatment process of epilepsy. The question of whether CAM is effective in the treatment of epilepsy requires further research.

Ethics Committee Approval

Ethical approval was obtained from the Ethics Committee of the Faculty of Medicine, Van Yüzüncü Yıl University (approval number: 2024/07-27).

Informed Consent

All the participants' rights were protected and written informed consents were obtained before the procedures according to the Helsinki Declaration.

Author Contributions

Concept – F.G.O.; Design - F.G.O., G.A.; Supervision - F.G.O., G.A.; Resources - F.G.O., G.A.; Materials - F.G.O., G.A.; Data Collection and/or Processing - F.G.O., G.A.; Analysis and/ or Interpretation - F.G.O., G.A.; Literature Search - F.G.O., G.A.; Writing Manuscript - F.G.O., G.A.; Critical Review - F.G.O., G.A.

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