

Complementary and Alternative Medicine for People with Epilepsy: Opinions of Physicians in Oman

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ABSTRACT

Objectives: Several studies have explored the opinions of healthcare workers on the use of complementary and alternative medicine (CAM) in epilepsy treatment. We sought to survey the views of non-neurologist and non-psychiatrist physicians in Oman on the use of CAM for epilepsy. **Methods:** We used convenience sampling to recruit physicians (except neurologists and psychiatrists) from all 11 governorates of Oman. The online questionnaire was open to physicians from 5 January 2022 to 15 February 2023. This study collected anonymous data on their demographics, discipline, work settings, geographical area, and years of practice. Additionally, participants were asked to answer questions about their perception of CAM use and its effectiveness in treating epilepsy. **Results:** A total of 190 physicians participated, of whom 69.5% were men. Respondents were mostly 36 to 45 years old (51.1%). The majority (52.1%) were general practitioners, 21.1% were internists, 17.9% were pediatricians, and 8.9% were family physicians. Most participants (n = 144; 75.8%) believed that CAM may help treat patients with epilepsy (PWE). The most common therapies that participants considered helpful were meditation (46.0%), prayers (44.7%), yoga (32.6%), and exercise (31.1%). **Conclusions:** While the evidence supporting the use of CAM for the treatment of epilepsy is scarce, this survey showed that most physicians (non-neurologists and non-psychiatrists), who manage PWE in Oman, believed that some CAM modalities would help treat epilepsy. Well-designed controlled trials are needed to provide reliable evidence on the usefulness of CAM options in PWE.

Epilepsy is a neurological disorder that affects around 51 million people worldwide.¹ People with epilepsy (PWE) are treated mainly with antiseizure medications (ASMs). About one-third of PWE have drug-resistant epilepsy, where surgical options are often considered. Although modern medicine has made significant progress in treating epilepsy, some patients do not achieve adequate control. Such patients may turn to complementary and alternative medicine (CAM). Traditional healing practices have been used in many cultures for centuries to treat epilepsy. Being rooted in cultural beliefs, traditional CAMs tend to have high social

acceptability, attracting PWE who are dissatisfied with modern medicine.²⁻⁴

Globally, the prevalence of CAM use among PWE varies widely from 7.5% to 73.3%.⁵⁻⁷ Studies have shown that two-thirds of PWE who use alternative therapies do not disclose this to their doctors.⁸ Consuming ASMs along with traditional herbs risks side effects, affecting the patient's health and medication adherence. Asadi-Pooya et al,⁹ gathered global opinions from neurologists and psychiatrists on the use of CAM by PWE. The responding physicians had varying views on the effectiveness of CAM for PWE. In many countries, epilepsy is treated by non-neurologists,

non-psychiatrist physicians, and other healthcare workers. In resource-poor countries, most patients with epilepsy are treated by primary care physicians. Therefore, it is important to understand how non-specialist physicians perceive the role of CAM in the treatment of epilepsy. Our study aimed to narrow the literature gap by collecting the opinions on CAM treatment for epilepsy, among non-neurologists and non-psychiatrists, in Oman, a country with a deficit of neurologists.

METHODS

The limited availability of neurologists in Oman presents challenges for PWE who need specialized care. Consequently, many PWE in Oman first consult general practitioners, internists, pediatricians, and family physicians, who often serve as the initial point of contact for the management of epilepsy.

For this study, we conducted an online survey in all 11 governorates of Oman. The study sample exclusively included family physicians, general practitioners, internists, and pediatricians working in regional hospitals, province and local hospitals, government-extended health centers, and primary health centers under the Ministry of Health (MOH) of Oman. The study excluded all neurologists and psychiatrists, and all private-sector physicians.

The eligible specialist physicians were invited to participate in an online questionnaire (using Google Forms) by email to all participants through the MOH Headquarters via the director of their respective hospital/health center. This was followed by the investigators directly communicating with the heads of regional hospitals, provinces (wilayat), and local hospitals and health centers. Family physicians and general practitioners were also directly contacted via social networks (WhatsApp groups).

The EpiTools sample size calculator (Ausvet)¹⁰ was used to calculate the sample size required for this survey study. The sample size was calculated according to the CAM belief rates of the physicians determined in a global survey, 72.3%.⁹ Assuming the same rate of belief with $\pm 6.5\%$ marginal errors at a 95% significance level, the minimum sample size was estimated to be 183 participants. If we expected around a 53% non-response rate, this study required surveying at least 346 physicians.

The online questionnaire was in English and remained open to eligible physicians for more than one year (5 January 2022 to 15 February 2023). Of the 351 eligible physicians, 190 returned the completed questionnaire (response rate = 54.1%). The questionnaire collected anonymous data on demographics, discipline, work settings, geographical area, and years of practice.

Participants were required to answer the following questions about their perception of CAM use and its effectiveness in treating epilepsy.

1. Do you think any of the following might be helpful in treating seizures in people with epilepsy?
2. If yes, have you ever used anything other than conventional antiseizure medications to treat your patients with seizures?
3. How did the effectiveness of anything other than conventional antiseizure medications compare with the effectiveness of the conventional antiseizure medications you prescribed?
4. How did the safety of anything other than conventional antiseizure medications compare with the safety of the conventional antiseizure medications you prescribed?
5. What are the reasons for using anything other than conventional antiseizure medications to treat your patients with seizures?
6. In which patients have you used anything other than conventional antiseizure medications?

Analysis was restricted to descriptive statistics. Categorical data were presented as frequency and percentage and continuous data as mean with standard deviation. This study was carried out according to the Declaration of Helsinki and the protocol was approved by the Research and Ethical Review and Approval Committee of the Oman MOH (MoH / CSR / 21/24129).

RESULTS

A total of 190 physicians participated, 69.5% of whom were men. Half of the respondents were between 36 and 45 years old. Most (52.1%) were general practitioners [Table 1].

The most common therapies that participants believed to be helpful were meditation (46.3%), prayer (44.7%), yoga (32.6%), and exercise (31.1%) [Table 2]. The least preferred was exorcism with only one participant (0.5%) endorsing it.

Table 1: Baseline characteristics of the participants (N = 190).

Characteristics	n (%)
Sex	
Female	58 (30.5)
Male	132 (69.5)
Age group, years	
25–35	47 (24.7)
36–45	97 (51.1)
46–55	36 (18.9)
> 55	10 (5.3)
Discipline	
Family physician	17 (8.9)
General practitioner	99 (52.1)
Internal medicine	40 (21.1)
Pediatrics	34 (17.9)
Work setting (all government)	
Extended health center	6 (3.2)
Primary care center	69 (36.3)
Local hospital	38 (20.0)
Regional hospital	45 (23.7)
Wilayat hospital	32 (16.8)
Governorate	
A'Dakhiliyah	18 (9.5)
A'Dhahirah	19(10.0)
Al Batinah North	7 (3.7)
Al Batinah South	11 (5.8)
Al Buraimi	19 (10.0)
Al Wusta	5 (2.6)
A'Sharqiyah North	13 (6.8)
A'Sharqiyah South	20 (10.5)
Dhofar	47(24.7)
Musandam	3 (1.6)
Muscat	28 (14.7)
Years of practice in a particular discipline	
Mean ± SD	12.9 ± 6.8
Median (range)	12.0 (1–40)

Sub-analysis focused on participants who responded 'Yes' to the question of whether they believed that alternative treatments might be helpful for epilepsy (n = 144, 75.8%) [Table 3]. Few participants (n = 11, 7.6%) reported having used alternative strategies to treat their patients with epilepsy, the majority (6/11; 54.5%) of whom thought that alternative treatments were as effective as ASMs. Almost half of these (5; 45.5%) believed alternative therapies to be 'equally safe' as ASMs. However, five (45.5%)

Table 2: Responses to the question “Do you think any of the following might be helpful in treating seizures in people with epilepsy?” (N = 190).

Type of therapy	Yes n (%)	No n (%)	Do not know n (%)
Herbal drugs	6 (3.2)	123 (64.7)	61 (32.1)
Exercise	59 (31.1)	86(45.3)	45 (23.7)
Yoga	62 (32.6)	66 (34.7)	62 (32.6)
Meditation	88 (46.3)	50 (26.3)	52 (27.4)
Acupuncture	24 (12.6)	71 (37.4)	95 (50.0)
Chiropractic care	15 (7.9)	69 (36.3)	106 (55.8)
Massage therapy	25 (13.2)	94 (49.5)	71 (37.4)
Homeopathy	18 (9.5)	80 (42.1)	92 (48.4)
Biofeedback	33 (17.4)	61 (32.1)	96 (50.5)
Prayers	85 (44.7)	54 (28.4)	51 (26.8)
Exorcism	1 (0.5)	98 (51.6)	91 (47.9)
Traditional medicine	23 (12.1)	102 (53.7)	65 (34.2)

physicians prescribed CAM to satisfy the demands of their patients.

DISCUSSION

Our results found that 75.8% of the surveyed physicians in Oman who manage PWE believe that some modalities of CAM help treat epilepsy; this is similar to the findings of previous studies.^{9,11} Despite such positivity, only a minority of participants in our study and elsewhere actually use CAM to treat epilepsy.⁹ The main reason our participants prescribed CAM was to satisfy their patients' desires. Previous studies also showed that most patients seek CAM due to dissatisfaction with conventional ASMs.¹² Patients tend to be dissatisfied with ASMs if epileptic symptoms are not mitigated, they experience adverse effects, or they find that ASMs are ineffective in treating comorbidities associated with epilepsy.¹¹ The high cost of ASMs is reported to be another reason to opt for CAM, in addition to the perception that CAMs are natural and must be safer.¹¹ Most of our 11 physicians who used CAM stated that they were as effective as conventional medical treatment. The majority also reported that CAM was equally safe or safer than conventional medications in the management of PWE.

A global study found that physicians were likely to prescribe CAM to patients with drug-resistant epilepsy or if the patients explicitly asked for CAM.

Table 3: Physicians' opinions on their experience prescribing complementary and alternative medicines (CAM) to patients with epilepsy (n = 11).

Category	n (%)
Effectiveness of CAM	
More effective	1 (9.1)
Equally effective	6 (54.5)
Less effective	1 (9.1)
Not sure	3 (27.3)
Safety of CAM	
Safer	3 (27.2)
Equally safe	5 (45.5)
Less safe	1 (9.1)
Not sure	2 (18.2)
Reasons for prescribing CAM	
Side effects of antiseizure medications (ASMs)	3 (27.2)
Ineffectiveness of ASMs	1 (9.1)
Both due to ineffectiveness and side effects of ASMs	1 (9.1)
To satisfy my patient	5 (45.5)
My personal feelings	1 (9.1)
Type of patients in whom CAM was used	
In patients of any age	4 (36.4)
Only in adults	1 (9.1)
Only in children	1 (9.1)
In patients taking conventional ASMs	2 (18.2)
In patients with epilepsy, regardless of seizures controlled with medications	2 (18.2)
Only in patients who explicitly requested for CAM	3 (27.2)
Only in patients who refused conventional ASM	3 (27.2)
Only in patients with drug-resistant epilepsy/poor seizure control	2 (18.2)

They were more likely to prescribe meditation, yoga, traditional medicine, and exercise, respectively,⁹ while prayer was nearly as important as meditation for physicians in Oman. This may be because Oman is a conservative Muslim country where prayer is integral to daily life and discipline. The above international study also found that physicians who used CAM were likely to report that such treatments were less effective and less safe compared to ASMs.⁹

Most of the participants in the current survey believed in the efficacy of meditation in managing PWE. There is also evidence in the literature that meditation may be effective in helping patients with epilepsy and mood and anxiety disorders, among others.¹² A systematic review of 20 randomized controlled trials comprising > 900 subjects illustrated

that no significant adverse events are associated with meditation techniques.¹² A study of 60 drug-resistant epilepsy patients has shown that meditation significantly improved the patient's quality of life, seizure frequency, depressive and anxiety symptoms, and memory compared to patients in the social support group.¹³

Among various forms of therapeutic meditation, mindfulness-based interventions (MBIs) are currently evoking much research interest. A systematic review on the effectiveness of MBIs for epilepsy and its comorbidities was conducted among 231 PWE. Significant improvements in their depression symptoms, quality of life, anxiety, and knowledge and skills were reported; however, there was limited evidence that MBI directly impacts the frequency of seizures.¹⁴ In Oman, a naturalistic observational study conducted in 2001 among 14 participants who attended a mindfulness meditation course reported multiple benefits.¹⁵ With such background, further exploration of the effects of MBI among PWE in Oman is worth considering.

Prayer was the second preferred CAM for our participants. Previous studies from the USA and Iran also had similar observations.^{9,11} Though there is no scientific evidence that spiritual practices have antiseizure effects, they are likely to benefit patient's mental health and quality of life.⁹

It is crucial to acknowledge that this study has limitations. The pool of participants was relatively small. Furthermore, as the study excluded neurologists, psychiatrists, and all private-sector physicians, our results may not adequately represent the views of all physicians in Oman who treat epilepsy cases.

CONCLUSION

This survey suggests that most public-sector physicians (non-neurologists and non-psychiatrists) who manage PWE in Oman believe that some CAM modalities can help treat epilepsy. We recommend well-designed controlled trials to seek reliable evidence on the usefulness of CAM options among PWE in Oman.

Disclosure

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