Yoga and epilepsy: What do patients perceive?

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ABSTRACT

Context: Benefit of yoga therapy in the management of epilepsy is emerging. However, there is no data available about the knowledge, attitude and practice (KAP) of yoga amongst people living with epilepsy (PLWE).

Aims: This study was designed to explore the KAP about yoga among PLWE.

Settings and Design: The study was conducted on 300 PLWE attending the neurology out-patient services of a tertiary care hospital.

Methodology: Three hundred PLWE (male:female=173:127; age: 31.6±12.4 years) attending the neurology out-patient services of a neuropsychiatry hospital were administered a pre-tested KAP questionnaire.

Results: About 87.4% were on regular anti-epileptic drugs and half (50.3%) on monotherapy. Use of complementary and alternative medicine by the respondents included: Ayurveda (26.7%), yoga (25.6%) and homeopathy (16.3%) or folk medicine (29.1%). Nearly 33.7% of the respondents reported that yoga is beneficial in managing epilepsy. More than half the respondents (54.8%) were willing to practice yoga. Those who practiced yoga opined that regular practice of yoga might reduce dosage of medication (62.8%), their side effects (51.3%) and frequency of seizures (54.5%). Majority of the patients were willing to practice yoga, if yoga services were offered.

Conclusion: The gaps in KAP identified in this study point to the need for more systematic effort to bring about awareness of yoga in patients with epilepsy.

Key words: Attitude, epilepsy, knowledge, practice, yoga

INTRODUCTION

An estimated 6.0 million Indians have epilepsy. While pharmacotherapy is the mainstay of treatment, factors that determine the health seeking behavior and compliance to treatment include adverse effects with standard anti-epileptic drugs (AEDs), costs of newer drugs and co-morbidities such as depression, migraine and anxiety. These aspects influence people living with epilepsy (PLWE) to seek other methods of treatment.

Amidst an increased interest in traditional complementary and alternate systems of medicine yoga with its significant positive effects on mental health is considered helpful in the treatment of various systemic and neurological disorders including epilepsy. Yoga is popular, acceptable to the majority and also generally held to be useful and beneficial by the patients. Earlier evidence suggests the usefulness of meditation (Sahaj Yoga) practice in patients with epilepsy and later studies have demonstrated evidence for the use of yoga (Asanas, breathing exercises, relaxation techniques and meditation) as an adjuvant in management of epilepsy, possibly through its influence on the autonomic nervous system. There are a few studies which have elicited the patient's knowledge and attitude towards yoga and its practice in epilepsy.
related it to service delivery. However, the perception of benefit in different medical conditions varies.

Hence, the present study was undertaken to assess the knowledge, attitude and practice (KAP) about yoga among PLWE and to ascertain their willingness to utilize yoga as an adjuvant therapy.

METHODOLOGY

Sample and setting
The study was conducted at a tertiary care university teaching hospital for neuropsychiatric disorders in South India. Consecutive patients aged ≥15 years attending the neurological services with a diagnosis of epilepsy who could understand instructions were recruited. Patients with severe neurological and psychiatric illness were excluded. The study was approved by the institutional ethics committee and consent was obtained from the subjects.

Questionnaire development
The components for the questionnaires used for the survey were arrived at by a consensus amongst the investigators. These questionnaires were administered among 50 PLWE as a pilot study and based on the results from the pilot study, were modified. The modified questionnaires included details of demographics, duration of epilepsy, dosage and type of AEDs, compliance, the duration patients would be willing to practice yoga if offered it, problems related to epilepsy, and utilization of treatment other than allopathy etc.

Data collection
Three hundred consenting PLWE were interviewed using the pre-tested yoga and epilepsy KAP assessment questionnaire [Appendix 1]. The coverage rate was 92% (300/326; 9 did not give consent and 17 were unable to understand the instructions).

Analysis
Data collected was scrutinized for completeness. Student t-test and Chi-square test were used to test the significance in mean values or proportions respectively. P<0.05 was taken to be significant.

RESULTS

The respondents’ age ranged between 15 and 80 years (mean: 31.6±12.4 years). The sample consisted of 173 males (57.7%) and 127 females (42.3%). About two-fifths (38.7%) had a secondary education and majority (65%) were from an urban area. The duration of epilepsy ranged from 10 months to 9 years and 41.3% had a seizure frequency of >2-3 times/year. Majority of the patients (87.4%) were on AEDs for more than a year and 50.3% were on monotherapy. Common medications used were carbamazepine (51.0%), phenytoin (37.3%) and phenobarbitone (30.3%). Most of the patients (72.1%) reported to be regularly taking their AEDs and more than half (54.8%) had experienced side effects [Table 1]. Further, two-thirds reported that their daily activities were significantly affected (65%), and were experiencing financial burden (57.7%) after onset of the illness.

Interestingly, more than a fourth (28.7%) reported to have used other systems of medicine. These included ayurveda (26.7%), yoga (25.6%) and homeopathy (16.3%) or folk medicine (29.1%).

Benefits of yoga
58.2% of the respondents opined that yoga is a healthy way of living (58.2%), a science which improves the physical, mental and spiritual well-being of a person (48.0%), and a tool to bring a balance between body and mind (46.6%). More than half of the respondents (53.6%) opined that yoga is a potent method of treatment. Positive KAP was noted to be significant among respondents who had more than 10 years of formal education thereby emphasizing the impact of schooling. About one-third agreed that yoga is beneficial in different clinical conditions: Anxiety and depression (44.6%), arthritis (43.7%), obesity (44.4%), headache (35%), diabetes (35.5%), hypertension (34%), sinusitis (33.6%), asthma (30%) and paralysis (24.8%).

Yoga and epilepsy
Nearly one-third (33.7%) reported that yoga is beneficial in managing epilepsy and opined that: Regular practice of yoga would be useful (42.3%); it reduces dose of medication (33.6%), the side effects of medicine (30.1%) and frequency of seizures (30.2%).

One-fifth (19.2%) of those practicing yoga were doing so regularly and majority did Ashtanga or Hatha Yoga (79.5%)

Table 1: Demographic profile of study population

| Particulars             | Values (%) |
|-------------------------|------------|
| Age                     | 31.6±12.4 years |
| Gender                  |            |
| Males                   | 173 (57.7)  |
| Females                 | 127 (42.3)  |
| Religion                |            |
| Hindu                   | 239 (79.7)  |
| Muslim                  | 46 (15.3)   |
| Christian               | 15 (5.0)    |
| Education status        |            |
| Illiterate              | 18 (6.0)    |
| Primary                 | 72 (24.0)   |
| Secondary               | 116 (38.7)  |
| Higher secondary        | 39 (13.0)   |
| Graduate and above      | 55 (18.3)   |
| Place of residence      |            |
| Urban                   | 202 (67.3)  |
| Rural                   | 98 (32.7)   |
| Marital status          |            |
| Single                  | 123 (41.0)  |
| Married                 | 177 (59.0)  |
Greater proportions of those who had practiced yoga opined that regular practice of yoga might reduce dosage of medication (62.8%), the side effects of medicine (51.3%) and frequency of seizures (54.5%).

**Yoga in epilepsy care**

More than half of the respondents (54.8%) were willing to practice yoga. Majority (42.3%) committed to practice for more than a year, while nearly one-third (31.3%) desired to practice for more than 1 month but less than 1 year. Only about one-fourth (23.9%) agreed to come to the hospital for the yoga sessions and the others (76.1%) preferred to do yoga at their own home settings. Greater proportions of those regular on medication were willing to practice for >1 month (34.7%) or >1 year (35.7%) than those who were irregular on their medication.

In the bivariate analysis, regarding willingness to practice yoga or opining that yoga would reduce frequency of seizures, reduces medicine dose or their side effects, the proportions were statistically not significant with respect to gender and place of residence. However, a statistically significant proportion of males reported that yoga was definitely useful in the management of epilepsy ($P=0.03$).

More patients who had experienced side effects were willing to practice yoga daily ($P=0.04$), so also those with significantly affected daily activities, although the difference in the latter did not reach statistical significance ($P=0.08$).

Amongst those regularly taking medications and having experienced side effects, statistically significant proportions felt that yoga would reduce the frequency of seizures and reduce the dosage of medicines but opined that it cannot reduce the side effects of the medicines. The difference was significant with respect to urban location of residence compared to those from rural background ($P=0.04$).

**DISCUSSION**

In the present study, about one-third of patients reported a positive connotation regarding yoga, particularly among those who had experienced side effects. Interestingly, the PLWE were pragmatic (willing to accept yoga practice for more than a year but within their residential premises) and also optimistic (reduction in frequency of seizures, dosage of medicines). These points of view challenge the notion that patients are passive recipients of care.

A study in patients with schizophrenia has detailed the challenges faced in adding yoga as an adjuvant therapy on regular basis. The primary one seems to be logistic difficulties in coming for yoga regularly such as travelling long distances to the yoga center, lack of family support, financial problems, time constraint, and so on.[21]

Main-streaming the Ayurveda, Yoga and Naturopathy, Unani, Siddha, and Homoeopathy (AYUSH) systems of medicine is one of the important strategies of the Government of India. Towards this end there have been efforts to introduce clinical services. Integrated and holistic care should not be restricted to mere provision of services. The emergent need is to educate people and create awareness about benefits of individual systems of medicine, thereby popularizing AYUSH. This paper has bridged an important gap in health service delivery by highlighting yoga therapy in the management of epilepsy from a patient’s viewpoint.

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APPENDIX 1

Questionnaire used

1. Yoga and Epilepsy Assessment questionnaire
   1. In your opinion Yoga is?
      A way of healthy life Yes/No/don’t know
      An ancient Indian philosophy Yes/No/don’t know
      A tool to bring a balance between body and mind Yes/No/don’t know
      A science which combines physical, mental and spiritual well being of a person Yes/No/don’t know
      A potent treatment method Yes/No/don’t know
      Any other opinion give your comments

2. In your opinion Yoga is beneficial in the management of
   Headache Yes/No/don’t know
   Hypertension Yes/No/don’t know
   Epilepsy Yes/No/don’t know
   Asthma Yes/No/don’t know
   Diabetes Yes/No/don’t know
   Anxiety and depression Yes/No/don’t know
   Arthritis Yes/No/don’t know
   Sinusitis Yes/No/don’t know
   Paralysis Yes/No/don’t know
   Obesity Yes/No/don’t know

3. Do you think yoga is useful along with your medication for your problem?
   Definitely useful
   Somewhat helpful
   Not at all helpful

4. How often you practice Yoga?
   Never/regularly/occasionally/rarely

5. Type of Yoga technique practiced
   Yoga therapy Yes/No
   Hatha Yoga Yes/No
   Ashtāṅga Yoga Yes/No
   Kurñdalini Yoga Yes/No
   Any other

6. Did you try any treatment other than allopathy
   Ayurveda Yes/No
   Naturopathy Yes/No
   Homeopathy Yes/No
   Yoga Yes/No
   Folk medicine Yes/No
   Any other

7. In your opinion regular Yoga practice is likely to be useful in patients with epilepsy
   By reducing frequency of seizures Yes/No/don’t know
   By reducing dosage of medication Yes/No/don’t know
   By reducing side effects of medication Yes/No/don’t know
   Not at all useful Yes/No/don’t know

8. Give comments on
   How long have you been having epilepsy
   How frequently you get seizures
   contd...

Questionnaire used

1. How long have you been taking medication? Yes/No
   Regularity of medication

2. List of drugs presently taking
   Carbamazepine Yes/No
   Phenobarbital Yes/No
   Phenytoin Yes/No
   Valproate Yes/No
   Topiramate Yes/No
   Clobazam Yes/No
   Lamotrigine Yes/No
   Any other

3. Problems related to epilepsy / medication
   Increase financial burden Yes/No
   Side-effects Yes/No
   Impaired quality-of-life Yes/No
   Any other

4. Would you be willing to practice if Yoga therapy is offered Yes/No/Don’t know

5. If willing to practice
   For how long will you be interested to undergo yoga
   Preferred place At home/in patients/ out patient
   Frequency of yoga practice Daily/alternate day/ twice a week/weekly
   Any other

APPENDIX 2

The foundations of Yoga can be found in the ancient Indian religious and spiritual texts: viz., Vedās, Upaniṣads, Purāṇa, Smṛtis, Bhagavadgītā, Patañjali Yoga Sūtras etc. Despite the multiple sources, Yoga is considered a way of life whose main objective is to integrate personality of an individual at physical, mental, emotional, intellectual and emotional levels of existence. Hence the root word of Yoga is ‘Yuj’ meaning ‘to bring together’. There are different schools of Yoga such as Ashtāṅga Yoga, Hatha Yoga, Karma Yoga, Jñāna Yoga and Bhakti Yoga however, Ashtāṅga Yoga, and Hatha Yoga are the more popular ones. While, Ashtāṅga Yoga (called Rāja Yoga) consists of 8 eight limbs (or components): do’s and dont’s (Yama & Niyama), postures (Āsana), controlled breathing techniques (Prānāyāma), withdrawal from senses (Pratyāhāra), concentration (Dhāraṇa), meditation (Dhyāna) and liberation (Śamādhi), Hathayoga includes body purification methods (Kriyās) apart from Āsana and Prānāyāma.