

## Knowledge of epilepsy among II<sup>nd</sup> year students of medical fraternity

Sudarshan Surendran<sup>1</sup>, Maheswaran S<sup>3</sup>, James Gonsalves<sup>1\*</sup>, Prima J.J. D'Souza<sup>2</sup> and Keerthana Balaji<sup>4</sup>

<sup>1</sup>Melaka Manipal Medical College, Manipal University, Manipal, Karnataka, India.

<sup>2</sup>Manipal College of Nursing, Manipal University, Manipal, Karnataka, India.

<sup>3</sup>M.B.B.S. Student, Melaka Manipal Medical College, Manipal University, Manipal, Karnataka, India.

<sup>4</sup>School of Information Sciences, Manipal University, Manipal, Karnataka, India.

### \*Correspondence Info:

Dr. James Gonsalves,  
Associate Professor,  
Department of Physiology,  
Melaka Manipal Medical College,  
Manipal University, Manipal – 576 104, Karnataka, India.  
E-mail: [jamesmmmc@gmail.com](mailto:jamesmmmc@gmail.com)

### Abstract

**Objectives:** To test the awareness and knowledge regarding epilepsy among II year medical students.

**Materials and methods:** A questionnaire designed to test the knowledge levels of students regarding epilepsy was chosen and administered to students for collecting their responses. The questionnaire was distributed to II year MBBS students, who volunteered to participate in this study. The data collected was summarized to get the final picture of the level of awareness with respect to epilepsy among those students.

**Results:** It was seen that the students had a fair knowledge and awareness regarding epilepsy. Most of them did not believe that epilepsy was a spiritual or a blind belief. Most of them were aware of the scientific reason behind such a condition. Many had clear picture regarding the consequences of such epileptic attacks. Many of them agreed to it that the normal life would not be affected, even though care must be taken. Dealing with the problems during an epileptic attack, the patients are supposed to take of their working conditions and also be prepared for such situations. On a whole, the response from the students on the seven questions with varied aspects on epilepsy and the subdivisions under each of them were summarized. The level of awareness of these students have been summarized and presented in this report. The findings in the report also throw light on the scope of little improvement possible in some of the aspects of student's knowledge and understanding.

**Keywords:** Student's knowledge, epilepsy, awareness of students.

### 1. Introduction

Epilepsy is a common, noninfectious neurological disorder that is said to affect around 1% of the total world population[1]. Measuring awareness, the understanding and attitudes towards epilepsy and epileptic patients is a necessary step in the process of eliminating discrimination. A change towards the behavior and acceptance of such affected persons should be brought up in developing countries by creating awareness among the people[1].

Knowledge, awareness and attitude in relation to epilepsy are better off in developed countries when compared with that of the developing countries. The negative impression and attitude towards patients suffering from this condition has been reported since time immortal, which is less in an educated community when compared in the

uneducated population. The importance of spread of knowledge plays an important role in removing such negative impression and attitude towards those suffering from non-contagious conditions such as epilepsy. Considering the ways of spreading awareness, students in a medical fraternity would be one of the primary sources of information as doctors in the future. Hence, as a first step towards the spread of awareness, an attempt was made to evaluate the levels of knowledge among the medical students of II year. A questionnaire designed for the same was implemented and the results are compiled and presented.

The incidence of epilepsy is reported to be higher in the developing countries as compared to the developed[1]. People suffering from epilepsy often

face social differentiation in developing countries. Fear exists in the society with respect to a myth of spread of this condition through contact or even with saliva, as it is considered infectious and transmittable[2,3]. The precise knowledge of epilepsy and awareness of not discriminating epileptic patients are very essential in general society and especially in a medical set up. The incidence of epilepsy is reported to be higher in the developing countries as compared to the developed[1]. When seen from a medical perspective, in general public, there is also a very good chance of misdiagnosing epilepsy for panic attack, hypoglycemia, syncope etc[4]. In the literature, there are several studies reporting the knowledge regarding epilepsy in various populations (children, schools, colleges, country etc.)[5-10]. The data regarding the awareness about such conditions could provide a deeper perspective towards the attitude shown towards such affected people.

There is lot of misconception leading to a negative attitude towards epileptic patients. These negative attitudes and misunderstandings can be cleared and ruled out only by educating the community, with the whereabouts of this condition and those suffering from it. This study was designed keeping in mind the fact that teachers and schools are an effective means of communication next to family. Awareness in the community is an essential factor when it comes to such noninfectious diseases.

### Annexure 1: Questionnaire

1. What do you think a seizure is?

(Check all that you think apply)

- an abnormal electrical discharge in the brain
- demonic possession
- divine punishment
- an abnormal movement

2. What do you think causes epilepsy?

(Check all that you think apply)

- an evil spirit
- a head injury
- brain tumor
- divine punishment for renegeing on a vow
- sleep deprivation
- alcohol withdrawal or heavy drinking
- stroke
- genetic disease
- high fever
- eating pork

3. What are the types of seizures?

(Check all that you think apply)

- rigid then jerking (tonic-clonic seizure)
- unusual sensation or abnormal jerking with preserved awareness (simple partial seizure)
- lost awareness and physically disabled, repetitive involuntary movements (complex partial seizure)
- loss of muscle strength and tone: the person collapses (atonic seizure)
- staring spell, suddenly absent, loss of awareness (absence seizure)

### 1.1 Objective

Epilepsy is one among the clinical conditions which a student is expected to know about and also has to disperse this knowledge among the community to minimize the negative attitude and misunderstanding towards patients with this condition. This study was designed with the specific objective of assessing the knowledge of II year medical students with respect to epilepsy and patients suffering from this condition.

## 2. Materials and Methods

A questionnaire designed to test the knowledge levels of students regarding epilepsy was chosen from a previous study done[11] and prior permission was taken from the author to use the instrument in our study. The questionnaire was distributed to II year MBBS students, who volunteered to participate in this study. The data collected was summarized to get the final picture of the level of awareness with respect to epilepsy among those students.

### 2.1 Subjects

The participants were 2nd year undergraduate students of medicine. A total of 100 students participated in the study.

4. Do you think epilepsy can be cured?

- Yes
- No

5. How long antiepileptic drugs should be taken?

- for life
- 2-5 years
- only on the full moon
- only during an episode
- for 3-6 months

6. What are the consequences of epilepsy?

(Check all that you think apply)

- should not allowed to drive a motor vehicle
- no sexual intercourse
- cannot get married
- should not work with machinery
- cannot get pregnant
- abruptly stop antiepileptic drugs during pregnancy
- not able to lactate
- should not eat pork
- must quit work
- should not drink alcohol beverages

7. What should be done during a seizure?

(Check all that you think apply)

- place the person in a semi-prone position to prevent choking
- place something in the mouth to prevent biting the tongue
- give an antiepileptic drug during the episode
- restrain the person and perform chest compressions (CPR)
- prevent injury during the episode

### 3. Results

Questions	Answers (n=100)													
	Yes (%)	No (%)												
<b>Q.No.1 What do you think an epileptic attack is?</b> An abnormal electrical discharge in the brain Demon possession and divine punishment An abnormal movement	79 0 13	21 100 87												
<b>Q.No.2 What do you think causes epilepsy?</b> An evil spirit A head injury Brain tumor Divine punishment Sleep deprivation Alcohol withdrawal or heavy drinking Stroke Genetic disease High fever Eating pork	0 38 46 0 7 14 26 44 24 14	100 62 54 100 93 86 74 56 76 86												
<b>Q.No.3 What are the types of seizures?</b> Generalized tonic-clonic seizures Simple partial seizures Complex partial seizures Atonic seizures Absence seizures	80 76 78 73 76	20 24 22 27 24												
<b>Q.No.4 Do you think epilepsy is a curable disease</b>	21	79												
<b>Q.No. 5 How long to take antiepileptic drugs</b> <b>Duration</b> Lifelong 2-5 years Only on the full moon Only during an episode For 3-6 months	<table border="1"> <caption>Data for Q.No. 5 Pie Chart</caption> <thead> <tr> <th>Duration</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>1 (Lifelong)</td> <td>54%</td> </tr> <tr> <td>2 (2-5 years)</td> <td>23%</td> </tr> <tr> <td>3 (Only on the full moon)</td> <td>0%</td> </tr> <tr> <td>4 (Only during an episode)</td> <td>18%</td> </tr> <tr> <td>5 (For 3-6 months)</td> <td>5%</td> </tr> </tbody> </table>		Duration	Percentage	1 (Lifelong)	54%	2 (2-5 years)	23%	3 (Only on the full moon)	0%	4 (Only during an episode)	18%	5 (For 3-6 months)	5%
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<b>Q.No. 6 What are the consequences of epilepsy?</b> Should not be allowed to drive No sexual intercourse Should not work with machinery Cannot marry Cannot get pregnant Abruptly stop antiepileptic drugs during pregnancy Not able to lactate Should not eat pork Must quit work Should not drink alcohol beverages	77 16 57 9 14 6 8 6 10 41	23 84 43 91 86 94 92 94 90 59												
<b>Q.No.7 What should be done during seizure?</b> Place in semi-prone position to prevent choking Place an object in the mouth to prevent biting the tongue Give antiepileptic drug during the episode Restrain the person to perform chest compression (CPR) Prevent injury during the episode	35 82 39 8 59	65 18 61 92 41												

### 4. Discussion

Epilepsy is a chronic neurological disorder that is characterized by the occurrence of spontaneous recurrent seizures, which consist of prolonged and synchronized neuronal discharges. Even though it is a known fact that epilepsy is strongly associated with mental illness and cognitive disabilities, still there are many countries where the awareness regarding this condition is not a

widespread message. There are some beliefs that this condition is infectious and is also extended to the spread of the same through contacts. Epilepsy representing demonic possession is also believed in some cultures and has been related to some kind of divine punishment[12-14]. There are many religious and spiritual healing methods, said to be followed that reflect the traditional thinking and beliefs in the rural society. These beliefs still do exist even after

the presence of medical evidences with respect to the condition[15]. An earlier study among the nurses, students in nursing, social work and specialist education in Jakarta showed that 58% of the respondents objected to their relatives marrying people with epilepsy, and 22% thought that people with epilepsy could not work like others.

A transient dysfunction in the brain leads to epilepsy is shown by modern science. Hughlings Jackson's definition: "A convulsion is but a symptom, and implies only that there is an occasional, an excessive, and a disorderly discharge of nerve tissue on muscles." [16].

In the present study, we have tried to reveal the knowledge level of second year medical students in relation to epilepsy. Based on the responses, it was seen that a major portion of the respondents (79%) knew that an epileptic attack is an abnormal electrical discharge in the brain compared to the 21% of them who did not agree to it. It was very clear that the superstitious beliefs were out of the educated society from the results, as none of the students thought epileptic attacks to be demon possessions or divine punishment. This study has given clear degree of sense that epilepsy is considered as a dysfunction of the brain and that the superstitions are reduced drastically in an educated and modern society. Many of them also did not agree these attacks to be abnormal movements due to uncontrolled signals from the brain.

An average of 76.6% of the students agreed to the types of seizures to be generalized tonic-clonic seizures, simple partial seizures, complex partial seizures, atonic seizures and absence seizures. Around 79% of the students were also up to date with their basic knowledge regarding epilepsy which is proved by their agreeing for the statement that epilepsy is curable. However when seen the students knowledge of epilepsy with respect to treatment of the same, 59% of them said the medication is to be taken lifelong, 5%, 18% and 23% of the students felt that the medications have to be taken for a period of 3 – 6 months, only during episodes and for a period of 2 – 5 years, respectively. Again, it was proven in this question that the condition is a clinically related and curable one as none of them thought that the medications have to be taken on a full moon day and this shows their clear knowledge of this condition giving no scope for superstition to play a role.

After having asked about their knowledge of the condition and the treatment for the same, there was also the list of questions which could get a glimpse of the consequences of this condition. Highest response was given to safety as this was an uncontrollable condition and in this regard 77% of

the students thought that driving could prove dangerous and at the same time 47% of them thought those with this condition should avoid working with machinery. Around 41% of the students agreed on restriction on the consumption of alcohol in this clinical condition as they might believe that alcohol consumption may aggravate the condition. Majority disagreed on some of the questions like those having this condition should not marry or have sexual intercourse, cannot get pregnant, should not continue medications during pregnancy, will not be able to lactate. Also, they did not agree to statements like these patients should not eat pork against the minority (9.8% - average of yes for the above statements) who agreed for the previous statements.

Finally, some statements were given to check their response as medical advisors, if they come across someone having a seizure. Majority of them agreed (82%) to the fact that those undergoing seizures could bite their tongue and something should be given in their mouth to bite in order to prevent them from biting their tongue. Around 59% agreed to prevent the person from injury during the episode. Most of them disagreed (92%) that they would restrain the person to perform chest compression as a mode of treatment. Almost 35% agreed to place the person in a semi prone position and 39% agreed that medication should be given during an episode.

The above results give a clear picture that these days the educated community do not believe that epilepsy is a result of some kind of superstitious belief, rather it is a clinical condition which can be cured with knowledge about the condition and a knowledge of the first aid measures along with preventive measures is a must in the society that could save many. The students were seen to have a general awareness of the facts and consequences of this condition. Awareness among the public regarding this condition is also an essential factor and awareness among the medical students regarding this condition could be considered as a useful tool as the first step in the spread of awareness in the society.

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