

# Knowledge, Attitude and Practices Regarding Epilepsy among Nurses in a Tertiary Care Hospital in South India

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## Abstract

**Background:** In a resource constraint nation like India, nurses play an important role in bridging the epilepsy treatment gap. They are not only caregivers but also opinion leaders. So this study has been undertaken to study the knowledge, attitude and practices regarding epilepsy among the nursing staff.

**Material and Methods:** A hospital based cross-sectional study was conducted among 213 staff nurses in South India for a period of four months using a 50 item questionnaire.

**Results:** In our study very few nurses (8%) had never witnessed an epileptic seizure. Most of them believed to have insufficient experience in taking care of such patients (86%) and were also reluctant to take care of them (28%). Certain negative beliefs like epileptics are sinners, contagious and under the influence of supernatural power were still prevailing among them. They practiced administration of oxygen and giving a metallic object in the hands of the patient during an epileptic seizure. Half of them had average to poor knowledge, attitude and practice regarding epilepsy.

**Conclusion:** The study findings show that knowledge, attitude and practice regarding epilepsy is low. This calls for urgent need to include practical as well as theoretical aspects of epilepsy care in the nursing curriculum and at the same time address the misconceptions linked to it.

**Keywords:** Knowledge, attitude, practice, epilepsy, nurses, India

## Introduction

Globally epilepsy is one of the most frequently occurring neurological disorder affecting more than 60 million people irrespective of their age.<sup>[1,2]</sup> About 80% of

them are residents of middle and low income countries. <sup>[3]</sup> Mortality risk in people with epilepsy is double than the general population <sup>[4]</sup> Epilepsy is a social disease accompanied by a stigma that is more debilitating than the disease itself. It creates distress among even those whose seizures are under control as they are constantly subjected to rejection, isolation and discrimination.<sup>[5,6,7]</sup>

In India, epilepsy is often neglected due to lack of knowledge as well as the stigma attached to it. In addition to this, the extreme shortage of neurologists with most of them being available only in the cities has

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resulted in epilepsy treatment gap of 80% -90%.<sup>(8,9)</sup> In such resource poor settings nurses can play a pivotal role in plugging the lacunae by providing continuum of care between settings. They are an essential, economic and rational asset who provide information, support, counselling and care to people with epilepsy.<sup>[1,10]</sup>

Poor knowledge, negative attitude and stereotyped beliefs about epilepsy among them results in the tendency to discriminate against the people with epilepsy thereby affecting the quality of care.<sup>[11]</sup> Therefore we have undertaken this study to assess the knowledge, attitude and practice regarding epilepsy among staff nurses in a tertiary care hospital in South India

## Methodology

### Study population

An institutional based cross sectional study was conducted from June 2018 to September 2018 among 213 staff nurses of a tertiary care teaching hospital in South India after obtaining consent from the Institutional Ethics Committee. All the staff nurses willing to participate and were present at the time of visit were recruited for the study.

### Data collection:

The study participants were interviewed using a predesigned, pretested semi structured 50 items questionnaire after obtaining consent from them. They were assured that their anonymity and confidentiality would be maintained.

The questionnaire was devised based on the previous survey tools utilized to assess the knowledge attitude and practice towards epilepsy among the health staff. The content validity of the questionnaire was tested by dispensing the questionnaire to three specialist working in the department of Neurology. To devise the final questionnaire a pilot study was initially carried out among 20 staff nurses working in the same institute and their feedback was pursued which helped us to rephrase certain questions

The questionnaire consisted of four sections namely: profile of study participants (5 questions), their knowledge (23 questions), attitude (15 questions) and practice (7 questions) regarding epilepsy. In each

section, the correct responses were given a score of '1' and '0' was allotted for all incorrect responses. The final outcome scores were divided into tertiles and classified as poor, fair and good knowledge, attitude and practice respectively.

## Data Analysis

The data was tabulated and analyzed by using SPSS version 15.0 software. Results were expressed as percentages and proportions. Continuous data are summarized using mean and standard deviation.

## Results

Socio-demographic profile and familiarity with epilepsy

The present study was conducted among 213 staff nurses in the age group of 20-58 years with a mean age of  $30 \pm 8$  years. Majority of them were females (96%) and were predominantly hindus (83%). Half of them were married (51%). Equal number of them had completed general nursing and diploma nursing course (40% and 42% respectively). Very few of them had a family member suffering from epilepsy (8%). Training of more than half of them (55%) involved both theoretical as well as practical aspects of epilepsy. Most of them believed that they had inadequate experience in taking care of a patient with epilepsy (86%) and wished for additional training in the field of epilepsy(91.5%)

### Knowledge regarding epilepsy

All the study participants had heard about epilepsy mostly from their nursing curriculum (84.6%) followed by books (32.7%), internet (15.4%), newspaper (8.4%) and television(1.4%). Majority of them (91.5%) had witnessed an epileptic seizure.

More than three fourth of them opined that organic disease was the cause of epilepsy (76.5%) followed by hereditary disease (58.2%), birth defect (40%), head trauma (35.2%) and mental illness (29%). One fourth of them (25%) believed epilepsy to be a result of sins committed past life.

Very few of them (6.5%) correctly knew all the clinical manifestations of epilepsy. About half of them were of the opinion that epilepsy can be prevented by ketogenic diet (48%). Most of them (63%) were familiar

with the antiepileptic drugs and their side effects (58%). (Table 1). Half of them had poor knowledge (50.7%), whereas 36.2% and 13% had good and fair knowledge regarding epilepsy respectively.

**Table 1: Knowledge about epilepsy among study participants**

Knowledge about epilepsy (N=213)	Frequency(%)
1. Epilepsy is a contagious disease	38(18)
2. A patient with epilepsy is possessed by supernatural powers	39(18)
3. Cited manifestations of epilepsy	
Convulsions	186(87.3)
Loss of consciousness	148(69.5)
Change in behavior	60(28.2)
Period of amnesia	66(31)
Screaming	29(13.6)
Foam in mouth	122(57.3)
4. Every person who has convulsions has epilepsy	71(33.3)
5. Epilepsy is a public health problem	47(22)
6. There is a specific diet for patients with epilepsy	23(11)
7. There is a specific diet to prevent epilepsy	15(7)
8. Recommended place of treatment	
Hospital	205(96)
Traditional healer	5(2.3)
Ayurvedic /homeopathic practitioner	8(3.7)
9. Epilepsy can be cured	117(54.7)
10. Epilepsy requires chronic treatment	160(74.8)
11. Familiarity with antiepileptic drugs	135(63.4)
12. Familiarity with side effects of these drugs	124(58)

#### **Attitude towards epilepsy**

Majority of the study participants had a positive attitude towards a person with epilepsy attending school and having a job. Though their attitude towards a person

with epilepsy getting married and having children was positive (67%) only 48% were willing to get their child married to an epileptic. (Table 2) On the whole half of the study participants had a positive attitude towards epilepsy (50.2%) whereas 30% and 35.7% had neutral

and negative attitude respectively.

**Table 2: Attitude of study participants towards epilepsy**

Attitude about epilepsy	Frequency(%)
1. Patients with epilepsy can attend school	177(83)
2. Patients with epilepsy can marry	143(67)
3. Patients with epilepsy can have children	143(67)
4. Patients with epilepsy can breastfeed	131(61.5)
5. Patients with epilepsy can participate in sports	66(31)
6. Patients with epilepsy can travel alone	35(16.4)
7. Patients with epilepsy can swim	30(14)
8. Patients with epilepsy can have a job	132(62)
9. Patients with epilepsy can drive	36(17)
10. Willingness to shake hands with a person with epilepsy	184(86.4)
11. Willingness to let their child to play with someone with epilepsy	186(87.3)
12. Willingness to allow their child to marry someone with epilepsy	102(48)
13. Willingness to work with someone with epilepsy	186(87)
14. Society should behave differently with person with epilepsy	53(25)
15. Willingness to take care of a person with epilepsy	154(72)

The study participants followed certain faulty practices like administering oxygen (67%) and placing a metallic object in the hands of the patient (44%) during an epileptic seizure. ( Table 3) Overall more than half of the participants followed a good practice (53%) during an epileptic seizure

**Table 3: Study participant’s practice when someone has seizures:**

Practice when someone has seizures	yes	no
1. Stand back away from the patient	29(14)	184(86)
2. Give oxygen	143(67)	70 (33)
3. Turn patient to side	208(98)	5(2)
4. Move objects such as furniture away from the person	198(93)	15(7)
5. Move him from dangerous place such as road or top of staircase	198(93)	15 (7)
6. Put metallic object in their hand	93(44)	120 (56)
7. Avoid putting anything in his mouth	179(84)	34 (16)

## Discussion

The health care system in India shows a glaring disparity in the availability of specialized health services due to the urban – rural divide.<sup>(8,9,11)</sup> In such a scenario nurses can play a crucial role as they can work in multiple settings where one can find people with epilepsy right from schools to specialized centers. A well trained nurse can relieve the burden on the health system by shouldering the responsibility of providing care and support to people with epilepsy thereby reducing the rates of readmission. They are closely associated with the community and act as a torchbearer in elucidating various social and educational concepts regarding epilepsy.<sup>12</sup> This study explored the knowledge, attitude and practice regarding epilepsy among the staff nurses in a tertiary care hospital in South India.

In the present study all the study participants were aware about epilepsy which was analogous to the previous studies conducted in developing African countries.<sup>[14,15]</sup> In our study 91.5% of the staff nurses had witnessed epileptic seizures. Similar findings were found in other studies conducted by among staff nurses<sup>14,15,16</sup> in Brazil and African countries. In the present study the familiarity of epilepsy among nurses is high as epilepsy is a part of the nursing curriculum and by the very nature of nursing profession they are more likely to witness seizures and epilepsy.

In our study 81% of the staff nurses knew someone suffering from epilepsy which was contradictory to the study conducted by RK Surekha et. al (20%)<sup>[17]</sup> in north India. A greater proportion of study participants knew someone with epilepsy in a study conducted by Njamnshi AK et al(86.5%).<sup>[14]</sup>

In the present study hardly 8% of the study participants had a family member suffering from epilepsy. This finding was much lower than the studies conducted by Chomba EN et al in Zambia (33.2%), Vancini RL et al among nurses in Brazil(38%) and Dayapoglu N et al among clinical nurses in Turkey (23.5%).<sup>[13,15,16]</sup>

In our study when asked about the causes of epilepsy 76.5% of staff nurses stated that epilepsy is caused by organic brain disease which was much higher than a study conducted by Surekha RK et. al (43.47%).<sup>[17]</sup> Also, 58.2% of our study participants stated that

epilepsy is a hereditary disease. These responses were much greater than studies conducted by Surekha RK et. al (34.78%) and Njamnshi et al (16%), but lower than the study conducted by Vancini RL et al (86.2%).<sup>[14,17]</sup> Only 35.2% of our study participants responded that head trauma could be a cause for epilepsy. This response was much lower than a study conducted by Vancini RL (95.9%) in Brazil and Nishina Y in Japan (85.3%).<sup>[1,16]</sup>

In this study the nurses had certain fallacies in knowledge like epilepsy is a mental illness (29%) which is caused due to past sins (25%) or due to possession by supernatural powers (18%). This shows that ancient beliefs are still deep rooted in spite of the information about epilepsy obtained from the training school. Similar misconceptions that epilepsy is a mental illness, were also noted in studies conducted in African countries, India and China.<sup>[2,14,15,17,18]</sup>

In our study 18% of the respondents had a misconception that epilepsy is contagious. This is an alarming number as it will provide hindrance in the quality of care rendered by them. A comparatively lesser number of study participants had the same opinion in a studies conducted in African countries and one in Northern India.<sup>[14,15,17]</sup>

In the present study 33.3% believed that all types of seizures are due to epilepsy. These findings were higher than those of Chomba et.al (2.9%).<sup>[15]</sup> In an Indian setting nurses tend to spend more time with the patient, so they can help in fastening the diagnostic process if they are aware of are some medical conditions which present with seizures.

In the present study only 22% of study participants felt that epilepsy is a public health problem as compared to those conducted in Zambia.<sup>(15)</sup> This means that they are still unaware of the magnitude of the problem.

In the present study 57% responded that epilepsy can be cured which was similar to studies conducted in Turkey (36.5%)<sup>[13]</sup> This shows that more than half of them are not aware that most forms of epilepsy are incurable but can be well controlled by antiepileptic drugs.

In our study 83% of study participants felt that epileptics can attend school. Similar findings were seen

in a studies across Africa, Guinea-Bissau, china and east Asia. [13,15,18]

In our study 62% of the respondents were of the opinion that epileptics can have a job and were also willing to work with them (87%). Similar positive findings were seen in studies conducted across Asia, Africa and Europe.[1,2,13,14,18,19,20]

In the present study, although 67% of the study participants felt that epileptics can marry and have children. But only 48% of them were willing to let their children marry epileptics. This is in accordance with the age old belief that all types of epilepsy are genetic .So although they knew that there was nothing wrong in marrying a person with epilepsy they preferred their child to marry healthy individuals so as to avoid the possibility of having a child with epilepsy. These findings were in par with the study conducted by Otte WM et al.[2]

In the present study 69% of the respondents were of the opinion that epileptics cannot participate in sports. Similar findings were seen in a study conducted by Chomba et. al (66.4%)[15]

In the present study 83.6% were of the participants were of the opinion that epileptics cannot travel alone . This was in contrast to the earlier studies in Japan and Zambia where a higher percentage believed otherwise. [1,15]

In the current study 86% of the staff nurses believed that epileptics should not swim. These findings were analogous with the Zambian study (85.1%) [15]

In our study 83% of the study participants were of the opinion that epileptics should not drive. This shows that they are aware of the Indian law which states that people with epilepsy are prohibited from driving. These findings go in line with those of Yuko Nishina (83%) and Chomba et. al (65.4%).[1, 15]

In the present study around 13% of study participants were not willing to shake hands or work with or let their child play with someone with epilepsy. This may be because of their erroneous belief that epilepsy is contagious. Similar findings were found in studies conducted in North India and Guinea Bissau.[2,17] Whereas a greater proportion of participants were not

willing to work with epileptics in a study conducted in Japan (38.2%) [1]

In the current study 25% of the staff nurses were of the opinion that society should behave differently with a person with epilepsy. Similar findings were seen in a study conducted by Surekha RK et. al in North India(26.08%). [17]

In our study 28% of the staff nurses were not willing to take care of epileptic patients which is a big number in case of a health care professional as this kind of negative attitude will directly hamper the quality of care provided by them. Almost similar findings were found in the study conducted by Y Nishina et.al (37.9%) [1] unlike the study conducted by Chomba et.al (5%)[15]

In this study, the nurses followed faulty practices like administering oxygen and placing a metallic object in the hand of the patient during a seizure which were similar to those seen in a study conducted by Chomba et. al. [15]

#### **Study limitations:**

As it is a single center study the results cannot be generalized. The quantitative nature of the study restricted the elucidative power of the study. Also there is a likelihood that the questions were answered in a manner considered socially acceptable by them

#### **Conclusion and recommendation:**

The study concludes that the knowledge regarding epilepsy is inadequate among the study participants Their attitude is prejudiced by the myths, taboos and misinformation accompanying epilepsy which are entrenched in the Indian society. Most of them lack awareness about appropriate first aid measures to be taken at the time of an epileptic seizure. This calls for an urgent need to conduct timely workshops to provide skill based epilepsy care education in addition to modification in the course content of nursing curriculum. There is a dire need for global standardization of nursing competencies, thereby intensifying role of nurses in epilepsy care. Further qualitative studies should be conducted to explore the reasons behind the negative beliefs among these nurses.

#### **1. Declaration of competing interest**

There was no conflict of interest between the authors

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