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A knowledge, attitude and practice study about seizure management towards pharmacy students in private institution at Chennai: A web based cross sectional study

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Abstract---Aim - The study aim is to show the knowledge, attitude and practice regarding seizure management towards pharmacy students in private institution at Chennai. Material and Methods- The study is carried out with a sample size of 218 students in VISTAS, Pallavaram, at Chennai. It is a web based cross –sectional study. The data were collected by e-questionnaire of 21 questions into 4 domains, where demographic details and questions regarding knowledge, attitude and practice of seizure management were asked among pharmacy students in private institution. Result and Discussion- In our study questionnaire was circulated to 218 pharmacy students totally, but only 206 pharmacy students have responded giving response rate of (94.4%) who is studying in private institution at Chennai. Majority of pharmacy students responded from the age group above 22 years 113(54.8%), Most of response were from Female participants 112(54.3%) and B pharm students 111(53.8%).The study result shows that pharmacy students have 81.9% knowledge about seizure management. Conclusion- The present study concluded that pharmacy student have adequate knowledge, attitude and practice

about seizure and its management and have enough awareness regarding seizure management among pharmacy students.

Keywords---knowledge, pharmacy, students, questionnaire, seizure.

Introduction

Epilepsy is one of the most common neurological illnesses affecting any age group people. It is characterized by periodic loss of consciousness with or without convulsions. It is an abnormal and excessive discharge of a set of neurons in the brain [1][2]. Epilepsy is a condition of recurrent unprovoked seizure [3]. Seizure is a paroxysmal alteration of neurologic function caused by excessive, hypersynchronous discharge of neurons in the brain. Sudden excessive nerve discharge in brain resulting in abnormal body function.

Seizure often causes transients impairment of consciousness leaving the individual at risk of body harm [4][5]. It involves episodic abnormal electricity activity in brain, where all epilepsy are not lifelong forms it may be only for a particular stage of life of a person. Anticonvulsant medication is used to cure epilepsy. It is difficult to control the seizure even though the drugs are used; only little improvement is seen therefore surgery is required for some cases. [6] Major compliance due to use of medication for long term where many drug are used it may lead to several interactions. [7] [8] It is a second most common neurological disease after a stroke, where up to 1% of the population is affected by epilepsy [6]. 90% of them come from developing countries [9]. Epilepsy is more likely to occur in young children or people over 65 years of age; however, it can occur at any time [10] [11]. The word epilepsy comes from the Greek 'epilepsia' that means 'to seize' which in turn has merged into the form 'epi' meaning above and means 'lambanein' which they assume [12].

It is one of the most common neurological disorder, where a prevalence of approximately 1 % (i.e. 5, 00,000 cases per 50 million persons worldwide) [13] [14]. In United States, the prevalence of epilepsy is 6.42 cases per 1000 people [15]. Approximately 1 to 50 children and 1 to 100 adults are affected. Approximately 70% of people with epilepsy have only one seizure type; the remainder has two or more seizure types [16]. Epilepsy causes is unknown. Epilepsy in some cases is induced due to genetic factor, environmental factor and some of triggering factors but it can also be due to some of brain injuries caused by head, strokes, infections, fever or tumor blow [17] [18].

They are different type of seizure such as partial, generalized and mixed seizure depend upon the symptoms seizure can be classified some of the symptoms are consciousness is impaired, uncontrolled jerking movement of legs and arms, temporary confusion and cognitive symptoms [19]. Some of temporary symptoms are loss of awareness or consciousness, disturbance in movement (jerking of single limbs), sensation including vision, hearing and taste, moods or other cognitive functions [20]. People with seizure tend to have more physical problems as well as psychological condition such as anxiety and depression [21].

Some of the diagnosis test which is available to determine the types of seizure are, EEG, brain scan such as CT (Computed Tomography), PET (Position Emission Tomography), MRI (Magnetic Resonance Imaging), SPECT (Single Photon Emission Computed Tomography), MRS ((Magnetic Resonance Spectroscopy). MEG (Magnetic Encephalogram) detects the magnetic signals generated by neurons. Medical history such as symptoms and blood tests are done to determine the seizure type [22]. Epilepsy can be managed by using antiepileptic drugs which is used to control epilepsy. The treatment should be started with single conventional anti-epileptic drug (AED). The dose should be gradually increased until it achieves its medication effectiveness. If the initial treatment is not effective than second drug has to be given slowly with increasing dose to maximum [23]. First drug has to be withdrawn if the treatment is ineffective, where combination therapy many more effective rather than single therapy [24]. First line drugs – phenytoin, carbanazepine, oxcarbazepine, phenobarbitone, valporate are less expensive and have fewer side effects. New or second line drugs –vigabalin, topiramate, zonisamide, where these drugs are used as contraction to first line drug [25].

There are many opportunities for pharmacists in the management of patients with epilepsy and have extensive knowledge and practice regarding the management and drug therapy, where pharmacy students have great knowledge about seizure and play an important role by not only dispensing medication but also provide information regarding the side effect, interaction which will help to improve the clinical outcomes and that leads to improve the quality of patient life. This study shows the familiarity and knowledge about seizure management among the pharmacy students.

Objective

The objective of our study were as follows-

1. To evaluate the knowledge, attitude and practice regarding seizure management among pharmacy students in private institution.
2. To assess the awareness about seizure management among pharmacy students.

Materials and Methods

The study is carried out with a sample size of 218 students in VISTAS, Pallavaram, and Chennai. The sample size is calculated according to the formula. The study was carried out via online. The study is a web based cross –sectional study using E- Questionnaires. Before conducting the study, ethical approval was obtained from the Institutional Ethical committee (IEC).

Data collection and procedures

A physician validated Questionnaire containing 20 questions is made into a Google form for which the link will be shared to students to evaluate knowledge, attitude and practice regarding seizure management in private institution, to the students who are registered in Vels institute of science technology and advanced

studies (VISTAS), Chennai will be sent the link to self-administered online questionnaires. The E-Questionnaires which is distributed among college students in department of pharmacy in a (VISTAS) through Google forms, the link was created and used to circulate among the students by social media such as whatsapp, G-mail. The survey consists of demographic characteristics such as age, gender, education qualification and 3 sections contain question regarding knowledge, attitude, and practice towards seizure management. The filled online questionnaires will be submitted to investigators mail. The inclusion criteria for selecting the participants in this study is only Pharmacy students above 18 years from VISTAS are included in the study and students from other departments and other universities are excluded. The statistical analysis was calculated based on review performed on E- Questionnaire, where the values were expressed as percentage or as mean and which is obtained by using MS- excel sheet.

Results

All the questions from the questionnaire provided the information needed to frame the result and helps to assess the knowledge, attitude and practice regarding seizure among pharmacy students. The data were collected by e-questionnaire of 21 questions into 4 domains, where demographic details and questions regarding knowledge, attitude and practice of seizure management where asked. In our study questionnaire was circulated to 218 pharmacy students totally, but only 206 pharmacy students have responded giving response rate of (94.4%) who is studying in private institution at Chennai.

Majority of pharmacy students responded from the age group above 22 years 113(54.8%) followed by 21 years were 57(27.6%); 20 years were 21 (10.1%). Only 15 (7.2%) of pharmacy student responded from age groups of 19 years. Figure 1 which shows the age of the respondents by the way of percentage.

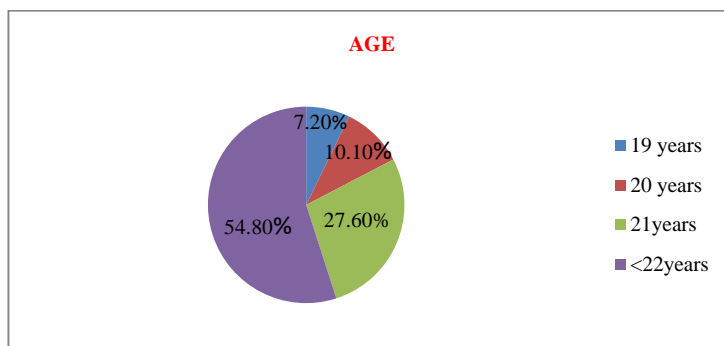


Figure 1 – Age of the Respondents

The samples that answered male and female for gender question were 94(45.6%) and 112 (54.3%) respectively. Figure 2 shows the gender characteristic of respondents.

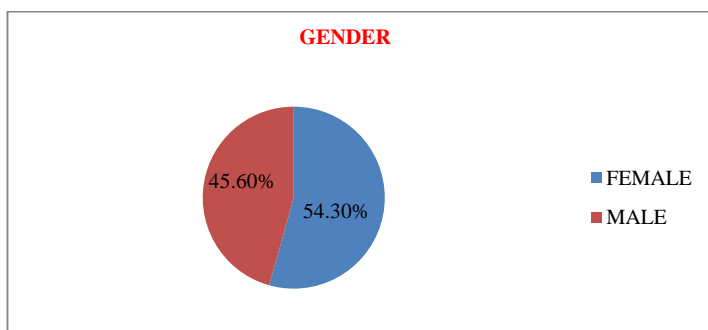


Figure 2- Gender of the Respondents

The education qualification of the students was obtained and number of sample for B. Pharm students were 111(53.8%), in M. Pharm students were 19(9.2%) and Pharm- D students were 76(36.8%). Most of the responses were from B. Pharm students. Figure 3 shows the education qualification of respondents in percentage.

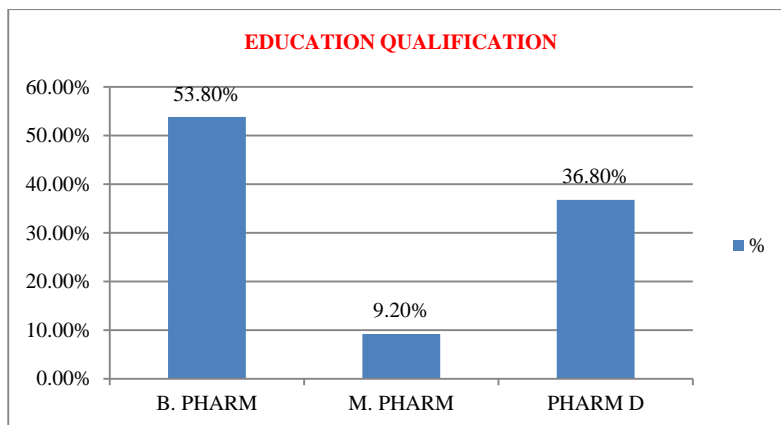


Figure 3- Education Qualification of Respondents

Table 1 shows and summarize the responses of students about the knowledge of seizure management. Majority of respondent 84(89.3%) doesn't know people who experiencing with seizure. Only 22(10.65%) students know people who experiencing with seizure. In addition to this, mostly 175(84.9%) think that seizure is neurological disorder. Most of students 149(72.3%) felt that seizure and epilepsy are same. Regarding cause of epilepsy 121(58.47%) students responded in favour of all the factors such as genetic, brain injury, infection and birth defect. The response for other cause such as genetic factor 62(30%), brain injury 47(18%), infection 12(5.8%) and birth defect 4(1.9%). Most of the students 198(96%) have knowledge regarding the different types of seizure. Majority of students 104 (50.4%) felt that EEG is the best way to diagnosis seizure and responses for other diagnosis method from other students are skull x-ray 13(6.3%), MRI/CT scan 54(26.2%) and blood studies 35(16.9%). Majority of students 193(93.6%) enclosed that they are aware about first aid seizure management and to perform it.

Table 1- Knowledge towards seizure management among students

S.No	Questions	Number(N=206)	Percentage
1.	Do you know anyone experiencing with seizure?		
	a. Yes	22	10.6%
	b. No	184	89.3%
2.	Do you think seizure is a Neurological disorder?		
	a. Yes	175	84.9%
	b. No	8	3.8%
	c. Maybe	23	11.16%
3.	Is epilepsy and seizure are same?	149	72.3%
	a. Yes	12	5.8%
	b. No	45	21.8%
	c. Maybe		
4.	What is the cause for seizure?		
	a. Genetic factor	62	30.0%
	b. Brain injury	47	18.0%
	c. Infection	12	5.8%
	d. Birth defect	4	1.9%
	e. All the above	121	58.7%
5.	What are the common symptoms experiencing by the seizure patient?	87	42.2%
	a. Loss of consciousness	34	16.5%
	b. Uncontrollable jerking movement of arms and legs		
	c. Temporary confusions	5	2.4%
	d. Cognitive symptoms	6	2.9%
	e. All the above	74	35.9%
6.	Do you have knowledge about different types of seizure?		
	a. Yes, I have	198	96.1%
	b. No	8	3.2%
7.	How do you diagnose a seizure?		
	a. EEG	104	50.4%
	b. Skull X-ray	13	6.3%

c.	MRI/CT Scan	54	26.2%
d.	Blood studies	35	16.9%
.			
8.	Are you aware about First Aid Seizure Management?		
a.	Yes	193	93.6%
b.	No	13	6.3%

Table 2 shows and summarize the responses of students about attitude towards seizure management. Only 4 (1.9%) of students felt that epilepsy is a contagious disease, where majority 187(90.7%) students felt that it is non- contagious disease. Majority of respondent 123 (59.7%) students thought that patient's mental ability will be affected due to seizure. Only 73(35.4%) of student felt that patient can live a high quality of life and 36(17.4%) students thought that they cannot have high quality of life and some students 97(47.7%) felt it uncertainly. Majority of students 102(49.5%) felt that epilepsy and epilepsy medication doesn't have any significant effect on affected person lifestyle. Among the respondents 91(44.1%) students felt that seizure can be cured or controlled.

Table 2- Attitude toward a seizure management among pharmacy students

S.No	Questions	Number(N=206)	Percentage
1.	Do you think patient's mental ability will be affected?		
a.	Yes, it will be affected	123	59.7%
b.	No	10	4.9%
c.	Sometime	73	35.4%
2.	Do you think epilepsy is a contagious disease?		
a.	Yes	4	1.9%
b.	No	187	90.7%
c.	Maybe	15	7.2%
3.	A patient with seizure can have a high quality of life.		
a.	Yes, I Agree	73	35.4%
b.	No , I Disagree	36	17.4%
c.	Uncertainly	97	47.7%
.			
4.	Do you think epilepsy and epilepsy medication can have significant effect on the affected person's life style?	30	14.5%
a.	Yes	74	49.5%
b.	No		35.9%
c.	Maybe		

5.	Do you think seizure can be cured?	91	44.1%
a.	Yes	53	25.7%
b.	No	62	30.0%
c.	Maybe		

Table 3 shows and summarize the responses of students about practice towards seizure management. Majority of students 104(50.4%) will call an ambulance first if they find anyone with seizure. Only 83(40.2%) students will put something on the mouth to avoid tongue bite first if they find someone with seizure. Majority of student 114 (55.3%) felt that allopathic treatment is best treatment for seizure management and 53(25.7%) students felt that ayurvedic is best treatment. Only 37(18.2%) student felt that both ayurvedic and allopathic treatment are best. Only 2(0.97%) doesn't know which is best treatment. Majority of student 154(74.7%) selected all the prevention method to prevent the tongue bite. Majority of students 192(93.2%) prefer antiepileptic drug to cure seizure. Only 9 (4.36%) students choice of drug for seizure patient is levetiracetam, where majority of student 97(47%) choice is for sodium valproate, where 89 (43.2%) student choice is for carbamazepine and only 11 (5.3%) choice is for lamotrigine.

Table 3-Practice toward a seizure management among pharmacy students

S.No	Questions	Number(N=206)	Percentage
1.	If you find someone with seizure what would you do first?	104	50.4%
a.	Call an ambulance	8	3.8%
b.	Take them away from danger	83	40.2%
c.	Put something on the mouth to avoid tongue bite	11	5.3%
d.	Loosen the tight cloths		
2.	What would be the best treatment for seizure management?	114	55.3%
a.	Allopathic treatment	53	25.7%
b.	Ayurvedic treatment	37	18.2%
c.	Both	2	0.97%
d.	Don't know		
3.	How do you prevent a person from tongue bite during seizure?	7	3.39%
a.	Turn them on their side	33	16.01%
b.	Place something on mouth such as cloth	154	5.8%

	c.	Hold their head still		74.7%
	d.	All the above		
4.		Is antiepileptic drug can be used by the seizure patient?	192	93.2%
	a.	Yes	2	0.97%
	b.	No	12	5.85%
	c.	Maybe		
5.		What would be your choice of drug for seizure patient?		
	a.	Lamtorigine	11	5.3%
	b.	Sodium valporate	97	47%
	c.	Carbamazepine	89	43.2%
	d.	Levetiracetam	9	4.36%

Discussion

Many previous studies were conducted regarding awareness about seizure management among school and college going teachers and school's students. From the previous study result it shows that teachers and students have inadequate knowledge and awareness about seizure management. Currently, the present study shows about knowledge, attitude and practice regarding seizure management among pharmacy students. As per my knowledge this was the first study conducted for the pharmacy students at Chennai to examine the knowledge, attitude and practice about seizure management. The study result shows that pharmacy students have 81.9% knowledge about seizure management, where 90.7% students felt that seizure is non-contagious disease and 44.1% of students felt that seizure can be cured and controlled this shows that the students have good attitude towards seizure management. From the result, it shows that 50.4% of students will call an ambulance if they find anyone with seizure and 93.2% of students prefer antiepileptic drug to cure seizure. This shows that pharmacy students have enough practice regarding the seizure management. From the present study the result shows that pharmacy student have adequate knowledge, attitude and practice regarding seizure management.

The present study concluded that pharmacy student have adequate knowledge, attitude and practice about seizure and its management. The results of this study help to show the scarcity of knowledge, attitude and practice among the pharmacy students. From the result it shows that, awareness about seizure management is also good enough among the pharmacy students. Participant had good knowledge regarding seizure and its management and had enough practice regarding first aid management. Even choice of drug therapy was good among the pharmacy student.

Conflict of Interest

There was no conflict of interest in this study.

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