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ASSESSMENT OF KNOWLEDGE, ATTITUDE AND PRACTICE OF ANTI-EPILEPTIC DRUGS AMONG EPILEPSY PATIENT IN TERTIARY CARE TEACHING HOSPITAL

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ABSTRACT

Aim: The present study was aimed to assess the knowledge, attitude and practice (KAP) of epilepsy patients about epilepsy and anti-epileptic drugs in RIMS, KADAPA. **Methodology:** A prospective observational study conducted for a period of six months Dec-2013 to May-2014. We included 100 patients with epilepsy (PWE) attending both IP/OP departments of RIMS. Knowledge score were given based on the percentage of correct responses. Data was collected using a self-prepared questionnaire and analyzed using descriptive statistics. Demographic details and responses to a questionnaire assessing the knowledge, attitude and practices were recorded. **Results:** Although majority of the patients belonged to low socioeconomic strata, the literacy rate was very low (70%). A large majority (86%) of PWE had heard about epilepsy and 53% knew that epilepsy can be treated with modern drugs. Negative attitude was reflected in the belief that epilepsy is due to supernatural powers (10%) and sins committed by patient or ancestors (43%). Analysis of demographic data revealed regional differences in KAP which could be attributed to local factors, such as literacy, awareness about epilepsy, and practice of different systems of medicine. Knowledge regarding seizure medication was poor, 22% and 9% of respondents known about their seizure medication and its dose and frequency. **Conclusion:** There is a need to create awareness about epilepsy and anti-epileptic drugs by patient counselling, patient educating programmers' to dispel the misconceptions and stigma through effective and robust programs with the aim to lessen the disease burden.

INTRODUCTION:

In many countries, epilepsy is believed to be contagious or a sign of a curse.. It is the most common serious brain disorder in every country, and it affects people of all ages, races, social classes, and countries.[4] The incidence and prevalence of epilepsy rise sharply after age 60, and its incidence is the highest of any age group.[5,6] Epilepsy is one of the most common of the serious neurological disorders.[7] About 3% of people will be diagnosed with epilepsy at some time in their lives.[8] Several clinical and experimental data have implicated the failure of blood–brain barrier (BBB) function in triggering chronic or acute seizures,[9]some studies implicate the

interactions between a common blood protein—albumin and astrocytes. A review of literature revealed that though studies have focused on knowledge and attitudes of the general public or student toward epilepsy,[10] assessment of the same among healthcare workers is not fully explored. It is known that the triad of knowledge, attitudes and practices in combination governs all aspects of life in human societies, and all three pillars together make up the dynamic system of life itself.[11] These three components can be defined thus: ***Knowledge*** is the capacity to acquire, retain and use information; a mixture of comprehension, experience, discernment and skill; ***Attitudes*** refer to inclinations to react in a certain way to certain situations; to see and interpret events according to certain predispositions; or to organise opinions into coherent and interrelated structures; and ***Practices*** mean the application of rules and knowledge that leads to action.[11] Good practice is an art that is linked to the progress of knowledge and technology and is executed in an ethical manner. Patients with epilepsy are socially discriminated on the ground of widespread negative public attitudes, misconceptions and defensive behaviors. Misconceptions that epileptic patients have are with physical disability, mental retardation, and emotional disturbance. This discrimination against epileptic patients could also be due to the lack of knowledge and understanding about epilepsy. Several studies have shown the lack of basic knowledge of epilepsy, misunderstanding, and negative attitudes among the general public epileptic patients and their family members.[12] This will minimize the stigma associated with this disease.[13] This together with improvement in self-management practices of epileptic patients will help in the betterment of their life style. So the researcher thought to improve the knowledge, attitude and behavior among epileptic patients to help them bring out the betterment of their life.[14]

MATERIALS AND METHODS

Study design and study period: Prospective observational survey based study

Study site: Rajiv Gandhi institute of medical sciences, Kadapa.

Source of data: Annexure – 1 (Questionnaires for knowledge, attitude and practice), Annexure – 2 (Attitude questionnaires for epilepsy medication), Patient counseling brochures, Patient information leaflets.

Sample size: 100 patients were recruited from various departments of both IP/OP like General medicine, Neurology etc.

Inclusion criteria: Diagnosed cases of epilepsy by both male and female patients. Who are above 15 years and below 60 years aged patients? Who were willing to participate in the study and Conscious and co-operative patients only included.

Exclusion criteria: Below age of 15 years and above age of 60 years. Who were not willing to participate in the study? Who are in position of unconscious and un co-operative. Patients with severe mental disability

Method of collection of data: Patients were randomly selected from each department like neurology, ICU, general medicine wards (I.P/O.P). The required baseline was collected from Epilepsy I.P/O.P in the patients or their relatives. Data collection proforma was included demographics of respondents with a well-suited to access the results. Selection of patients was identified by seeing their diagnosis which is confirmed by the physician. Data collection from the patients will include 4 parts.

PART I: In this part we collected the information about case history from the patient or from their case sheet. This will includes the Demographic data, chief

complaint, If he/she is a known case of epilepsy and etiology of seizure, habits (Smoker/Alcoholic/food habits), adverse effects, past medical history and past medication history, family history, laboratory details, diagnosis (provisional or confirmatory) and the treatment.

PART II: In this part we have list out the responses of patients from the questioner form about the knowledge, attitude and practice of patient towards the disease and drugs. It contains the questions up to 10 or 15 and scores was given and divided in to poor, fair and good categories based on their scores.

PART III: Here we have assessed the knowledge about patient's medication through obtaining the questionnaire responses. The questioner forms were prepared based on the patients mentality, attitudes, locality and that would be prepared by the researchers. The questionnaire has questions which were of the close ended type and comprised of yes/no/don't know variety of answers. The structured questionnaires were administered to the parents who completed them on the spot. Those who could not read and write were assisted by the researchers. The questionnaire was translated to Telugu and back translated and checked for accurate reproduction. After completing the information we have given the standard patient counseling information about the disease and drugs based up on their knowledge, attitude and practice and this is very useful to patients and practitioners for better patient care. Patient information leaflets and patient counseling brochures are distributed to the patient for better understand and further beneficial.

Statistical analysis: The data collected was analyzed and the descriptive measures presented include percentages and corresponding 95% confidence intervals. The knowledge concerning the epilepsy, antiepileptic drugs and attitude, practice among the patients was assessed by calculating the number of correct responses to ten statements as shown in annexure poor, adequate and good knowledge was defines as total knowledge scores of 1 (<50% correct responses), 2 (50-70% correct response) and 3 (>70% correct response). Association of respondent's knowledge score with sex, age group, educational level and income was analyzed by chi square test using Graph Pad Prism 6.

RESULTS: A prospective observational study was conducted for 6 months in a south Indian tertiary teaching care hospital in inpatient and outpatient departments at RIMS (Rajiv Gandhi institute of medical sciences), Kadapa. A total of 100 patients were studied who comes under inclusion criteria.

DISCUSSION: Epilepsy is usually defined as the tendency to experience recurrent seizures. The word "epilepsy" is derived from Latin and Greek words for "seizure" or "to seize upon". This implies that epilepsy is an ancient disorder. Historically, epilepsy has been considered a curse of the gods, 'demonic possession,' and a form of madness. Consequently epilepsy is a condition that has been feared and rejected. Misconceptions have led to social isolation for the individual with epilepsy; it is therefore no great surprise that the myths and prejudice that have surrounded epilepsy has resulted in the stigmatization of people with the disorder. Because epilepsy is seen as a highly contagious and shameful disease in the eyes of the public, persons with epilepsy are shunned and discriminated against in education, employment and marriage. A strong network of traditional healers was found, providing a parallel system of health care in the South India. People turned to religiospiritual treatments in desperation for a cure, often under the influence of their families after the perceived failure of Western medicine. The majority of people with epilepsy are in

developing countries, and substantial numbers of these people remained untreated. The reasons for this failure of treatment are complex and involve nonpharmacologic aspects such as cultural attitudes to epilepsy, the acceptability of drugs as a method of treatment, and the less developed systems for the delivery of healthcare so continuing effective educational interventions will be of value in order to improve the appropriate understanding of epilepsy, and to ameliorate the social discrimination and misconceptions against epileptic patients. Our study investigated levels of knowledge and expressed attitudes to epilepsy among the epileptic patients in south Indian tertiary care hospital. The belief of relating epilepsy to the supernatural is consistent with the study among rural population. The belief of the respondents about the causes of Epilepsy and The study demonstrated that majority of the respondents stated that epilepsy is manifested by convulsions, other manifestations of the disorder proffered by the respondents included falling down, rolling of eyes and foaming of mouth. Up to 31% of respondents did not know the cause of epilepsy. However some of the Other patients mentioned other causes of epilepsy such as heredity (27%), brain defect (8%), birth defects (10%) and stroke (8%). Overall (13%) of the respondents had good knowledge of epilepsy whereas (13%) and (74%) had fair and poor knowledge of the disease respectively. Lack of knowledge increases the potential for inappropriate or inadequate responses by patients. Pharmacist play a key role in educating patients, parents, caregivers, and the community about how to respond to an individual who is having a seizure. Like what was mentioned in the literature the majority of the negative attitudes toward epilepsy were significantly associated with the misunderstanding of epilepsy. Effective educational interventions would be needed in order to improve the appropriate understanding of epilepsy, and to ameliorate the social discrimination and misconceptions against an epileptic patient. Majority of patients in our study was males about 70%, females 30% with low socioeconomic strata and came from rural Kadapa and neighboring villages. Respondents education levels were observed were primary school (47%), no education (23%) and followed by secondary school (15%), graduate (15%) were recorded. As per the knowledge score regarding epilepsy and anti-epileptic drugs was given, most of males (70%) were recorded among them 72% were with poor knowledge towards epilepsy and the p-value was >0.005 when compared between the male and female hence the difference was statistically non-significant. Knowledge score was distributed among the different age groups and most of the age group patients (82%) from 45-60 years, there knowledge was poor and 15-25 years (57%) age group knowledge was good. The myths and misconceptions about the disorder particularly epilepsy is due to supernatural causes (such as evil, or curse) were recorded in 47%.

Knowledge, attitude and practice of anti-epileptic drugs among respondents:

Majority of respondent's knowledge regarding seizure medication was very poor due to low level their education and low socio-economic strata. As the seizure medication was long term treatment, most of the respondents response regarding their seizure medication was good in listing the seizure medication name (22% yes and 78% no), dose and frequency (9% yes and 91% no) were the response (10% yes and 90% no) for their seizure medication side effect. Overall 14% of respondents had good knowledge of anti-epileptic drugs whereas 80% and 6% had fair and poor knowledge of medication respectively. Most of the respondent's attitude and practice in following the physician's instructions regarding seizure medication had 80% positive and 20% negative attitude respectively.

I- Percentage distribution based on gender:

Table 1: Percentage distribution based on gender and knowledge of respondents

Gender	Total Count (%)	Score 1 Count (%)	Score 2 Count (%)	Score Count (%)
Male	70	51	9	10
Female	30	23	4	3

Knowledge score was categorized into 3 types based upon the number of correct responses.

- Below 50% of correct responses categorized as **score 1**
- 50% - 70% of correct responses categorized as **sore 2**
- >70% of correct responses categorized as **score 3**

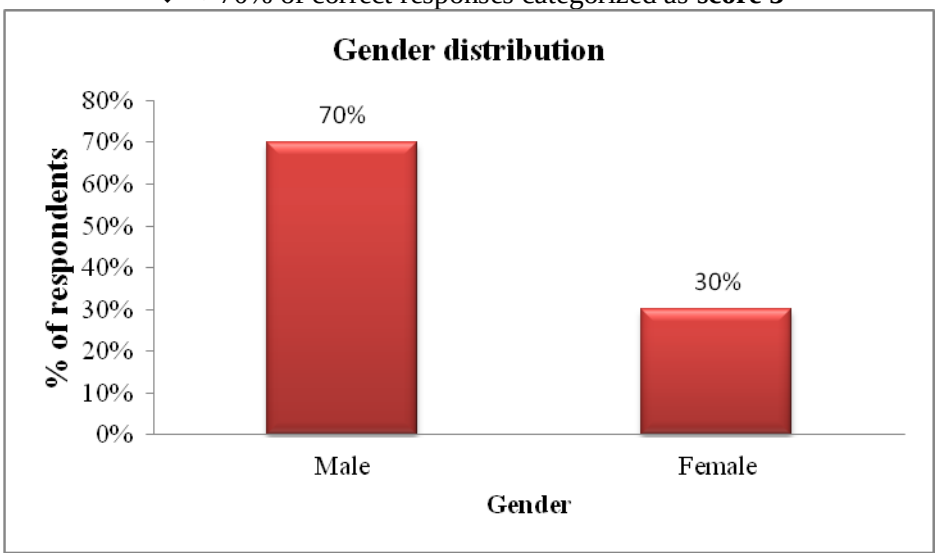

Figure-1: percentage distribution based on gender

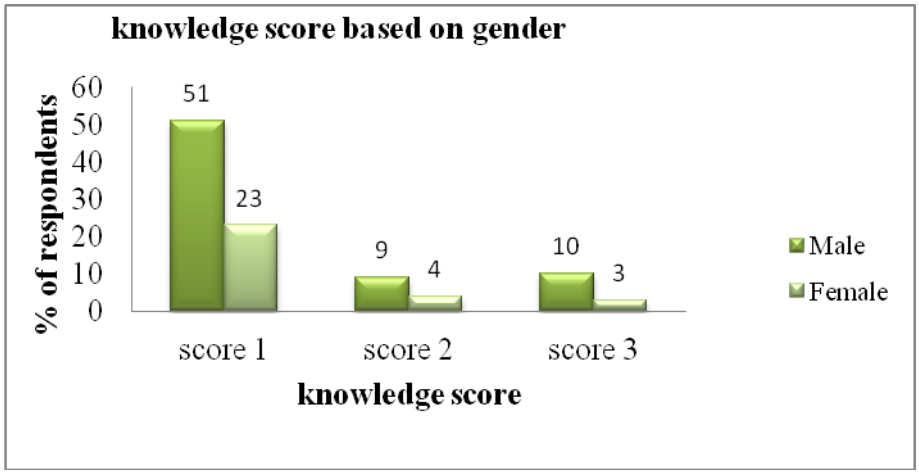

Figure-2: Knowledge score based on gender

II- Percentage distribution based up on age group:

Table 2 Distribution of respondents based on age group

Age groups	Number of respondents N (%)
15 - 25	26 (26%)
26 - 35	12 (12%)
36 - 45	22 (22%)
>45	40 (40%)

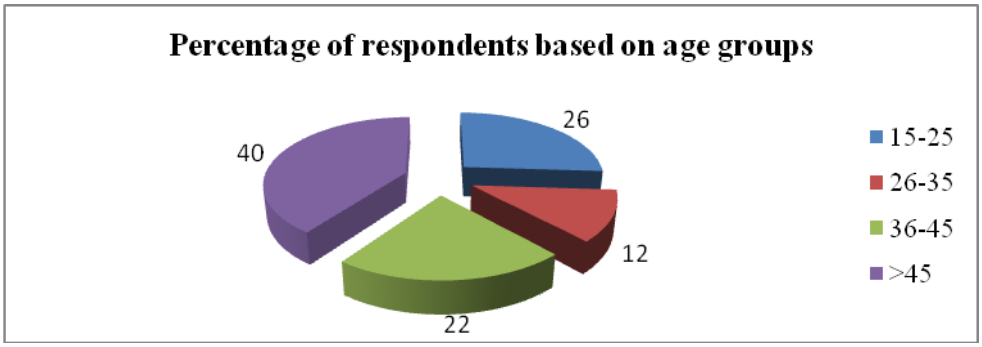

Figure 3: percentage of respondents based on age groups

III- Knowledge score distribution of respondents based upon age group:

Table 3 Knowledge score distribution of respondents based on age group

Age group	Score-1	Score-2	Score-3
15-25	11	8	7
26-35	10	0	2
36-45	20	1	1
>45	33	4	3

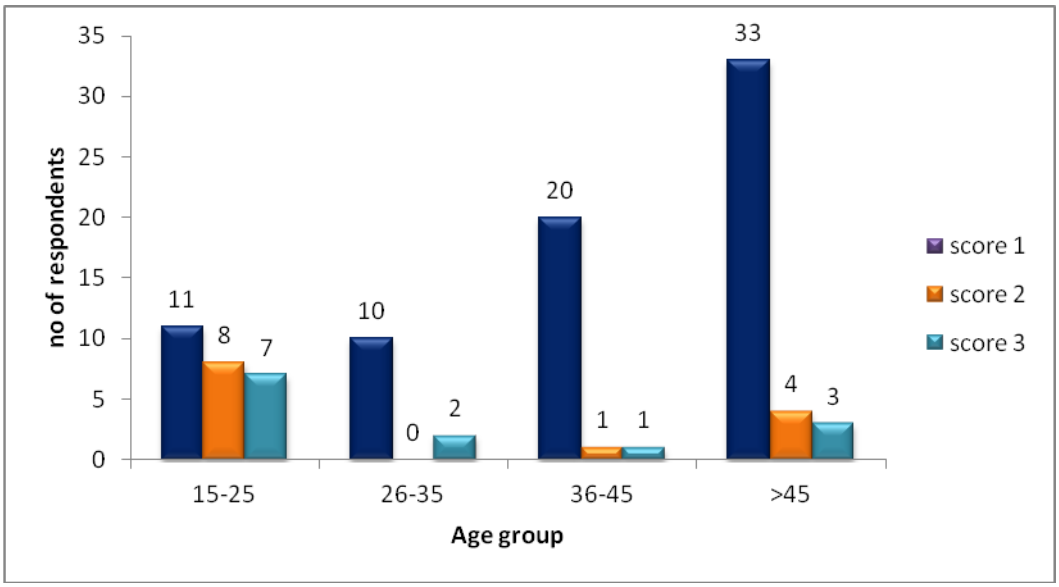

Figure 4: Knowledge score distribution of respondents based on age group

IV- Distribution of respondents based on place of living:

Table 4: Number of respondents based on place of living

Place of living	No of respondents
Urban	7
Rural	93

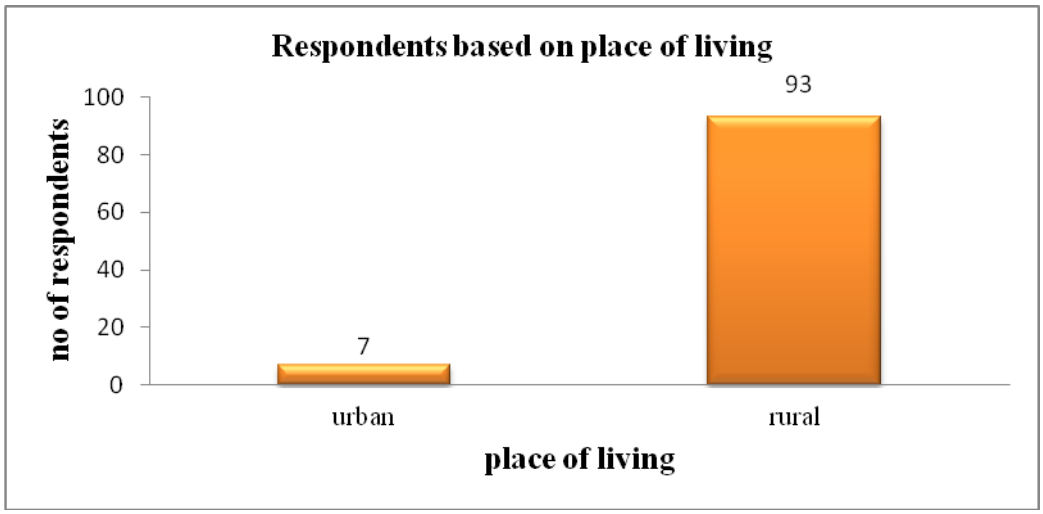

Figure 5: Distribution of respondents based on place of living

V- Distribution of knowledge score based on place of living:

Table 5: Distribution of knowledge score based on place of living

Place of living	Score 1	Score 2	Score 3
Urban	4	2	1
Rural	67	11	12

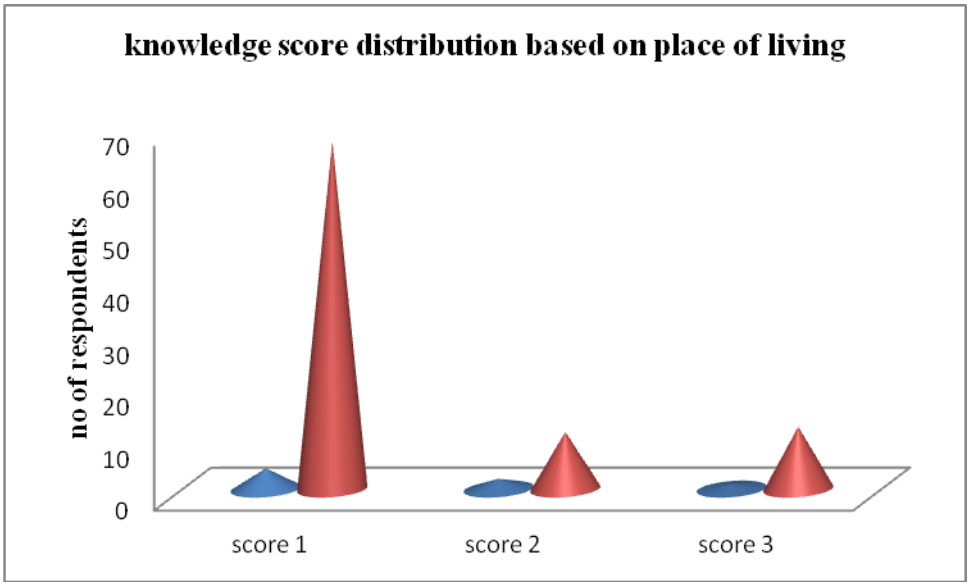

Figure 6: Distribution of knowledge score based on place of living

VI. Distribution of respondents based on education level:

Education level	No of respondents
Primary school	47
Secondary school	15
Graduate	15
No education	23

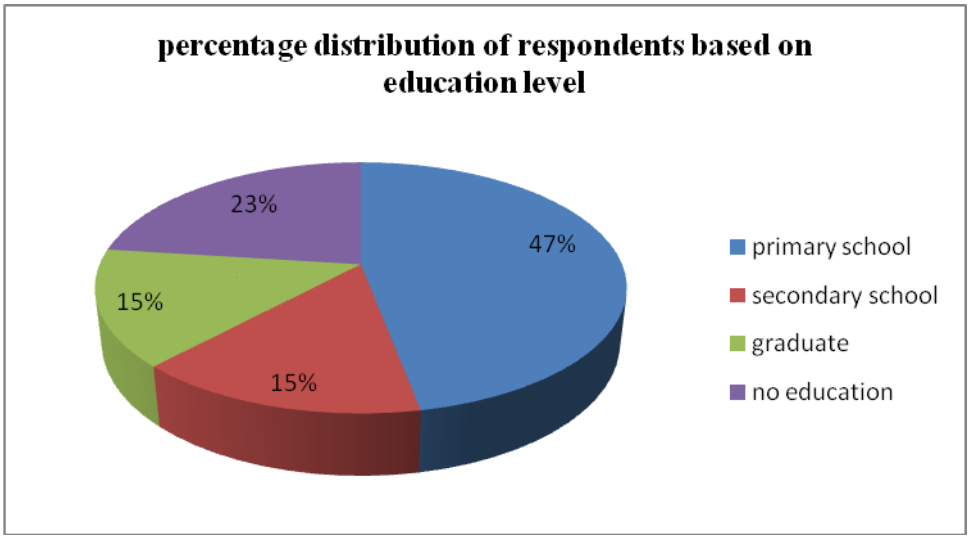

Figure 7: percentage distribution of respondents based on education level

Table 6: Knowledge distribution of respondents based on education level

Education level	Score 1	Score 2	Score 3
Primary school	43	4	0
Secondary school	6	5	4
Graduate	2	4	9
No education	23	0	0

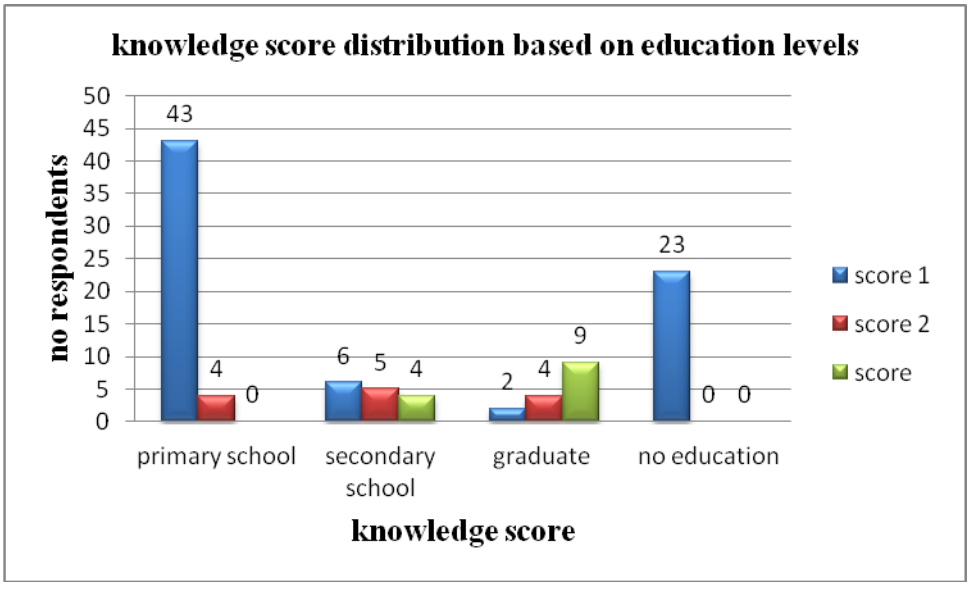

Figure 8: Knowledge distributions of respondents based on education level

VII. Distribution of respondents based upon income per month:

Income per month	Score 1	Score 2	Score 3	Total (n)
<5000	55	10	4	69
5000-10000	19	1	1	21
>10000	0	1	9	10

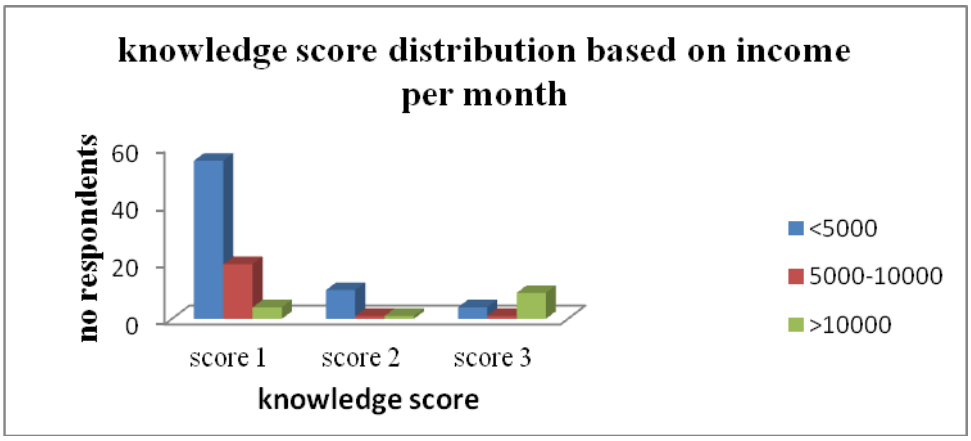

Figure 9: Knowledge score distribution based on income per month

KNOWLEDGE OF PATIENTS ABOUT EPILEPSY QUESTIONS	NUMBER	PERCENTAGE	95% CI
1). Have you ever heard or listen about epilepsy?			
Agree	86/100	86%	
Dis agree	6/100	6%	
Don't know	8/100	8%	
2.) Epilepsy occurs in 1/100?			
Agree	13/100	13%	
Dis agrre	28/100	28%	
Don't know	59/100	59%	
3). Causes of epilepsy?			
Accidents			
Inherited disease			
Insanity or other illness			
Birth defects			
Stroke			
Don't know			
4). An epileptic attack is?			
A convulsion or shaking			
A loss of consciousness			
An episode of behavioral change			
A period of memory disturbance			
5).Is epilepsy a brain disorder?			
Agree	68/100	68%	
Dis agree	13/100	13%	
Don't know	19/100	19%	
6). Is epilepsy a mental disease?			
Agree			
Dis agree	13/100	13%	
Don't know	41/100	41%	
7). Is epilepsy a hereditary disorder?	46/100	46%	
Agree			

Dis agree	65/100	65%	
Don't know	5/100	5%	
8). Is epilepsy contagious?	30/100	30%	
Agree			
Dis agree	6/100	6%	
Don't know	38/100	38%	
9). Is epilepsy treatable with modern drugs?	56/100	56%	
Agree			
Dis agree			
Don't know	55/100	55%	
ATTITUDE AND PRACTICE OF PATIENTS ABOUT EPILEPSY	6/100	6%	
	39/100	39%	
Is epilepsy due to supernatural powers?			
Agree	10/100	10%	
Dis agree	76/100	76%	
Don't know	14/100	14%	
Is it due to sins of/patient/ ancestors?			
Agree	43/100	43%	
Dis agree	47/100	47%	
Don't know	10/100	10%	
Can faith healers treat epilepsy?			
Agree	53/100	53%	
Dis agree	30/100	30%	
Don't know	17/100	17%	
During an epileptic attack will you put keys in the hands of patients?			
Agree	97/100	97%	
Dis agree	3/100	3%	
Don't know	0/100	0%	
During an epileptic attack will you make the patient smell a shoe?			
Agree	8/100	8%	
Dis agree	78/100	78%	
Don't know	14/100	14%	
6. During epileptic attack will you take the patient to hospital?			
Agree	74/100	74%	
Dis agree	25/100	25%	
Don't know	1/100	1%	
KNOWLEDGE BASED QUESTIONARIES RELATED TO ANTI EPILPTIC DRUGS			
1. Do you know the name of your seizure medication?			
Agree	22/100	22%	
Dis agree	78/100	78%	
Don't know	0/100	0%	
2. Do you know what the dose and frequency of your medication is?			
Agree	9/100	9%	

Dis agree	91/100	91%	
Don't know	0/100	0%	
3. Can you name at least one side effect of your seizure medication?			
Agree	10/100	10%	
Dis agree	90/100	90%	
Don't know	0/100	0%	
4. Have you ever heard about newer anti epileptics?			
Agree	18/100	18%	
Dis agree	62/100	62%	
Don't know	20/100	20%	
ATTITUDE AND PRACTICE RELATED QUESTIONARIES ABOUT EPILEPSY MEDICATION			
1. Do you have the habit of keeping a seizure diary?			
Agree	23/100	23%	
Dis agree	77/100	77%	
Don't know	0/100	0%	
2. Do you take the medication according to the physician's instruction?			
Agree	80/100	80%	
Dis agree	20/100	20%	
Don't know	0/100	0%	

CONCLUSION

The study showed that level of knowledge and understanding about epilepsy needs community education programmers' to fill the gaps, ameliorate misconception, and to minimize the social stigma. The high frequency of negative attitude among the respondents may be due to lack of awareness towards epilepsy. A better understanding of the disorder among the public would allay fears and mistrust about epilepsy. Our findings would be useful to health policy makers in the design of community health educational programmes on epilepsy. The study show that the level of knowledge regarding epilepsy and anti-epileptic drugs needs counseling and educational programs which will reflects the positive input in quality of life of the patients. Awareness about epilepsy and the effects AED"s can have on respondents is needed for health care professional to avoid negative stereotyping or lacking of knowledge and there is need to develop a National Epilepsy Plan which is inclusive of all socio-economic issues that affect people living with epilepsy.

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