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KNOWLEDGE, ATTITUDE AND PRACTICE AMONG ADULT EPILEPTIC PATIENTS TOWARDS THEIR ILLNESS IN ADAMA HOSPITAL MEDICAL COLLEGE DEPARTMENT OF NEUROLOGY, ETHIOPIA

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ABSTRACT

Background: Epilepsy is one of the major public health problems which provoke a variety of medical, social, psychological and economic burdens especially in developing countries where its incidence and prevalence are thought to be higher. Stigma to epilepsy due to lack of knowledge, attitude and practice among different population groups may influence the nature of treatment and care for Epilepsy.

Objective: Is to assess the knowledge, Attitude and practice of epileptic patient toward their illness and its association's factor who attend to AHMC neurology referral clinic for epilepsy follow up.

Methodology: A hospital based prospective cross sectional study was conducted among epilepsy patients on follow-up in AHMC, about 237 PWE who were selected and interviewed. For data collection structured questionnaire with closed ended questions was used as a tool for data collection. Data were entered, cleaned and analyzed using SPSS version 20. Descriptive statistics were done to characterize the study population using different variables. Bivariate and multiple logistic regression models were fitted. Odds ratios were computed to identify factor associated with KAP.

Results: A total of 237 epileptic patients, at Neurology referral clinic, were interviewed. Of 237 patients interviewed, 46.8% of the respondents have good knowledge about epilepsy. About 93.8% of the respondents suggested epileptic patient can be employed and work effectively. About 55.4% of the respondents have safe practice toward epilepsy and 97.5% respondent said protect them from danger.

Conclusion: In our study it was found that most of the participants have lower knowledge about the cause and its treatment or practice of epilepsy. 46 % had favorable attitude towards epilepsy. Most of them used modern medicine for treatment .Cultural and religious practice push them back to use spiritual treatment, prayers, and holy water. Still lack of knowledge has been considered an important determinant of unfavorable attitudes towards PWE. There is significant association between knowledge and educational status .Therefore this association has positive impact on people to have favorable attitude toward epilepsy.

Keywords: Attitude, Epilepsy, Knowledge, Practice, Seizure

1. Background

Epilepsy is one of the world's most common chronic neurological disorders. It is characterized by recurrent derangement of the nervous system due to sudden excessive discharge of the cerebral neurons that result in almost instantaneous disturbance of motor, sensory, autonomic and loss of consciousness *(1)*.

The clinical manifestations consists of sudden and transitory abnormal phenomena which may include alterations in consciousness, motor, sensory, autonomic or psychic behaviors. Epilepsy is different from seizure which is characterized by recurrent seizure with an excessive, abnormal discharge of neurotransmitters from cortical neurons and loss of consciousness, while seizure is usually only with a brief duration. Similarly, convulsion is violent attack manifested by strong contraction of the voluntary muscles *(2,3)*.

Misunderstanding about epilepsy combined with financial barriers to availability of treatment, widespread ignorance, fear and misunderstanding have contributed negatively to the management of epilepsy in developing countries. Sociocultural attitudes continue to have a negative impact on the management of epilepsy in many Africans. The disorder is associated

with superstition, discrimination and stigma in many countries. Still deeply rooted in these communities the idea that the cause of these frightening attacks is possession by evil spirits *(4,5).* Knowledge and attitude of epilepsy is interwoven into cultural and religious practices in Africa which was complicated by diverse cultures and multiplicity of ethnic groups and with different religious doctrines which though have influenced popular attitudes towards epilepsy but might have made it worse in some areas. Therefore, wide gaps still remain in the attitude of the people *(5,6).*

PWE dissatisfied with information provided to them by medical personnel and other caregiver that made them to knew only a little about their illness .Therefore they have little knowledge about its etiology and curability .Communities and family members are important in providing information on behavioral or environmental factors that trigger seizures among PWE. They can provide information on seizure triggers such as sleep deprivation, alcohol intake, and stress which is important for the health care team during the assessment of epilepsy *(7, 8, 10, and 11).*

Misconceptions continue to prevail in communities, which lead to poorly managed epilepsy, and thus many epileptic patients continue to get seizures that lead the patients and their caretakers to seek other practice to treatment *(11, 12).*

2. OBJECTIVES

2.1 .General objective

- To assess the knowledge, Attitude and practice of epileptic patient toward their illness in AHMC, Oromia Ethiopia from February, 2018 up to February 2019 G.C 2019.

2.2 .Specific objectives

- To determine knowledge of epileptic patient toward their illness
- To assess Attitude of epileptic patient toward their illness.
- To explore practice of epileptic patient toward their illness.

3. METHOD AND MATERIALS

3.1. Study design

Prospective Cross-sectional study design was carried out for data collection from epileptic patients attending Neurology referral clinic in AHMC from February, 2018 up to February 2019 G.C.

3.2. Population

3.3. Source population

All patients Neurologic patients who have follow up at Neurology referral clinic in from February 2018 up to February 2019 G.C.

3.4. Study population

All Epileptic patients attending Neurology referral clinic in AHMC was considered as study population from February, 2018 up to February 2019 G.C.

3.5. Study unit

All Epileptic patients who have follow up at Neurology referral clinic in AHMC from February 2018 up to February 2019 G.C.

3.6. Study criteria

3.7. Inclusion criteria

All patients with epilepsy on follow up and attending Neurology referral in AHMC was included in the study.

3.8. Exclusion criteria

All Neurologic patients without epilepsy

All patients not willing to participate

3.9. Sample size determination

In this study, the sample size was determined by using single population proportion formula from the study population, which was (N) 500.

n= $Z^2 P(1-P)/d^2$ where

n= sample size

P_1= proportion of knowledge (0.60) which was taken from previously studies sample at JUSH is 60% since it is key proportion of that study.

z = confidence interval of (1.96) corresponding to 95%.

d= maximum width (degree of accuracy), which was 0.05.

Therefore $n_1=1.96^2 \times 0.6\ (1-0.6)/\ 0.05^2$= 368.7936

P_2= proportion of Practice (0.533) which was taken from previously studied sample at JUSH was 53.3 %.

z = confidence interval of (1.96) corresponding to 95%.

d= maximum width (degree of accuracy), which was 0.05.

Therefore $n_2=1.96^2 \times 0.533\ (1-0.533)/\ 0.05^2 = 382.4866$

P_3= proportion of Attitude (0.70) which was taken from previously studied sample at JUSH was 70 %.

z = confidence interval of (1.96) corresponding to 95%.

d= maximum width (degree of accuracy), which was 0.05.

Therefore $n_3=1.96^2 \times 0.70\ (1-0.70)/\ 0.05^2 = 322.944$

Then we were taking the highest sample size which is n_2. =382.4866

AND a 10% non response rate was added giving the required minimum sample size (n) of 237. But, since this sample size was taken from a relatively small population (N), which is 500, the required minimum sample was obtained from the above estimate by using the correction formula to estimate final sample size (nf) from the target population (N):

i.e. $$nf = \frac{n}{1 + \frac{n}{N}}$$

Then, the final sample size (nf) was 216.

3.10. Sampling method

In this study all participants who come to neurology referral clinic for regular follow up were interviewed until the desired sample size (237) is obtained.

Convenience non probable sampling technique was used to select the study subjects.

3.11. Data collection instrument

In this study, a semi structured self-administered questionnaire was used to collect data. The questionnaire in this study has four sections. The first section contained the demographic

characteristics of the study population; the second section dealt with the participant's knowledge of cause, seen someone and manifestations, third section dealt with to assess the attitudes of participants toward epilepsy and the fourth section dealt with practices of patients towards epilepsy. The questions in the questionnaire consisted of YES and NO options, as well as strongly agree to strongly disagree in English with respect to epilepsy which was collected from study paper done in Mekele 13, Nigeria-5, 8, Uganda-12, Malasya-7, Gojam-18, Mizan Tape-20, Sululta-21, Jimma-23 and Addis Ababa-24.

3.12. Data collection procedure

Data collectors were two trained personnel, about the objectives of the study and how to fill the questionnaires. The data collection was supervised daily by investigator and co-investigators whether data would be filled correctly or and the filled checklists was collected daily so as checked.

3.13. Variables

3.13.1 Dependent variables: Knowledge, Attitude and Practice

3**.13.2. Independent Variables**: Age, Sex, Marital status, Educational status, Public media, Practice experience and Information about epilepsy

3.14. Operational definition

Knowledge: What the patient expected to know about Epilepsy

- Those who get above mean score of Knowledge related questions referred as knowledgeable
- Those who get below mean score of knowledge related questions referred as low level of knowledgeable.

Practice:

- Safe practice: when participant answer above mean score of practice related questions.
- Unsafe practice: when participant answer below mean score of practice related questions.

Attitude: Opinion or feelings that the participant shows toward epilepsy.

- Favorable attitude: when participant answer above mean score of attitude related questions.

- Unfavorable attitude; when participant answer below mean score of attitude related questions.

3.15. Data quality control method

In this study pretest was done before one week of actual data collection for 5% of the respondents in similar setup to at AHMC to determine if any problems in responding to the questionnaire, checking the questionnaire quality, checking the experience of the data collector and to make necessary correction as needed. The result of the pretest was discarded not included to the main data.

For the final data, after data collection, data was cross checked for its completeness at the time of data collection.

3.16. Data analysis procedures

Data was checked and then entered into computer. Descriptive statistics of socio-demographic variable and other characteristics of sample population was computed. SPSS version 20 was used for data entry and analysis. After cleaning the data, frequencies and other descriptive statistics were used to describe the data. Binary and multiple logistic regression analysis used to assess the association between independent and dependent variables. Odds ratios and $p<0.05$were computed to determine the presence of association. Likert scale analysis of knowledge, attitude and practice was used.

3.17. Ethical considerations

Ethical clearance was obtained from AHMC. Official permission was secured. The respondents were informed about the objective and purpose of the study and verbal consent was taken from each respondents. They were also informed about their right of rejecting participating in the study or withdrawing at any time. Confidentiality of the information was assured and collected anonymously.

3.18. Dissemination of the result

After the research paper has been completed & it was approved by the responsible bodies of AHMC, it was disseminated to AHMC, and any other concerned body including publishing.

4. RESULTS

4.1 Socio-demographics characteristics

A total of 237 questionnaires were distributed and completely filled, with a participation rate of 100%. Two hundred thirty seven (237) respondents were participated in the survey, representing all of epileptic patients who have follow up at AHMC in neurology referral clinic. Male respondents were 56.5 %. Most of respondent's age fell in 25-30 year (35.9%) category while the least were aged below 25 (32.1%).

Around 123 (51.9%) of the respondents were single. In terms of educational status, 27% were grades 5-8, 24.5% of them in Grade 9-12. Diploma and Degree were reported as 7.2% and 6.8% respectively. In terms of religions 46.8% were Orthodox Christian and 33.3% of them Muslim. According to this research 51.1% of patients have their own job and work at private sectors and, government employers were 20.3%. Most of the respondent 35.4% earn between 1100-2500Birr per month and 30.8% of patient have no income. The finding of this research indicated that 73.4% said no family history of epilepsy. Sociodemographic characteristics of the sample are summarized in Table 1below.

Table 1: Sociodemographic characteristics of participants at AHMC at neurology referral clinic AHMC,Oromia ,Ethiopia, 2019.

Variable	Frequency	Percentage
Sex		
Male	134	56.5
Age		
< 25	76	32.1
25-30	85	35.9
>30	76	32.1
Marital status		
Single	123	51.9
Married	91	38.4
Divorced	20	8.4
Separated/widowed	3	1.3
Religion		
Orthodox	111	46.8
Muslim	79	33.3
Protestant	44	18.6
Wakafeta	3	1.3
Work		
Private	121	51.1
Government	48	20.3
No work	68	28.7
Educational statu		
Grade 1-4	54	22.8
Grade 5-8	64	27.0
Grade 9-12	58	24.5
Diploma	17	7.2
BSC	16	6.8
No Education	28	11.8
Average monthly Income		
<1000Birr	38	16.0
1100-2500	84	35.4
2600-4500	39	16.5
>4600	3	1.3
No income	73	30.8

The information in the above table of Sociodemographic characteristics collected from different journals in this reference

4.2 Responses about knowledge of epilepsy

The majority of the respondents 207 (87.3%) have heard about epilepsy from deferent sources. The main sources of information were health professional and epileptic patient.

One item enquired by the respondents which sex they believed was mostly affected by epilepsy, 83.5% respondent said epilepsy affects both sex. See table 2 below for more descriptions.

Table-2: shows knowledge about the vulnerable sex group among epileptic patients at AHMC, Oromia Ethiopia, 2019.

Variable		Frequency	Percentage
Whom does Epilepsy affect	Male	24	10.1%
	Female	15	6.3 %
	Male and female	198	83.5%

Of 67.5% said they knew someone with epilepsy and 84.4% said they have seen someone with epilepsy. Most of respondents 59.9% said it was caused by bad sprite, and 57.4% said insanity or mental illness. All the respondents, 100% said convulsion is the most common, and 99% of respondent said loss of consciousness. Other manifestation explained in table 3 below.

Table-3 Indicates response of causes and manifestation(s) of epilepsy by Respondents at AHMC,Oromia ,Ethiopia, 2019.

Variable	Frequency of yes	Percentage
Accident	131	55.3
Inherited Disease	25	10.5
Insanity or Mental illnesses	136	57.4
Brain tumor	94	39.7
Birth defect	76	32.1
Stroke	96	40.5
Evil eye	105	44.3
Bad sprite	142	59.9
Convulsion	237	100
Falling down	230	97
Foaming of mouth	186	78.5
Rolling of the eye	152	64.1
Biting of tongue	125	52.7
Loss of consciousness	235	99.0

4.3 Overall knowledge score

In this study we used eighteen multiple-choice questions which had a score of one point for a correct response and zero for the incorrect one. An overall knowledge score was calculated by adding up the scores for each respond across all eighteen questions. There were 126, (53.2%) of respondents had lower level of knowledge about epilepsy. The mean knowledge score for all respondents were 11.45 out of a possible 18 points (SD = 2.62). The maximum knowledge score was 17 point and minimum 6 point. The knowledge score summarized in table 4 below.

Table 4: Distribution of knowledge about epilepsy across all respondents in AHMC, neurology referral clinic, Oromia , Ethiopia, 2019.

Overall knowledge score	Frequency	Percentage
Lower knowledge (< 11.45)	126	53.2
Good knowledge (>11.45)	111	46.8
Total	237	100
Minimum score= 6	Mean score=11.45	
Maximum score= 17	Sd=2.62	

4.4 Factors associated with knowledge towards epilepsy.

Bivariate logistic regression was conducted to assess the association between knowledge and others variables of epilepsy. Multivariate analysis shows that the following factors: educational status (AOR 95% CI, 9.08[1.890, 145.5]), had heard about epilepsy (AOR 95% CI, 3.84[1.249, 11.81]), or seen someone with epilepsy (AOR 95% CI, 0.305[0.097, 0.960]), monthly income greater than 2600birr (AOR 95% CI, 0.257[0.081, 1.523]), and having favorable attitude (AOR 95% CI, 1.34[0.646,2.802]) toward epilepsy had associated with good knowledge of epilepsy. Respondents who had diploma or degree holders were 7 and 9 time more knowledgeable than illiterates and had positive association with the level of knowledge about epilepsy. The results of this study also showed that respondents who heard about epilepsy 4 times more knowledgeable than not heard and positively associated. Respondents who seen someone with epilepsy and having work were more knowledgeable than those who had not witnessed and no job. Other association also included in the table-5 below.

Table-5; Association of selected sociodemographic and related factors toward knowledge in epileptic patient at AH MC neurology referral clinic, Adama, Oromia, Ethiopia,2019

Character	knowledge		COR (95% CI)	AOR (95% CI)
	Yes(n=111)	No(n=126)		
Sex				
Male	69(62.2%)	65(51.5%)	1.542(0.918, 2.59)	1.59(0.805,3.8)
Female	42(37.8%)	61(48.5%)		
Age				
<25	31(27.9%)	45(35.7%)	0.654(0.344,1.241)	1.23(0.45,3.37)
25-30	41(36.9%)	44(34.9%)	0.884(0.476,1.64)	1.531(0.63,3.74)
>30	35.1%	37(29.3%)		
Marital status				
Single	54(48.6%)	69(54%)	4.565(0.138,17.721	3.526(0.08,155.25)
Married	46(41.4%)	45(35%)	5.044(0.179,23.348	5.89(0.175,356.65)
Divorced	10(9%)	10(7.9%)	2.00(0.155,25.755)	5.926(0.112,312.4)
Education				
Grade 1-4	19(17.1%)	35(27.7%)	1.146(0.434,3.023)	0.750(0.247,2.273)
Grade 5-8	26(23.4%)	38(30.1%)	1.44(0.566,3.686)	1.371(0.464,4.047)
Grade9-12	29(26.1%)	29(20.6%)	2.11(0.820,5.434)	1.742(0.570,5.321)
Diploma	13(11.7%)	4(3.1%)	18.86(5.738,37.07)	7.416(1.062,51.80)
Degree	15(13.5%)	1(0.79%)	31.66(3.601,278.4)	9.08(1.890,145.5)
Work				
Private/Government	88(79.2%)	81(64.2%)	3.89(1.186,4.069)	2.299(0.58,8.999)
No work	23(20.7%)	45(35.7%)	1.957(0.918,4.17)	0.886(0.292,2.691)
Income				
<1000birr	14(12.%)	24(21.6%)	0.937(0.417,2.109)	0.513(0.146,1.807)
1100-2500	41(369.)	43(38.7%)	1.532(0.811,2.8)	0.514(0.15,1.7)
2600-4500	25(22.5)	14(12.6%)	2.87(1.281,6.429)	0.257(0.054,1.)
>4500	3(2.7%)	0	3.214(0.278,37.11)	0.34(0.081,1.5)
Heardabout epilepsy				
Yes	105(94.%)	102(80.9%)	4.118(1.616,10.49)	3.84(1.249,11.)
Knowanyonewith epilepsy				
Yes	84(75.%)	76(68.4%)	0.489(0.279,0.857)	0.783(0.37,1.4)
Seen anyone with epilepsy				
Yes	102(91.%)	98(88.2%)	0.859(0.139,0.688)	0.35(0.097,0.6)
Favorable Attitude	37(33.3%)	67(60.3%)	2.7(1.349,3.849)	1.34(0.646,2.8)
Safe Practice	66(68%)	43%	1.6(0.978,2.345)	0.4(0.201,0.79)

4.5 Attitudes towards epilepsy

There were 12 attitude related questions. Respondents answered a combination of positive and negative statements to help gauge their attitude towards epilepsy. From the respondents, 78.1% said epilepsy don't acquired through hereditary chain. About 83.5% participants answered epilepsy is not contagious. In their opinion 81.4% said traditional medicine did not control epilepsy but 98.3% said modern medicine did. Other respond summarize in table 6 below.

Table-6: Percentage and frequency of respondents of attitude towards epilepsy among epileptic patients attending at AHMC at neurology Clinic,Oromia Ethiopia,2019.

Variable	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
I think Epilepsy is acquired through hereditary factors	-	23(9.7%)	29(12.2%)	182(76.8)	3(1.3%)
In my opinion Epilepsyoccurs following head injury	2(0.8%)	162(68.%)	35(14.8%)	38(16%)	-
I think Epilepsy occurs as a result of evil spirit possession	12(5.1%)	133(56.%)	3(1.3%)	84(35.4%)	5(2.1%)
I think Epilepsy is so contagious up on trial of help when the patients are on attack	-	11(4.6%)	28(11.8%)	197(83.1%)	1(0.4%)
I think Epilepsy patients do not need modern medicine, but traditional medicine only	1(0.4%)	18(7.6%)	25(10.5%)	191(80.6%)	2(0.8)%
In my opinion, Epilepsy can be controlled by using modern medicine?	10(4.2%)	223(94.%)	-	4(1.7%)	-
In my opinion, patients with epilepsy are prone to serious body injury during the attack which deserves our help	13(5.5%)	224(94.%)	-	-	-
I think Epilepsy patients need to take the drug daily as the physician ordered	21(8.9%)	214(90.%)	-	2(0.8%)	-
I think Epilepsy patients' academically incompetent in the class	-	41(17.3%)	37(15.6%)	140(59.1%)	19(8%)
In my opinion Epileptic patient is unable to continue their education to the tertiary level	-	43(18.1%)	46(19.4%)	133(56.1%)	15(6.3%)
In my opinion epileptic patient can marry and have children's?	9(3.8%)	216(91.%)	7(3%)	5(2.1%)	-
In my opinion Epileptic patient can be employed and able to work effectively	9(3.8%)	219(92.%)	4(1.7%)	4(1.7%)	1(0.4%)

4.6 Overall attitude score

When both positive and negative statements were scored, the right answer scoring 5 points and the wrong answer 1 point, overall attitude score is determined for each respondent by adding up the scores across 12 attitude questions. There were 43.9% of respondents have favorable attitude towards epilepsy. The mean attitude score for all respondents was 38.56 (SD =2.71). Other information about attitude score summarized in table 7 bellow.

Table-7: Distribution of epilepsy attitudes among epileptic patients attending at Adama Hospital Medical College at neurology referral Clinic, 2019.

Overall attitude score	Frequency	Percentage
Favorable attitude(< 38.56)	133	56.1
Unfavorable attitude (>38.56)	104	43.9
Total	237	100
Minimum score= 32	Mean score=38.56	
Maximum score= 46	SD=2.71	

4.7 Factors associated with attitude towards epilepsy

Regarding factors associated with attitude toward epilepsy, educational status like being a tertiary level student significantly associated with epilepsy (AOR 95% CI,0.062[0.008, 0.48]),(AOR 95% CI,0.184[0.024, 0.389]) having enough income per month (AOR 95% CI,1.038 [0.331, 3.336]), (AOR 95% CI,0.431[0.745, 1.870]) ,family member with epilepsy has favorable attitude toward epilepsy(AOR 95% CI, 3.119[0.515,9.405]) . Other associated factors included in table-8 below.

Table-8; Association of selected sociodemographic and related factors to attitude at AH MC neurology referral clinic , Adama, Oromia, Ethiopia,2019

Character		Attitude		COR (95% CI)	A*OR (95% CI)
		Yes(n=104)	No(n=133)		
Sex					
	Male	58(55.7%)	76(73%)	0.946(0.564, 1.586)	0.813(0.425,1.555)
	Female	46(44.2%)	57(54.8%)		
Age					
	<25	34(32.7%)	42(31.57%)	1.175(0.618,2.236)	0.936(1.040,2.703)
	25-30	39(37.5%)	46(34.58%)	1.231(0.658,2.301)	1.215(0.522,2.829)
	>30	31(29.8%)	45(33.83%)		
Education					
	Grade 1-4	33(31.7%)	21(15.7%)	1.813(0.721,4.561)	1.607(0.567,4.554)
	Grade 5-8	28(26.9%)	36(27%)	0.897(0.368,2.190)	0.738(0.269,2.025)
	Grade 9-12	23(22.11%)	35(26.3%)	0.758(0.305,1.884)	0.615(0.209,1.805)
	Diploma	2(1.9%)	15(11.27%)	0.154(0.029,0.803)	0.062(0.008,0.480)
	Degree	5(4.8%)	11(8.27%)	0.524(0.144,1.909)	0.184(0.024,1.389)
Work					
	Privat/Government	71(68.2%)	98(73.6%)	0.697(0.383,1.269)	0.418(0.142,1.23)
	No work	33(31.7%)	35(26.3%)	0.976(0.466,2.044)	0.1.33(0.475,3.74)
Income					
	<1000birr	19 (18.2%)	19 (14.2%)	1.212(0.553,2.658)	2.336(0.737,7.40)
	1100-2500	36(34.6%)	48(36%)	2.72(1.449,5.130)	1.038(0.331,3.336)
	2600-4500	16(15.3%)	23(17.3%)	3.37(1.536,12.412)	2.33(0.528,10.275)
	>4500	0	3 (2.2%)	0.772(0.244,2.311)	0.431(0.745,1.870)
	No Income	33 (31.7%)	40(30%)		
Family History					
	Yes	11(10.57%)	2(1.5%)	5.5(1.104,27.389)	3.119(0.515,9.405)
	No	68(65.3%)	106(78.2%)	0.62(0.341,1.208)	0.695(0.319,1.514)
	I don't know	25(24%)	25(18.7%)	0.42(0.23,1.201	0.574(0.287,1.33)
Heard about epilepsy					
	Yes	87(83.6%)	120(90.2%)	1.804(0.833,3.908)	0.899(0.361,2.239)
seen pt .with epilepsy					
	Yes	83(79.8%)	117(87.9%)	1.85(0.911,3.758)	1.924(0.738,5.014)

4.8 Practices towards epilepsy

PWE were asked whether they ever encountered a patient having an epileptic attack anywhere, the majority,83.1% had seen someone seizing, 97.5% of the respondents said they would

protecting him from danger and 62.9% providing match stick smoke. All of the participants ,100%, said that they advised the Patient to took medication consistently and 99.2% were contact and counsel the family. The percentage in this item is more than 100, because the participants were asked to tick more than one option .Other practical question summarized in table 9 below.

Table-9: Experiences of respondents how to help seizing patients, handling and treatment recommendation PWE in AHMC at neurology referral Clinic, Oromia Ethiopia, 2019.

Option how to help a patient during epileptic attack	Frequency	Percentage
Took him to the clinic	89	37.6
Took him to Traditional healers	7	3
Prayed for him	73	30.8
Let him smell matches smoke	149	62.9
Protected him from injury	184	77.6
Hold legs and arms	140	59.1
Avoid touching during seizure	155	65.4
Promptly move patient away from danger	231	97.5
Lay patient to his side	181	76.4
Avoid touching patient's saliva	67	28.3
Adivise to take medication cossistently	237	100
Avoid tigmatization	230	97
Contact and counsel the family	235	99.2
Recommending modern medicine	237	100
Traditional healers	7	3
Holy water	120	50.6
Prayers	168	70.9

4.9 Overall practices score

An overall practices score was determined for each respondent by adding up the scores across the four choice questions which allowed multiple responses practice questions. Out of 197 ,109 (55.4%) had safe practices in relation to epilepsy. The mean practices score for all respondents were 6.63 out of a possible 18 points (SD = 2.14). Distribution of epilepsy practices across all respondents in AHMC neurology referral clinic is summarized table 10 below.

Table-10: Distribution of epilepsy practices amongst respondents in AHMC neurology referral clinic, 2019.

Overall attitude score	**Frequency**	**Percentage**
safe practice (< 6.63)	88	46.4%
unsafe practice (>6.63)	109	55.4%
Total	197	100%
Minimum score= 2	Mean score=6.63	
Maximum score= 11	SD=2.14	

4.10. Factors associated with practice towards epilepsy

Based on the result of this study, having degree, seen someone with epilepsy and those who had good knowledge about epilepsy had association with safe practice toward epilepsy (5.205[0.592, 31.22]), (0.310[0.118, 1.157]) and (AOR 95% CI, 2.211 [0.95, 0.642]), respectively. Other associated factors included in table-11 below.

Table-11; Association of selected sociodemographic and related factors to practice at AHMC neurology referral clinic, Adama, Oromia, Ethiopia,2019.

Variable	Practice		COR (95% CI)	A*OR (95% CI)
Sex	Yes(n=109)	No(n=88)		
Male	61(55.9%)	54(61%)	0.800(0.452, 1.418)	0.804(0.408,1.585)
Female	48(44%)	34(38.6%)	Ref	Ref
Age				
<25	30(27.5%)	31(35.2%)	0.789(0.96,1.575)	0.916(0.340,2.467)
25-30	41(37.6%)	26(29.5%)	0.650(0.650,2.547)	1.377(0.560,3.385)
>30	38(34.8%)	31(35.2%)	Ref	Ref
Education				
Grade 1-4	20(18.3%)	23(26.1%)	0.791(0.278,2.248)	0.674(0.221,2.060)
Grade 5-8	28(25.6%)	23(26.1%)	1.107(0.400,3.065)	1.107(0.368,3.328)
Grade 9-12	26(23.8%)	25(28.4%)	0.945(0.342,2.65)	0.897(0.292,2.758)
Diploma	11(10%)	5(5.6%)	2.00(0.513,7.796)	1.393(0.254,7.646)
Degree	13(11.9%)	2(2.2%)	6.909(1.061,42.915)	5.205(0.592,31.22)
No Education	11(10.9%)	10(11.3%)	Ref	
Income				
<1000birr	16(1.4%)	13(1.4%)	1.275(0.520,3.127)	1.006(0.291,3.479)
1100-2500	37(3.4)	35(3.9%)	1.095(0.546,2.194)	0.642(0.198,2.083)
2600-4500	25(22.9%)	11(10%)	2.354(0.977,5.669)	0.918(0.216,3.900)
>4500	3(2.7%)	0	2.451(1.089,5.874)	2.387(0.321,4.123)
No income	28(25.6%)	29(32.9%)		
Family History				
Yes	6(5.5%)	4(4.5%)	1.500(0.369,6.097)	1.793(0.351,9.168)
No	82(75.2%)	63(71.5%)	1.302(0.654,2.590)	1.646(0.683,3.963)
I don't know	21(19.2%)	21(23.8%)		
Seen anyone with epilepsy				
Yes	102(93.5%)	7(7.9%)	0.396(0.151,1.040)	0.310(0.118,1.157)
Good Knowledge				
Yes	66(60%)	31(35.2%)	2.832(1.584,5.072)	2.211(0.95,0.642)
No	43(39.4%)	57(64.7%)	Ref	Ref

5. DISCUSSION

This study explored Knowledge, attitude and practice toward epilepsy among` epileptic patient through a person to person interview using questionnaires and it was the first study in this hospital.

Regarding knowledge about epilepsy 87.3% of the respondents heard about epilepsy from deferent sources, PWE were the main source of information which was 57.8%, and health professionals 52.4%. This was a little higher than a study done at Mekele city, 85.6% and lower than a study done at Mizan-Tepi University which was 97% *(13, 20).* A study done in South East Nigeria majority of respondents (99.8%) had heard about epilepsy which is higher than our study and the commonest sources of information were family members (55.8%) and electronic media 11.8% which was lower than our finding , 24.5% *(8).*

As indicated in this study, 84.4% respondent witnessed someone with seizure but a study done in Mekele city about 57.14%. Our finding also show that 67.5% of respondent knew someone with epilepsy which was similar to a Mekele city's study finding, 67.03 %,*(13).* A study done in south Nigeria showed that a total of 46.75% of the participants knew someone with epilepsy which was lower than our findings *(8).*

In this survey respondents said the causes of epilepsy were bad sprite 59.9%, 57.4% was insanity or mental illness, and 55.3% considered accidents which were higher than a study done at Debre Markos University ,51%, 44.2%, and 24% respectively but at MizanTepi University 85.3% of respondents said mental illness, in AAU due to evil sprite 6.4%, mental illness 12.9%, accident 18.4%,hereditary and brain tumor 9.9%and 8.9% respectively which is far less from our finding *(18, 20,24)* .

Another study done in Southern Nigeria, 5.41% said evil spirits were cause of epilepsy, 82.88% due to accident, in Uganda evil spirits 40.2% and inherited disease ,30.2% reported as common cause of epilepsy *(12,8).*

Finding of this research showed that most common manifestation of epilepsy were convulsion, 100% and loss of consciousness 99%. The same research done in AAU indicate that convulsion 83.5% and loss of consciousness 72%, Mekele university ''foams from mouth" 69.20%, and convulsions 63.46%, as common manifestation of epilepsy which is lower than our finding *(24,13).* A research done in India 90.9% convulsions and 90.2% loss of consciousness, and in *Nigeria* convulsion, 77.4% and loss of consciousness, 57.9 %*(16, 5).*

In this study 46.8% of participants have good knowledge about epilepsy. Participant from DebreMarkose University 52.5% and Zewuditu specialized hospital 59.8% have good knowledge which is higher than our finding but in Japan 95.8% of participants respondent answered epilepsy-related knowledge question *(18,24,6).*

In this study Knowledge of epilepsy was significantly associated with tertiary level education status, prior information about epilepsy and witnessing of epilepsy attack and similar study done at Zewuditu hospital showed consistent association that was sex, educational status, had heard about epilepsy, knew someone with epilepsy, had witnessed a seizure, or had epileptic family members but a study done in DebreMarkose University showed that educational status was significantly associated *(24,18).* A study zone in Nigeria showed that witnessing of epilepsy attack and married with PWE have significantly associated with Knowledge of epilepsy *(8).*

Regarding attitude, this study showed that 43.9% of the respondents have a favorable attitude but the same study done at Jimma and Debremarkose University showed 70% and 65.7% had favorable attitude toward epilepsy, respectively both findings were higher than ours. In our study tertiary level education status, Better monthly income and having family member of epileptic patient were significantly associated with favorable attitude toward epilepsy but Jimma and Debremarkose University finding showed occupation, marital status, monthly income, and tertiary educational status were significantly associated *(23,18).*

Our finding shows that 94.9% of participants thought PWE could married and have children and 96.2% said they could work effectively but in Debremarkose University finding showed that 46% of respondent thought that PWE could not marry, only 34.5% of participants said PWE could be employed and could work , in North Nigeria 93.2% said they would not marry with epileptic patient, but in Uganda 97.2% agreed on they could have family, and this finding almost similar with our results *(18,5,12).*

Regarding practice 55.4% of respondents have safe practice but study done in Debremarkose University and Zewuditu Hospital showed that 36.8% and 33.5% of participants have safe practices towards epileptic respectively, which were lower than our finding *(18,24).*

Our finding showed that having degree, seen someone with epilepsy and those who had good knowledge about epilepsy significantly associated with safe practice of epilepsy which was similar with study done in Addis Ababa, having prior information, knowing epileptic patients, previous experience in the management of epilepsy, epilepsy in a family member and tertiary level of educational status *(24).*

Concerning first aid measure to be taken for seizing patients, around 97.5% of respondent said they might help to protect patient from injury, 62.9% said let him smell matches smoke, and

37.6% said took him to clinic. Almost all respondents, 100%, recommended to took drug daily, 50.6% uses holly water, and 70.9% prayer.

The same study done at Jimma university stated that 94.4% of patients had good adherence to treatment but 3.3% of respondent used spiritual treatment, prayers, and holy water and 53.3% said positioning the patient, this finding were consistent with our result *(23)* but Debremarkose University showed that 89.5% position the patient and 78.2% would provide match stick smoke and in Malaysia 94% of them said epilepsy treated with modern drugs these practice more close to our finding*(18,7)* .

6. CONCLUSION

In our study it was found that most of the participants have lower knowledge about the cause and its treatment or practice of epilepsy. 46 % had favorable attitude towards epilepsy. Most of them used modern medicine for treatment .Cultural and religious practice push them back to use spiritual treatment, prayers, and holy water. Still lack of knowledge has been considered an important determinant of unfavorable attitudes towards PWE. There is significant association between knowledge and educational status .Therefore this association has positive impact on people to have favorable attitude toward epilepsy. Overall, 46.8% had lower knowledge, and 55.4 % of them had unsafe practices related to epilepsy. Hence, this study concluded that the current new findings might help initiate further studies because there is still a gap that need for more widespread dissemination of information to improve general knowledge, attitude and practice of epilepsy among epileptic patient and the general population.

7. DATA AVAILABILITY

Data is available and can be shared by corresponding author

8. RECOMMENDATION

There must be widespread dissemination of information to improve Knowledge to create favorable attitude and safe Practice. All stalk holders like Health bureau of East showa zone , regional health bureau and AHMC shall work together on creation of awareness on interventions which are important when they face seizing patient and alleviate fears of community surrounding epilepsy through health education about epilepsy.

9. LIMITATIONS OF THE STUDY

Recall bias by participant may affect the findings as the questions on knowledge and attitude and practice are predisposed to individual judgments. A further limitation is that the use of a close-ended questionnaire may not reveal further details about the reasons for lower of knowledge, unfavorable Attitude and unsafe practices.

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