

ADDIS ABABA UNIVERSITY
COLLEGE OF HEALTH SCIENCE
DEPARTMENT OF EMERGENCY MEDICINE



To Assess First aid knowledge and practice For an Epileptic seizure Students
Among Governmental High School Teachers In AA, Ethiopia, 2018.

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Assessment of knowledge and practice about first aid provision towards epileptic seizure students among high school teachers in Addis Ababa, Ethiopia, By: Adisu Shiferaw (BSC) school of medicine; Addis Ababa university CHS, emergency medicine and critical nurse.

Approved by Examining Board:- Chairman, Department Of Graduate committee

1. NAME Sign.....

A study on the Assessment of Knowledge and Practices of Frst Aid Service Provision to Students with Epilepsy among Teachers working in government high schools of Addis Ababa

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ABBREVIATION

AA : Addis Ababa

AAU: Addis Ababa University

BSC : Bachelor of Science

CHS: College of Health Sciences

ED: Emergency Department

ER : Emergency Room

GCAE : Global Campaign Against Epilepsy

HIV/AIDS: Human immunity virus/Acquired immune deficiency syndrome

KAP : Knowledge Attitude Practice

MOH: Ministry Of Health

PLW : People Living with Epilepsy

SPSS : Statistical Packages for Social Science

TASH: Tikur Anbessa Specialized Hospital

WHO : World Health Organization

ABSTRACT

Background: Epilepsy is one of the most common serious chronic brain disorders and is poorly understood by the public and has been associated with numerous misconceptions and beliefs. This coupled with its dramatic clinical manifestations has resulted in a strong social stigma and physical trauma due to unknown delivery of first aid care .Since teachers have a key role in society as educators.

Objective:-To assess knowledge and practice of first aid service provision towards epileptic seizure students among high school teachers in Addis ketema, Arada, Lideta and kirkos Sub City, Addis Ababa, Ethiopia, 2018.

Methods: Institution based cross-sectional study were conducted from February 19 to march 31, 2018. Data collected by structured self-administer questionnaire which consists knowledge and practice questions. The data inter into epinfo7 and cleaning was made before export to SPSS version 23.Cross tabulation was computed for the association between categorical variables, knowledge and practice among participants could be measured using the Chi square (χ^2) test of independence at level of significance $\alpha = 0.05$; p -values <0.05 .

Result: A total of 378 participants with mean age of 34.2 ± 7.8 SD participated with a response rate of 92%. Among those (90.6%) heard about the disease called epilepsy.Teachers knowledge were 144(41.1%) and practice 143(40.9%). Generally, teachers who were trained in first aid were fewer score (25.6%) than those who were not trained (43.1%) ($\chi^2 = 3.665$, $p = 0.050$) who were had good knowledge. Teacher who heard about epilepsy (44.2%) the higher opportunity to had good knowledge than not heard about epilepsy ($\chi^2 = 11.384$, $p = 0.001$).

Conclusion and recommendation: This study showed that there was gap on knowledge and practice of teachers regarding to epileptic seizure.

Key word: epileptic seizure, Knowledge, practice,

CHAPTER ONE

1. INTRODUCTION

1.1. Background

Among non-communicable diseases epilepsy is a chronic disorder of the brain that occurs worldwide affecting people of all age groups. It refers to a clinical phenomenon rather than a single disease entity, characterized by recurrent seizures. Currently, epilepsy affects 50 million people worldwide, and 80% of them live in the developing country (1).

Globally, an estimated 2.4 million people are diagnosed with epilepsy each year (2). The reported annual incidence rates for epilepsy vary from country to country. The annual incidence rates reported are 11/100,000/year in Norway, 33/100,000 in Italy, and 48/100,000 in the United Kingdom. It has been observed that the highest incidence rates are found in the populations of developing countries with values of 140–230/100,000/year (3).

Data from Arab countries revealed prevalence rates of 0.9/1000 in Sudan (4) 2.3/1000 in Libya,(5) and 6.5/1000 in Saudi Arabian(6) ranges from 5.3 to 37/10,000 population in Nigeria (7)

In the African continent, epilepsy affects about ten million people of all ages but, especially children, adolescents and the ageing population (8). In sub-Saharan African, active epilepsy was estimated to affect four million people and its prevalence is high among adults and children.

According to a large community based epidemiological study, the incidence and prevalence of epilepsy in Ethiopia were estimated to be 64/100,000/year and 5.2/1000, respectively. The highest age specific incidence occurred among the youngest age groups which is 0–9 and 10–19 years(9, 10).

In Ethiopia More than 85 % of PWE do not receive epilepsy treatment. Among these ninety percent of the untreated were unaware of the existence of treatment for epilepsy, while only 4 % of them cited cost as a reason for not receiving treatment (10).

The following is a list of factors that have the potential to cause epilepsy:

Abnormal brain development ,Brain injury with loss of consciousness ,an infection of the brain, High fever in children under 5 years old ,Loss of oxygen to the brain ,Stroke ,Brain lesion/tumor
Toxins/poisons , Genetic factors and unknown cause.(11)

Epileptic Seizure and common triggering factors?

A seizure occurs when there is abnormal and overactive electrical activity of brain cells and characterized by brief stares, muscle spasm, incontinency, loss of consciousness, foaming and after seizure completed brief forgetfulness and nervous might be happen. Some people with epilepsy have strange or odd sensations (bad smells, unusual or bad tastes, and changes in vision) right before they have a seizure.

Some common factors that trigger epileptic seizure are:

Missed medications, extreme heat ,illness eg infection , lack of sleep , too much alcohol over-the-counter medicine, other prescription medicines, supplements, or herbal remedies, use of illegal drugs, physical or emotional stress ,poor eating habits ,too much caffeine , brain disorders (tuberous sclerosis, cerebral palsy, mental retardation, autism,) (12).

First aid provision technique for all seizures should be scientifically acceptable

Epileptic Seizures can vary from one person to another and how people are affected and how they recover after seizures. However, people who develop epileptic seizure need first aid services through in proper way of technique. Some of the following techniques are recommended to help seizing child.

First aid giver once a seizure is happen immediately make it try to stay calm , move the person if they are in a dangerous place, for example in the road. Instead move any objects away from them so that they don't hurt themselves ,put something soft materials like pillow under their head, or cup their head in your hands, do not hold them down (allow the seizure to happen) ,do not put anything in their mouth.

How to help once the shaking stops:Gently roll them on to their side into the recovery position ,If their breathing sounds difficult or noisy, gently open their mouth to check that nothing is blocking their airway ,wipe away any spit from their mouth ,Stay with them until they have fully recovered. They may need some gentle reassurance and call for the emergency care service delivery team(13)

1.2. Statement of the problems

In Ethiopia around 64 epileptic cases estimated per hundred thousand per year. Majority of cases are between the ages of 15-19 years(10). However, most of the children are not aware about the nature of this disease and the possible management.

Mainly the knowledge of teachers in Ethiopia about the disease of epilepsy and trained of first aid service provision for child having epileptic seizure at a school level is very limited.

Regarding to the burden of stigma still remain it is social process or related personal experience characterized by exclusion, rejection, blame and devaluation. Additionally stigma and its psychosocial consequences cause indescribable suffering to those who are stigmatized (14).

In Ethiopia 81 % of PWE and their relatives suffer from perceived stigma and the burden of the problem is highest among school age children and teenagers .Study shows that to magnify the magnitude of stigma in terms of occupation high school Students with epilepsy reportedly experience significantly higher level of stigma compared with other types of occupations (15)

Additionally teachers do not receive formal training on epilepsy in their academic year which may lead to them missing providing to first aid for seizing students, especially in undiagnosed children.

To minimize the gap of teachers knowledge and practices particularly way of attending first aid provision technique is very important. According to the research which was conducted in AA, 2013 indicated that still the problem is existing and need further study.

1.3. Significance of the study

Assessment of knowledge and practices towards epilepsy among high school teachers is very crucial, because the degree of the teacher's knowledge and practices will have significant impact on students with epilepsy and their peers.

School children with epilepsy spend most of their daytime socializing and interacting with their teachers and their schoolmates, therefore teachers understanding of the condition plays an important role for students living with epilepsy and in the public at large.

Teacher can transfer on the knowledge to their students and indirectly to the community through minimizing discrimination of pupils with epilepsy.

The main thing teachers usually do not receive any formal training on epilepsy during on teachers training level but they are expected to give first aid care for children living with epilepsy and seizing child. More school children living with epilepsy will benefit from their teachers knowledge

Generally asses knowledge and practices of first aid provision experience at high school teachers towards epilepsy will help in the designing of better interventions to prevent physical and psychological trauma through unknowingly care.

This study also serve as a bench mark for the ministry of education to educate teachers and improve their knowledge the technique of first aid provision skills.

Researchers also use this finding as a base line data while they want to do further studies.

CHAPTER TWO

2. LITERATURE REVIEW

2.1. Knowledge about epilepsy

According to the study conducted in Pakistan to assess knowledge and practices of first aid service provision among the private and governmental high schools' teachers, out of the total 150 teachers (n =75 for each), 134 (89.3%) teachers has heard about epilepsy. Overall 50 (33.3%) teachers thought epilepsy is contagious disorder while 77 (51.3%) teachers said that epileptics cannot succeed like normal students. 69 (92%) of private schools and 65 (86.7%) of government schools' teachers have heard about epilepsy before respectively. Of all the respondents from both public and private high schools, 88 (58.7%) have heard about epilepsy through print media, followed by 40 (26.7%) through electronic media and 13 (8.7) through friends and family. Of the total respondents, 9 (6%) were not aware of epilepsy (16)

According to the study conducted in India to assess the knowledge and attitude about epilepsy among primary and secondary school teachers in north east in Uttar Pradesh city, out of the total(n= 700) teachers, 679 (97%) were heard about epilepsy. Of all Teachers from primary and secondary schools ,their source of information were from public media 215 (37.9%) and from parents of the students with epilepsy203 (35.7%) . Only 28(4.9%) of the responders got information from the doctors. Regarding cause of epilepsy 36(6.4%) teachers confirmed in due to one or the combination of others causes, majority felt 252 (44.4%) it is a brain disease and only minority of 31 (5.5%) thought it a super natural possession. The other cause attributed to were genetic (10.4%), trauma (5.5%) infection (3.3%) ,tumor (3.5%) and insanity (1.5%) (17).

According to the study conducted in southern Saudi Arabia on primary school teachers to assess the knowledge and practice of epilepsy and first aid provision skill ,out of the total 620 participant(from public=360)and (private=260) the response rate were 615(99%) then only 105 (17%) were knowledgeable by Likert scale measurements . and near four out of five teachers knew that epilepsy did not infectious disease. Teachers says epilepsy to be hereditary (34.3%), whereas others thought it was an acquired disease (36.5%), and (46.0%) believed that epilepsy was caused by electrical discharges. However, 65.4% and 44.8% of the teachers thought that epileptic students should be prevented from riding motorcycles or swimming, respectively (18).

According to the descriptive cross sectional study conducted in Burkina Faso Bobo- Dioulasso city among 260 teachers working in private and public schools the result 255 (98%) of the teachers were knowledgeable about epilepsy. out of the total teachers 201(77.3%) were knew someone with epilepsy. Regarding the cause of epilepsy 112 (43.2%) teachers answered epilepsy is central nervous system disturbances, epilepsy was thought to be a contagious disease 31(11.9%) and hereditary 20(7.7%). The most frequently mentioned manifestations of epilepsy were loss of consciousness, convulsions, foaming at the mouth, amnesia. Among the total teachers, 57% mentioned manifestations related to “absence” the disease were characterized only by convulsive tremors and loss of consciousness for (85.8%) of the respondents (19).

Another study conducted in Zambia (97%) of teachers were found to have high level of epilepsy and majority (>70 %) of them recognized brain disorder as the commonest cause of epilepsy [4]. Evil spirit possession and witchcraft were considered as causes of epilepsy by (20%) and (16.8 %) of teachers respectively. Close to (30%)of respondents confirmed a contagious disease and only (1.5%) of them as insanity (20).

According to the study conducted in Addis Ababa showed that 759 (90%) teachers who heard about epilepsy as a disease and the most common source of information was from PWE 420 (51.3%), followed by public media 303 (36.9%) and medical doctors 19 (2.3%). Among those who had acquaintances with PWE, had come across PWE in person 749 (67.2 %), and had a student living with epilepsy in their class were 319 (28.6 %) (21).

2.2. First aid provision

The study conducted in India, Panchkula and Haryana city to assess first aid practical study on Epilepsy among 97 school teachers, around 28(28.9%) respondents answered epileptic fit can be terminated by smelling a shoe. Nearly half of them knew that a person with epileptic seizure should seek treatment from neurologist. Nearly one fourth 23(23.7%) answered that during a seizure; the school teacher should stay with child and remain calm. 40 (41.2%) respondents did not know what to do during an episode of seizure. During an episode of seizure, some of a school teachers answered that pull out tongue 3(3.1%); pour some water on patient's face 19(19.6%); Give something for patient's to smell 15(15.5%); Put something into patient's mouth 12(12.45%); Restrain patient's movements 8(8.2%) (22).

Another south East Asia study showed that (55%–68.2%) teachers did not provide first-aid to actively seizing students. When they provide first-aid, they used potentially harmful interventions like inserting a spoon into the mouth (40.4 %), pouring animal excreta on the face of the subject (13.9 %) and having them smell leather shoes (15.7%) (23).

Study conducted in Pakistan among the total respondent half of the teachers (49.9%) would attend the student lie in bed as a first-aid measure while (15.7%) would make them smell a shoe and (21.1%) would attend on put a spoon and metallic material in the mouth. Only (10%)of teachers would not know what to do (24).

Another cross sectional study conducted in Montenegro to assess the knowledge attitude and practice of high school teachers towards epilepsy in which among from the total participant (219) almost one third of interviewed 62(28.3%) knew how to perform proper first aid. Of all teachers 42(19.4%) who had students with epilepsy in their class and provide proper first aid management. One half of teachers who had previously seen an epileptic attack would provide proper first aid in a seizing child. About 77(35%) of teachers suggested putting something in a person's mouth during attack to prevent tongue injury and aspiration were better method. The remaining near to142(65%) teachers was managed their students by applying of potentially harm full activities, such as holding a student s arms and legs and pouring water on a student during an attack. Only three teachers did not know what to do with a seizing student (25).

According to the descriptive cross sectional study which was conducted in Khartoum Sudan to assess KAP among 317 high school teachers the finding showed that of the total participant who had received first aid training to attend an epileptic seizure was only 19 (6%) And their experience in first aid service was 41(12.9%) would tie their leg and hand and 151(47.6%) would put a spoon in the mouth of the seizing patient. The remaining teachers attend 242 (76.3%) down on the ground carefully, 248 (78.2%) remove any harmful surroundings, 177 (55.8%) put a soft pillow under the seizing patient's head, and 197 (62.1%) remove any tight clothes (26).

A quantitative descriptive cross sectional study conducted in Namibia among the total respondents of 113 teachers to assess the knowledge attitude and practice towards epilepsy the result shows that around 15 (13%) respondents indicated that they would hold the learner's legs and arms, 4 (4%) respondents said they would make the learner smell something to stop the seizure, 36(31.9%) of them responded that they would avoid touching the learner during the seizure, 45 (40%) would promptly move the child away from danger, 26 (23%) would lay the child on his/her side during the seizure, while 52 (46%) of them were avoid to touch the saliva of the student during the seizure (27).

According to the study conducted in Addis Ababa to assess the knowledge , attitude and practice of high school teachers out of the total (n=844) respondents the response rate was (97%). Of all teachers 759(90%) who have information about a disease called epilepsy and the most common source of information was from PWE 420 (51.3%), followed by public media 303 (36.9%) and medical doctors 19 (2.3%). Among the total participant who were get information acquaintances with PWE, had come across PWE in person is 749 (67.2 %), and had witness and seen epileptic student in their class were 319 (28.6 %). Among those 558 (68%) teachers were the first aid measure responses could be biologically plausible but many also suggested potentially harmful interventions such as smelling a struck match 329(14.2 %), pouring water on the face 182 (7.8 %), and inserting a spoon into the mouth 156(6.7 %)(21).

Conceptual frame work of the study

The purpose of a conceptual or theoretical framework is to help the researcher to clearly see the variables of the study in question; it can also help provide the researcher with a general framework of data analysis (28). The relationships between dependant and in dependent variables are tested during the analytical phase of this study. The conceptual framework which was adopted from Ndilimeke puye – Ipawa study in Angola (27) as taken from Hamadan which was studied in 2012 and made little modification.

Socio demographic characteristics of teachers.

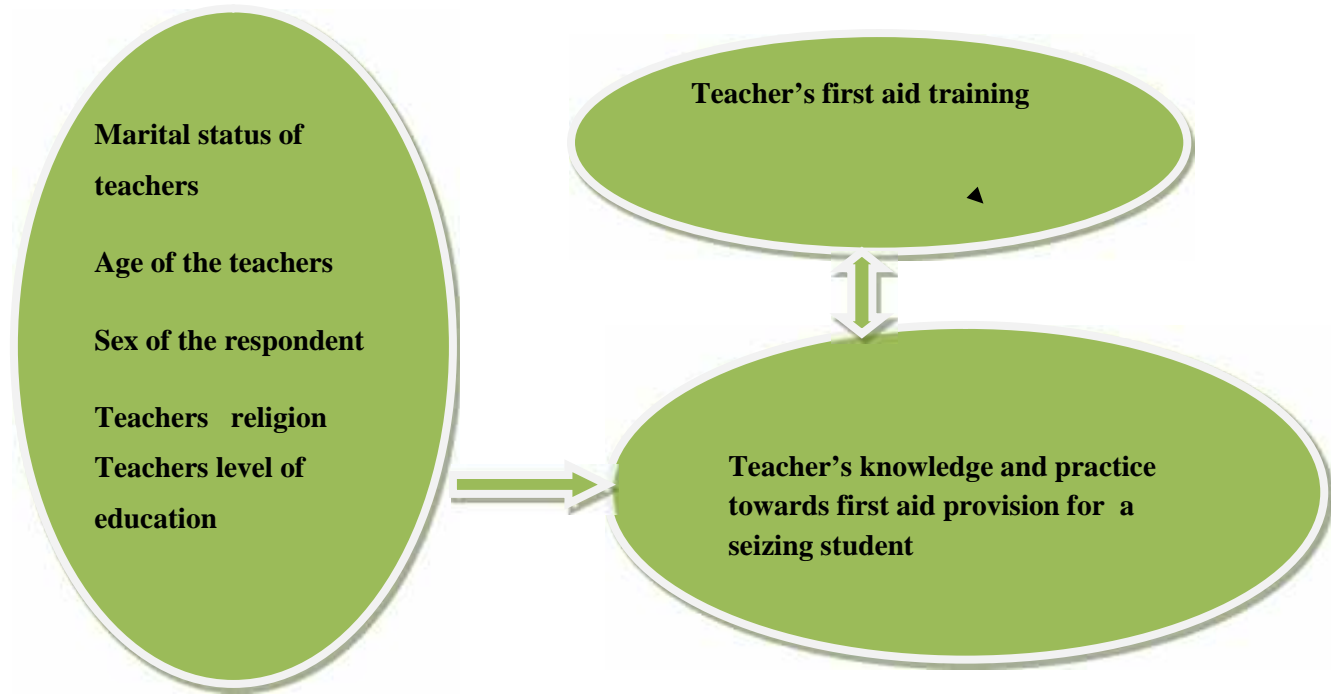


Figure 1: conceptual frame work of the study (29)

CHAPTER THREE

3. OBJECTIVE

3.1 General Objective

To Assess knowledge and practices of first aid provision towards epileptic seizure students among governmental high school teachers in Addis Ababa, Ethiopia,

3.2 Specific objectives

To determine knowledge of high school teachers towards epilepsy.

To assess the first aid service provision for seizing student among high school teachers.

To determine factor that affect knowledge and practice of first aid provision

CHAPTER FOUR

4. METHODS AND MATERIALS

4.1. Study area

The study was conducted in Addis Ababa the capital city of Ethiopia. According to the EDHS report in national figures of 2017/18, the total population of Addis Ababa city was estimated 6.6 million. The city occupies a total area of 540 Sq.Km² which comprises 10 Sub-cities under each sub city there are 10 districts.

Under Addis Ababa city administration education bureau, there are 215 secondary and preparatory governmental schools with the total no of 3258 teachers. Among those schools 17 high schools are located in four sub city (Addis ketema (5 school) Arada (6 school) Lideta (3 school) and kirkos (3 school)) and 1274 teachers are working in the selected school (30).

4.2. Study design and period

Descriptive quantitative cross sectional study design was employed from November 2017 to June 2018. Structural self-administered questionnaire which was adopted from previous similar study and made a certain modification were used to collect data from volunteer teachers in the pre identified schools.

4.3. Source of Population

All governmental high school teachers working in Addis Ababa, Ethiopia

4.4. Study population

All high school teachers from Selected school

4.5. Study Units

High schools teachers

4.6. Inclusion and exclusion criteria

4.6.1 Inclusion criteria

- All teachers who were working in selected high schools,
- Teachers who showed their willingness to participate in the study.

4.6.2 Exclusion criteria

- High school teachers those who were not volunteer to participate in the study
- Teachers who could not able to see.

4.7. Sample size determination and Sampling procedure

Simple Random sampling technique/lottery methods were used to select four sub cities (Addis ketema, Arada, Lideta and Kirkos) from 10 districts in AA. The random sampling also used to select four high school in the selected sub cities (which was one school from each sub city).The randomly selected schools from each sub city were allocated proportionally to determine the final sample size. Finally, lottery sampling method was used to collect information from all teachers in the selected schools. Sample size was determined by using a single population proportion formula .then

$$n_i = (Z /2)^2 p (1-p) / d^2$$

$$n_i = (1.96)^2 0.5(1-0.5) / (0.05)^2 = 384$$

Where: n_i is the size of the sample

$Z /2$ is the standard normal value corresponding to the desired level of confidence

d =error of precision

P =is the estimated proportion of an attribute

Assumptions:

Prevalence of KP of first aid care in epileptic seizure were 50%, since similar or directly related study conducted on the same topic in the study setting is not available, 50% of population proportion is considered.

Margin of error $d= 5%$ is accepted

A confidence interval of 95% is assumed ($Z /2=1.96$).

Since the source population was less than 10,000 (3258) found in Addis Ababa Sub city administration Education Office, then I consider correction formula.

$$\text{i.e. } n_f = n_i / (1 + n_i / N) = 384 / (1 + 384 / 3258) = 344$$

Where: n_i = initial sample size = 384

N = source population = 3258

n_f = final sample size =344

When I consider the 10% non-response rate/ contingency the final sample size is as follow

$$n_f = n_1 + n_2 + n_3 + n_4 = 344 + 34 = \mathbf{378}$$

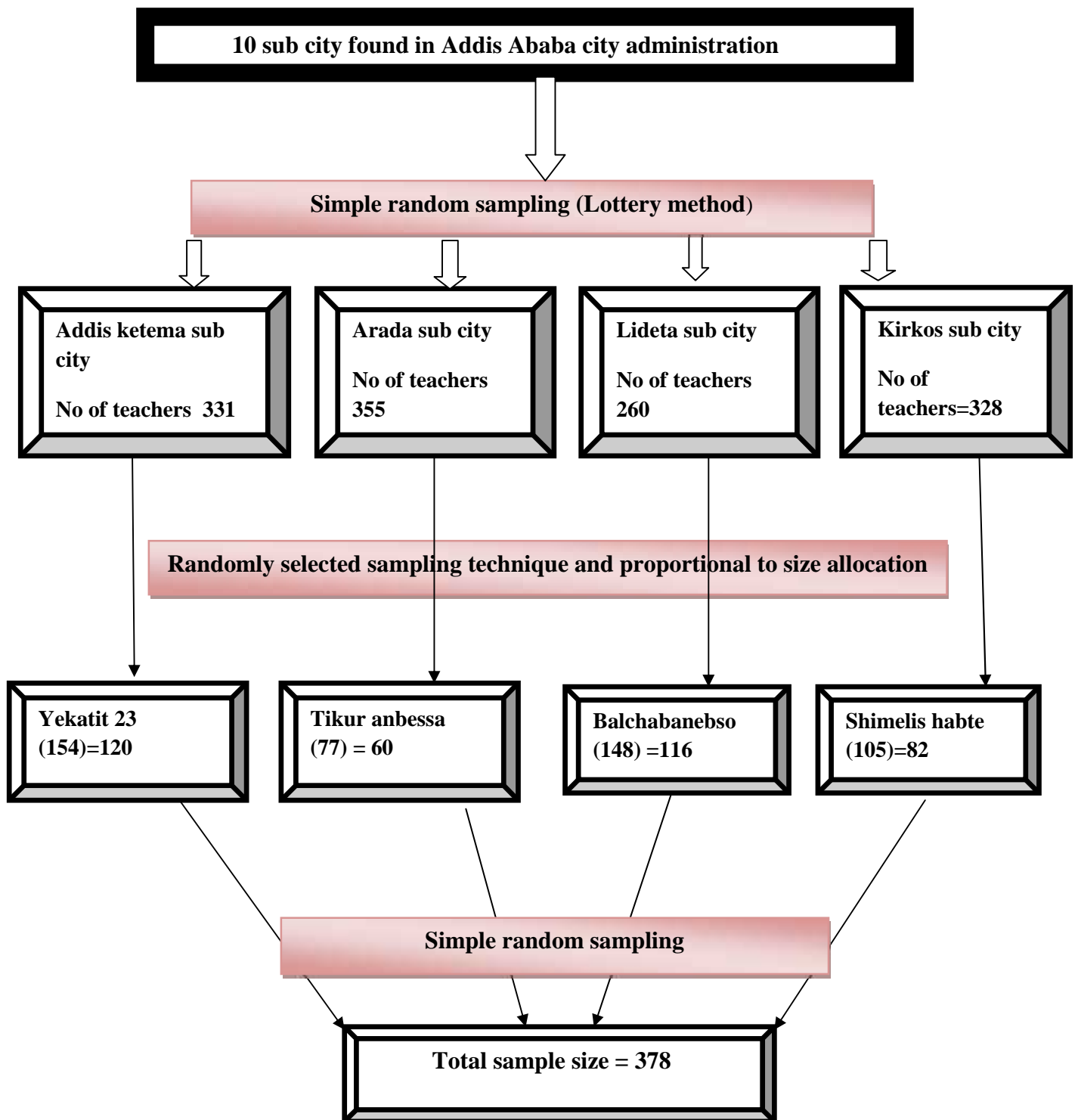


Figure 2: Schematic presentation of sampling procedure from four sub city Addis Ababa .

4.8. Data collection and analysis

For data collection three hundred seventy eight teachers from four governmental schools were chosen randomly and invited to participate in the study, by answering a questionnaire which quantified the knowledge, and practice toward epilepsy. The questionnaire was self administered and has mainly the yes/no type, but teachers were also allowed to express their opinions by means of free answers. Additionally to avoid the guess work the not sure option is included in section 2. Tools have three sections, the first section consists socio demographic part has age, sex, marital status, religion and level of education, the second section consists the knowledge part has 10 question ever heard about epilepsy, source of information, what is epilepsy, the cause of epilepsy, know anyone with epilepsy, what was the manifestation, capability of transmission, what was the management and who are exposed group. Last section has 5 questions for the assessment of practical experience of teachers.

Before actual data collection, pretest was done on 5% of similar population out of study area and based on the test result correction was made in two question which have the controversial idea.

For the data collection three diploma and one Bsc nurses were involved with half day training and completed in 15 working days.

The collected data was checked manually for clarity and completeness. Data was coded, entered and organized using epi.info version 7 and analyzed by using SPSS version 23. Percentage and frequency results were described using tables and charts. Analytically statistical techniques were used as appropriate for the effect between categorical variables, knowledge and practice among participants could be measured using the Chi square (χ^2) test of independence. All tests were conducted at level of significance = 0.05; results with p -values <0.05 will be considered statistically significant.

4.9 .Operational Definitions

Good knowledge: respondents who score mean and above the mean.

Poor knowledge: respondents who score below the mean.

Good practice: respondents who score mean and above the mean

Poor practice: respondents who score below the mean

First aid provision: help given to epileptic seizure students until full medical treatment is available.

Seizure; abnormal movement of the body which is stay for seconds to few minutes

Properly managed: managing of a seizure in a proper way which scientifically acceptable

Improperly managed: In these cases attending of first aid management in scientifically harm full way.

Epilepsy: abnormal electrical flow in the brain and characterized by an enduring predisposition to generate epileptic seizures and by the neurobiological, cognitive, psychological, and social consequences of the condition.

4.10. Study Variables

4.11. Dependent variables

- Knowledge of teachers about epilepsy
- Practice of teachers for epileptic seizure

4.12. Independent variables

- Socio-demographic characteristics
 - Age
 - Sex
 - Marital status
 - Religion
 - Level of education
 - Previous first aid training

4.13. Ethical Consideration

Ethical clearance was obtained from institutional review board of Addis Ababa University, College of Health Sciences, Department Of Emergency Medicine. Official letter was written to Addis Ababa City Education bureau, permission was obtained from Addis ketema, Lideta, Arada and Kirkos Sub City education offices. Informed consent was obtained from respondents who

were participated in the study. In addition all the responses were kept confidential and anonymous by assuring that any information will never be passed to any individual or institution without their agreement and participant was not compel to the study.

4.14. Dissemination of the result

The results of this study will be disseminated or communicated to University of Addis Ababa Emergency Medicine and Critical Care Nursing, Addis ketema, Arada Lideta and Kirkos Sub city education offices, Addis Ababa Education Bureau, Federal Ministry of Education, MOH, and other concerned bodies through publication on an appropriate journal.

Effort will be made to present on professional association meetings for further review

CHAPTER FIVE

5. RESULT

5.1. Socio demographic of the respondents

A total of 378 participants were enrolled in this study with the response rate of 92%. The remaining 28(8%) were considered non response rate due to in different reason. Among the non respondent 12 (3.2%) questioners were incomplete and 16 (4.2%) questioners were not returned. Above half (54.9%) of the respondents were married at the time of data collection. 264 (75.4%) were orthodox Christian by religion and 251 (71.7 %) were male by sex. 153 (43.7%) of the respondents were in the age group between 30-39 with the mean age 34 ± 7.79 standard deviation. Majority of 293 (83.7%) the teachers were first degree holder (**See Table1**).

Table 1: Socio demographic characteristics of the respondents in four selected sub cities, Addis Ababa, Ethiopia, 2018(**n=350**)

Variables	category	Frequency	Percent
Age	20 -29	121	34.6
	30-39	153	43.7
	40-49	56	16
	50	20	5.7
Sex	Male	251	71.7
	Female	99	28.3
Marital status	Married	192	54.9
	Single	139	39.7
	Divorce and widowed	19	5.4
Level education	Degree	293	83.7
	masters	57	16.3
Religion	Orthodox	264	75.4
	Muslim	30	8.6
	protestant	45	12.9
	catholic	11	3.1

5.2. Teachers' familiarity of epilepsy.

From the total interviewer 317(90.6%) respondents were familiar about epilepsy, only (9.4%) are unfamiliar. But (51.4%) they don't know someone with epilepsy.

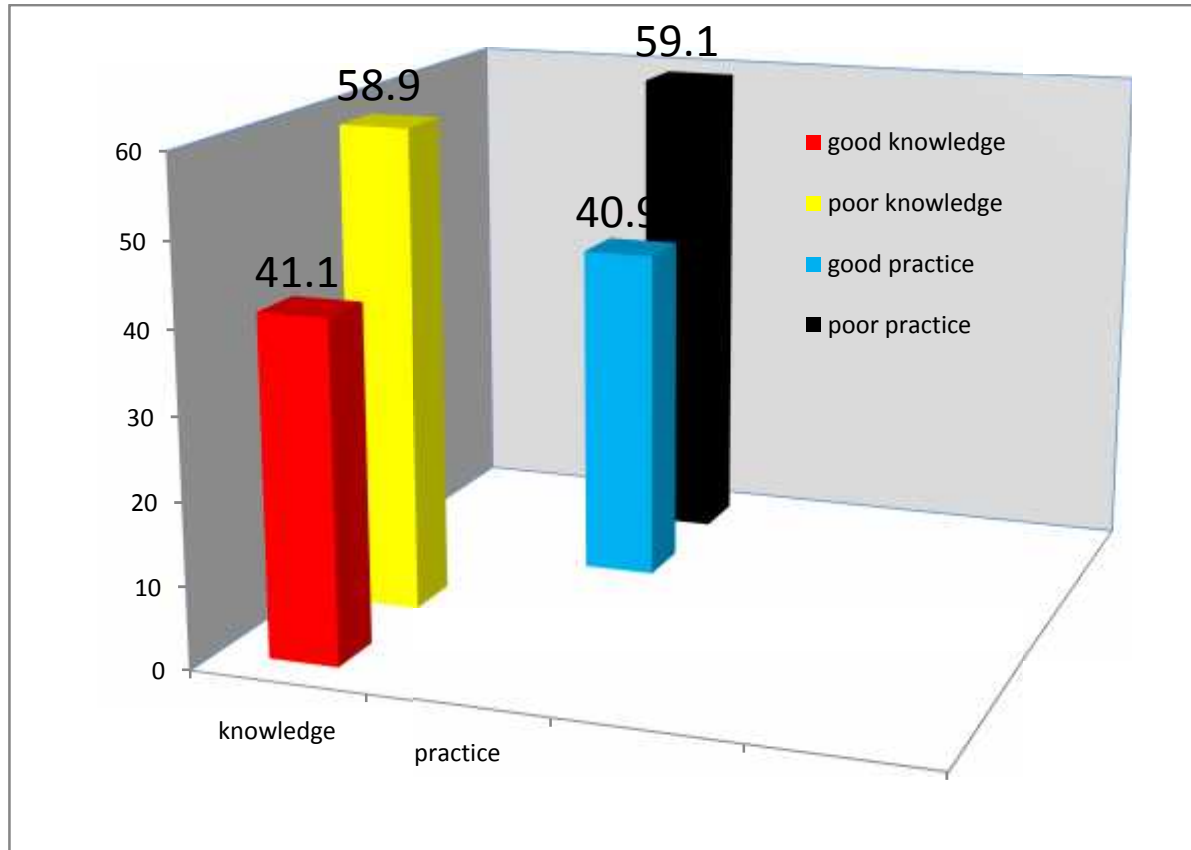


Figure 3: Knowledge and practice of high school teachers, four selected sub city Addis Ababa, Ethiopia,

Participant's answer due to the treatment or control of epilepsy

More than 262 (75%) of the teachers thought that epilepsy could be treated, while 24.3% thought that it could not be treated. Among those who thought that epilepsy could be cured, 52,6% thought that cured only by modern medicine, and 18.6% mentioned that epilepsy could be cured by combination of traditional and modern medicine, only 2.3% are thought be traditional medicine is better.

Teachers Source of information about epilepsy

Public media is the common source of information regarding to the disease called epilepsy 159(45.4%) next to friends148 (42.3%), health profession 72 (20.6%) and books 55 (15.7%) from neighbor were their sources are 52(14.9%) and from their family39 (11.1%).The least likely source of information was from people living with epilepsy 33 (9.4%).

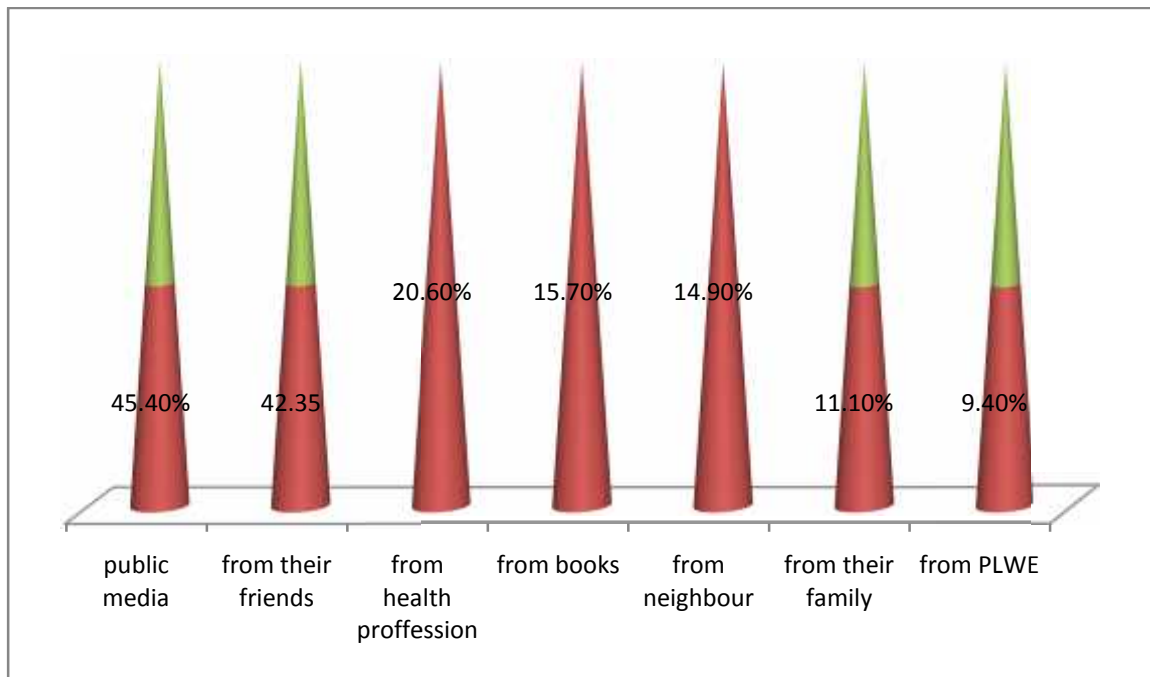


Figure 4: respondents source of information regarding epilepsy as a disease in Addis Ababa, Ethiopia.

Knowledge of the respondents about the definition of epilepsy

Among the total participants of 378 teachers the response rate was 92%. However, 149(42.6%) recognize the disease to be a chronic brain disorder. In opposite, 127(36.3%) believed that it is mental illness followed by their agreement with mental retardation was 34 (9.7%), teachers do not have real information 40(11.4%).

5.3. Manifestation of the epileptic seizure mentioned by the respondents

The most frequently mentioned manifestations of epilepsy were loss of consciousness, foaming at the mouth, convulsion and behavioral change. Concerning to the definition of epilepsy (42.6%) are think as a brain disorder next to mental illness (36.3%) and regarding to the cause of epilepsy their response was brain infection (33.7%),brain disease(32.9%), psychiatric illness (22.6%) and genetic disorder(16%).(**Table2**)

Participants knew epilepsy should not transmitted/contagious 271 (77.4%) and they were sure 306 (87.4) epilepsy can attack males and females, while only 10 (2.9%) teachers says that males are the only exposure. But teachers responses 20 (5.7%) have no real information.

Table 2: Teachers knowledge distribution in four selected sub cities, Addis Ababa, Ethiopia, 2018(n=350).

Variables of the study	Respondents option	Frequency	%
Have you ever heard about epilepsy before?	yes	317	90.6
	no	33	9.4
Do you know child with epileptic seizure	yes	170	48.6
	no	180	51.
Do you think epilepsy is contagious	yes	19	5.4
	no	271	77.4
	Not sure	60	17.1
Do you think epilepsy is treatable disease	yes	265	75.7
	no	7	2,0
	Not sure	78	22.3
Have you given first aid service	yes	38	10.8
	No	312	89.2
Have you get first aid training in your life time	Yes	39	11.1
	no	211	88.9

A: what is epilepsy(n=350)	Frequency	%
Epilepsy is a type of mental retardation	34	9.7
Epilepsy is chronic brain disorder	149	42.6
Epilepsy is a type of mental illness	127	36.3
No answer	40	11.4
B: what is the cause of epilepsy	Frequency	%
Brain infection	118	33.7
Psychiatric illness	79	22.6
Genetic disorder	56	16
Brain disease	15	32.9
Brain tumor	17	4.9
Head trauma	32	9.1
Evil spirit	19	5.4
Not real cause	63	18
Total	399	142.6%

y-multiple response allowed

C: what was the Manifestation	frequency	%
Loss of consciousness with drooling of saliva	113	32.3
Foaming only	48	13.7
Brief behavioral change	41	11.7
Generalize convulsion	40	11.4
Urine incontinency	15	4.3
Blank staring	3	0.9
We do not remember	14	4
Total	274	78.3%

D: epilepsy treatment options	Frequency	%
It is treated by modern medicine	184	52.6
It is treated by traditional medicine	8	2.3
Can be traditional and modern	65	18.6
Praying by religious father	54	15.4
Holly water or kuran	40	11.4
Not sure the treatment	12	3.4
Total	363	103.7%

5.4. Teachers Practices of first aid service provision for epileptic seizure

How was your experience towards a person during a seizure?

This was the more difficult part of the study due to an individual can select more than one answer then it was highly variable and very hard to group them as proper or improper way. The frequency of the respondents might be more than hundred percent. However, a question in connection of what the teachers would do if they were to witness a learner having an epileptic seizure the most frequently selected answer was 204 (58.3%) Promptly move the patient from danger place and protect from harm full materials, 95(27.1%) lay the child on lateral position are categorized proper way of technique. Others as improper technique include smell something like match stick smoke 56(16%),inserting spoon and other harm full materials through mouth were 30(8.6%) respondents (**fig 3**).

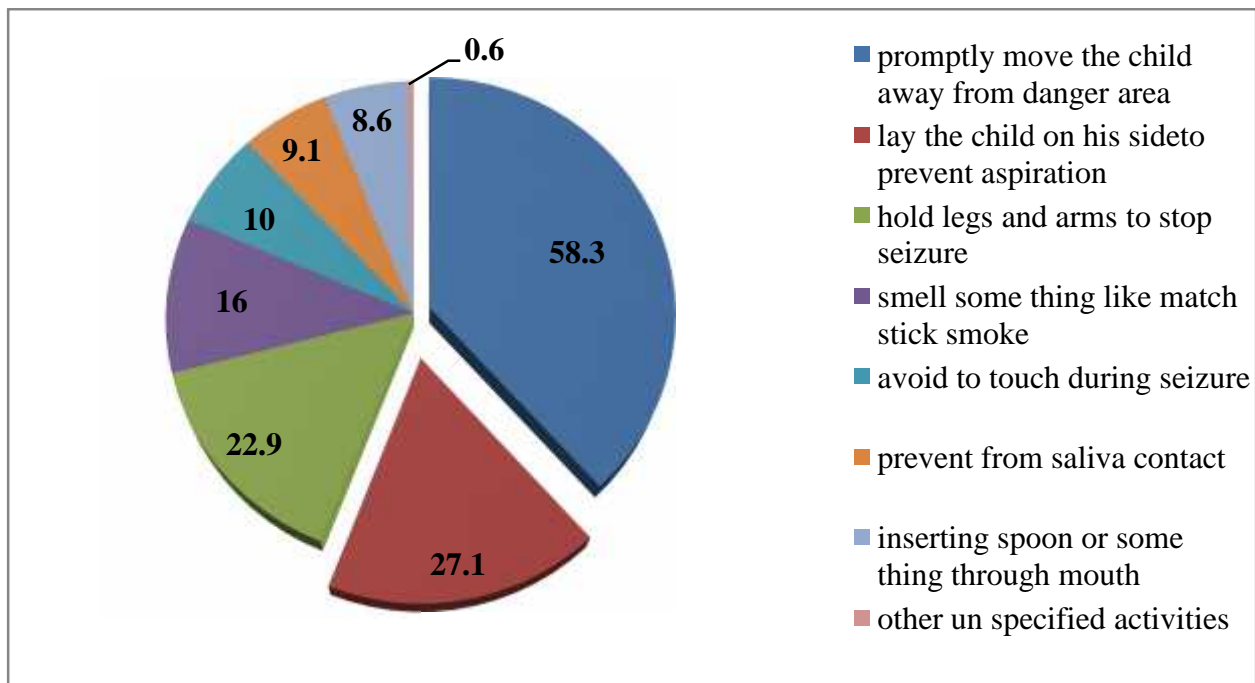


Figure 5 : Perception of respondents for Emergency care during epileptic seizure.

Teachers first aid training status

Based on this finding through first aid management among the total participant only 38 (10.8%) had ever attend first aid to have seizing students .unfortunately only 39 (11.1%) individual from the total participants were got a training to attend epileptic seizure.

5.5. Bivariate analysis of knowledge and practice of respondents

Respondents who categorized good knowledge of teachers towards epilepsy shows that significantly higher frequency seen in the not trained teachers (82.4%) rather than trained teachers (17.6%) ($\chi^2 = 12.875, p = 0.000$). Teachers also said epilepsy can be contagious shows that significantly higher frequency among the previously not trained teachers (73.7%) than the trained teachers (26.3%) ($\chi^2 = 8.414, p = 0.015$). Regarding to practice, respondents had ever seen epileptic seizure students in their class significantly higher in not trained teachers (80.5%) other than trained teachers (19.5%) ($\chi^2 = 10.475, p < 0.001$). The overwhelming majority of the not trained teachers (67.9%) significantly had attend first aid Compared to trained (32.1%) ($\chi^2 = 27.222, p < 0.000$).

Table 3: Cross tabulation of Training status of high school teachers with knowledge and practice in four selected hospitals, Addis Ababa, Ethiopia, June, 2018.

Knowledge of epileptic seizure	Category	First aid Training status		χ^2	p-value
		Trained	Not trained		
Ever heard epilepsy	Yes	36(11.4)	281(88.6)	0.011	0.918
	No	3(9.1)	30(90.9)		
Known epilepsy child seizure	Yes	30(17.6)	140(82.4)	12.875	0.000*
	No	9(5.0)	171(95.0)		
Did epilepsy transmitted	Yes	5(26.3)	14(73.7)	8.414	0.015
	No	239(88.2)	32(11.8)		
Treated or controlled	Yes	32(12.1)	233(87.9)	1.331	0.514
	No	1(14.3)	6(85.7)		
Practice of first aid					
Ever seen epileptic seizure student in the class	Yes	22(19.5)	91(80.5)	10.745	0.001*
	No	17(7.2)	220(92.8)		
attend first aid	Yes	18(32.1)	38(67.9)	27.222	0.000*
	No	21(7.1)	273(92.9)		

* Significant at p –value 0.05

5.6. Bivariate analysis of factors likely affecting knowledge of teachers

From the Respondents who scored good knowledge who ever heard about epilepsy had a higher score (44.2%), in comparison to respondents not ever heard about epilepsy (12.1%) ($\chi^2 = 11.384$, $p = 0.001$).

Also, it was remarked that teachers who have good knowledge but not trained first aid were had high score (43.1%) than those who were trained (25.6%) ($\chi^2 = 3.665$, $p = 0.050$).

Neither educational status nor marital status or age of teachers had a significant effect on knowledge of teachers on epilepsy.

Table 4: Bivariate analysis of factors likely affecting knowledge of teachers, in four selected sub cities, Addis Ababa, Ethiopia, June, 2018.

Characteristics of teachers	Category	Knowledge		X2	p-value
		Good knowledge	Poor knowledge		
Age in years	20-29	53(43.8)	68(56.2)	3.353	0.340
	30-39	55(35.9)	98(64.1)		
	40-49	26(46.4)	30(53.6)		
	50	10(50)	10(50)		
Sex	Male	102(40.6)	149(59.4)	0.034	0.853
	Female	42(42.4)	57(57.6)		
Marital status	Single	61(43.9)	78(56.1)	3.686	0.158
	Married	72(37.5)	120(62.5)		
	Divorce	11(57.9)	8(42.1)		
Level of education	Degree	121(41.3)	172(58.7)	0.00	1.00
	Masters	23(40.4)	34(59.6)		
Heard about epilepsy	Yes	140(44.2)	177(55.8)	11.384	0.001*
	No	4(12.1)	29(87.9)		
Ever seen epileptic seizing student in the class	Yes	50(44.2)	63(55.8)	0.489	0.485
	No	94(39.7)	143(60.3)		
Attending first aid care	Yes	28(50)	28(50)	1,746	0.186
	No	116(39.5)	178(60.5)		
First aid training	Yes	10(25.6)	29(74.4)	3.665	0.050*
	No	134(43.1)	177(56.9)		

* Significant at p –value 0.05

5.7. Bivariate analysis of factors likely affecting practice of teachers

Respondents seen epileptic seizing students in their class generally had a higher score (85.8%), in comparison to respondents not ever seen (19.4%) ($\chi^2 = 137.009, p = 0.000$).

While teachers who have good practice and were attend first aid care had high score (98.2%) than those who were not attend (29.9%) ($\chi^2 = 87.96, p = 0.000$).

Additionally respondents who were trained had higher score (94.9%) than non trained (34.1%) ($\chi^2 = 50.508, p = 0.000$).

But others like age, marital status, level of education, sex and ever heard about epilepsy were not statistically significant with teacher's practice of epileptic seizure management.

Table 5: Bivariate analysis of factors likely affecting practice of teachers, in four selected sub cities, Addis Ababa, Ethiopia, June, 2018.

Characteristics of teachers	Category	Practice		X ²	p-value
		Good practice 50%	Poor practice <50%		
age in years	20-29	48(39.7)	73(60.3)	1.801	0.615
	30-39	59(38.6)	94(61.4)		
	40-49	27(48.2)	29(51.8)		
	50	9(45)	11(55)		
Sex	Male	98(39)	153(61)	0.957	0.328
	Female	45(45.5)	54(54.5)		
Marital status	Married	74(38.5)	118(61.5)	1.360	0.507
	Single	62(44.6)	77(55.4)		
	Divorce	7(36.8)	12(63.2)		
Level of education	Degree	125(42.7)	168(57.3)	1.989	0.158
	Master	18(31.6)	39(68.4)		
Heard about epilepsy	Yes	132(41.6)	185(58.4)	0.957	0.328
	No	11(33.30)	22(66.7)		
Ever seen epileptic seizing student in the class	Yes	97(85.8)	16(14.2)	137.009	0.000*
	No	46(19.4)	191(80.6)		
Attending First aid care	Yes	55(98.2)	1(1.8)	87.96	0.000*
	No	88(29.9)	206(70.1)		
First aid training	Yes	37(94.9)	2(5.1)	50.508	0.000*
	No	106(34.1)	205(65.9)		

* Significant at p-value 0.05

CHAPTER SIX

6. Discussion

This facility based cross sectional study were tried to assess the knowledge and practice of first aid provision in high school teachers working in Addis Ababa, 2018. This study found that teachers who have good knowledge were (41.1%), when we compare with another study this finding was much smaller than study conducted in India pradesh city (97%) (17),Burkina Faso Bobo- Dioulasso city (98%)(19) and Pakistan (89.3%) (24). The difference might be the study setting, the instruments used, sample size, study setup and lack of training, and this gap could be explained by lack of information about epilepsy in different media.

This study is higher than a study conducted in Saudi Arabia revealed that 17% (18).The difference could be all respondents were high school teachers rather in this studies primary school teachers are included. Additionally they might be not spent more time with in the hospital; this may reduce their time of exposure to the case.

Based on this study among the respondents only 143(40.9%) had good practice towards first aid provision for epileptic seizure students. This is higher than similar study conducted in Montenegro (19.4%) (25) and done in Khartoum Sudan (12.9%) (26). But this study is lower than conducted in Pakistan (49.9%).The possible discrepancy might be due to socio-cultural difference and it might be fear of thinking contagicity and spiritual believes.

Regarding the practical experience attending epileptic seizure our study shows only 56(16%) teachers had attend seizure management in their life time. Compared from Indian study which was (27.8%) (17) less but in Thailand 16.3% it was very similar score. Mainly in the present study protect the child from harmful materials until seizure relief by itself was the first selected activities followed by lay on the ground with safe position, pouring of water and giving through mouth were answered. These result also compared with Namibia lower finding which was 15 (13%) attended by hold the learner's legs and arms, 4 (4%) smell something sixteen responded answered avoid to touch, 45 (40%) performed promptly move the child away from danger, 26 (23%) teachers did the child on safe position while 52 (46%) of them were avoid touching the saliva (27).

This discrepancy may be due to the instruments used for data collection and sampling size difference. In fact our finding also compare from Sudan result the technique of first aid measure relatively the same but the frequency has significantly less which was (78.2%) protect from harm full materials, lay the patient on the ground(76.3%) and inserting some materials through mouth (47.6%). majority of the respondents attend by scientifically acceptable which is consider as good clinical experience (26).

Participants who reported in Pakistan (49.9%) they attend seizure lay on the smooth surface which was acceptable however (15.7%) others attending by shoe smell, one fifth of the teachers has harm full intervention which was inserting spoon and metallic materials through mouth. This result was similar to this study which was 16% (24).

In this study (58%) the first aid measure responses were indicated in proper way of intervention. this finding was almost similar conducted in Addis Ababa which was (68%) scored by make the child on lateral position to prevent aspiration 95(27.1%). These practices were comparable to found that in Montenegro almost the same which was (28.3%). Teachers who provided scientifically acceptable management care are similar in this finding. The same study were opposite compare with potentially harmful interventions such as hold their arms and legs to stop seizure 80(22.9%), smelling a struck match 56 (16%) and inserting a spoon into the mouth 30(8.6%). whereas inserting a spoon into the mouth (35 %), potentially dangerous activity like pulling their tongue, restrict movements and pouring of water excreta on the face (13.9 %) and smelling of match stick smoke (15.7 %) are common practices (21).

In the present study which was believed that epileptic seizure can terminate by shoe smell (12.8%). This finding compared with similar study conducted in India panchkula city the result show small in number that was (28.9%). This difference may be the cultural difference between the countries. The same study (23.7%) says keep the child until gain his consciousness this is consider as used proper decision compared than this study which was (10%). Majority said that we do not know what we did (41.2%). This is consider the negative finding compared present study which was only (0.6%) (22).

Teachers had attended 39(11.1%) first aid training on epilepsy and its intervention was lower by half than conducted in south east Nigerian study (25.3%) whilst similar result was found in

Pakistan 19(12.6%) consistent with the findings of other study which reported that almost all recruited teachers had no previous training on epilepsy.

In this study participants previously ever seen epileptic seizure and attend first aid were significantly associated with training status of respondents. Also previously heard about the disease called epilepsy and had first aid training significantly associated with knowledge of teachers. On the other hand seen epileptic students first aid provision and first aid training were significantly associated with practice of respondents. However this study were different from study conducted in Ethiopia Addis Ababa shows that level of education, teaching experience, biological and cultural response towards epilepsy were significantly associated (21).

This difference might be due to sample size and study period.

CHAPTER SEVEN

7. Strength and limitation of the study

7.1 Strength of the study

- High response rate
- Study involved teachers currently who have teaching

7.2 limitation of the study

- There was unavailable literature review directly related in this topic in nationally.
- Recall bias since the study in life time.
- Since the study population is not more than ten thousands design effect was not used

CHAPTER EIGHT

8. Conclusion

This study identified the baseline knowledge and practice of first aid provision among study participants on epileptic seizure showed that there was gap on knowledge and practice on first aid attending skill on epileptic seizure. It was an alarm sound that (24.3%) of this group was unaware that epilepsy is a treatable disorder.

Positive finding were also registered in practical experience of the case (58.3 %). However, their opinion for the contagious was considering negative result (22.5%).

More educated and trained teachers had better performance for the care of seizing students in their life time may be minimizing negative perception and improving the care children with epilepsy.

CHAPTER NINE

9 .Recommendation

Based on this study there was found in knowledge and practice gap on first aid provision skill.

Then organized and strategic regular awareness development method regarding epilepsy is recommended to improving quality of life through epileptics; specifically high school teachers should be targeted group since they spent their more time with students.

Further responsible body should be prepared first aid training for teachers may decrease the degree of the problem.

Ministry of education should emphasize for the development of curriculum during teachers training may be minimizing negative perception and improving the care children with epilepsy.

Next knowledge improvement system would be providing continues training and demonstration that have in adequate knowledge and practices towards epileptic seizure management.

These will be done further collaboration with governmental and non-governmental institution. Because teachers are the corner stone for students equivalent to their families.

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Annex II: Information sheet and consent form

Addis Ababa University

Emergency Medicine and Critical Care Nursing

Consent form: -

Hello! My name is _____ I am conducting the survey on the assessment of Knowledge, and practice of first aid management among governmental high school teachers in Addis ketema, arada lideta and kirkos sub city Addis Ababa, Ethiopia, 2018. The assessment is made for the partial fulfillment of Master's Degree in emergency medicine and critical care, Addis Ababa University College of emergency Department. The results of the study will be used as base line information to design appropriate intervention strategies to increase high school teachers' knowledge, and practice of first aid management regarding epileptic seizure student. The questionnaire contains both closed and open ended questions and will be provided in self-administered form. You are therefore kindly requested to provide genuine answers to the questions. The information you provide is confidential and is used only for the purpose of this study. If you have any question, don't hesitate to ask the data collector. Your cooperation and participation until the completion of the questionnaire is very necessary for the successful completion of the study. We therefore ask your genuine willingness. However, you have the right to refuse if you are not voluntary to participate by making thick mark in '-No' in the box below.

If you are voluntary Yes----- No-----

Thank you in advance for your cooperation

Data collectors Name _____, date _____ sign: _____

Questionnaire code: _____

If you have any question to ask, please contact

Adisu Shiferaw mobile no 0918721248 ,Email = adisushef02@gmail.com

Annex ii: questionnaire for the quantitative phase

I. Demographic characteristics:

101. Age.....

102. Genders:

- 1 Male 2. Female

103. Marital status:

1. Married 2. Single
3. Divorce 4. Widowed

104. Level of education

1. Diploma 2. Degree
3. Master

105. Religion

1. Orthodox 2. Muslim
3. Protestant 4. Catholic
5 others

II. Knowledge based question towards epilepsy

201. Have you ever heard before about a disease called epilepsy?

- 1 Yes 2 No

202. If yes what was your source of information about the epilepsy? (Where have you heard about it?)(More than one choice can be selected).

1. From public media 2. From neighbor

- 3. From health profession
- 4. From friends
- 5. from family
- 6. From books
- 7 From living with epilepsy
- 8. Mention another source

203. What is epilepsy? Please circle the correct answer

- 1. Epilepsy is a type of mental retardation.
- 2. Epilepsy is a brain disorder
- 3. Epilepsy is a mental illness
- 4. No answer

204. What do you think the cause of epilepsy?

- 1. Genetic Disorder
- 2. Brain Infection
- 3. Brain Disease
- 4. Psychiatric illness
- 5. Brain Tumor
- 6. Head Trauma
- 7. Curse of God
- 8. Evil Sprit
- 9. Witchcraft
- 10. Not Sure / I do not know

*More than one choice can be selected

205. Do you know or have you ever known child with epileptic seizure?

- 1 Yes
- 2. No
- 3. Do not know

206. If yes your answer for Q 205, what was the manifestation of during seizure

- 1. Convulsion
- 2. Loss of consciousness with Drooling of saliva
- 3. Brief Behavioral change
- 4. Blank staring
- 5. Brief period of forgetfulness
- 6. Foaming

7. Urine incontinency

8 Not Sure / I do not know

*More than one choice can be selected

207. Do you think epilepsy is transmitted from one person to another?

1 yes

2. No

3. Not Sur / I do not know

208. Do you believe that epilepsy can be treated or controlled?

1. Yes

2. No

3. Not Sure / I do not know

209. If yes to Q 206 please indicate your answer regarding the treatment of epilepsy in the options provided (More than one answer can select).

1. Modern medicine 2, Traditional healers

3. Both modern medicine and traditional healers

4. Praying by religious father

5. Holly water or kuran

6. Not sure

*More than one choice can be selected

210 Who does epilepsy affect?

1. Females

2. Males

3. Both males and females

4. I don t know

III. Practice based question

301. Have you ever seen students with epilepsy in your classroom?

1. Yes

2. No

302. Have you given first aid management for a child with seizure?

1. Yes

2 .No

303. If yes for Q 302 what was your practice? You may select more than one answer.

1. Hold the legs and arms
2. Make the student smell something to stop the seizure.
3. Avoid touching the student during the seizure
4. Promptly move the child away from danger
5. Lay the child on his side
- 6 .Avoid touching the child's saliva
7. Inserting a spoon or gag into the mouth
8. Please mention your practice

*More than one choice can be selected

304. Have you ever trained regarding the first aid management of epileptic seizure in your life time?

1. Yes

2 .NO

Assurance of principal investigator

The undersigned agrees to accept responsibility for the scientific ethical and technical Conduct of the research project and for provision of required progress reports as Per terms and conditions of the Research Publications Office in effect at the time of Grant is forwarded as the result of this application.

Name of the student: Adisu Shiferaw (BSc)

Date. _____ Signature _____

Approval of the primary Advisor

Name of the primary advisor: Dr. Hywot Engida.

Date. _____ Signature _____

Name of the Co- advisor: Asmamaw Abebe

Date . _____ Signature _____

