

**KNOWLEDGE ATTITUDES AND PRACTICES OF TEACHERS TOWARDS
EPILEPSY IN TARKWA-NSUAEM MUNICIPALITY**

BY

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UNIVERSITY FOR DEVELOPMENT STUDIES



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EPILEPSY IN TARKWA-NSUAEM MUNICIPALITY**

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DEVELOPMENT**

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DECLARATION

Student

I hereby declare that this thesis is the result of my own original work and that no part of it has been presented for another degree in this University or elsewhere:

SALIM AHMED KHALID
(UDS/CHD/0222/15) SIGNATURE DATE

Supervisor

I hereby declare that the preparation and presentation of the thesis was supervised in accordance with the guidelines on supervision of thesis laid down by the University for Development Studies.



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ABSTRACT

Epilepsy is the most common neurological disorder in the world; approximately 50 million are diagnosed worldwide. Even though many teachers are aware of the condition, a lot of misconceptions about the condition have resulted in discrimination and restricted educational opportunities for People with epilepsy, and in some cases, members of their families. Despite widespread negativity about the condition in Ghana, epilepsy is treatable. Appropriate medical treatment could help reduce many avoidable injuries and deaths. The objective of this study, therefore, was to assess the knowledge, attitudes and practices of basic school teachers on epilepsy in Tarkwa-Nsuaem Municipality.

The study employed a descriptive and cross sectional designs and used a questionnaire to collect data from 312 participants. Data was analyzed with SPSS version 20.

The study found that majority of the teachers (73.9%) was knowledgeable about epilepsy and had positive attitudes (84.5%) toward epilepsy. However, seizure management practices among the teachers were poor; only 19.3% of the teachers had appropriate seizure management practices.

The findings made indicate that, even though knowledge levels and attitudes toward epilepsy are acceptable; over 70% of the teachers had adequate knowledge and positive attitudes toward epilepsy, it rather reflected in inappropriate seizure management.

On the basis of the findings, it is necessary to train teachers in Tarkwa-Nsuaem on seizure management.



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DEDICATION

This thesis is dedicated to my parents, Faustina Ofosuwaa and Alhaji Khalid Isa for their enormous interest and support in my welfare. I really appreciate your encouragement. Thank You.



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ABBREVIATIONS/ACRONYMS

CPU	Community Psychiatric Unit
DALYs	Disability-adjusted Life Years
EFWP	Epilepsy Foundation of Western/ Central Pennsylvania
ESRC	Economic and Social Research Council
F-CUBE	Free Compulsory Universal Basic Education
GBD	Global Burden of Diseases
GES	Ghana Education Service
GHS	Ghana Health Service
JHS	Junior High School
MOH	Ministry of Health
PWE	People/Person with Epilepsy
TMH	Tarkwa Municipal Hospital
TNM	Tarkwa-Nsuaem Municipality
UDS	University for Development Studies
WHO	World Health Organization



DEFINITION OF CONTEXTUAL TERMS

Students/Pupil	People who attend school
Unprovoked attacks	epileptic attacks that have no underlying cause
Regular School	Schools meant for all students
Special School	Schools meant for people with low intellectual ability
Epilepsy Management	First aid for epilepsy
Seizure	Epileptic attack/ fits
Trigger factor	things that induce epileptic attacks/fits



CHAPTER ONE

INTRODUCTION TO STUDY

1.0 Introduction

This chapter is the beginning part of the study and outlines the background and objectives of the study. It also presents the problem that has occasioned the need for the study, its relevance and potential health impact. The overview of the thesis is also captured here.

1.1 Background of the study

Epilepsy is a neurological condition that affects people and manifests in repeated seizure activity in the victim as a result of brain cell malfunction (Dekker, 2002). Seizure is broadly categorized into partial and generalized types depending on the part of the brain experiencing abnormal neuron activity (Dekker, 2002).

The condition may result from identifiable causes such as head injury, brain tumor, brain infection and certain genetic disorders (Dekker, 2002). The type of epilepsy with unidentifiable cause is generally diagnosed through a carefully taken history of onset, nature, frequency, duration, and time of seizure as well as the subsequent behaviour of the experiencer after the seizure (Dekker, 2002).

Epilepsy is one of the commonest neurological disorders in the world, and approximately 50 million people are known to suffer from the condition worldwide (WHO, 2016). Globally, the annual estimate of epilepsy diagnosis stands at 2.4 million, affecting between 30 and 50 people per 100000 of the general population in high income countries. In low income countries, annual diagnosis is about double the number in high income countries (WHO, 2016).



Africa has one of the highest prevalence rates of epilepsy in the world as evidenced by estimates provided by some agencies working on epilepsy including the Global Campaign Against Epilepsy who puts the prevalence at 11.29 cases per 1000 people (Winkler, 2013).

This figure is supported by other studies conducted in Sub-Saharan Africa. One such study was conducted by Ngugi et al. (2013) in selected communities in Africa which revealed that, Kilifi in Kenya had a prevalence of 7.8 per 1000 people, Agincourt in South Africa had 7.8 per 1000 people, Iganga-Mayuge in Uganda had 10.3 per 1000 people, Ifakara in Tanzania had 14.8 per 1000 people and Kintampo in Ghana had 10.1 per 1000 people. Another study by Ae-Ngibisie et al. (2015) similarly reported a prevalence of 10.1 per 1000 people in Kintampo.

Living with epilepsy comes with lots of social challenges. The WHO's (2016) publication of the impact social attitudes have on PWE and their families concluded that people only stigmatize and discriminate against PWE because of their condition. GlobalGiving (2017) concurs with this position, revealing that living with epilepsy creates barriers for sufferers seeking public services because they are subjected to abuses and ridicule a lot of times.

Additionally, epilepsy has enormous implications for sufferers, families, and the economy. The economic cost associated with epilepsy in the United States of America is reported to be in excess of 12.5 billion dollars annually, with 14% and 84% attributed to cost of anti-epilepsy drugs and treatment for associated conditions like fractures and burns respectively (Cardarelli and Smith, 2010). One researcher posits that epilepsy perpetuates poverty in families and in most instances contributes to the repeated cycle of poverty in families due to amount the amount of money spent seeking anti-epilepsy treatments and the unfavorable socio-economic environment in communities these families live in (Aikins et al, 2010). It is quite disturbing to know that



access to epilepsy treatment still remains challenging for PWE, with financial challenges being one of the likely reasons (Ba-Diop et al., 2014); this has in no small way contributed to the high disease burden of epilepsy.

The impact of epilepsy on the general health status of the sufferer is also well documented. One observation made in this regard revealed that PWE have a higher number of physically and mentally unhealthy days in a year than people without epilepsy (Elliot et al., as cited in Cardarelli and Smith, 2010). The physically unhealthy days may be due to the frequent falls and injuries sustained therefrom and may explain why epilepsy ranked 15th in the top causes of disability-adjusted life years in 2010 (Institute for Health Metrics and Evaluation, 2010). PWE are known to die prematurely, possibly due to the failure of people to attempt helping a seizing person (Institute for Health Metrics and Evaluation, 2010).

Access to treatment for PWE is poor in Ghana and is partly due to the negative attitude of some health personnel, ranging from rejection and apathy to open discrimination (Ba-Diop et al., 2014). Goronga et al. (2013) concurs with the above position revealing that a lot of peoples' negative attitudes stem from Biblical narratives.

The need to support PWE has, now more than ever, become an urgent issue that needs addressing because of the burden the condition imposes on society. Indeed, supporting PWE should not be too difficult to do since glowing examples of countries managing epilepsy better than Ghana abound, especially in developed countries, where schools have epilepsy policies and it is the duty of teachers in such schools to work together with parents and other staff to ensure that pupils with epilepsy remain in school (Epilepsy Action, 2005). A case in point is St. Egbert



Primary School, Egton in Hatchington, United Kingdom where teachers are taught first aid seizure management (Epilepsy Action, 2005).

Appropriate seizure management is crucial to preventing injuries and avoiding deaths among PWE, unfortunately, many teachers in developing countries, possibly including those in TNM, do not possess the right skills manage seizures; hence, many are likely to intervene in ways that may compound a seizing person's condition (Gebrewold et al., 2016). Teachers who are not skilled at seizure management may pour water on the face or even insert objects into the mouth of a seizing person; these practices may cause victims to suffocate (Gebrewold et al., 2016).

According to Lee et al. (2011), when teachers are knowledgeable about a subject or object, such knowledge may influence their attitudes and subsequent reactions to that subject or object (as cited in Fanjoy, 2015). Therefore, appropriate knowledge about epilepsy may improve attitudes, and subsequently, improve seizure management skills among teachers and likely help to reduce injuries and deaths among PWE (Lee et al., 2011, as cited in Fanjoy, 2015). The result may be a reduction in the burden of epilepsy.

1.2 Problem statement

School children spend considerable amount of time in school. While there, teachers are expected to take care of their academic, physical and emotional needs.

Public basic schools in Ghana, and for that matter in TNM, lack health facilities and do not usually employ the services of health personnel. Consequently, in medical emergencies PWE are transported to health facilities which may be several kilometers away, a phenomenon that has enormous health and social implications for the staff, the victim and their families.



Additionally, teachers in Ghana are not trained in epilepsy management while in school, hence teachers in Tarkwa-Nsuaem Municipality (TNM) may not be skilled enough to intervene when a student is seizing.

Furthermore, unlike private basic schools, special arrangements between parents of PWE and teachers in public schools are uncommon; hence teachers are mostly unaware of the health status of their students and so are often ill prepared to handle health emergencies involving these students.

The Tarkwa Municipal Hospital (TMH) is a modern public health facility that provides healthcare services to the people of the municipality. As of December 2016, records from the Community Psychiatric Unit (CPU) of TMH indicated that the total number of epilepsy cases registered and receiving treatment at the Tarkwa Municipal Hospital was 642, out of which 17% were children of school-going age (TMH, 2016). Staff of the unit confirmed that some of these children are in school. According to the staff, cases of PWE seizing in school and being left to their fate is not uncommon due to the widespread misconception that epilepsy is spiritually caused.

As yet, the knowledge, attitudes and seizure management practices of basic school teachers in TNM are unknown because no study has been conducted on the subject. Assessing these three variables is important to empirically establish how much teachers in TNM know about epilepsy, what their attitudes are and how they will intervene during seizure. It is the aim of the researcher, therefore, to conduct this study to fill this knowledge gap.

As yet, no study has been conducted in TNM to assess their knowledge on epilepsy, their attitudes toward epilepsy and their seizure management practices. Assessing the knowledge,



attitude and practices of teachers towards epilepsy is therefore important to empirically establish how much teachers in TNM know about epilepsy, what their attitudes are and how they would intervene during a seizure. It is the aim of the researcher, therefore, to conduct this study to fill this knowledge gap.

1.3 Objectives of the study

1.3.1 Main Objective

The main objective of this study was to assess the knowledge, attitudes and practices of basic school teachers in Tarkwa-Nsuaem Municipality towards epilepsy.

1.3.2 Specific objectives

1. To assess the level of knowledge of basic school teachers on epilepsy in TNM.
2. To assess the attitudes of basic school teachers toward epilepsy in TNM.
3. To assess seizure management practices of basic school teachers in TNM.
4. To determine whether associations exist between the independent (socio-demographic data) and dependent variables (knowledge, attitudes and practices).

1.4 Justification of the study

- The need to contribute to enforcing children's right to education under the Free Compulsory Universal Basic Education (F-CUBE) policy in Ghana.
- The need to contribute to enforcing the right to education for people with mental disorder under the Mental Health Act.



- The need to fill the knowledge gap among staff of the Community Mental Health Unit of Tarkwa Municipal Hospital in respect of knowledge, attitude and practices of teachers towards epilepsy in TNM.
- The need to comprehensively involve teachers in the care of school children is another reason for carrying out this study.

1.5 Significance of the study

The outcome of this study will serve as a basis for intervention among basic school teachers in the municipality regarding epilepsy education and seizure management.

The study will serve to inform policy makers on the need to incorporate epilepsy education in the curriculum of Colleges of Education.

1.6 Theoretical framework

Theories are frameworks that provide explanation on how a phenomenon works and hence give meaning to research work. The theory that underpins this study is Icek Ajzen's theory of planned behaviour (Ajzen, 1985, as cited in Morris et al., 2012). The theory posits that behaviour change does not occur in a vacuum; rather it is influenced by people's intention. Intentions, according to the theory is determined by attitudes, subjective norms, and perceived behavioural control. According to the theory, one's evaluation of a behaviour as either positive or negative to a large extent determines whether a person would adopt that behaviour or not. Attitudes are formed based on information or misinformation. The theory of planned behaviour in essence teaches that, if a teacher has a positive attitude towards epilepsy, he or she may likely have positive intentions for those with epilepsy and may likely learn behaviours that may be helpful to PWE.



Subjective norm refers to perceived social pressure to perform or not to perform a particular behaviour. Humans are social beings and so affect and are affected by people in their environment. According to the theory, significant others wield substantial influence on us; people adopt or reject a particular behaviour based on whether they think significant others will approve or disapprove of the behaviour in question. The import is that teachers may want to know more about epilepsy and help PWE if they think their parents, spouses, religious leaders among others will approve or disapprove of that action.

The last factor that determines intention is a person's perception of whether they have control over this potential behaviour not. The theory posits that peoples' belief about their abilities is another factor that may affect their willingness to adopt a particular behaviour or not. Hence, if teachers believe that they have the necessary resources to support PWE, they are more likely to learn and acquire the necessary knowledge and skills ton epilepsy and use it to help PWE.

1.7 Conceptual framework

According to Miles and Huberman (1994) as cited in Latham (2017), "a conceptual framework explains, either graphically or in narrative form, the main things to be studied-the key factors, constructs or variables- and the presumed relationships among them".

It essentially serves as a guide to researchers on the nature of variables being studied and the factors that affect these variables. Conceptual framework should therefore be seen as an abstract image that relates the objectives of a study to the kind of information to be collected and analyzed (Wikipedia, 2016). The components of these abstract representations play complementary roles in explaining a given construct (Jabareen, 2009).



According to Jabareen (2009), the object of using a conceptual framework is not to identify causal relationship between known variables, rather it serves to interpret the idea being conveyed for the reader's understanding and can therefore not be used for predictive purposes.

Jabareen's (2009) position is buttressed by another researcher who posits that conceptual frameworks are essentially aids that help in describing the relationships existing between some variables so that a phenomenon is easily understood (Radhakrishna et al., 2007, as cited in Chukukwa, 2008).

The variables being studied in this research are mainly the dependent and independent variables. The independent variables include demographic information such as age, sex, religion and educational level of the respondents as well the marital status, and number of years of service. The dependent variables are teacher knowledge, attitude and seizure management practices. Data collected would be subjected to analysis which would determine whether a relationship exists between the independent and dependent variables.

The conceptual framework of the study can be seen in figure 1.1.

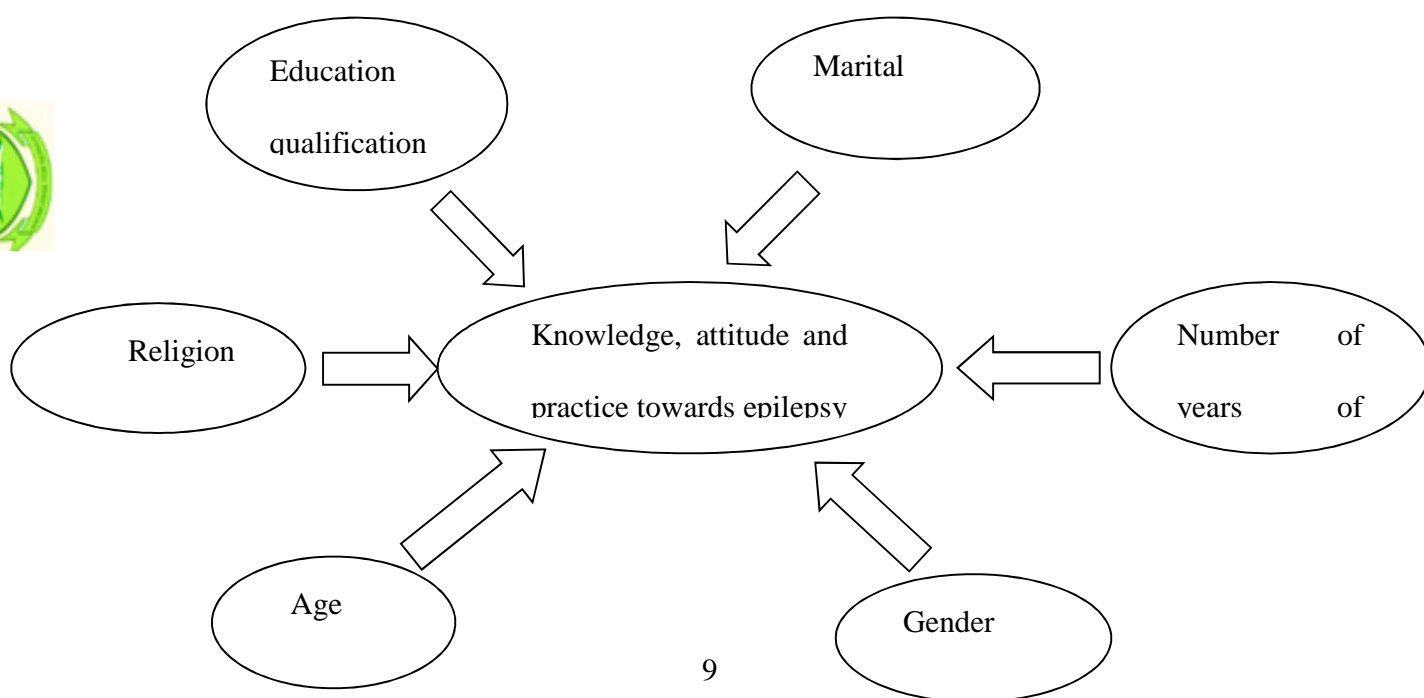


Figure 1.1: A conceptual framework of the study, adapted from Angula (2016)

1.8 Organization of thesis

This research work comprises five chapters with each chapter further divided into sections. Chapter one covers the background of the study, problem statement, research questions, conceptual framework, objectives of the study, justification of the study and organization of chapters. In the second chapter, relevant literature is reviewed. Chapter three covers the methodology used in the study and includes the study area, study design, study population, sample size, sampling technique, data sources, study variables, instruments for data collection, data collection procedure, pilot testing of instrument, pilot test report, data analysis and presentation of results, quality control, ethical considerations and limitations of the study. The result of the study is presented in chapter four. Chapter five covers the discussion while chapter six presents the conclusion and recommendations.



CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter focuses on works done by others that are considered relevant to this research. It also provides a background of epilepsy. Reviewing works of other researchers would help put this study's findings in perspective relative to existing knowledge; whether findings confirm or refute what is already known about the subject. The review includes the pathophysiology of epilepsy, causes and types as well as teachers' knowledge on epilepsy such as causes of epilepsy, sources of information about epilepsy, appropriate treatment for epilepsy among others. Relevant studies on teachers' attitude towards epilepsy, including whether they think PWE should receive regular formal education, whether PWE are normal and whether they should attend special schools among others would also be reviewed as would teachers' seizure management practices.

2.1 Background of epilepsy

According to Omran et al. (2011, as cited in Angula, 2016), the brain is composed of several million nerve cells which are electrically charged. These nerve cells communicate by exchanging electrical signals which essentially keeps the brain working. When these exchanges are interrupted for some reason, nerve cells function improperly resulting in seizures (Omran et al., 2011, as cited in Angula, 2016).

Typically, a person may be diagnosed with epilepsy after experiencing several attacks without an underlying cause (Titus et al., 2008, as cited in Fanjoy, 2015).

Even though epilepsy is more common in the developing world, there is no finding that links the condition to specific racial groups (Gzrshvili et al., 2013, as cited in Fanjoy, 2015). However,



factors such as poverty and its associated problems including low access to healthcare, low educational levels, living in poor neighborhoods among others have been found to contribute to the condition (Dekker, 2002).

2.2 Classification of epileptic seizure

The World Health Organization (2016) classifies epilepsy into two broad categories namely partial and generalized epilepsy.

In partial seizure, the interruption in electrical signal is confined to a particular area of the brain which would then determine the symptoms exhibited by the victim. If unchecked, this may extend to the entire brain and result in generalized seizures (Dekker, 2002).

Partial seizure is divided into simple and complex seizure characterized by retention of consciousness and loss of consciousness respectively (Dekker, 2002).

According to Epilepsy Foundation (2009), generalized seizure covers both sides of the brain unlike the partial type (Dekker, 2002) and may be categorized into the following:

Absence seizure (petit mal); where seizure typically takes up to 15 seconds occurring several times daily. Sufferers usually stare blankly, pick at clothes or experience muscle twitching and are mostly children between 4-12 years (Epilepsy Foundation, 2009).

Myoclonic seizure produces sudden shock-like muscle contractions that are sudden and short with the limbs being affected (Dekker, 2002).

Tonic seizure comes with loss of consciousness and sudden sustained muscle contractions. The limbs are consequently affected and assume unusual positions while the eyes and head turn in a particular direction (Dekker, 2002).



Clonic seizure refers to generalized seizure short of the tonic phase and is characterized by flexing and extending the limbs (Dekker, 2002).

Atonic seizure is characterized by sudden loss in muscle tone which causes victims to fall down because the muscles in the limbs lose their strength. Consciousness is lost momentarily but is regained when the seizure is over (Dekker, 2002).

Tonic clonic seizure (grand mal): In the tonic phase the victim's arms and legs become stiff and then the clonic phase of limb jerking follows (Epilepsy Foundation, 2009).

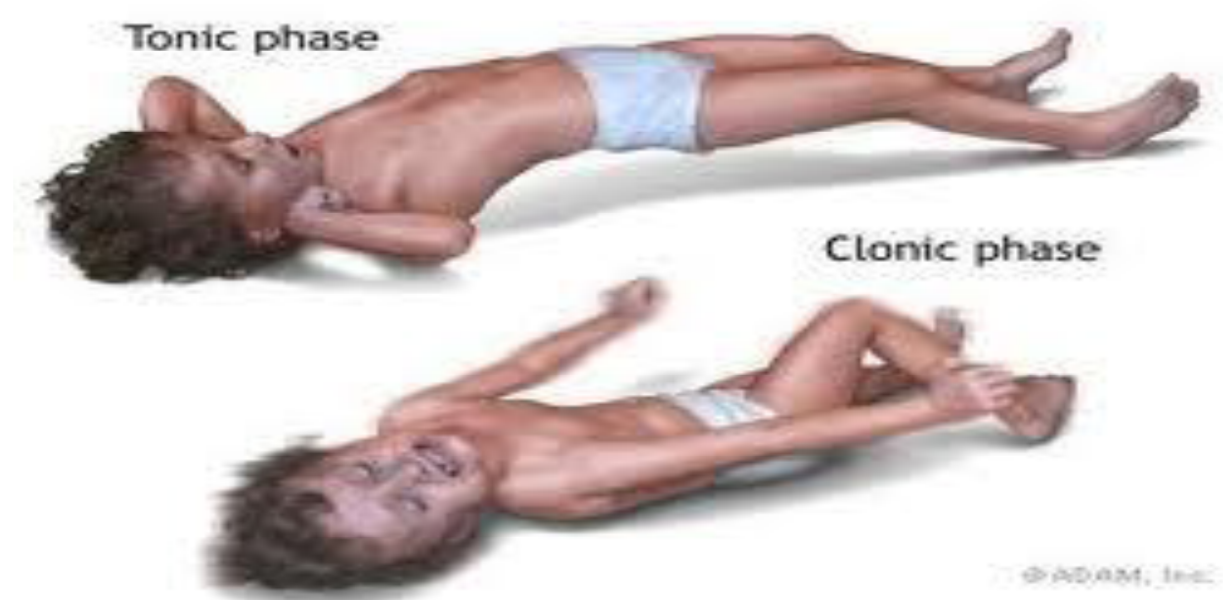


Figure 2.1: Generalized Seizure (Hicks, 2014)

2.3 Causes of epilepsy

According to WHO (2016), idiopathic epilepsy has no known cause and is the most common type of epilepsy affecting 6 out of 10 persons with the condition. The other type is called secondary or symptomatic epilepsy has identifiable causes and may include the following:



- Brain damage from prenatal or perinatal injuries (e.g. loss of oxygen, trauma during birth),
- Congenital abnormalities or genetic conditions with associated brain malformations,
- Severe head injury,
- A stroke that restricts the amount of oxygen to the brain,
- Infections of the brain (e.g. encephalitis, meningitis),
- Certain genetic syndromes,

2.4 Empirical review of Knowledge on Epilepsy

2.4.1 Epilepsy awareness

There is so much myth about epilepsy globally, especially in developing countries. Awareness of the condition is very high as reported by a study in Namibia where majority of respondents reported knowing about the condition (Angula, 2016). This finding is similar to other studies in Pakistan (Bhesania et al., 2014) and Ethiopia (Gebrewold et al., 2016).

In spite of the high levels of awareness, epilepsy still remains a condition that is widely misunderstood. Considering that awareness about the condition is high worldwide, it would be likely that awareness among teachers in TNM is also high.

2.4.2 Discrimination against PWE

Although a lot of research has been conducted in both developed and developing countries on epilepsy with respondents showing enormous awareness about the condition, there still remains a lot of misconceptions about the condition (Shafiq et al., 2008, as cited in Ullah and Nabi (2015) which may explain the notoriously high stigma and discriminatory behaviour against PWE (Ullah and Nabi (2015).



One researcher opined that PWE are burdened directly by the demands of the condition and require permanent adjustment in lifestyle while having to engineer ways to handle the social impediments that limit their progress (Bozkaya et al., 2010, as cited in Lim, Lim and Tan, 2013). Children with epilepsy may therefore have to go through years of isolation, stigma, and physical abuse. The direct and indirect effects of epilepsy, therefore, present enormous challenges for children with epilepsy.

2.4.3 Precipitating factors for seizure attacks

Even though misconceptions about epilepsy abound, there are some teachers who know more than just the existence of the condition. Karimi and Heidari (2015) reported that, unlike some teachers who are only aware of epilepsy, there are some who know as much as the factors that may trigger seizure attacks. This is a very important finding; the teachers may be in a position to advise students with the condition on what to do to prevent attacks. This may contribute to reducing the number of seizure attacks and disruptions in classroom work.

Additionally, there are studies that have also found that some teachers not only know the trigger factors for seizure, they are also aware of the various types of epilepsy and their defining characteristics (Al Hashemi et al., 2016).

The finding is an important one because it has implications for detecting other forms of epilepsy that may be so subtle as to escape the attention of teachers but nevertheless have negative effect on the academic performance of PWE.

2.4.4 Sources of information on epilepsy

People obtain information on epilepsy from various sources such as educational materials, through health education, from parents and friends among others.



In previous studies conducted among teachers on epilepsy awareness, a variety of sources were provided by the respondents. Some of the respondents mentioned the media, friends, and family members as sources of information (Bhesania et al., 2014). Others also reported knowing of the condition from PWE and the internet (Fanjoy, 2015). It is very important to point out that credible sources of information on epilepsy may likely influence peoples' perception and subsequent behaviour towards PWE. Information obtained from sources such as friends, relatives and priests may likely be tainted with personal biases which may further deepen peoples' misconceptions and prejudices resulting in increased stigma and discrimination against PWE.

2.4.5 Knowing someone with epilepsy

People with epilepsy are usually not too hard to find in communities in developing countries. Their state of neglect in communities and physical scars mark them out. The discrimination and stigma against PWE and their families make it very easy for PWE to be identified in communities in developing countries such as Ghana. Studies in some developing countries in Africa have revealed more than half of the respondents knowing someone with epilepsy (Gebrewold et al., 2016; Angula, 2016). A slightly lower figure was reported by Bhesania et al. (2014) in Pakistan. The respondents who know someone with epilepsy may likely have known about the sufferers from family members or others in the communities. It is also possible that they go to know only during a seizure attack.

2.4.6 Teaching someone with epilepsy

It is important that teachers are informed of the health conditions of their students in order to prepare in advance for any medical emergencies. For students with epilepsy, such knowledge is crucial to preventing injuries and even death. For teachers, it helps to adopt teaching methods that take PWE's academic challenges into consideration.



In many developing countries, including Ghana, it is not uncommon for teachers in public schools to be unaware of the health conditions of their students. Consequently, the teachers are often ill-prepared to help in emergency situations. The scenario above has been firmed up by a study that revealed that many of the teachers in some schools did not know whether there was someone with epilepsy in their class or not (Karimi and Heidari, 2015). It is further buttressed by a finding made in Ethiopia by Gebrewold et al (2016) with only few teachers being aware that there were people with epilepsy in their class. While it is possible that some of the teachers were told by parents or guardians, the possibility that some of the teachers also got to know only when a student had a seizure in school cannot be totally ruled out.

2.4.7 Witnessing a seizure

There are teachers who are aware of epilepsy but have yet to see someone experience a seizure attack, especially the generalized type. This type of seizure could be very frightening for first time witnesses.

Many of the studies conducted on knowledge on epilepsy have produced mixed findings. Angula (2016) found that almost half of the respondents reported having ever witnessed a seizure which is similar to Karimi and Heidari's (2015) finding in Iran. In Germany, very few respondents reported ever witnessing a seizure (Dumeier et al., 2015). Germany, a developed country with majority of residents having science orientation would likely see PWE reporting to medical facilities for treatment and complying with medical instructions, however, PWE in Ghana may be more inclined towards religious treatment. It is worth mentioning that most people only think of epilepsy in terms of generalized seizures, leaving the partial types largely unreported.



2.5 Manifestation of epilepsy

On the manifestation of epilepsy, a study conducted in Ethiopia reported that an overwhelming majority of respondents mentioned convulsion as the commonest manifestation of the condition. Similar number of respondents knew that people lose consciousness during seizures while almost one-third mentioned that strange actions may be displayed after an attack (Gebrewold et al., 2016). In the same study almost half of the teachers reported that brief periods of memory lapses may be witnessed following a seizure attack. Blank staring during attacks was also reported by some of the teachers (Gebrewold et al., 2016).

According to Owolabi et al. (2014), teachers generally have poor knowledge regarding the various manifestations of epilepsy, explaining that many of the teachers had mentioned that epilepsy is always associated with seizure. Another research finding revealed that the respondents were unaware of the types of epilepsy assuming that only falls, jerks, and lip foaming constituted the main manifestation of epilepsy (Mustapha et al., 2013). The case was no different from other findings in the Middle East (Al-Hashemi et al., 2016).

The reported poor knowledge on epilepsy and its manifestation among teachers is not limited to a single continent. The general impression is that seizure is the defining feature of epilepsy; therefore, any condition that closely mimics epilepsy but is short of a seizure is more likely to be seen differently and not as epilepsy. The findings above have great implications for detecting other forms of epilepsy that are so subtle that they may be mistaken for something else (Akpan et al., 2013).



2.6 Perception on causes of epilepsy

The perceived causes of epilepsy to a large extent determine how people react to seizures attacks. Perception may therefore be a key factor that may determine the success of efforts to support people with epilepsy and changing attitudes towards sufferers.

Majority of studies carried out in developing countries, especially in Africa, have almost always reported some people attributing epilepsy to supernatural factors. As surprising as this finding may be, perhaps more surprising is a finding made in a study conducted among health workers of various categories in Laos Republic where the majority of the respondents did not know the causes of epilepsy (Harimanana et al., 2013). The finding is similar to findings made in Iran (Asadi-Pooya & Torabi, 2012). In Namibia, a lesser but significant number also failed to mention any of the causes of epilepsy (Angula, 2016) while the case was worse in a study by Babikar and Abbas (2011).

However, other studies made encouraging findings where some of the respondents were able to mention genetic factors, head injury and brain infections as some of the causes of epilepsy (Al-Hashemi et al., 2016). Respondents in other studies also mentioned brain tumors, birth defects and strokes as causes of epilepsy (Angula, 2016). Sadly, some respondents attributed epilepsy to possession by supernatural forces (Al-Hashemi et al., 2016). Many studies conducted in the developing world have recorded significant number of respondents holding similar views. In Pakistan (Bhesania et al., 2014) and Sudan (Babikar and Abbas, 2011), such findings are well documented. Some researchers posit that, phenomenon that is not well understood is usually given religious interpretation, perhaps explaining why some teachers think epilepsy has supernatural causes. This way of interpreting phenomenon is very common in developing countries where religion underpins almost every aspect of daily life (Lim et al., 2013). Contrary



to the situation in developing countries, people in developed countries believe in systematic analysis of phenomenon using laid down rules to arrive at empirical conclusions (Lim et al., 2013).

The position of Lim, Lim and Tan has been supported by other researchers (Tiamakao et al., 2013) who assert that people's geographical location affect their perception of whether epilepsy is spiritually caused or not. According to Tiamakao et al. (2013), people living in rural areas tend to attribute epilepsy more to supernatural forces more than folks in urban areas. In rural areas, life is usually relaxed and relationships are more informal; people know each other relatively well. Additionally, unlike urban folks who enjoy a wide variety of worldviews, people in rural areas tend to share a single and common worldview mostly rooted in religion. Hence, it is less surprising that a lot more people in rural areas think of epilepsy as a supernatural phenomenon than their urban counterparts.

2.7 Communicability of epilepsy

Studies have found mixed results regarding whether epilepsy is contagious or not. In Zimbabwe, Goronga et al. (2013) revealed that majority of the respondents thought that one cannot suffer from epilepsy by merely associating closely with someone with epilepsy. The finding may be really important for the self-esteem of PWE. Teachers in such schools are likely to encourage participation of PWE in all school activities and not restrict them from playing with peers who do not have epilepsy.

However, a finding made in the Laos Republic found a sizeable number of the respondents fearing that they might suffer from epilepsy by associating with people with epilepsy (Harimanana et al., 2013). Similarly, Owolabi et al. (2014) reported that some teachers objected



to keeping children without epilepsy with those with epilepsy in the same classroom for fear of infecting those without epilepsy. There is the likelihood that PWE in such schools may be restricted from participating in activities that involve contact with their colleagues, a situation that may negatively affect their self-esteem. Having such mindset, some teachers may adopt discriminatory measures against PWE. Others may even encourage the students to intimidate PWE, and this may have a profound effect on a person with epilepsy staying in school or dropping out.

2.8 Treatability and appropriate treatment for epilepsy

In spite of the many misconceptions about epilepsy, coupled with the fact that the condition is generally viewed in negative light, opinions about its treatability is really encouraging. Many people believe that epilepsy is treatable as reported in an East African study (Gebrewold et al., 2016). Other studies on epilepsy have produced similar results, including Bhesania et al. (2014) and Angula (2016).

Peoples' opinions on various aspects of epilepsy are shaped in many ways by what they believe, as well as their environment. The bases for such beliefs differ from one person to another, and largely determine the kind of treatment option people will seek. For instance, even though modern medicine for treating epilepsy abounds in Nigeria, some respondents believed traditional medicine is best for treating epilepsy (Akpan et al., 2013). In the same country, a similar finding was made by Owolabi et al. (2014) who explained that the native culture of the of the respondents which includes strong beliefs in spirits coupled with long held misconceptions about epilepsy underlie the choice of only traditional medicine. They further posit that sometimes a mix between traditional and modern medicine is preferred (Owolabi et al. , 2014) In Kuwait,



PWE have less reason to be optimistic about the future since Quran recitation only is seen by many to be best treatment approach for the condition (Al-Hashemi et al., 2016).

Kuwait is an Islamic nation, and that may explain why many respondents recommended reciting Quran as a form of treatment for epilepsy. Previous studies reveal persisting beliefs that people hold about epilepsy and a worrying vacuum that must be filled. The situation where teachers recommend prayer centers or herbalists for parents and their wards suffering from epilepsy is not a thing of the past. Indeed, it is happening in the twenty first century in many developing countries and is indicative of the depths misconception about epilepsy and how little impact campaigns on epilepsy have achieved. The above said, the situation is not all gloomy because in the face of poor knowledge among teachers, there are some who are knowledgeable enough to know that the best form of treatment for epilepsy is modern medicine (Bhesania et al., 2014; Angula, 2016). Appropriate knowledge about the treatability of the condition may be useful in recommending where parents should send their wards with epilepsy for treatment. Teachers who are positive about the treatability of epilepsy may likely take interest in the treatment of school children with the condition. Additionally, they may be more likely to vary teaching methods to accommodate the shortcomings of PWE.

2.9 Attitude towards epilepsy

2.9.1 The role of teachers in influencing PWE and others

Angula (2016) posits that the teacher is in a unique position of influence. They influence students and members of the community in many ways because of the nature of their job and the perception that they are a group of knowledgeable people (Angula, 2016). Indeed, anecdotes of teachers serving as secretaries to chiefs and helping members of communities in writing letters for formal and informal purposes abound. The position teachers occupy in communities is





prominent globally, so when more than half of the respondents in a Zimbabwean study revealed that PWE belong in special school, it was, indeed, surprising (Goronga et al., 2013). Similar findings were made in the Middle East (Al-Hashemi et al., 2016). These teachers may likely think that PWE are mentally subnormal. There are other teachers, however, who think PWE are intellectually capable yet would prefer not to have them in their class (Alqahtani, 2015), a situation which Banon et al. (1992) attribute to poor knowledge on first aid seizure management (as cited in Alqahtani, 2015).

According to Bandura et al. (1961), children, to a large extent, learn by imitating the actions of people they admire. Teachers serve as role models for a lot of school children and there are many things that pupils learn from their teachers, consciously and unconsciously. The import of Bandura et al's (1961) position is that students may learn from teachers when they see the latter properly managing a seizure (as cited in Artino (2007).

Some researchers hold the view that teachers, in many instances, are unaware of the leading role they could play in helping PWE adjust to the social and academic challenges they face, and so in many cases recommend that PWE be sent to special schools (Ullah and Nabi, 2015). Fernandes et al. (2007) hold a contrary view, stressing that even after being educated on the condition and the role to play, some teachers were adamant about changing their behaviour towards PWE (as cited in Angula 2016).

The above finding is instructive since it raises fundamental questions about focusing solely on epilepsy related education as a means to change peoples' attitudes toward PWE. Epilepsy education appears to be the predominant recommendation given by many respondents in many studies on epilepsy. The above finding was made in Brazil, a highly religious country with

majority of citizens being Catholics. There is the possibility that the position taken by the teachers on PWE is religiously influenced. It is therefore necessary to support epilepsy education with religious scripture if attitudes are to change.

2.9.2 Effect of educational level on attitude towards epilepsy

Some researchers posit that epilepsy related behaviour is in many communities influenced by the level of education of the people, implying that educated members of a community tend to treat PWE favourably than their less educated counterparts (Lim et al., 2013). This position is supported by another study's finding (Bishop and Boag, 2006, as cited in Karimi and Heidari, 2015). One possible explanation is that people with higher education are more likely to appreciate the superiority of the scientific method of explaining phenomena. Science relies on established rules and presents cogent and consistent arguments in explaining a given phenomenon. This is not the case in non-scientific fields where explanation of phenomena varies according to the personal beliefs of the teacher. The latter is mostly associated with lower levels of education.

In many parts of Ghana, especially in rural areas where education level is usually low, PWE are chained. This may be based on the belief that doing so is a way of punishing the possessing spirit presumed to be causing the disorder. Treatment for epilepsy is, therefore, mostly administered by traditional or faith healers.

In urban areas, however, many of the residents are relatively more educated and, mostly, epilepsy is seen as a condition that has physical causes, consequently, PWE are sent to hospitals. They are also likely to be treated more humanely in urban areas than rural areas.



2.9.3 Beliefs of teachers on normality of PWE

Studies conducted around the world have reported a number of findings regarding normality of PWE. A study conducted in Canada reported that majority of teachers believed that PWE are normal and are not different from their peers without the condition (Fanjoy, 2015). This may be because respondents in the study are in a developed country where information on epilepsy may be easier to access, coupled with the strong faith among citizens of that country in scientific explanations. Bhesania et al. (2014) also reported that, like their colleagues without epilepsy, PWE have all it takes to achieve whatever they imagine and that determination is all that matters. However, other teachers believe that PWE can only do as well as their counterparts without epilepsy when they are on medications (Al-Hashemi et al., 2016).

PWE need a lot of support because of the misconceptions about their condition. Therefore, it is encouraging to know that some teachers believe in the abilities of PWE and think that PWE are as capable as their counterparts without epilepsy. The finding above would likely set the stage for integrating students with different health conditions in one system to learn and pursue their dreams. Children spend enormous amount of time with their peers in and out of school playing and learning from each other in the process. Such interactions would help them explore the world and learn new ways of dealing with situations.

Jean Piaget (1936) posits that children are not mini adults but are unique beings having a world of their own and learning from their environment (as cited in McLeod, 2018). It is therefore important that teachers create the right environment for all school children to freely explore and discover themselves.



2.9.4 Willingness to allow children play with PWE

There is a lot of negative attitude towards PWE. There are some parents who may be averse to having PWE around their wards. For instance, some respondents in a study were opposed to having PWE in the company of their wards and were adamant they would not allow PWE play with their wards (Karimi and Heidari, 2015). Similar findings have been reported in East Africa (Gebrewold et al., 2015). Seizure attacks may be frightening to first time witnesses, even among adults. There is the possibility that some of the respondents feared the effect seizure might have on their wards, influencing their decision not to allow them play with PWE. There are others also who share in the belief that epilepsy is contagious and therefore would not want their wards to play with PWE. The effect of disallowing play between PWE and their peers is deep and enduring and usually leaves emotional marks on the minds of PWE.

2.9.5 Willingness to allow a relative to marry PWE

Marriage to PWE appears to be unpopular with some teachers, research shows. According to Gebrewold et al. (2016), a sizeable number of respondents reported that they would not allow their children to marry someone with epilepsy. In a Nigerian study, some teachers expressed a similar position; going further to state that diagnosis of epilepsy in a person should be enough grounds to dissolve marital union (Mustapha et al., 2013). The position taken by some of the teachers may be informed by the misconceptions they have about the condition. Teachers who believe that epilepsy is caused by spiritual forces may likely not want their children to marry PWE. Another possible reason for the refusal is that many people, especially those of marriageable age such as the respondents in the study, may be aware that epilepsy is an inheritable disease. People will not want to risk having relatives with epilepsy.



Other studies have made contrasting findings in respect of marrying PWE or allowing relatives to marry PWE. Gebrewold et al. (2016) found that some teachers were willing to marry or allow relatives to marry PWE. Similarly, in Thailand, some respondents reported their willingness to marry, regardless of the epilepsy status of a potential partner (Tiamakao et al., 2013). Teachers who are willing to marry or allow their wards to marry someone with epilepsy are likely to have a positive attitude towards students with epilepsy and are likely to be willing to help them during a seizure.

2.9.6 Willingness to employ/assign tasks to PWE

Discrimination against PWE extends into every area of life. Employing PWE is quite an issue in many countries and is one area that has enormous effect on the lives of PWE. Aragon et al. (2009) found that some employers were willing to employ any one able and willing to work, including PWE. Another study also made findings similar to the one expressed above (Al-Hashemi et al., 2016).

According to Goronga et al. (2013), some teachers reported that there is no reason to assign different activities to people with and without epilepsy. They believe that both sets of students have similar physical and intellectual abilities, and so it may be unwise to lower the standard for PWE. The above finding is very encouraging, in the sense that the teachers have an open mind about PWE and do not think PWE are any different from their colleagues without epilepsy. The positive attitudes expressed above may encourage PWE to see themselves as capable beings and not feel inferior to their colleagues whether in school, at the workplace or on the playground.

In contrast, other studies have found that some respondents think PWE are weak and therefore should only be assigned simple tasks (Goronga et al., 2013). Teachers who expressed this view



are more likely to assign different tasks to students depending on their epilepsy status. They are also likely to give less stimulating tasks to PWE and, perhaps, even prevent them from participating in physical education because of their prejudice.

2.10 Practices during seizures

Research findings made with regards to seizure management practices is not very encouraging. Seizure management among teachers is generally poor in both developed and developing countries, per available literature. A study conducted in Germany reported that less than a quarter of respondents in the study reported ever being involved in seizure management (Dumeier et al., 2015). In an another study, even though some of the respondents claimed to be knowledgeable about seizure management, nearly all of them mentioned at least one practice that would be harmful to a seizing person (Karimi and Heidari, 2015).

The legal regime in some jurisdictions has been reported to have an effect on peoples' willingness to intervene during a seizure (Dumeier et al., 2015). Studies in Germany have revealed that almost half of the study's respondents expressed reluctance to help someone during a seizure, fearing the legal implications of improperly managing a seizure (Dumeier et al., 2015). Others also feared complicating the situation of seizure victim while intervening (Dumeier et al., 2015).

The poor seizure management practices reported around the world could be the result of inadequate epilepsy and seizure management training for people (Zanni et al., 2012). For instance, one study in Brazil made a startling revelation that almost all the teachers in a study conducted in a special school reported never having been taken through seizure management training (Zanni et al., 2012) while some teachers in Sudan also reported their unwillingness to



intervene in the event of a seizure attack (Babikar and Abbas, 2011). This finding lends support to the widely held opinion that PWE are neglected. Many people believe PWE belong in special schools yet teachers in special schools lack the necessary skills to manage seizure. It is urgent to educate teachers on epilepsy so that they are able to identify students with the condition and make appropriate recommendations to their guardians to avoid complications. It is equally important to train teachers on seizure management to prevent injuries and save the lives of people.

Practices of teachers during seizure vary across countries, available research findings on epilepsy shows. Gebrewold et al. (2016) found that the respondents thought inserting objects into the mouth and pouring water on the face are appropriate interventions. Babikar and Abbas (2011) added pulling out the tongue as another seizure management practice. Similar improper interventions have been reported in Nigeria (Mustapha et al., 2013).

The practices mentioned above may be so dangerous that, perhaps, leaving a seizing person to their fate may even be a better option. These interventions appear to be very common in developing countries where indigenous culture appears to influence almost everything.

2.11 Effects of epilepsy

2.11.1 Effects on PWE

According to Hills (2007), the psychological challenges that come with being diagnosed with epilepsy are overwhelming. Further, when people are diagnosed with epilepsy first time, they go through lots of contrasting emotions which if improperly managed may have dire consequences (Hills, 2007). However, if they are able to handle it well, they eventually accept their present status and adjust their lifestyle accordingly (Buchanan, 2002, as cited in Hill, 2007).



The difficulty of living with epilepsy makes one researcher believe that epilepsy as a “hidden disability” since it is for the most part not being experienced; presenting no apparent signs and symptoms (Falvo, 2005, as cited in Hills, 2007). As a consequence, individuals with the condition often deny its existence, resulting in failure to seek treatment or failure to adhere to medical instructions (Falvo, 2005, as cited in Hills, 2007)

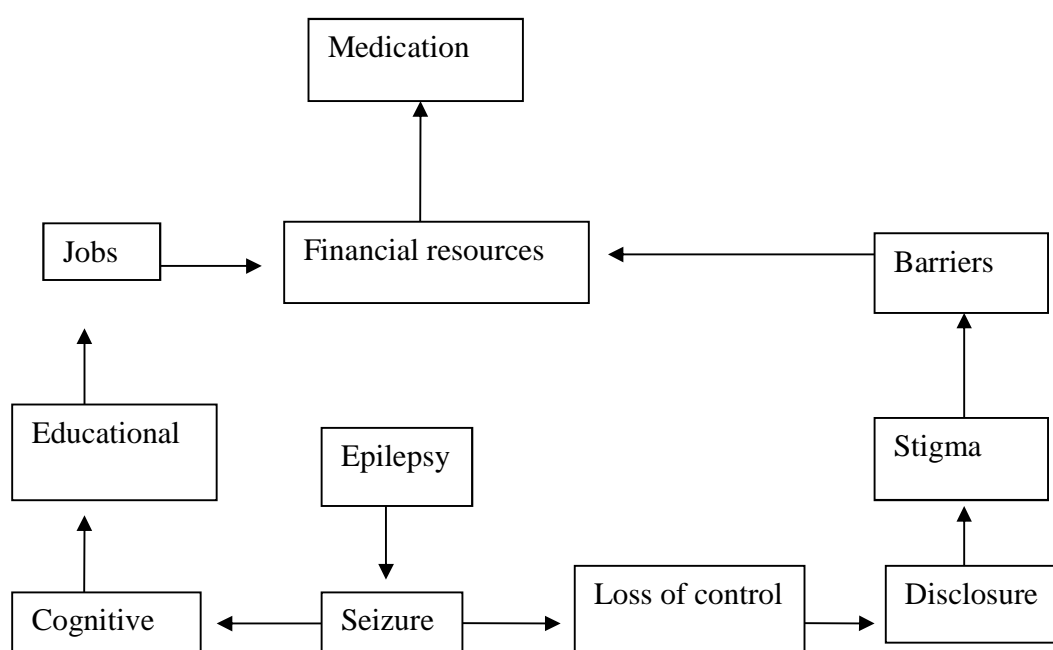


Figure 2.2: Effects of Epilepsy, adapted from Kerr et al (2011)

2.11.2 Effects on the family

According to Devinsky (2001), when a family member is initially diagnosed with epilepsy, it is very unsettling for the family and may even lead to a breakdown in the normally warm relationship between family members (as cited in Hills, 2007). There is a gap created in how

siblings and friends relate to the person diagnosed with the condition and this may take time to change (Devinsky, 2001, as cited in Hills, 2007). The development may require objectivity and serious efforts to find ways to help the person since appropriate treatment may bring some sort of relief to the sufferer and the family.

2.11.3 Effects on education

Epilepsy has been found to be associated with learning disabilities and memory problems, which are direct effects of other conditions that are associated with epilepsy, including brain damage (Devinsky, 2001, as cited in Hills, 2007). Research has shown that repeated seizure attacks, especially in absence seizure, are associated with poor attention, thereby making schooling and academic work difficult (Devinsky, 2001, as cited in Hills, 2007). Further argument is raised on the sleeping effect that anti-epileptic drugs have on PWE, causing drowsiness in PWE and making them unable to follow classroom lessons (Devinsky, 2001, as cited in Hills, 2007).

Other studies agree with the above findings, and even proceed further to broadly categorize these learning disabilities into those induced by uncontrolled seizure attacks, anti-epileptic drugs, psycho-social factors and human development challenges (EFWP, 2017).

According to EFWP (2017), difficulties in learning among PWE are consequences of the interaction among different factors such as the cause, onset and frequency of attacks. Other factors include the part of the brain affected as well as the sort of seizure experienced.

Studies have found that difficulty in learning among children with epilepsy contributes to the negative attitudes of some parents toward educating PWE (GlobalGiving, 2017). One study found that while some parents get stuck in the denial phase of coping with diagnosis of epilepsy in their ward, others have low educational expectations of PWE, hence for these parents,



investing in the education of their wards with epilepsy is not worth the effort (EFWP, 2017). Additionally, there are some PWE who exhibit varying levels of anti-social behaviour, further fueling the resolve of some teachers with negative attitudes toward epilepsy to disregard their academic challenges (EFWP, 2017).

Some researchers have explained that PWE suffer from slowed thinking which makes breaking down problems tiring and sometimes impossible, hence, attending school becomes quite a burden for these children (Moffat et al., 2009, as cited in Kerr, 2011).

2.11.4 Effects on the economic lives of PWE

Epilepsy comes with social, psychological and financial costs. Allers et al. (2015) puts the annual cost of epilepsy for individuals at several thousand United States Dollars. It is important to note that the severity of each individual's condition determines the proportion of their income spent treating the condition (Beghi et al., 2004; Tetto et al., 2002, as cited in Allers et al., 2015).

The WHO has observed that poverty is cyclical in families having PWE, especially in developing countries (Aikins et al., 2010); therefore, health financing in the form of a national health insurance policy is one sure way of supporting PWE financially. National health insurance policies are interventions that are meant to support the poor in society to gain access to quality healthcare; however, even though anti-epileptic drugs are paid for by Health Insurance, many PWE are unable to subscribe to the policy since there is very little to expend on food, leaving nothing left for healthcare related expenditure (Doumbia- Ouattara et al., 2010, as cited in Allers et al., 2015).



When PWE lack access to anti-epileptic medications, they may experience repeated attacks and suffer complications such as physical injuries and, possibly, brain damage resulting in psychotic behaviour and paralysis.

Indirect costs of epilepsy ranges from unemployment, expulsion from work, reduced productivity and associated reduced income, findings reveal (Allers et al., 2015). This finding agrees with reports in other studies (Raty et al., 2007; Rhodes et al., 2008, as cited in Kerr et al., 2011). Further evidence in support of the findings above is provided by the University of Florida who also found disparate rates of hiring between people with and without epilepsy (University of Florida, 2006).

2.11.5 Effects on quality of life

Quality of life may be defined as an individual's understanding of social, psychological and spiritual experiences and how they positively experience these variables (Hills, 2007).

Epilepsy affects peoples' quality of life in several ways. Psychologically, PWE are more likely to suffer deterioration in cognitive abilities and may therefore exhibit poor understanding, poor memory, poor problem solving ability, and difficulty using words (Elliot et al., 2005; Velissaris, et al., 2009, as cited in Kerr et al., 2011).

An observation made by one researcher revealed that PWE are prone to bouts of anger and frustration because of the constraining effect of epilepsy on industry (Moffat et al., 2009, as cited in Kerr et al., 2011). The researcher posits that such frustration and anger may with time result in depression (Moffat et al., 2009, as cited in Kerr et al., 2011).

According to Velissaris et al. (2007), the constraining effect of epilepsy on victims induces an altered state of control in them, resulting in apathy (as cited in Kerr, 2011). Many young people





with epilepsy would have wanted to be out at social events with their colleagues enjoying the moment and having fun. Unfortunately, this cannot be done freely with fears of an attack in public lingering, knowing that the spectacle of an attack would effectively condemn PWE to solitary lives (Hightower et al., 2002; Elliot et al., 2005, as cited in Kerr et al., 2011). On the basis of the above, living with epilepsy requires a lot of adjustments and compromises in social life. The bitterness resulting from these adjustments make some PWE reluctant in sharing their epilepsy status, even though the Epilepsy Society (2014) recommend disclosing one's status to others, especially close associates. It is further recommended that these associates be taught seizure management so that they would be in a position to intervene appropriately when the need arises (Epilepsy Society, 2014). Disclosing one's status may sound like a risky idea but, practically, it may be one of surest ways of avoiding injuries and staying safe (Epilepsy Society, 2014).

The WHO (2016) found that the social impact of epilepsy on victims and their immediate families is many times higher than the condition itself. Plioplys (2003) supports this position and avers that PWE are more likely to be depressed or even attempt to commit suicide than the general population (as cited in Hung, 2009). Additionally, parents of some PWE have been reported to be so worried about their wards' condition that some of them end up being diagnosed with depression (Hung et al., 2008, as cited in Hung, 2009).

Other areas of life negatively affected by epilepsy include courtship, marriage and, to an extent, even child bearing (Hung, 2009). On childbearing, some women with epilepsy have been found to be consternate about carrying a pregnancy, dreading the impact seizures may have on the fetus (Hung, 2009). Others also worry about being in lasting relationships since they may have to

disclose their epilepsy status to their potential partners; the potential of being jilted constantly lingering (Hung, 2009).



CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter describes the methods and procedures used in collecting data for the study. The chapter covers sub-headings such as the study area, research design, population of interest, sample size and sampling technique, data collection instrument, pilot-testing of instrument, pilot study report, procedures for data collection as well as data analysis.

3.1 Study area

The study was conducted in Tarkwa-Nsuaem Municipality; one of the seventeen (17) districts of the Western Region of Ghana. It is divided into six (6) area councils with the historic mining town of Tarkwa as the administrative capital. The municipality is situated in the central part of the region and shares common boundaries with Prestea-Huni Valley district to the north, Ahanta West district to the south, Nzema East district to the west and Mpohor-Wassa East district to the east. Politically, the municipality has one constituency covering a land area of 905.2 square Km. The municipality has a population of 90,477 with almost half of the population comprising immigrants (Ghana Statistical Service, 2014). The diverse ethnic composition of the population is the main reason why the area was chosen for the research.

Mining is a very important economic activity in the municipality, employing a significant percentage of the population and drawing people from all over the country and even abroad to the area. In view of the population size and its diversity, there are many basic schools; both public and private schools to cater for the educational needs of the residents.



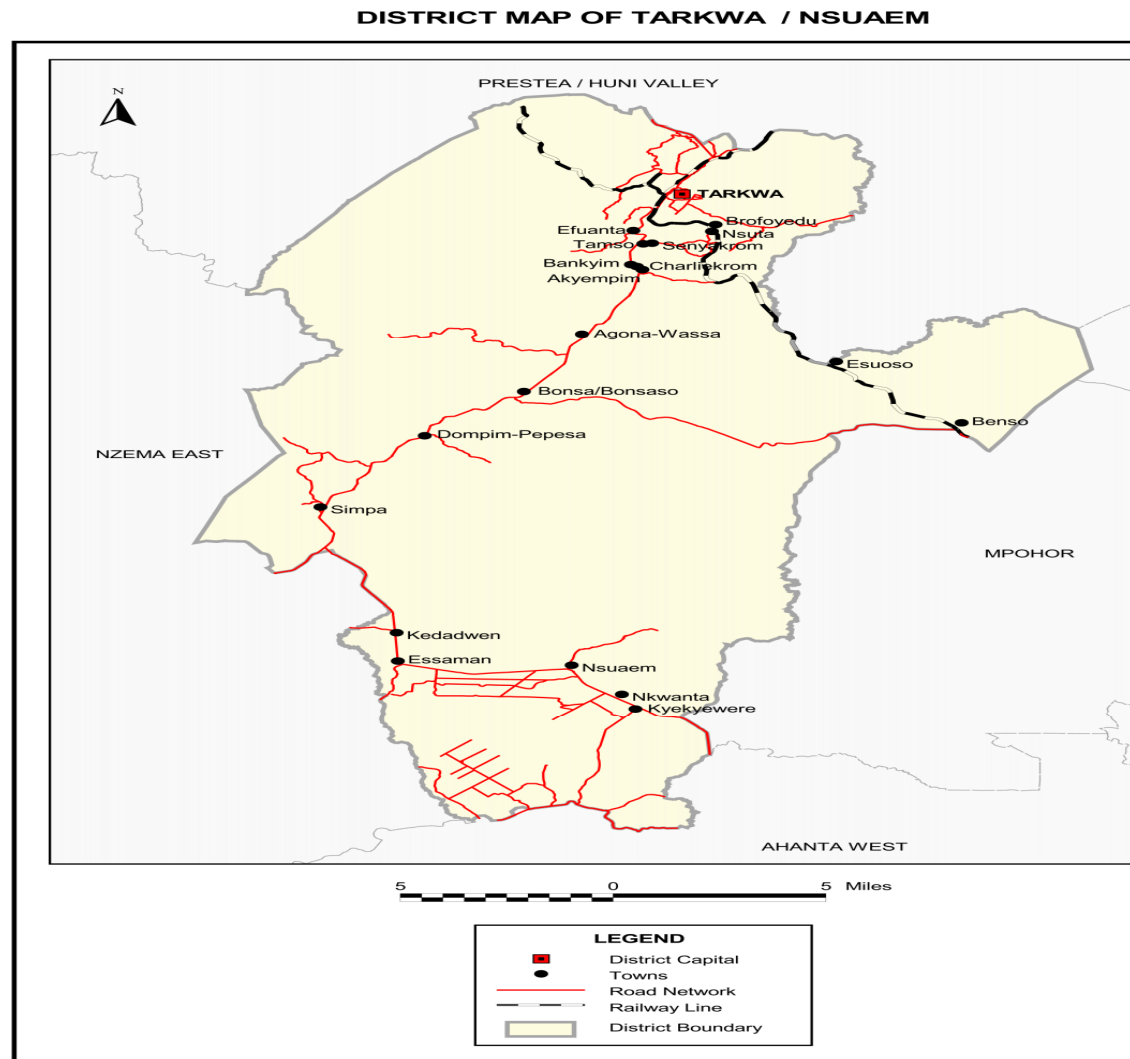


Figure 3.1: Map of Tarkwa-Nsuaem Municipality (Ghana Statistical Service, 2014)

3.2 Study design

“Research designs are the blueprints for producing knowledge” (Ogah, 2013 p111) and the use of one research design over another is determined by the research question. Cross sectional and descriptive research designs were used for this study.

Descriptive design is defined by Shuttleworth (2008) as a scientific method of closely observing and describing behaviour of interest in individuals of interest without seeking to change the behaviour in question. This study has a primary aim of reporting exactly what the study participants will report without any alteration, hence the use of this research design.

Cross sectional designs take still images of a phenomenon of interest among a given population at one point in time for necessary conclusions to be drawn (Shuttleworth, 2010). This research seeks to assess defined variables in a sample population at a particular point in time, hence the use of this research design. Similar studies in the past also used the same research design.

3.3 Study Population and Unit

The target population included all teachers who were permanently employed in public basic schools within TNM by the Ghana Education Service (GES)/Ministry of Education (MOH). Teachers who fell outside this category including those in second cycle and tertiary institutions were excluded from the research. Other categories of teachers excluded from this research included those teaching in private schools, Day Care Centers and extra classes. Individual teachers in public basic schools were therefore the study units.

3.4 Sample Size

The Cambridge dictionary (2017) defines a sample as a group of entities from a larger group that are studied with the intention to acquire information on the larger group. A “Sample size is the number of members of a population included in a study” (Ogah, 2013). According to data from the District Education Directorate of TNM as of May, 2017, the number of teachers employed by the Ghana Education Service in public basic schools in TNM is 1176; the sampling frame.



The formula used for calculating sample size for a known sampling frame is the Yamane (1967) formula:

$$N/1+N(\alpha)^2$$

Where N is the population size (1176) and

α represents the margin of error (0.05)

The result obtained by substituting the above values into the formula was 298. To make room for non-response, 5% of 298 was added to the computed sample size giving a total sample size of $298 + 14 = 312$. The sample size that was used for this study was therefore 312.

3.5 Sampling Technique

Sampling is the process of selecting a sample from a population for a given exercise (Ogah, 2013). This research work employed a multi-stage sampling process in selecting participants for the study.

There are 82 public basic schools falling under seven circuits in TNM municipality (GES, 2017). Cluster sampling technique was used to breakdown the municipality into seven circuits namely Dompim, Akyempim, Nsuta, Fiase, Nsuaem, Tarkwa and Benso circuits. This was to ensure that every area council had an equal chance of being represented in the study.

Simple random sampling technique was used to select five circuits out of the seven for the study. The sample size was then divided by five to obtain the number of teachers to be sampled from each circuit, giving sixty two teachers per circuit.

Convenience sampling technique was then used to select the various schools to be used for the study under each circuit. The same technique was also used in selecting the study participants.



The technique was used because the geographical location of some schools was such that it was highly inaccessible. Additionally, the varying number of members of staff in the various schools made selecting a pre-determined number of respondents from each school a challenge for the researcher. Another reason for choosing this technique is that there were schools that were incomplete; some only up to primary six while others comprised only Junior High Schools without primary schools. Below is a table of the selected circuits, the number of schools under each and the sample size drawn from the circuit.

Table 3.1: List of Circuits in TNM

Name of Circuit	Number of Schools	Sample Size
Nsuta	10	62
Tarkwa	10	62
Fiase	12	62
Dompim	11	62
Akyempim	13	62

Table 3.2a: Selected schools from Tarkwa Circuit

Name of school	Sample size
Tarkwa Methodist Primary	11
Tarkwa Methodist JHS	16
Tarkwa Islamic Basic School	16
Quayson Basic School	10
Tarkwa Catholic Boys Basic School	9
TOTAL	62

Table 3.2b Selected schools from Nsuta Circuit

Name of school	Sample size
Tamso Anglican Primary School	10
Tamso M/A Junior High School	5
Nsuta Dadwen Schools Complex	17
Nsuta Methodist Basic School	15
Nsuta Catholic Basic School	15
TOTAL	62



Table 3.2c Selected schools from Fiase Circuit

Name of school	Sample size
Tarkwa John Taylor M/A Basic School	14
Akoon St Peter's Anglican Primary School	6
Akoon St Peter's Anglican JHS	10
Akoon M/A Basic School	13
Tarkwa Goldfields School Complex	19
TOTAL	62

Table 3.2d Selected schools from Akyempim Circuit

Name of school	Sample size
Ahwetieso Catholic Basic School	17
Agona Methodist Primary School	13
Agona Methodist JHS	12
Akempim M/A Basic School	20
TOTAL	62

Table 3.2e Selected schools from Dompim Circuit

Name of School	Sample size
Bonsa M/A Basic School	5
Dompim SDA Primary School	5
Dompim SDA JHS	5
Nana Boadi II Basic School	10
Dompim Methodist Basic School	12
Dadwen Primary School	7
Simpa 'A' Primary School	4
Simpa 'B' JHS	7
Simpa 'B' Basic School	7
TOTAL	62



3.6 Study Variables

The variables in the study included age, gender, marital status, educational qualification, number of years of service, and religion which constitutes the independent variables. The rest include knowledge, attitudes and practices during seizure constituting the dependent variables.

3.7 Instruments for Data Collection

A self-administered questionnaire was used to collect data from respondents in this study. A questionnaire “is a data collection instrument consisting of a series of questions and other prompts for the purpose of gathering information from respondents” (Abawi, 2013). Questionnaires are relatively simple methods for obtaining data and saves time when the researcher has to collect data from a sample that is dispersed in a geographical area (Awaisu, 2013).

The questionnaire was adapted from Angola (2016) from a study conducted in Namibia. It consisted of open and close ended questions and had two parts; the first part comprised demographic data such as age, gender, religion, educational qualification, marital status and number of years of teaching. The second part comprised the three variables being assessed; knowledge, attitude and practices. Under the knowledge section, it covered among others epilepsy awareness, causes and appropriate epilepsy treatment. The attitude section covered among others whether or not teachers think PWE should attend regular or special schools, whether or not they are willing to teach a person with epilepsy and whether or not they are willing to allow PWE to play with colleagues without epilepsy. The practice aspect included the teachers’ epilepsy management skills; their response towards PWE during seizure.



3.8 Data Collection Procedure

The researcher visited numerous schools under each of the selected circuits starting from schools that were geographically easier to access. Distribution of the questionnaire was done in an orderly manner; the administration was completed in one circuit before the next. In summary, the administration lasted one month starting from 16th May and ending on 15th June, 2017. The teachers who agreed to participate in the study were given copies of the questionnaire and the date of collection, usually one week, communicated appropriately. The researcher returned to each school and collected the completed questionnaires on the agreed date.

3.9 Quality Control

The researcher collected two hundred and sixty questionnaires in all. The collected data was inspected and sorted. Improperly and incompletely filled questionnaires were withdrawn. After this procedure, two hundred and twenty-six questionnaires were deemed to be useful for analyses and so were numbered and coded into SPSS Version 20 to same effect.

3.10 Pilot Testing of Instrument

In surveys, a sample size of 20 is generally considered sufficient for a pilot study (Monette et al., 2002, as cited in CONqir, 2016). In view of the above, pre-testing of the data collection instrument was done by selecting 21 teachers from the Prestea-Huni Valley District in the Western Region. The teachers in this district were selected because of the similarities between them and those in TNM in respect of geographical location and educational qualification. Administration of questionnaire was done by the researcher after guiding participants on how to fill the questionnaire. Pre- testing of the data collection instrument was carried out from Thursday 16th March to 24th March, 2017.



The District comprises seven area/urban councils out of which the Aboso area council was randomly selected for the study. There are 12 public basic schools in the Aboso area council out of which three schools namely the Aboso Anglican Basic School, Bosomtwi Junior High School and the Aboso Catholic Basic School with staff strengths of seventeen, nine and eighteen respectively were randomly selected for the exercise.

Convenient sampling technique was then used to select eight teachers each from both the Aboso Anglican and Catholic Basic Schools and five from the Bosomtwi Junior High School. Permission was sought from Head teachers of the selected schools before the study was carried out.

After the pilot study, observations made about the questionnaire were noted and duly refined after which a copy was sent to the researcher's supervisor for perusal and approval which was granted.

3.11 Pilot Study Report

The pilot study proved to be a helpful activity to the researcher, helping to design a respondent-friendly questionnaire. For instance, some close-ended options provided by the researcher as responses to some items were opened up.

It was also found that some of the items in the questionnaire were not clear to the respondents in the pilot study and so changes had to be made for easy comprehension.

The pilot study also served as the basis to broaden the options provided for some items including the educational qualifications of the respondents.



3.12 Data Analysis

Data analysis is defined as “a process of inspecting, cleansing, transforming, and modeling data with the goal of discovering useful information, suggesting conclusions, and supporting decision-making” (Wikipedia, 2016). Data was analyzed and presented at two levels namely the descriptive and analytical levels. The descriptive presentation covered a description of what has been reported by respondents and involves frequencies and percentages; hence frequency tables and graphs were used in their presentation.

The analytical phase covered determining the association between the dependent and independent variables using chi square and P-value. Cross tabulation was also used and $P < 0.05$ was regarded as significant.

3.13 Ethical Considerations

Research ethics is defined as research standards deemed acceptable when conducting research involving humans and animals (Kearns, 2014). Several reasons give rise to research and one important reason is helping to better the human condition. However, as Kearns (2014) explains, that should not give researchers the license to abuse other humans or even animals.

On the basis of the above argument, the researcher took certain measures to ensure that the participants were not exposed to harm of any sort, hence a written consent form was made available to the respondents, explaining the purpose of the study and the freedom to either participate or decline participating in the study.

The researcher did not request for the names or any form of identity from the respondents in order to assure them that their identities would be confidential. The respondents were also



assured of the confidentiality of their responses and that their responses would not be revealed to any third party except the researcher's academic supervisor.

In view of the fact that teachers are employed by the Ministry of Education, a written request was made to the Ministry through the Municipal Education Directorate for permission to conduct this research after obtaining an introductory letter from the Public Health Department of the University for Development Studies which was duly granted.

3.14 Limitations of the study

The limitation of the study have been presented below

- The findings of the study may not be generalized to teachers in private schools.
- Some schools were not included in the study because of their remote location.
- The study's findings may not be generalized to teachers beyond the basic school level.



CHAPTER FOUR

RESULTS

4.0 Introduction

Data collected from the respondents are presented in this chapter and have been presented in two parts; descriptive and analytical. The descriptive part covers the demographic information of the respondents, responses to items on knowledge, attitude and seizure management practices.

The analytical part comprises the relationships between the demographic information and knowledge on epilepsy, attitudes toward epilepsy and seizure management practices, as well as the relationship between knowledge on epilepsy, attitudes toward epilepsy and seizure management practices.

4.1 Demographic Information

Out of the total number of questionnaires administered (312), 226 were satisfactorily filled and returned giving a response rate of 72.4%. Table 4.1 below presents the demographic data of the respondents.

The respondents were broadly categorized into young adults (21-40 years) constituting 79.2% and middle age adults (41-59 years) constituting 20.8%. However, the breakdown showed that respondents aged 21-25 were thirteen (5.7%), 26-30 were forty-four (19.4%), 31-35 were forty-two (18.5%), 36-40 were thirty-one (13.7%) and 41-45 were twelve (5.3%). The rest include 46-50 numbering ten (4.4%), 51-55 numbering five (2.2%) and 56-60 numbering seven (3%). Some of the respondents numbering sixty-two (27.8%) failed to provide their ages.



Table 4.1 Demographic data of the respondents

Socio-demographic variable	Category	n	Percentage
Age	Young adults	130	79.2
	Middle aged adults	34	20.8
Gender	Male	93	58.8
	Female	133	41.2
Marital Status	Married	149	66
	Single	77	34
Educational Qualification	Up to Diploma	71	31.4
	Bachelor's Degree	140	62
	Postgraduate Degree	15	6.6
Religion	Christianity	217	96
	Islam	9	4

The gender of the respondents was such that female participants were more than their male counterparts. There were 226 responses to the item on gender out of which 133 (59%) were females while 93 (41%) were males.

There were 226 teachers who responded to the item on marital status out of which 149 (65.9%) reported being married, 73 (32.3%) being single, and 2 (0.9%) each for separated and divorced respondents.

The respondents were also asked to provide their highest educational qualification and the results revealed that 71 (31.4%) had up to Diploma certificate while 140 (62%) had up to a Bachelor's Degree. The number of teachers with post-graduate certificate was 15 (6.6%). The respondents



belonged in either Islam or Christianity. Majority of the teachers numbering two hundred and seventeen (96%) were Christians while the remaining nine (4%) were Muslims.

The teachers were also asked to provide the number of years they have been in service. In all, one hundred and sixty-nine teachers responded to this item with the results indicating that fifty-seven (25.2%) of the respondents had been in service for at most 5 years while forty-nine (21.6%) had been in service for between 6 and 10 years. It was also found that twenty-five (11%) of the teachers had been serving for between 11 and 15 years, fourteen (6.1%) had been serving for 16-20 years and twenty-four (10.9%) had been serving for more than 20years. Fifty-seven (25.2%) respondents failed to answer this item. Figure 4.1 summarizes the number of years of service reported by the respondents.

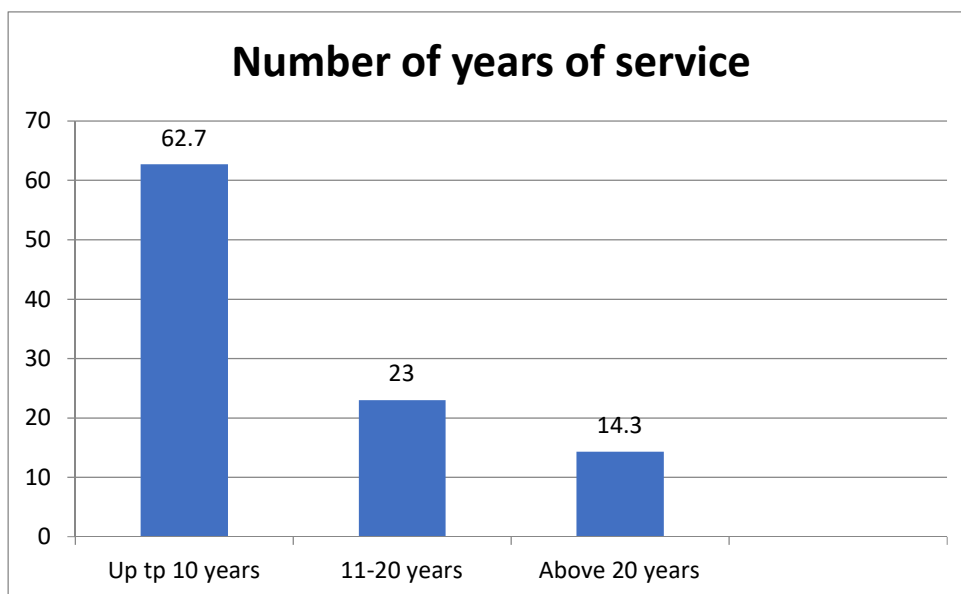


Figure 4.1 Number of years of service



4.2 Knowledge on epilepsy

The responses to items on knowledge have been presented in this section.

4.2.1 Composite Scoring

The responses of the teachers on their knowledge about epilepsy were grouped into two; “Yes” representing positive response and “No” representing negative response. The responses to the items on knowledge are presented in Table 4.2.

Table 4.2: Composite scoring of knowledge about epilepsy

Item	Responses		Total (n)
	Yes	No	
Have you ever heard of epilepsy	226 (100%)	--	226 (100%)
Do you know anyone with epilepsy	169 (74.8%)	57 (25.2%)	226 (100%)
Have you ever taught a student with epilepsy	62 (27.4%)	164 (72.6)	226 (100%)
Have you witnessed someone experience a seizure before	173 (76.5%)	53 (23.5%)	226 (100%)
Perception of epilepsy	126 (55.7%)	100 (44.3%)	226 (100%)
Causes of epilepsy	121 (53.5%)	105 (46.5%)	226 (100%)
Is epilepsy communicable	43 (21%)	161(79%)	204 (100%)
Is epilepsy treatable	208 (95%)	11 (5%)	219 (100%)
Appropriate treatment for epilepsy	110 (53%)	98 (47%)	208 (100%)

The breakdown of the responses on knowledge indicates that all the respondents (100%) in the study reported being aware of epilepsy with 74.8% indicating that they are acquainted with someone living with epilepsy. Another 27.4% indicated ever teaching someone with epilepsy while some (76.5%) reported having ever witnessed a seizure. Almost half (44.4%) had poor



perception about epilepsy thinking it is a form of mental illness or retardation while 55.7% thought it is a brain disorder. On the causes of epilepsy, 53.5% believed inheritance, accidents, strokes, brain tumors, and birth defects cause epilepsy while 46.5% either thought mental illness was the cause or did not know the cause. Majority of the respondents, representing 79% and 95% believed that epilepsy is not communicable and is treatable respectively. Additionally, while 53% thought modern medicine is the best form of treatment for epilepsy, 47% thought other forms of treatments are more efficacious than modern medicine.

In a follow up question to the item on treatability of epilepsy, respondents were required to indicate the treatment option they would recommend for epilepsy. The responses to this item are presented in Table 4.3 below.

Table 4.3: Recommended treatment for epilepsy

Treatment Type	Frequency	Percentage (%)
Modern Medicine	46	22
Traditional Medicine	18	8.7
Modern and Traditional Medicine	71	34
Treatment by Faith Healing	9	4.3
Modern and Faith Healing	64	31

4.2.2 Overall Categorization of Knowledge on Epilepsy

The responses given by the teachers on knowledge were grouped into adequate and inadequate knowledge levels. The respondents who were classed as having adequate knowledge obtained at least five appropriate responses out of the nine selected items measuring knowledge on epilepsy while those classified as having inadequate knowledge obtained less than five appropriate responses. Table 4.4 below presents the scores for the two groups.



Table 4.4: Categorization of knowledge levels

Knowledge Levels	N	%
Adequate knowledge	167	73.9
Inadequate knowledge	59	26.1
Total	226	100%

4.2.3 Self-rating of knowledge on epilepsy

This item asked the respondents to rate themselves on their level of knowledge on epilepsy and the result was grouped into two; high and low level of knowledge. Responses to this item are presented in Table 4.5 below.

Table 4.5: Self-rated knowledge on epilepsy

Knowledge category	Frequency	Percentage (%)
High level	95	52.5
Low level	86	47.5
Total	181	100

4.2.4 Sources of information

On the sources of information about epilepsy, 226 respondents answered the questionnaire; however, they were free to choose multiple responses. Table 4.6 presents the various sources that respondents obtained information from.

Table 4.6: Source of information

Source of Information	Frequency	Percentage (%)
Relatives/Friends	83	36.7
Radio	41	18
Television	81	35.8



Book	40	17.7
Personal Observation	17	7.7

4.2.5 The experience and ratings of witnessing a student having a seizure

The item sought to find out from the respondents whether they have ever witnessed a student experience a seizure attack. One hundred and nine (48.2%) respondents reported in the affirmative while one hundred and seventeen (51.8%) reported never having done so.

In a follow up to the previous item, the emotional experience of the respondents at the time a student was experiencing a seizure was sought. Respondents were asked to rate their experience on an ordinal scale. Table 4.7 is a presentation of the emotional experiences of respondents who have ever witnessed a student having a seizure.

Table 4.7: Emotional experiences of the respondents during seizure

Rating of Experience	Frequency	Percentage (%)
Highest level of fright	45	41.3
Second highest level of fright	41	37.6
Neutral	8	7.3
Second lowest level of fright	13	12
Lowest level of fright	2	1.8
Total	109	100

4.3 Attitudes towards Epilepsy

4.3.1 Composite Scoring of Attitudes towards Epilepsy

Composite responses of the teachers on items on attitude towards epilepsy are presented in Table 4.8 below.



Table 4.8: Composite Scores for Attitudes toward Epilepsy

Item	Yes	No	Total
Are you willing to teach a student with epilepsy	192 (85%)	34 (15%)	226 (100%)
Should PWE attend regular schools	132 (58%)	94(42%)	226 (100%)
Can PWE achieve the highest education possible	172 (76%)	54 (24%)	226 (100%)
Would you allow your ward play with PWE	172 (76%)	54 (24%)	226 (100%)
Would you allow a close relative marry a PWE	98 (43.4%)	128 (56.6%)	226 (100%)
Should PWE have children	167 (73.9%)	59 (26.1%)	226 (100%)
Would you associate in social gathering with PWE	186 (82.3%)	40(17.7%)	226 (100%)
Would you maintain your attitude when someone you know is diagnosed with epilepsy	194 (85.8%)	32 (14.2%)	226 (100%)
Are you willing to have a PWE as a close friend	172 (80.7%)	41 (19.3%)	213 (100%)

On attitudes toward PWE, the respondents were first asked to indicate whether or not they were willing to teach someone known to have epilepsy to which 85% respondent positively while 15% objected. In a follow up to this item asking reasons for the choice of answer (“yes” or “no”), 52% of those who answered “Yes” reported that PWE are normal while another 9% indicated that PWE have the right to education. The rest failed to respond to the item. Among those who responded “No” to teaching PWE, 59% indicated being uncomfortable during a seizure while 15% thought that PWE are not intelligent enough to cope with regular classroom work.

The next item asked the respondents to indicate their thoughts on whether PWE should attend special schools or not. It was found that 58% thought regular schools are best for PWE while 42% disagreed.



In a follow up question to the item on special schools, 78% of those who thought regular schools are best for PWE believed that PWE are as normal as their counterparts without epilepsy. However, almost half of those who believed PWE need special education thought PWE are not normal.

On the highest education attainable by PWE, it was found that 4.4% of the respondents believed PWE could only attain primary education, while 9.3% believed they could complete basic school. Others (10.2%) believed PWE could attain second cycle education with majority (76.1%) reporting that PWE could go all the way to tertiary institutions. The latter finding is really encouraging and should be the mindset of every teacher.

The next item asked the respondents whether they were willing to allow their children or students play with PWE. Here, 76% of the respondents agreed to allow their wards play with PWE with 24% disagreeing. It was found that 90% of the respondents who were willing to allow their wards play with PWE believed that epilepsy is not communicable. Some (26%) of those who would not allow their wards play with PWE thought their wards would be frightened in the event of a seizure while others (18.5%) reported personally being uncomfortable with the idea.

The next item asked the respondents whether they would allow close relatives such as their wards, sisters or brothers to marry PWE. Surprisingly, only 43.4% would allow such unions with 56.6% rejecting the idea. However, the majority (73.9%) of the respondents agreed that PWE should have children while 26.1% were opposed to it. It is surprising that some people would not allow PWE to marry a close relative would want them to have children. How that is to be done is anyone's guess.



The next item requested the teachers to indicate whether they would be open to associating with PWE in social gatherings or not. It was found that 82.3% would associate publicly with PWE while the rest (17.7%) would not. This was followed by another item asking whether they would change or maintain their current attitude towards an acquaintance recently diagnosed with epilepsy. Some (85.5%) respondents were adamant they would not change their attitude while 14.5% would change their attitude.

The study also asked about having PWE as close friends, and here again, the majority (80.7%) of the respondents agreed while 19.3% dismissed the idea.

4.3.2 Categorization of Attitude Levels

The responses given by the teachers on attitude towards epilepsy were grouped into positive and negative attitudes. The respondents who were classed as having positive attitudes obtained at least five appropriate responses out of the nine selected items measuring attitude toward epilepsy while those classified as having negative attitude obtained less than five appropriate responses out of the nine items. Table 4.9 presents the categories of attitudes.

Table 4.9: Attitude categories

Attitude Category	n	%
Positive attitude	191	84.5
Negative attitude	35	15.5
Total	226	100%

4.4 Management Practices during a Seizure

The practices of the respondents during episodes of Epileptic seizures are presented below



4.4.1 Responses on first aid seizure management

This item asked the teachers to choose from suggested alternatives what they believe to be appropriate practices in the event of an epileptic seizure. The responses to the item are presented in the Table 4.10.

Table 4.10: Seizure management practices

Practices	N	Percentage
Promptly move from danger	30	13.2
Lay victim on their side	14	6.1
Pour water on the face	20	8.8
Let them smell something	13	5.7
Hold legs and arms	31	15
Avoid touching a person having a seizure	28	12.3
Avoid touching saliva of a seizing person	49	21.6
Put something in the mouth	41	17.3
Total	226	100

The responses of the teachers on managing seizure were grouped into appropriate and inappropriate practices with the former being for respondents choosing either “promptly move from danger” or “lay victim on their side” or both and the latter being for choosing any of the other seizure management practices or in combination with any of the two mentioned above. The categories of practices are presented in Table 4.11

Table 4.11: Categorization of seizure management practices

Practices	N	%
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Appropriate practice	44	19.3
Inappropriate practice	182	80.7
Total	226	100%

4.5 Relationship between the dependent and independent variables

The study sought to find out whether any associations exist between the socio-demographic characteristics and knowledge, attitude and practices of the teachers toward epilepsy. The second phase of the result presentation which analyzes the findings is presented next.

4.5.1 Relationship between Socio-Demographics and Knowledge on Epilepsy

This section sought to find out whether the respondents' socio-demographic characteristics influenced their level of knowledge on epilepsy. The findings made are presented in Table 4.12.

From the Table 4.12 below, the relationship between the ages of the respondents and knowledge on epilepsy was found not to be statistically significant. This implies that respondents of all ages are equally likely to be knowledgeable about epilepsy.

The relationship between the gender of the respondents and knowledge on epilepsy as presented in Table 4.12 was also found not to be statistically significant. This implies that respondents of either gender are equally likely to be knowledgeable about epilepsy.

However, the relationship between the marital status of the respondents and knowledge on epilepsy in Table 4.12 was found to be statistically significant. This implies that respondents in one of the marital status categories are likely to be more knowledgeable about epilepsy than the other.

Table 4.12: Socio-demographic characteristics and knowledge on epilepsy





Socio-demographic variable	Knowledge Level: n (%)		P Value
	Adequate	Inadequate	
Age			
Young adults	80 (83.3%)	16 (16.7%)	0.506
Middle aged adults	29 (78.3%)	8 (21.7%)	
Gender			
Male	56 (60.2%)	37 (39.8%)	0.259
Female	70 (52.6%)	63 (47.4%)	
Marital Status			
Married	94 (63%)	55 (37%)	0.002
Single	32 (41.5%)	45 (58.5%)	
Educational Qualification			
Up to Diploma	39 (55%)	32(45%)	0.053
Bachelor's Degree	83 (59.2%)	57 (40.8%)	
Degree Postgraduate	4 (26.6%)	11 (73.4%)	
Years of service			
Up to 10 years	59 (64%)	33 (36%)	0.120
11-20 years	10 (33.3)	20 (66.7%)	
Above 20 years	10 (58.8%)	7 (41.2%)	
Religion			
Christianity	118 (54.3%)	99 (45.7%)	0.041
Islam	8 (89%)	1 (11%)	

Level of significance (α) = 0.05

The relationship between the educational qualification of the respondents and knowledge on epilepsy as presented in Table 4.12 above was not significant, implying that the respondents are equally likely to be knowledgeable about epilepsy, regardless of educational qualification.

From Table 4.12 above, the relationship between the number of years of service of the respondents and knowledge on epilepsy was not statistically significant. The implication of this finding is that the respondents are equally likely to be knowledgeable about epilepsy, regardless of the number of years of service.

The relationship between the religion of the respondents and knowledge on epilepsy was, however, found to be statistically significant as presented in Table 4.12 above. This implies that respondents of one of the religious categories are likely to be more knowledgeable about epilepsy than the other.

4.5.2 Relationship between Socio-Demographics and Attitudes toward Epilepsy

The socio-demographic characteristics of the respondents and whether they have any association with attitudes toward epilepsy is summarized in this section. Table 4.13 presents the findings made.

From Table 4.13 below, the relationship between the ages of the respondents and attitude towards epilepsy was not statistically significant. The implication is that respondents of either age category are likely to have similar attitudes toward epilepsy.

The relationship between the gender of the respondents and attitude towards epilepsy was also not statistically significant as presented in Table 4.13, implying that respondents of either gender are likely to have similar attitudes toward epilepsy.

Table 4.13: Socio-Demographic characteristics and attitudes toward epilepsy

Socio-demographic variable	Attitude Level: n (%)		P Value
	Positive	Negative	





Age			
Young adults	87 (83.6%)	18 (16.4%)	0.208
Middle aged adults	21 (72.4%)	8 (27.6%)	
Gender			
Male	60 (64.5%)	33 (35.5%)	0.119
Female	72 (54%)	61 (46%)	
Marital Status			
Married	96 (65.3%)	51 (34.7%)	0.004
Single	36 (45.5%)	43 (54.5%)	
Educational Qualification			
Up to Diploma	17 (30.3%)	39 (69.7%)	0.001
Bachelor's Degree	102 (76.7%)	31 (23.3%)	
Postgraduate Degree	13 (86.6%)	2 (13.4%)	
Years of service			
Up to 10 years	73 (87%)	11 (13%)	0.086
11-20 years	20 (69%)	9(21%)	
Above 20 years	17 (77.2%)	5 (22.8%)	
Religion			
Christianity	124 (57%)	93 (43%)	0.058
Islam	8 (89%)	1(11%)	

Level of significance (α) = 0.05

The relationship between the marital status of the respondents and attitude towards epilepsy presented in Table 4.13 above was found to be statistically significant. This implies that respondents in one of the marital status categories are likely to have more positive attitudes toward epilepsy than the other.

The relationship between the educational qualification of the respondents and attitude towards epilepsy was also found to be statistically significant, implying that respondents in some of the educational qualification categories are likely to have more positive attitudes toward epilepsy than others. Table 4.13 presents the details on this finding.

From Table 4.13 above, the relationship between the number of years of service and attitude towards epilepsy was not statistically significant. This implies that the respondents are likely to have similar attitudes toward epilepsy, regardless of the number of years of service.

Lastly, the relationship between the religion of the respondents and attitude towards epilepsy as presented in Table 4.13 was found not to be statistically significant. The finding implies that respondents of either religion are likely to have similar attitudes toward epilepsy.

4.5.3 Relationship between Socio-Demographics and seizure management practices

This section sought to find out whether the socio-demographic characteristics of the respondents influenced their practices in managing seizure. The findings are presented in Table 4.14 below.

Table 4.14: Socio-Demographic characteristics and seizure management practices

Socio-demographic variable	Practice Level: n (%)		P Value
	Appropriate	Inappropriate	
Age			
Young adults	28 (21.5%)	102 (78.5%)	0.003
Middle aged adults	16 (47%)	18 (53%)	
Gender			
Male	25 (34.2%)	48 (65.8%)	0.001
Female	19 (14.2%)	114 (85.8%)	
Marital Status			



Married	29 (19.4%)	120 (80.6%)	0.997
Single	15 (19.5%)	62 (80.5%)	
Educational Qualification			
Up to Diploma	11 (15.5%)	60 (84.5%)	0.509
Bachelor's Degree	29 (20.7%)	111 (79.3%)	
Postgraduate Degree	4 (26.7%)	11 (73.3%)	
Years of service			
Up to 10 years	23 (21.7%)	83 (78.3%)	0.209
11-20 years	12 (30.8%)	27 (69.2%)	
Above 20 years	9 (37.5%)	15 (62.5%)	
Religion			
Christianity	42 (19.4%)	175 (80.6%)	0.831
Islam	2 (22%)	7 (88%)	

Level of significance (α) = 0.05

From Table 4.14 above, the relationship between the ages of the respondents and seizure management practices was found to be statistically significant. The finding here implies that respondents in one of the age categories are likely to have more appropriate seizure management practices than the other.

The relationship between the gender of the respondents and seizure management practices was also statistically significant as presented in Table 4.14. The implication of the finding is that respondents in one of the gender categories are likely to have more appropriate seizure management practices than the other.



The relationship between the marital status of the respondents and seizure management practices was not statistically significant, implying that respondents of either marital status are likely to have similar seizure management practices. The finding is presented in Table 4.14.

The relationship between the educational qualification of the respondents and seizure management practices as presented in Table 4.14 was also not statistically significant. This implies that the respondents are likely to have similar seizure management practices regardless of educational qualification.

The relationship between the number of years of service and seizure management practices was not statistically significant. The finding as presented in Table 4.14 implies that the respondents are likely to have similar seizure management practices, regardless of the number of years of service.

In Table 4.14 above, the relationship between the religion of the respondents and seizure management practices was also not statistically significant, implying that respondents of either religion are likely to have similar seizure management practices.

4.5.4 Relationship between knowledge levels and seizure management practices

The knowledge levels and seizure management practices of the respondents were compared to establish whether knowledge on epilepsy influenced seizure management practices. The findings are presented in Table 4.15.

Table 4.15 Relationship between knowledge and seizure management practices

Knowledge level	Practices			
	Appropriate practices	Inappropriate practices	Total	P Value



Adequate knowledge	29 (16%)	138 (84%)	167 (100%)	0.179
Inadequate knowledge	15 (25.4%)	44 (74.6%)	59 (100%)	
Total	44	182	226 (100%)	

Level of significance (α) = 0.05

From Table 4.15 above, the relationship between knowledge on epilepsy and seizure management practices was found not to be statistically significant. The finding implies that the respondents are likely to have similar seizure management practices, regardless of level of knowledge.

4.5.5 Relationship between self-rated knowledge and seizure management practices

The section sought to establish the relationship between knowledge levels assigned by the respondents to themselves and seizure management practices. This is presented in Table 4.16.

In Table 4.16 below, it was found that the relationship between the respondents' self-rated knowledge on epilepsy and seizure management practices was not statistically significant. This implies that the respondents are likely to have similar seizure management practices, regardless of self-rating.

Table 4.16 Self-rated knowledge and seizure management practices

Self-rated knowledge	Practices			
	Appropriate practice	Inappropriate practice	Total	P Value
High level	25 (26.3%)	70 (73.7%)	95 (100%)	0.508
Low level	19 (22%)	67 (78%)	86 (100%)	
Total	44	137	181 (100%)	



Level of significance ($\alpha = 0.05$)

4.5.6 Relationship between attitudes towards epilepsy and seizure management practices

This section sought to find out whether the attitudes of the respondents toward epilepsy influenced their practices during seizure. The findings made are presented in Table 4.17

Table 4.17 Relationship between attitudes and seizure management practices

Attitude Category	Practices			
	Appropriate practices	Inappropriate practices	Total	P Value
Positive attitude	30 (15.7%)	161 (84.3%)	191 (100%)	0.001
Negative attitude	14 (40%)	21 (60%)	35 (100%)	
Total	44	182	226 (100%)	

Level of significance ($\alpha = 0.05$)

The relationship between attitudes toward epilepsy and seizure management practices in Table 4.17 was found to be statistically significant. The implication of this finding is that respondents in one of the attitude categories are likely to have more appropriate seizure management practices than the other.



CHAPTER FIVE

DISCUSSION

5.0 Introduction

This chapter presents the highlights of what has been found in this study and tries to situate it in available literature. As the researcher set out with some specific objectives, it was important to

relate the findings to studies with similar objectives. Findings on the knowledge, attitudes and practices of the teachers in this and other studies are discussed below.

5.1. Knowledge on epilepsy

Studies conducted on knowledge about epilepsy among teachers have revealed poor knowledge about epilepsy in many parts of the world (Akpan et al., 2013; Mustapha et al., 2013). The case is especially troubling in developing countries where much of knowledge about epilepsy is rooted in culture and so culturally appropriate treatment is sought (WHO, 2016). In this study, however, the majority of the teachers were found to possess adequate knowledge about epilepsy. Similar findings were made in Pakistan (Bhesania et al., 2014) and Southern Saudi Arabia (Alqahtani, 2015). The knowledge levels of teachers in this study is evidenced by the generally higher scores obtained by the teachers on the adequate knowledge category as against the other category on the composite scores table, making it imperative to discuss some of the highlights.

5.1.1 Perception of epilepsy

It was found that, although the teachers generally perceived epilepsy as a brain disorder, an appreciable number (25.6%) perceived it as a form of mental retardation or mental illness, a finding that agrees with Aydemir's (2008) work in Turkey (Aydemir, 2008, as cited in Karimi and Heidari, 2015). This is worrying because the teachers expressing this view may not see the need to educate PWE. It is important to mention that many people with epilepsy have over time, through repeated attacks developed mental problems because of poor access to anti-epileptic medications (WHO, 2016). This may have informed the choice of mental illness by some teachers. Bhesania et al. (2014) concurs with the above position, opining that teachers in developing nations tend to associate mental illness with epilepsy more, compared with their



counterparts in developed countries. The finding in this study therefore gives support to Bhesania et al's (2016) position.

5.1.2 Choice of treatment for epilepsy

Additionally, despite the fact that modern health facilities abound in the Municipality, as evidenced by the two public hospitals, dozens of private hospitals as well as specially trained professionals to treat epilepsy with modern medicine, a significant number of the teachers recommended treating epilepsy with traditional medicine, a finding similar to a study in Nigeria (Akpan et al., 2013). This practice is known to be dangerous and should not be encouraged. There are lots of radio shows locally (TNM) that promote the use of traditional products for treating epilepsy and other conditions. This has really caught the attention of people and many are patronizing these traditional products. This may have influenced the choice of traditional medicine by some of the teachers for treating epilepsy.

5.1.3 Association between marital status and knowledge on epilepsy

The marital status of the teachers was also found to influence their knowledge on epilepsy ($p=0.002$). The study found that married teachers possessed more adequate knowledge about epilepsy than their single counterparts, a finding similar to another made in Iran (Karimi and Heidari, 2015). In Ghana, the tradition among many ethnic groups requires that comprehensive background checks are made before marriage is contracted between couples. This is done to rule out any undesirable health conditions including epilepsy in the family of a potential partner. The married teachers in the study may have gone through these checks already and may in the lead up to their unions sought information from different sources regarding epilepsy, perhaps explaining the difference in knowledge. It is important to point out that, out of the total number of teachers who mentioned inheritance as a possible cause of epilepsy, 63% were married while



37% were single. It is therefore possible that Ghanaian culture may have played a role in exposing married people to more information about epilepsy than their single counterparts. However, Lim et al. (2013) disagree and posit that, the teachers' knowledge regarding inheritance may be attributed to their appreciation of science rather than culture.

5.1.4 Association between religion and knowledge on epilepsy

The religious affiliation of the teachers was also found to influence their knowledge on epilepsy. In the study, the majority of the teachers indicated being Christians, and in Christianity, stories about epilepsy can be found a number of times in the Bible which may have induced interest in the condition and the desire to read about it and clarify any lingering misconceptions. Surprisingly, even though epilepsy is rarely mentioned in the Quran and stories about the condition is uncommon in the religion, Muslim teachers were more knowledgeable about epilepsy than Christians ($p=0.041$). The reason for this may lie in the small size of Muslim participants in the study.

5.2 Attitudes towards epilepsy

On the attitude of teachers towards epilepsy, the study found that a higher number of the teachers had positive attitude. The attitude of the teachers was found to be positive for eight of the nine items that measured attitude towards epilepsy. This aligns with findings made in Zimbabwe (Goronga et al., 2013) where the majority of the teachers exhibited positive attitudes towards epilepsy. In Nigeria, similar findings were made by Mustapha et al. (2013).

5.2.1 Attitudes toward PWE attending special schools

The study found that even though almost half of the teachers (42%) would have preferred PWE to attend special schools, the reason behind their position was one of personal discomfort and not



that epilepsy is contagious. Indeed, many of the teachers (71.7%) who chose that option were aware that the condition is not contagious. Additionally, many of the teachers showed willingness to teach in a class with someone having epilepsy as evidenced by the composite score table on attitudes. The finding aligns with a study in Nigeria (Mustapha et al., 2013) and is encouraging and could be seized on by the Ghana Education Service to encourage families having PWE to send their wards to school.

5.2.2 Attitudes toward PWE marrying

Knowledge, to a large extent, forms the basis of peoples' attitudes. It is instructive to note that even though the teachers generally had a positive attitude towards epilepsy, one position that they were unwilling to compromise on was allowing a close relative to marry someone with epilepsy. The finding is similar to a study in Osogbo in Eastern Nigeria (Mustapha et al., 2013). There appears to be some sort of relationship between knowledge of cause of epilepsy and willingness to sanction marriage between people with epilepsy and people without epilepsy. Marriage usually leads to procreation, and by extension, offspring inheriting genes from parents. The teachers in this study appear to be well aware that inheritance plays a role in epilepsy as evidenced by the majority of teachers choosing inheritance twice more than the other causes of epilepsy in the composite score on knowledge. This may have informed the majority of teachers' decision to disallow marriage between a close relative and a PWE.

5.2.3 Association between marital status and attitudes toward epilepsy

The study also found that married teachers showed more positive attitude towards epilepsy than their single counterparts ($P=0.004$). This finding is not surprising since married teachers in the study have been found to be more knowledgeable about epilepsy than their single counterparts and given that knowledge largely influences attitude.



5.2.4 Association between educational qualification and attitudes toward epilepsy

The educational qualification of the teachers was also found to influence attitudes toward epilepsy. In the study, the attitudes of the teachers who possessed up to Bachelor's degree and Post Graduate certificates were more positive than the teachers with up to Diploma certificates ($P < 0.001$). Even though the reason for this difference in attitude is unclear, the broad nature of University education could have possibly influenced the teachers' worldview and their subsequent attitudes toward epilepsy. The finding here is similar to others made by Lim et al. (2013) and Bishop and Boag (2006) in a related study (as cited in Karimi and Heidari, 2015).

5.3 Management practices during seizure

Appropriate knowledge on seizure management is key to saving lives of people experiencing seizure. It would be good for teachers to learn seizure management given that they spend lots of time with students in school not only as teachers but as care givers as well.

The current study found that the teachers had poor seizure management practices, a situation that has serious implications for students in the Municipality. The current study's finding is similar to an Ethiopian study by Gebrewold et al. (2016) as well as another in Nigeria (Eze et al., 2015). It is also not different from an Iranian study (Karimi and Heidari, 2015). The sources of information may have something to do with the poor seizure management. It could be seen in the table on sources of information that majority of the teachers sourced information on epilepsy from friends and relatives; sources that may not exactly be authorities in epilepsy care.

5.3.1 Association between age and seizure management

However, some differences in seizure management were observed among the various demographic characteristics. On the ages of the teachers, for instance, it was found that middle



aged adults exhibited more appropriate seizure management practices than their young adult counterparts ($p=0.003$). Even though the reason for this difference is not clear, it could be that more middle aged adults may have witnessed seizure being managed than young adults. Another possible reason could be marriage, since more middle aged adult teachers than young adult teachers were married and so may have been exposed more to issues on epilepsy than young adult teachers.

5.3.2 Association between gender and seizure management

Another observation made in the study is that, male teachers exhibited more appropriate seizure management practices than females ($p=0.001$) which may partly be attributed to the higher knowledge of males on epilepsy (60.2%) compared to females (52.6%), although this is not statistically significant ($p=0.259$). Generally, females are considered to be more caring than males and perhaps would have been expected to know more about seizure management than males. However, that is not the case here. Knowledge and, perhaps, courage may have an influence in male teachers showing more appropriate seizure management than their female counterparts.

5.3.3 Association between knowledge and seizure management

The relationship between the teachers' knowledge on epilepsy and seizure management practices was analyzed and an interesting finding made. It is instructive to note that, the teachers found to possess inadequate knowledge about epilepsy were in fact found to have more appropriate seizure management practices (25.4%) than those with adequate knowledge on epilepsy (16%) even though this difference is not statistically significant ($p=0.179$). However, the teachers who rated themselves as knowledgeable about epilepsy were found to possess more appropriate



seizure management practices than those who rated themselves as not knowledgeable even though this difference is not statistically significant ($p=0.508$).

5.3.4 Association between attitudes and seizure management

The relationship between the teachers' attitudes toward epilepsy and seizure management practices was also analyzed. Surprisingly, the teachers found to have positive attitudes toward epilepsy showed more inappropriate seizure management practices (15.7%) than their counterparts with negative attitudes (40%) and this was found to be statistically significant ($p=0.001$). This finding is not encouraging and tells a story of a group of teachers who have the goodwill to help PWE acquire formal education against all the odds yet are poorly skilled in helping PWE in emergency situations.

The importance of knowledge in changing the world for the better is invaluable, and even though knowledge is known to form the basis of action, it is unfortunate to find that the reported high levels of knowledge and positive attitudes of the teachers toward epilepsy in this study did not translate into appropriate seizure management practices.

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.0 Introduction

The goal of this study was to assess the knowledge, attitudes and practices of teachers toward epilepsy. The findings and conclusions made in respect of the above goal has been summarized in this chapter and appropriate recommendations made. The limitations of the study are also included in this chapter.



6.1 Summary of key findings in the study

The study made some key findings including the finding that majority (73.9%) of the teachers possessed adequate knowledge about epilepsy. Majority (84.5%) of the teachers were also found to have positive attitudes toward epilepsy. However, seizure management was found to be poor among majority (80.7%) of the teachers, a finding with serious implications for PWE.

It was also found that, even though the teachers had adequate knowledge and positive attitudes toward epilepsy, this did not necessarily translate into appropriate seizure management practices.

6.2 Conclusions based on the specific objectives of the study.

6.2.1 Study Objective 1

The teachers demonstrated a high level of knowledge about epilepsy except a few who showed poor understanding of the condition. The majority of teachers obtaining more than average scores on the knowledge component was encouraging.

6.2.2 Study Objective 2

The teachers in TNM exhibited favourable attitudes toward epilepsy with the majority willing to support PWE in almost all situations that would have required the teachers to show goodwill.

6.2.3 Study Objective 3

Seizure management practices among the teachers were not acceptable as many of them showed the tendency to intervene in ways that would be injurious to individuals having a seizure.

6.2.4 Study Objective 4

On the association between the demographic characteristics of the teachers and knowledge, attitudes and practices, several significant findings were made. For instance, it was found that married teachers knew more and had more positive attitudes toward epilepsy than their single



colleagues. Additionally, Muslim teachers knew more about epilepsy than Christians. Other associations were found between the educational qualification of the teachers and attitudes toward epilepsy, with teachers holding at least a Bachelor's Degree showing more positive attitudes than those with up to Diploma. Associations were also found between the gender of the teachers and seizure management practices with males showing better seizure management practices than females.

6.2.4.1 Associations between ages of the teachers and knowledge, attitudes and practices during seizure

The age differences between the teachers did not significantly affect their knowledge, attitudes, and practices toward epilepsy. Hence, young and middle aged teachers had similar knowledge, attitudes, and seizure management practices.

6.2.4.2 Associations between the gender of the teachers and knowledge, attitudes and practices during seizure

The gender of the teachers did not have significant effect on their knowledge and attitudes toward epilepsy but had a significant effect on their seizure management practices. Male and female teachers, therefore, had similar knowledge and attitudes toward epilepsy but male teachers were better at seizure management than female teachers.

6.2.4.3 Associations between the marital status of the teachers and knowledge, attitudes and practices during seizure

The marital status of the teachers had significant effect on both knowledge and attitudes toward epilepsy but not on seizure management practices. Hence, even though the married teachers were



more knowledgeable and had more positive attitudes toward epilepsy, their seizure management practices were similar to their single counterparts.

6.2.4.4 Associations between the educational qualification of the teachers and knowledge, attitudes and practices during seizure

The differences in educational qualification of the teachers did not significantly affect their epilepsy knowledge and seizure management practices; however, it affected their attitudes toward epilepsy. Hence, even though teachers with up to Diploma, Bachelor's Degree and Post Graduate Certificates had similar knowledge and seizure management practices, those with Bachelor's Degree and Post Graduate Certificates had more positive attitudes toward epilepsy than those with up to Diploma.

6.2.4.5 Associations between the number of years of service of the teachers and knowledge, attitudes and practices during seizure

The differences in the number of years of service among the teachers did not significantly affect their knowledge, attitudes and seizure management practices. Hence, all the teachers had similar knowledge, attitudes, and seizure management practices, regardless of the number of years of service.

6.2.4.6 Associations between the religion of the teachers and knowledge, attitudes and practices during seizure

The religious affiliation of the teachers did not significantly affect their attitudes and seizure management practices; however, it affected their knowledge on epilepsy. Hence, even though the



teachers had similar attitudes and seizure management practices, regardless of religion, Muslim teachers were more knowledgeable about epilepsy than their Christian counterparts.



6.3 Recommendations

Findings in this study could serve as basis for improving upon the knowledge of teachers and helping Ghana Health Service to extend services to educational institutions. Some recommendations have been proffered for immediate and future action below:

Recommendations for immediate action

- The Community Psychiatric Unit at the Tarkwa Municipal Hospital should organize seizure management training for teachers in TNM.

- The researcher should make the significant findings, including the inappropriate ones and their corrective responses available to basic school teachers in TNM.
- The Community Psychiatric Unit should make first aid seizure management protocols available to all basic schools in TNM.
- The Community Psychiatric Unit should also make literature on epilepsy available to all basic schools.

Recommendations for future research

- Future researcher should investigate the inverse relationship between the teachers' knowledge on epilepsy and seizure management practices.
- The inverse relationship between the teachers' attitudes toward epilepsy and seizure management practices should also be investigated.
- Future researchers should investigate the influence of religion on teachers' knowledge on epilepsy.
- Future researchers should also investigate why many teachers would object to marriages between PWE and people without epilepsy.

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APPENDICES

APPENDIX A

CONSENT FORM

You are being invited to participate in a research study about knowledge, attitudes and practices towards epilepsy among the basic school teachers in Tarkwa-Nsuaem Municipality.

This study is being conducted by Ahmed Salim Khalid, in partial fulfillment of the requirements for the degree of Master of Science in Community Health and Development of the University for Development Studies.

You were selected as a possible participant in this study because you interact on a daily basis with the pupils, some of whom might be suffering from epilepsy. You are humbly requested to answer the questions in the form of a questionnaire, which you are requested to fill. It will take about 15 minutes. You are not required to provide your name or contact details. There are no costs to you for participating in the study. There are no foreseeable risks or discomforts in your participation in this study.

The information you provide will be used to help the Ministry of Health and Ministry of Education in reducing the burden of epilepsy through the improvement of acceptability, access to services, prevention and quality care for school going children with epilepsy by improving teachers' knowledge and attitudes towards the condition.

This study is anonymous. No one will be able to identify you or your answers, and no one will know whether or not you participated in the study. Your participation in this study is voluntary.

You are free to decline to answer any particular question you do not wish to answer for any reason.



If you have any questions about the study, please contact Ahmed Salim Khalid at cell:

0243851327

Email: ahmedstalinov @ yahoo.com

I agree to participate in this study voluntarily

School Name: Signed:

Date:



APPENDIX B

TITLE OF RESEARCH STUDY: Knowledge, attitudes and practices of teachers towards epilepsy in Tarkwa-Nsuaem Municipality

QUESTIONNAIRE FOR THE QUANTITATIVE PHASE

1. Demographic characteristics:

1.1 Age:

1.2 Gender:

Male []

Female []

1.3 Marital status:

Married []

Single []

Separated []

Widowed []

1.4 Level of education (Highest qualification)

Second Cycle Certificate []

Diploma []

Degree []

Postgraduate []

1.5 Years of teaching:

1.6 Religion:

Christianity []

Islam []

Traditionalist []

others (specify).....

2. Knowledge and practice towards epilepsy



2.1 Have you ever heard about epilepsy? Yes [] No []

2.1.2. If yes, what is your source of information?

2.1.2.1 Relatives/Friends [] Radio [] Television [] Book []

Others (specify).....

2.2 Do you know or have you ever known anyone with epilepsy? Yes [] No [] Do not know []

2.3 Have you ever taught a student with epilepsy? Yes [] No [] Do not know []

2.4 Have you witnessed someone experience an epileptic attack before? Yes [] No []

2.4.1 If yes to 2.4, how will you rate your experience? Please tick one

1	2	3	4	5
Very uncomfortable	Uncomfortable	Unsure	Comfortable	Very Comfortable

2.5 How would you rate your knowledge on epilepsy? Please tick one

1	2	3	4	5
Not	Not	Unsure	Knowledgeable	Very



knowledgeable at all	knowledgeable			knowledgeable

2.6 What do you think epilepsy is? Tick the correct answer

2.6.1 It is a type of mental retardation

2.6.2 It is a brain disorder

2.6.3 It is a mental illness

2.6.4 No idea

2.7 What do you think causes epilepsy? You may tick more than one answer below

2.7.1 Accidents ☐

2.7.2 Inherited disease ☐

2.7.3 Insanity or mental illness ☐

2.7.4 Brain tumor ☐

2.7.5 Birth defects ☐

2.7.6 Stroke ☐

2.7.7 Don't know ☐



2.8 Do you agree or disagree with the following statements?

2.8.1 Epilepsy may occur as a result of head injury Agree ☐ Disagree ☐

Do not know ☐

2.8.2 Epilepsy may occur following alcohol/drug abuse Agree ☐ Disagree ☐ Do not know ☐

2.8.3 Epilepsy may occur as a result of evil spirit possession Agree ☐ Disagree ☐

Do not know ☐

2.9 Have you ever witnessed a student having a seizure/convulsion? Yes ☐ No ☐

2.10 If yes to question 2.9, how would you describe your experience? Please tick one

1	2	3	4	5
Very frightening	Frightening	Unsure	Not frightening	Not frightening at all
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2.11 Do you think epilepsy can be transmitted from one person to another? Yes ☐ No ☐

Do not know ☐

2.12. Do you believe that epilepsy can be treated or controlled? Yes ☐ No ☐

2.13 If yes to 2.12, please indicate your belief in respect of epilepsy treatment in the options provided below



		Please tick the correct answer in this column
2.13.1	Modern medicine	
2.13.2	Traditional medicine	
2.13.3	Both modern and traditional medicine	
2.13.4	Only through faith healing/religion	
2.13.5	Modern medicine and faith healing/religion	

2.14 What would you do if a student has an epileptic attack? You may tick more than one answer below



2.14.1	Pour water on the face	
2.14.2	Hold the legs and arms	
2.14.3	Make the student smell something to stop the seizure	

2.14.4	Avoid touching the student during seizure	
2.14.5	Promptly move the child away from danger	
2.14.6	Lay the child on his/her side	
2.14.7	Avoid touching the child's saliva	
2.1.4.8	Put something in the mouth	

3. Attitude towards Epilepsy:

3.1 Do you think society discriminates against persons with epilepsy?

Yes []

No []

Do not know []

If yes, how?

.....

.....

3.2 Are you willing to teach a student with epilepsy?

Yes [] No []



Why?.....

.....

3.3 Do you think a student with epilepsy should attend a special school? Yes [] No []

Please elaborate.....

.....

.....

3.4 What is your belief about the academic potential of students with epilepsy? (Up to what grade do you think a student with epilepsy can reach?) Please tick one

	Qualification	Tick this column
3.4.1	Only up to primary 6	
3.4.2	Junior high school	
3.4.3	Second cycle	
3.4.4	Tertiary	

3.5 Willingness to associate with students with epilepsy

3.5.1 Would you allow your students or your children to play with a person with epilepsy?

Yes [] No []



Please elaborate.....

.....
.....

3.5.2 Would you allow a person with epilepsy to marry a close relative? (Brother, sister, child)

Yes [] No []

3.5.3 Do you think persons with epilepsy should have children? Yes [] No [] Not sure []

3.6 Do you agree or disagree with the following statements

3.6.1 I will associate with persons with epilepsy in social gathering? Agree [] Disagree []

3.6.2 I will not change my attitude to a person I know with a recent diagnosis of epilepsy

Agree [] Disagree []

3.6.3. I could have a person with epilepsy as a close friend. Agree [] Disagree []

Thank you for your valuable contribution to this project. I really appreciate the time you have taken to answer my questions

If you have additional comments or concerns, please list them below.

.....
.....





APPENDIX C

INTRODUCTORY LETTER TO THE DIRECTOR OF EDUCATION IN TARKWA-NSUAEM
MUNICIPALITY





UNIVERSITY FOR DEVELOPMENT STUDIES

(School of Allied Health Sciences)

Tel: 03720-93295

Our Ref: UDS/CHD/0222/15

Your Ref:



P.O. Box 1883

Tamale, Ghana

30/03/2017

DEPARTMENT OF COMMUNITY HEALTH

The Director of Education,
Tarkwa-Nsuaem Municipality,
Western Region

Dear Sir/Madam,

REQUEST TO CARRY OUT RESEARCH IN TARKWA-NSUAEM MUNICIPALITY

The School of Allied Health Sciences (SAHS), University for Development Studies would like to request that Mr. Khalid Ahmed Salim a student in the Department of Community Health is permitted to collect data for his M.Phil thesis among basic schools teachers in Tarkwa-Nsuaem Municipality in partial fulfilment of the award of Master of Philosophy degree in Community Health and Development.

The study title is **"KNOWLEDGE, ATTITUDE AND PRACTICES TOWARDS PEOPLE WITH EPILEPSY AMONG PUBLIC BASIC SCHOOL TEACHERS IN TARKWA-NSUAEM MUNICIPALITY"**.

We want to assure your office that data collected would be used only for academic work.

Counting on your support

Yours faithfully

A handwritten signature in black ink, appearing to be 'Aky'.

Akwasi Boakye-Yiadom
(For: Head of Department)

APPENDIX D

PERMISSION LETTER FROM THE DIRECTORATE OF EDUCATION, TARKWA-
NSUAEM MUNICIPALITY



GHANA EDUCATION SERVICE

In case of reply the
Number and Date of this
Letter should be quoted



Municipal Education Office
Post Office Box 736
Tarkwa

My Ref No.: GES/WR/TDO/206/VOL.III/275

12th April, 2017

RE: PERMISSION LETTER

The Municipal Education Office, Tarkwa-Nsuaem has permitted the bearer of this letter Mr. Khalid Ahmed Salim, a graduate student from the school of Allied Health Science (SAHS) University for Development Studies to collect data for his Mph. theses in the Basic Schools in Tarkwa Nsuaem Municipality.

It is our expectation that you give him the necessary support that he may need from you.

Thank you.

ANASTASIA KUNTAA
MUNICIPAL DIRECTOR OF EDUCATION
TARKWA

MR. AHMED SALIM KHALID
UNIVERSITY FOR DEVELOPMENT STUDIES
TAMALE

Cc: All Headteachers of Basic School,



