

**KNOWLEDGE, ATTITUDES AND PRACTICES TOWARDS EPILEPSY
AMONG SECONDARY SCHOOL TEACHERS
IN OSHANA REGION**

**A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF MASTER IN PUBLIC HEALTH**

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ABSTRACT:

Epilepsy is the most common serious and chronic neurological disorder worldwide. Lack of knowledge and negative attitudes among teachers towards epilepsy causes stigmatization and discrimination of children diagnosed with epilepsy on a daily basis. Teachers in Namibia do not receive formal training on epilepsy, which may lead to them missing partial epileptic seizures, especially on undiagnosed children. Little is known about the knowledge, attitudes and practices of Namibian teachers towards epilepsy, because there are no documented findings about the condition. Of the 247 patients who were diagnosed with epilepsy at Oshakati Intermediate Hospital from January to December 2013, 31% of them were school-going children.

It is against this background that a quantitative, descriptive and cross sectional study was employed to assess the knowledge, attitudes and practices of secondary school teachers in Oshana Region towards epilepsy.

The objectives of the study were to: Examine the knowledge of secondary school teachers in Oshana Region on epilepsy, determine the attitudes of secondary school teachers in Oshana Region towards epilepsy and explore practices of secondary school teachers in Oshana Region towards epilepsy

One hundred and thirteen questionnaires were distributed and completed, giving a response rate of 100%. The respondents' ages ranged between 21 and 60, with a range of 37, and a median of 35. The majority of respondents (22%) fell in the age group of 26 – 30. Ninety six percent (96%) of the respondents were familiar with epilepsy. Generally, the attitudes of the teachers towards epilepsy in this study are positive; however there

are some misconceptions about epilepsy, whereby some teachers believe that epilepsy is contagious. Some respondents (19.47%) have revealed the need for a teachers' training on epilepsy, which was also recommended by the study.

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ABBREVIATIONS AND ACRONYMS:

CDC	Centre for Disease Control
IHO	Intermediate Hospital Oshakati
ILAE	International League Against Epilepsy
LWE	Learners With Epilepsy
NANTU	National Teachers Union
NIH	National Institute of Neurological Disorders and Stroke
PWE	People with epilepsy
WHO	World Health Organization

DECLARATION

I, Ndilimeke P. I. Angula, declare hereby that this study is a true reflection of my own research, and that this work, or part thereof has not been submitted for a degree in any other institution of higher education.

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..... (Signature) Date.....

Ndilimeke P. I. Angula

DEDICATION

This thesis is dedicated to my late sister, Bertha Haufiku - Mungongolo, for her continuous encouragement, because she wanted me to succeed in this, my parents, who taught me that even the largest task can be accomplished, if it is done one step at a time. It is also dedicated to my loving husband, Vaino Naneo Angula, for his support, love and caring; our lovely sons, Tangi - Etuna and Tunomukwathi – Etuwilika, to my niece and namesake Ndilimeke P.I. P.Kwooko. Let this achievement be a source of inspiration to you.

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CHAPTER ONE

ORIENTATION AND BACKGROUND OF THE STUDY:

1.1 INTRODUCTION

Public health refers to all organized measures to promote health and prevent diseases, be it communicable or non-communicable (WHO, 2015). Health is an important aspect for every person. It is inextricably linked to all aspects of daily living and is a prerequisite for a productive and satisfying life. It is a major goal of any health care delivery system today to reserve and maximize human capital, by offering health preserving and social practices that result in the avoidance of disease and by offering diagnosis, treatment and rehabilitation services for existing diseases (Uusiku, 2009).

Even though public health strives to promote health and prevent diseases and many countries have put measures in place on their health care delivery system to achieve this goal, there are still many challenges and health problems that societies are grappling with.

Amongst one of the many health problems faced by society is epilepsy. Epilepsy is a chronic neurological condition which is characterized by recurrent seizures or convulsions. A seizure happens when abnormal electrical activity in the brain causes an involuntary change in body movement, function, sensation, awareness, or behaviour. Seizures can vary from a momentary disruption of the senses, to short periods of unconsciousness or staring spells, to convulsions (tonic clonic seizures). Some people have only one type of seizure while others have more than one type (CDC, 2009).

The term epilepsy can be used interchangeably with the term seizure disorder. Epilepsy is a chronic condition and cannot be transmitted from person to person (CDC, 2009). It was also defined by the National Institute of Neurological Disorders and Stroke (NIH, 2013), as a chronic neurological disorder in which clusters of nerve cells, or neurons in the brain, which sometimes signal abnormality and cause seizures.

Epilepsy has been present during the entire development of humankind from prehistory to the present time (Wolf, 2010). There are over 50 million sufferers in the world today, 85% of whom live in developing countries. Approximately 10 million people are affected in Africa. An estimated 2.4 million new cases occur every year world-wide.

Despite scientific advances in the 19th century, epilepsy remained a profound social problem characterised by deeply rooted historical concepts of a supernatural or sacred disorder. People with the disorder are widely labelled as being possessed and the disease is associated with witchcraft. Widespread ignorance, fear, misunderstanding and stigma contributed to severe legal and social penalties (Wolf, 2010).

Stigma about epilepsy dates back to the ancient times, where it was believed to originate from malignant causes and to be associated with sin or demonic possessions. Epileptic seizures were considered a bad omen (Jacoby & Austin, 2007).

In spite of all the information available, common diseases like epilepsy still carry strong social stigma. Stigma and discrimination against people with epilepsy coupled with negative social attitudes towards epilepsy were found to be more devastating and harmful than the disease itself (Thacker, Verma, Ji, Mishra, 2008). The social

discrimination against people with epilepsy is largely attributed to misconceptions about the disease with fear and fright of public on confronting an epileptic seizure.

Teachers' knowledge and attitudes towards epilepsy was found to have a direct impact on students with epilepsy in terms of school performance, social skill development, success in finding employment after school, as well as finding friends (Gorongwa, Gatsi, Gatahwi & Dozva, 2013). If children living with epilepsy are discriminated by their teachers at school, it will negatively affect their lives in future and vice versa.

The social discrimination against epilepsy was found to be mainly affecting school children as they are in their growing age with interactions at multiple levels (Thacker et al, 2008). Young Epilepsy (YE), 2015 has revealed that about 79% of people with epilepsy are victims of discrimination across the United Kingdom, with a great concern of whether the children will cope with those negative reactions. This can only be alleviated by the teachers' good knowledge, attitudes and practices, because they play a vital role in developing the community.

1.2 THE STUDY AREA

The study was conducted in Oshana region, Namibia. Namibia is a developing country in Southern Africa on the Atlantic coast which shares its borders with Angola and Zambia to the north, Botswana to the east and South Africa to the south. The population of Namibia is estimated to be 2.1 million. Oshana region (Figure 1.3) is one of the thirteen educational regions, which has a total number of 137 schools, with 2241

Little is known about the knowledge, attitudes and practices of teachers towards epilepsy in Namibia, because there are no documented findings about the condition. This has prompted the researcher to conduct research in this field. School personnel, including teachers, play a vital role in informing educators and parents about chronic illnesses, such as seizure disorders (Barza, 2014). Epilepsy is prevalent in Namibia as well. A total of 247 patients diagnosed with epilepsy were treated at Oshakati Intermediate Hospital from January to December 2013, whereby 31% of these patients were school going children.

1.4 PURPOSE OF THE STUDY:

The purpose of the study was to assess the knowledge, attitudes and practices of secondary school teachers in Oshana Region towards epilepsy.

1.5 THE OBJECTIVES OF THE STUDY ARE TO:

- Examine the knowledge of secondary school teachers in the Oshana Region on epilepsy.
- Determine the attitudes of secondary school teachers in Oshana Region towards epilepsy.
- Explore practices of secondary school teachers in Oshana Region towards epilepsy

1.6 SIGNIFICANCE OF THE STUDY:

Examining the knowledge, attitudes and practices towards epilepsy among teachers is important, because the degree of the teachers' knowledge, attitudes and practices has a

significant impact on learners with epilepsy (LWE) and their peers. School children with epilepsy spend most of their daytime socializing and interacting with their teachers and their schoolmates, therefore teachers 'understanding of the condition plays an important role in LWEs' lives and in the public at large. The teachers can pass on the knowledge to their pupils and indirectly to the community, minimizing discrimination of pupils with epilepsy (Akpan, Ikpeme, & Utuk, 2013). Teachers usually do not receive any formal instructions on epilepsy during their training, yet they are expected to take care of children living with epilepsy.

Documenting the knowledge, attitudes and practices towards epilepsy among the teachers will help in the designing of better interventions to prevent stigmatization of the condition, because the Ministry of Education could educate teachers, thus closing the gap on knowledge; which will result in the school children living with this condition benefiting from their teachers' knowledge. The teachers need to be well educated about epilepsy and the factors that trigger these attacks, such as flickering lights in order to advocate for proper accommodation of children living with epilepsy.

There is a need to enlighten teachers on epilepsy, in order to help the children with this condition, because they are found to experience feelings of anxiety, anger, and frustration about living with epilepsy; which are attributed primarily to having seizures, bullying, academic difficulties and medication experimentation (Whitting -MacKinnon et al, 2012).

1.7 DEFINITION OF TERMINOLOGY:

Knowledge: Familiarity with someone or something, which can include facts, information, descriptions, or skills acquired through experience or education. It can refer to the theoretical or practical understanding of a subject. It can be implicit (as with practical skill or expertise) or explicitly (as with the theoretical understanding of a subject); and it can be more or less formal or systematic (Oxford Dictionaries, 2015).

Attitude: An opinion that one has about someone or something. It can reflect a favourable, unfavourable, or neutral judgment. Attitudes are thought to reflect the “mental readiness” or learned “disposition” that influence actions and reactions. It is a way of thinking or feeling about something (Hamdan, 2012). It is a predisposition to behave in a particular way (Gilbert, 2012).

Practice: The actual application, putting an idea into action, performing an activity or exercise repeatedly in order to improve or maintain one's proficiency. It also refers to the customary, habitual, or expected procedure or way of doing something (Oxford Dictionaries, 2015), in this case the behaviour displayed towards children living with epilepsy.

Epilepsy: A brain disorder characterised by an enduring predisposition to generate epileptic seizures and by the neurobiologic, cognitive, psychological, and social consequences of the condition (Ko, 2015).

Teacher: In relation to state schools, means a staff member who is professionally qualified to teach others in formal education and whose occupation is teaching (Namibia Education Act, 2001)

Secondary school: A school or part of a school in which basic education from the level of grade eight to the level of grade twelve is provided (Namibia Education Act, 2001).

Learner: Any person who is registered and receiving basic education or course of study in terms of the Namibian Education Act 16 of 2001 (Namibia Education Act, 2001).

Special school: A school or part of a school in which special education is provided (Namibia Education Act, 2001).

1.8 CONCEPTUAL FRAMEWORK:

A conceptual framework is a conceptual status of the concepts or variables being studied and their relationship to each other (Punch, 2014). Kerlinger, 1986, as cited by Molefe, (2014), defined a theoretical framework in two parts, whereby a theory was referred to as set of interrelated constructs, definitions, and propositions that present a systematic view of phenomena by specifying relations among variables with the purpose of explaining and predicting phenomena.

Theoretical or conceptual frameworks play a vital role in research. They help researchers to spell out important concepts in research and the relationships between these concepts (Muhumuza, Sanders & Balkwill, 2013).

The purpose of a conceptual or theoretical framework is to help the researcher to clearly see the variables of the study in question; it can also help provide the researcher with a general framework of data analysis (Mehta, 2013). A typical theoretical framework provides schematic description of relationships among independent, dependent,

moderator, control and extraneous variables so that a reader can easily comprehend the theorised relationships (Chikukwa, 2008). This study includes the dependent variables such as the teachers' knowledge, attitudes and practices; and the independent variables such as the demographic variables, for example level of education of the teachers, age, sex, marital status, etc. The teachers' level of education, marital status, age and gender in this study might affect the teachers' attitude and practices towards epilepsy. The relationships between these variables are tested during the analytical phase of this study. The conceptual framework which was adopted from Hamadan, (2012) and modified by the researcher is shown in Figure 1.2 below:

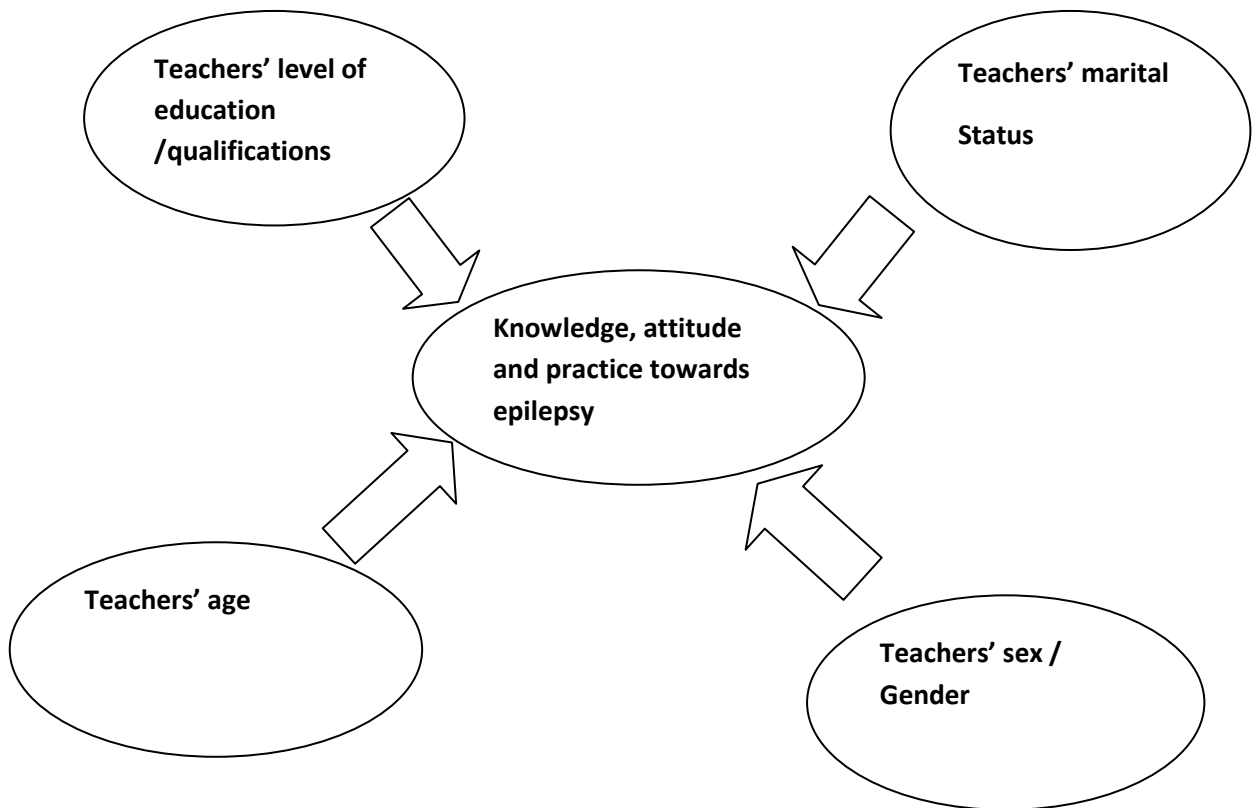


Figure 1.2: A conceptual framework of the study (Hamdan, 2012)

1.9 SUMMARY

This chapter provided a general overview and the rationale of the study, including the research problem, the research purpose and the objectives, definition of the terms as well as a conceptual or theoretical framework. In the next chapter a review will be conducted of the current literature on knowledge, attitudes and practices towards epilepsy among the teachers from different studies conducted previously.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION:

Chapter 1 has provided a general overview and the rationale of the study, including the research problem, the research purpose and the objectives, definition of the terms as well as a conceptual or theoretical framework. In this chapter, a review will be conducted of the current literature on knowledge, attitudes and practices towards epilepsy among the teachers from different studies conducted previously.

2.2 BACKGROUND OF EPILEPSY

Epilepsy is the most common serious and chronic neurological disorder worldwide. It can be caused by a brain disease or injury, infections such as meningitis, encephalitis, brain tumours, degenerative diseases and vascular diseases. It can also be caused by alcohol abuse, drug abuse or toxic substances. It is more common in developing countries, where it was found to be caused or related to preventable parasitic diseases, such as neurocysticercosis, malaria and schistosomiasis. However, some of the causes are not known. It has no age, racial, social class, national or geographic boundaries. It is believed that about 50% of the cases begin in childhood and adolescence (WHO, 2014).

Epilepsy is a disease or a condition, characterized by the occurrence of sporadic electrical storms in the brain called seizures. However, the commonly used definition of

epilepsy according to the International League Against Epilepsy (ILAE), is the occurrence of two unprovoked seizures, more than 24 hours apart (Fisher, 2014).

It is important to understand briefly how the brain functions normally, in order to understand how epilepsy arises. The brain consists of millions of nerve cells, or neurons, and their supporting structures. Each neuron maintains itself in an electrically charged state. It receives electrical signals from other neurons and passes them on to others. A tiny quantity of a special neurotransmitter substance is released from the terminals of one neuron, whereby it excites an electrical response in the neuron next in the chain and the signal moves onward. All the functions of the brain, including feeling, seeing, thinking and moving muscles depend on electrical signals being passed from one neuron to the next. This is done normally by the brain, by constantly generating electrical rhythms in an orderly way. An epileptic seizure results, when this order is disrupted by some neurons discharging signals inappropriately (Omran, Schwarz-Herion & Viehbacher, 2011). Anything which disrupts the brain's circuitry might cause epilepsy as shown in fig 2.1.



Figure 2.1: Effects of epilepsy on the brain (Hicks, 2014).

2.3 TYPES OF EPILEPTIC SEIZURES:

Epileptic seizures are divided into two broad categories: generalized seizures and partial seizures, which are also called local or focal seizures. Generalized seizures are categorized in types such as grand mal or tonic – clonic, which is found to involve the entire brain, and often causes unconsciousness, convulsions as well as muscle rigidity.

Generalized seizures involve discharges from both cerebral hemispheres and sub-cortical connections and structures. Abnormal electrical activities begin in both hemispheres at the same time. A seizure is described as complex if it is associated with a loss of consciousness (Barza, 2014).

The absence seizure is also categorized as a generalized seizure, which is characterized by a brief loss of consciousness. Absence or petit mal seizures are the most common types of seizures in children. They are characterized by losses of awareness without

changes in muscle tone, vacant stare, rapid eyelid blinking at about 3 per second, and no recollection of the seizure. Typical absence seizures classically occur between the ages of 3 and 12 (Barza, 2014). There is a danger in this, because some teachers might miss the condition and label the child as lazy or not concentrating in class. This might also delay diagnosis of the condition, because the teacher has an important role in society of teaching and advising the parents on the child's condition and growth. If the teachers do not possess knowledge about epilepsy, parents might not also take note of the child's condition.

Other types of generalized seizures are: myoclonic, which is characterized by sporadic (isolated) jerking movements, clonic seizures, characterised by repetitive jerking movements, tonic seizures, characterized by muscle rigidity and atonic seizures, characterized by loss of muscle tone (Senelick, 2014).

Tonic-clonic or grand mal types are most easily identified as a seizure because of their dramatic physical expression. This type of seizure is characterized by a sudden cry then unconsciousness, body rigidity, muscle jerking, clenched teeth, and possible suspended breathing. The seizure commonly lasts for about 2-3 minutes, while the entire seizure and recovery period may span about 10-20 minutes (Barza, 2014). Tonic clonic seizures were found to be more noticeable, but frightening to both teachers and LWE's classmates (Hung, 2009). The latter types can easily be noticed by the teachers and they will be able to advice the parents accordingly.

The generalized type of epilepsy is shown in Figure 2.2.

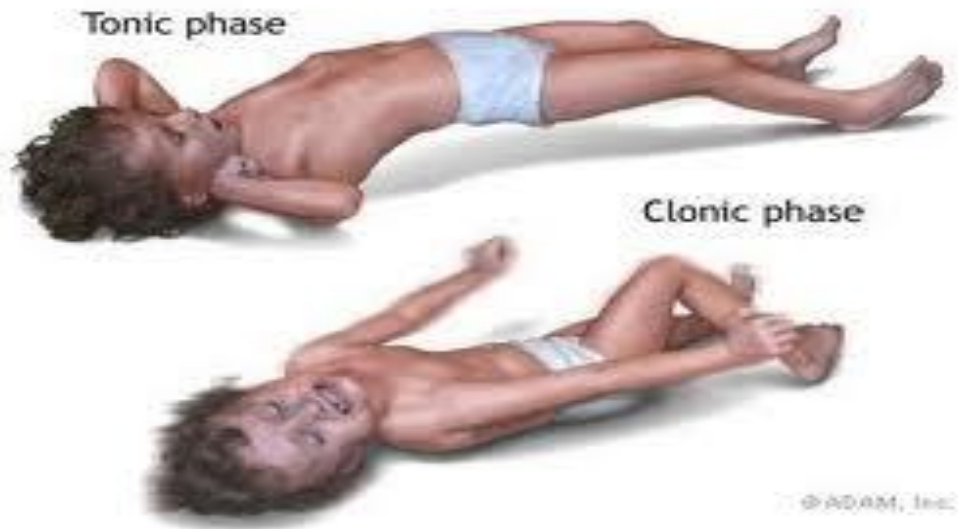
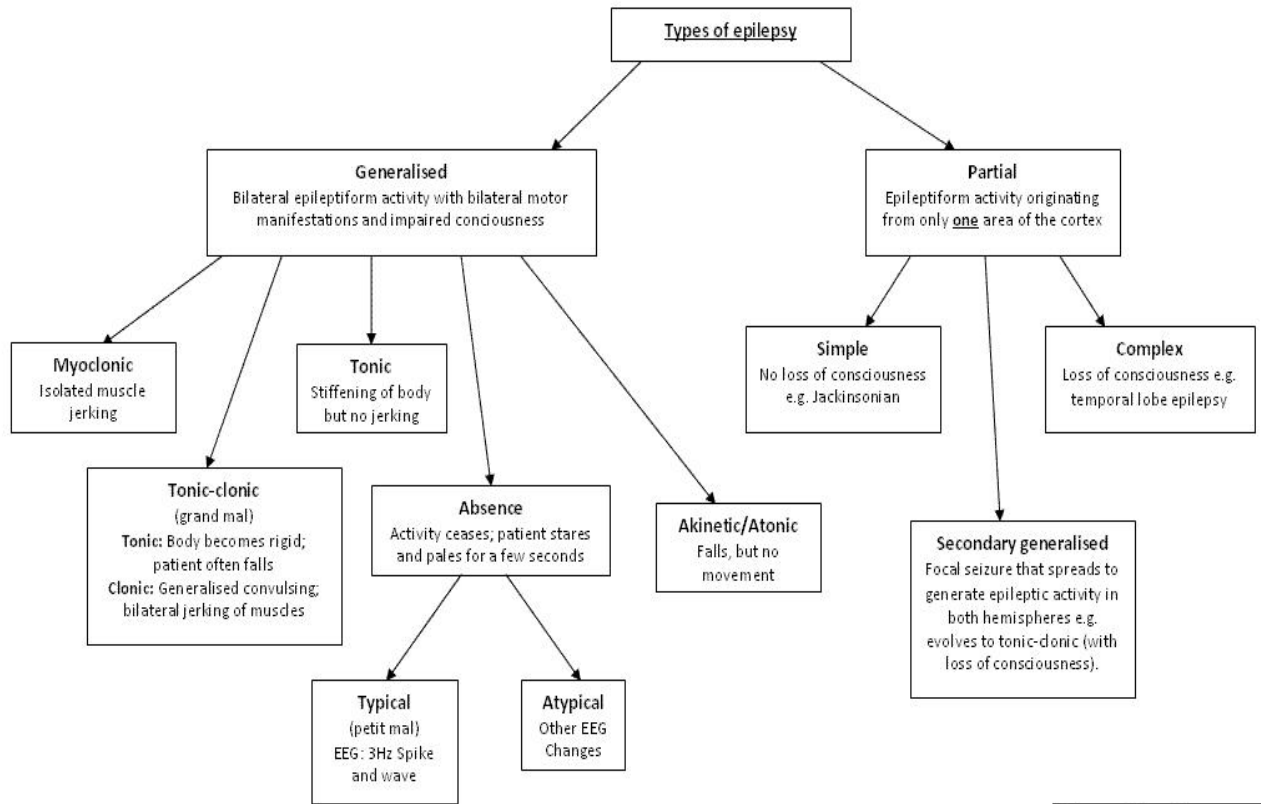


Figure 2.2: A figure showing generalized seizures (Hicks, 2014).

Partial seizures are divided into simple, complex and the ones that evolve into secondary generalized seizures. The difference between simple and complex seizures is that during simple partial seizures, the patient does not lose awareness, while they lose awareness during complex partial seizures (Senelick, 2014). Partial seizures involve localized discharges in the brain. They begin focally; meaning onset is from one brain region or one cerebral hemisphere only.

Although the characteristics of the types of seizures are described above, it must be noted that not everyone with epilepsy has the same type of seizure and it may affect people differently (Spriggs, 2014).

The types of epilepsy are described in more detail below (Figure 2.3).



fastbleep))

Figure 2.3: A figure showing the types of epileptic seizures (Shereef, 2015).

2.4 CAUSES OF EPILEPSY

The World Health Organization emphasises that epilepsy is not contagious. There are some noted factors that can cause epilepsy, although the most common type of epilepsy, which is found to affect 6 out of 10 people has no identifiable cause. This type of epilepsy is known as idiopathic epilepsy (WHO, 2015). The type of epilepsy which has a known cause is called secondary epilepsy, or symptomatic epilepsy.

The causes of secondary epilepsy could be:

- A severe head injury
- Brain damage from prenatal or perinatal injuries, which could be due to lack of oxygen, trauma during birth and low birth weight.
- Congenital abnormalities or genetic conditions with associated brain malformations
- A stroke that restricts the amount of oxygen to the brain
- An infection of the brain such as meningitis, encephalitis, neurocysticercosis,
- Certain genetic syndromes
- Brain tumours (WHO, 2015)
- The causes of epilepsy are described in more detail in Figure 2.4 below.

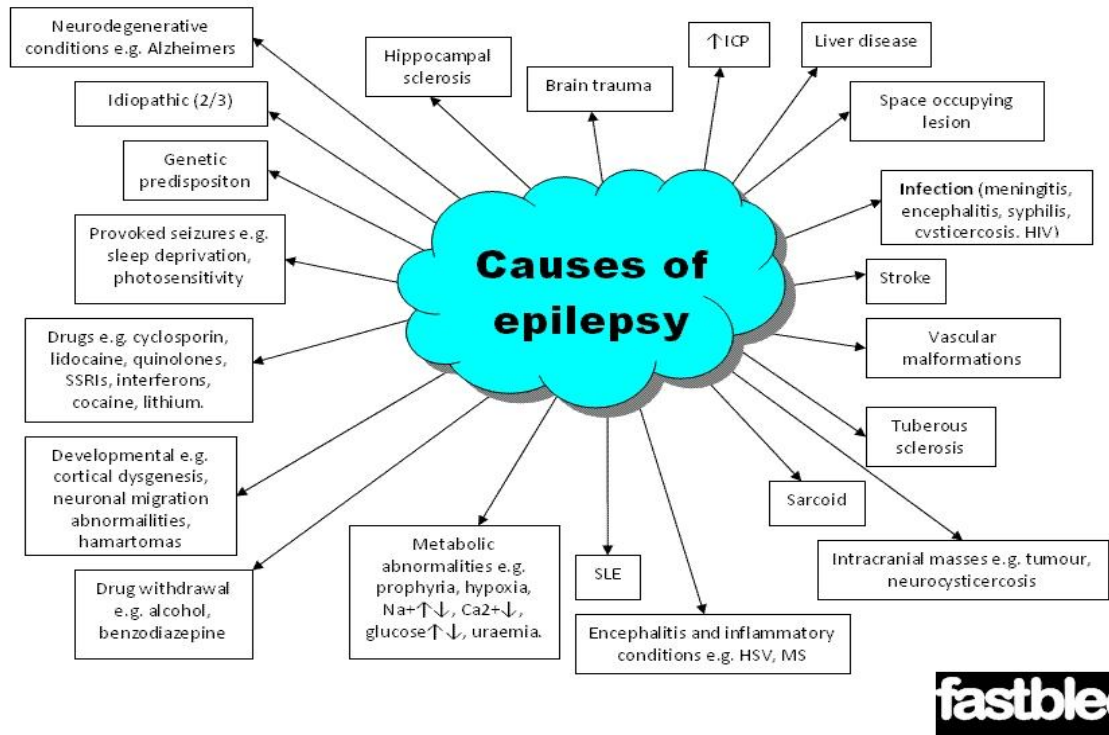


Figure 2.4: A figure showing the causes of epilepsy (Shereef, 2015).

The causes of secondary epilepsy were described above to put an emphasis on the fact that there are other causes apart from primary or idiopathic epilepsy. However, it has to be taken note of that the causes of epilepsy at school is mostly idiopathic, although there might be other causes that can affect children as well in addition to the ones described above, such as brain damage, head injury and brain infections (Cristopher, 2014).

2.5 KNOWLEDGE, ATTITUDES AND PRACTICES OF TEACHERS

TOWARDS LEARNERS WITH EPILEPSY

Knowledge of epilepsy amongst teachers and first-aid management of an epileptic attack was found to be poor (Frank-Briggs, 2015). The attitude of teachers towards epilepsy

was also found to be negative on the studies conducted about this condition worldwide. It will be beneficial to understand what epilepsy is, before getting into detail about the knowledge, attitudes and practices of teachers towards it.

It is important to note that the teachers' knowledge and attitudes towards pupils living with epilepsy and the extent to which these are communicated are fundamentally crucial and can influence the ways in which individual pupils perceive themselves as well as the way they are viewed by their peers. A teacher's attitude towards an epileptic seizure is plays a big role in this situation, because if the teacher reacts with fear, he will instil fear among the pupils and that is how they will react towards epilepsy once it occurs. It was also detected that if a teacher has a negative attitude towards children living with epilepsy the school mates or classmates of those will also follow suit (Goronga et al, 2013). A study conducted in Malaysia found that teachers in that study showed a positive attitude towards people with epilepsy, which is hoped that they will instil in their students, however they were only positive when it comes to employing people with epilepsy, but not marrying them (Lim, Hills, Choo, Wong, Wu & Tan, 2013).

Stigma is defined as any social attribute that is deeply discrediting for an individual or about a condition, epilepsy in this case. Its origin is from a Latin word "stigmat", which means to brand (Ahmad, 2011). Stigma about epilepsy can affect children in their everyday activities such as going to school. Stigma towards epilepsy is not only determined by the actual characteristics of the disorder, but also by the social stereotypes concerning it. This is caused by the lack of information about epilepsy which results in fear of the condition. In the case of epilepsy, fear and stigma could be a result of

perceptions about it, because of its nature and its unpredictability as it causes violent attacks on the person living with it (Lua & Neni, 2010). Unfortunately, knowledge and attitudes as well as stigmatization towards epilepsy have also been reported to be influenced by the socio-cultural environment in which the individual is residing (Akpan, Ikpeme, & Utuk, 2013).

Negative attitudes by the teachers towards children living with epilepsy were noted as a cause of low self-esteem and can lead to social discrimination of those children. This might lead to psychological problems. Children living with epilepsy were found to be at increased risk of educational under-achievement and learning disabilities. Poor performance at school can also be caused by loss of learning opportunity, because the child might be absent, attending hospital follow ups (Reyace, Kaheni, Sharifzadeh, 2013).

Poor knowledge about epilepsy among teachers was found to cause setbacks in the lives of LWE. According to a study conducted in Nigeria 18.2% of LWE had been expelled from school because of recurrent seizures (Nuhu, Yusuf, Sheikh, and Esegbe, 2012). Poor knowledge about epilepsy among teachers was also found to cause problems among the LWE, because teachers were found to believe that LWE were more likely to develop and express criminal tendencies compared to learners without epilepsy (Gibson, 2013). Misconceptions about epilepsy were attributed to poor educative programs about the condition (Karimi & Heidan, 2015).

Although many children living with epilepsy were found to have normal IQ tests, most of them experience slowed cognitive functions, fatigue, poor focus and attention at school. This was attributed to the side effects of the medication they are taking. The teacher has a responsibility to be considerate when handling learners with epilepsy (LWE) (Dakwa & Mudyahoto, 2013).

Good knowledge, attitudes and practices towards epilepsy among teachers is crucial for the improvement of quality of life of the school going children living with this condition. According to a study conducted in the United States of America among teachers, the results suggest a positive picture of teachers' attitudes towards epilepsy (Bishop & Boag, 2006). However, a number of historically problematic and stigmatizing ideas about epilepsy and persons with epilepsy remain prevalent. The study has also shown low levels of preparedness for teaching students with epilepsy (Bishop et al, 2006). This is in agreement with a study which was comparing attitudes towards epilepsy comparing certain countries; some teachers have opposed participation of a child with epilepsy in their classes (Talarska, Stanisławska, Strugała, & Talarska, 2014).

The findings above were similar to a study conducted in Thailand, where some teachers have refused to teach children living with epilepsy. However, these studies differ in a way from a study conducted in Thailand, where a significant number of teachers showed negative attitudes towards epilepsy, because they have indicated that it is contagious (Bhesania, Savul, & Zehra, 2014).

Many studies conducted, be it in developing or developed countries, showed poor attitudes towards epilepsy, which was attributed to a lack of organized information

campaigns in many countries to overcome the problem. A recommendation appearing in most of these studies was to equip teachers with information on epilepsy, to remove the fear and misconceptions, because even the teachers who knew that the disease is not contagious showed some form of fear (Asadi – Pooya & Torabi – Nami, 2012).

The stigma of epilepsy has great influence on the education of children and young people. This could negatively affect the education of children living with epilepsy. According to a study conducted in Nigeria, some children with epilepsy were withdrawn from school by their educated parents due to their condition (Ekeh & Ekrikpo, 2015). This finding is in agreement with a study conducted in Kenya, where a similar attitude was observed (Nyakwana, Simbauni, & Jowi, 2014).

WHO has launched a global campaign against epilepsy, themed: "Epilepsy Out of the Shadows", which aims to support countries worldwide in reducing the burden caused by epilepsy through the improvement of acceptability, access to services, prevention and quality care (Samba, 2011). In a study conducted in China, teachers were found to be sceptical about the treatment of epilepsy, because it was indicated that they did not know how long it will take for learners with epilepsy (LWE) to be cured (Yang, Wang, Snape, Chen, Zhang, Wu et al, 2011). Similarly, a study conducted in Cameroon has also revealed that many people with epilepsy do not get the care they need, due to stigma of the condition (Burton, 2015).

Although WHO is struggling to improve acceptability of epilepsy, there is still much to be done, because the condition is not fully understood. Stigmatization of this condition is

still alarmingly high. A study conducted in Malawi on epilepsy has revealed that some of the children living with epilepsy have been strongly discouraged from attending school by both parents and teachers, because they felt that the condition makes them unable to learn in a mainstream school environment. About 60% of the respondents in this study have reported being expelled from school for having repeated seizures during school time. Some of the children living with epilepsy leave school because of bullying, shame and fear of other children and teachers. It was also noted that teachers were not able to defend the children with epilepsy, due to lack of knowledge about the condition (Wapling, 2011).

Teachers have a responsibility, together with the parents of children with epilepsy to educate LWEs' school mates on what epilepsy is and how to act in case of a seizure. Building awareness and educating the school community about epilepsy was deemed important in a study conducted in Canada. It is believed that the misconceptions about epilepsy would be alleviated through education, and this would help in spreading awareness of what seizures look like, how they can be triggered, and how to help in the event of a seizure. Lack of knowledge about epilepsy is also believed to have resulted in misinterpretation of absence seizures by the teachers, which they believed to be daydreaming (Whiting - MacKinnon et al, 2012). This has a negative impact on the children's lives, because according to a study done in Nigeria, several teachers had little or no knowledge about the basic manifestations as well as types of epileptic seizures. Many of the teachers in this study believed that all epileptic seizures are convulsive. However, the findings were not unique to Nigeria, but it is also in agreement with other

reports in other countries. There is a danger of missing non – convulsive epilepsy, if the teachers are not aware of other types of epileptic seizures (Owolabi, Shehu, & Owolabi, 2014).

Education and imparting of knowledge is not only necessary to the public, but to the patients as well, because some of them were found not to understand their condition. School children living with epilepsy were found to suffer from depression, because they feel that they are not in control of their bodies at the time of a seizure. They might experience the world as an unpredictable, discontinuous, and scary place. Poor knowledge about epilepsy might lead to the teacher overprotecting children living with the condition regarding their safety. The child might become dependent and might feel helpless and worthless. Many children with epilepsy feel embarrassed when a seizure occurs in public. Feeling isolated or different from other children is also common amongst children with epilepsy. This often leads to low self-esteem and feelings of low self-worth. A recommendation was made that a teacher should be on the lookout and is considerate when dealing with those children; at least to make sure that the child is not left out (Canadian Epilepsy Alliance, 2015).

Another recommendation from a study conducted in Canada was to have a nurse at the beginning of the year to visit schools to give health education on epilepsy and its features to help alleviate fear among the children and teachers as well (Whiting-Mackinnon & Roberts, 2012).

A study conducted in Nigeria revealed that epilepsy is stigmatized, irrespective of the respondent's level of education or occupation, whereby a considerably negative attitude towards epilepsy was detected. The respondents in the study revealed that they did not want to get married to or employ a person with epilepsy. In addition, the respondents expressed that they will react differently if an acquaintance was diagnosed with epilepsy. This was found to be a cause for concern (Ekenze & Ndukuba, 2012). Several studies in Nigeria also revealed poor knowledge and negative attitudes towards children with seizure disorders by their teachers (Akpan et al, 2013). Teachers could play a valuable role in rectifying some of the misconceptions described earlier.

Poor knowledge about epilepsy, stigma associated with the disorder, ignorance that it is a treatable disorder and restricted access to health care was found to have a negative influence on the quality of life of people with epilepsy, especially in the low-resource countries (Gourie-Devi, Singh & Bala, 2010).

Educating the teachers will help alleviate stigmatization of epilepsy, since they have a big influence on their communities in the sense that when they educate the children on the condition, they are educating the community indirectly (WHO, 2014). However poor knowledge about epilepsy and negative attitudes towards children living with this condition continue to play a role among the teachers, who should ideally be advocating for the health and wellbeing of these children. The results of a study conducted in India revealed that there was poor knowledge towards epilepsy among the teachers (Joshi, Mahmood, Bamel, Agarwal, & Shaifali, 2012).

It is not only knowledge and attitudes towards epilepsy that need to be improved among the teachers, but the practices towards the condition need to be improved as well. According to a study conducted in Italy on epilepsy, the attitudes and knowledge of the teachers towards children living with epilepsy was found to be satisfactory, however the practices on how to help a child who has a seizure were found to be poor, with most of them calling an ambulance when the child experienced a seizure. Despite the positive attitudes, the teachers in the Italian study considered epilepsy and its treatment as a source of learning disability (Mecarelli et al, 2014).

Wrong practices when it comes to the management of a child with a seizure were also reported in a study conducted in Ethiopia among the teachers, where the teachers responded that they will insert a spoon in the mouth of a person having a seizure, or provide a matchstick smoke during a seizure. The causes of epilepsy were also poorly understood in the Ethiopian study, with many people mentioning witchcraft as the cause. A majority of the respondents also believed that epilepsy is contagious (Gedefa, Wolde, & Solomon, 2012). Although the causes of epilepsy are often misunderstood, a study conducted in Nigeria revealed that a significant number of teachers (70%) who were the majority of respondents in that study revealed that epilepsy is not contagious (Mustapha, Odu, & Akande, 2012).

The findings mentioned above are in agreement with a study conducted in Nigeria, whereby about 30.5% of selected teachers in primary, secondary and tertiary institutions in the North Central part of Nigeria, believed that epilepsy could be contracted through the saliva of an epileptic patient, while 27.7% thought epilepsy was similar to being

possessed by evil spirits. About 10% of these teachers misunderstood epilepsy and believed it was insanity. This led the authors to conclude that a negative attitude and bias against epilepsy were still ingrained among teachers in Nigeria, while the majority of them know little about the aetiology of epilepsy (Akinsulore¹, & Adewuya, 2010).

Negative attitudes towards epilepsy affect children living with this condition negatively, especially when the teachers believe that a child with epilepsy in the classroom would distract colleagues and disrupt the learning environment, more so when they experience a seizure attack. This was noted in a study conducted in Brazil among the teachers. A child living with epilepsy will not be able to survive in that environment, because he will feel that he is a burden to others (Zanni, Matsukura, & Filho, 2012).

Teachers' knowledge and attitudes towards epilepsy can have a direct impact on students with epilepsy, especially on their school performance, social skill development, and post-school success in the areas of employment, because children living with epilepsy were found to be among those underachieving in school. This impact extends to social skills and social network development, which leads to underemployment or unemployment later in life (Reyace, et al., 2013). The study by Reyace et al, 2013 is in agreement with a similar study conducted in Pakistan, whereby the teachers' negative attitudes towards children living with epilepsy is predicted to have a negative impact on students' development. These findings are also similar to a study conducted in Iran on the attitudes of biology teachers towards epileptics that showed fear, avoidance and other negative attitudes. Disappointingly, another study, on the rural population of north eastern Thailand showed that 90% participants thought that people with epilepsy cannot

live in the society like healthy people do. They also felt that epileptic children could not go to school like other children (Bhesania, et al., 2014).

The views above are in agreement with a study conducted in Iraq, in which more than half of the teachers thought that children with epilepsy are mentally underdeveloped, a threat to the community and should be separated from others who do not have epilepsy. Teachers in the study conducted in Iraq believed that children living with epilepsy often displayed illegal behaviours more than non-epileptic pupils. They also believed that children living with epilepsy could not have a normal life expectancy and also believed that children living with epilepsy must be separated from others, because they have an undesirable impact on the other children in a regular class (Abdulla, 2014).

Even though the causes of stigma towards epilepsy among the teachers are complex, lack of knowledge has been considered an important determinant factor in the negative attitudes towards children living with it. Studying knowledge, attitudes and practices towards epilepsy is useful in decreasing discrimination and stigmatization. Identifying misunderstandings and misconceptions among teachers can help alleviate problems associated with epilepsy. This was realised when a study conducted in China and Taiwan showed higher levels of discrimination against epilepsy, when compared to the one conducted in the United States (Neni, Latif, Wong, & Lua, 2010).

Most of the studies conducted globally have recommended that educating teachers on epilepsy and on how to handle an epileptic seizure will help alleviate the stigma towards children living with epilepsy. The Epilepsy Foundation of America 2009 made an effort to draw up guidelines for the teachers to be trained on how to handle epilepsy at school,

step by step on different types of epileptic seizures. For example, the teacher should keep calm and reassure the other children that the learner with epilepsy will be fine, when handling complex partial seizures (Epilepsy Foundation of America, 2009).

Similarly, a study conducted in Zambia has also recommended that stigma reduction programs should include major efforts to dispel contagion beliefs among the teachers, LWE as well as the greater community (Atadzhanov, Haworth, Chomba, Mbewe, and Birbeck, 2010).

Lua & Neni (2010) have also cited educating the teachers and the public at large about epilepsy as an important tool to alleviate the sufferings of people living with epilepsy. Furthermore, they noted that if these problems are to be dealt with effectively, a systematic study concerning awareness, knowledge, and attitudes towards epilepsy is a necessary first step. Defining common areas of both deficiency and strength to improve what is lacking will also be beneficial in alleviating negative attitudes and bad practices towards epilepsy.

In a study conducted by Lugthart (2011) about epilepsy management in Africa, a recommendation was made to put an emphasis on educating the public and teachers as well, in order to minimize stigma towards epilepsy and to add value to the quality of life for the people living with epilepsy.

Another study conducted in Germany strongly recommended that education about epilepsy needs to be given to the teachers and the public at large, because they have discovered that the quality of life of students with epilepsy may seriously be affected by

the attitudes of their families and teachers, if they are unaware of or uneducated about their condition (Omran, Schwarz-Herion & Viehbacher, 2011).

A positive attitude and good practices towards epilepsy was found to have a positive influence and can contribute to the successful school adjustment in children with epilepsy. Similarly, the teachers' attitudes towards epilepsy were found to have predicted their knowledge about epilepsy (Roux, 2009).

In support of teachers' training on epilepsy, Bohac (2011) in a study about the teachers' attitudes towards epilepsy detected that understanding teacher attitudes, training experiences, and personal knowledge of epilepsy may help guide schools in placement decisions, determining special education services, and may ultimately shape training programs for teachers on epilepsy. This study also pointed out the fact that there is poor knowledge about epilepsy among teachers in general, with many of them not ready and/or prepared to teach children living with epilepsy.

The children living with epilepsy experience a lot of anxiety and many have expressed that they need their teachers to be empathetic, caring and they need their teachers to have first aid seizure skills, as well as to provide on-going support. These types of support were identified as ways of promoting positive school experiences for children with epilepsy. Those were the experiences expressed by children living with epilepsy in Canada, which cannot be met, if the teachers do not have good knowledge about epilepsy (Whiting-Mackinnon & Roberts, 2012).

2.6 WHAT THE TEACHERS CAN DO TO HELP LEARNERS WITH EPILEPSY (LWE):

Teachers play an important role in society; they teach and advise parents on the child's development. Teachers further play a role in the identification of problems that affect children at school; therefore they have a role to play in cases of epilepsy.

Teachers should be familiar with different types of seizures: whilst a child may experience observable seizures, there are seizures that one cannot see, as well as nocturnal seizures. The condition might affect the child's energy level and concentration. Teachers are thus advised to modify the level of instruction, to ensure that the child with epilepsy is not left out, for example they can use repetition and direct instructions. In addition, teachers might postpone a test, until they can see that the child is able to concentrate, and the instructional language used by the teacher must be simple, clear and consistent, so that the child with epilepsy will know what is expected from them (Canadian Epilepsy Alliance, 2015).

Teachers should always strive to uplift the child with epilepsy's self-esteem, because low self-esteem has been observed in children living with epilepsy. This can be addressed through establishing peer support to those children and by helping them to make friends (Canadian Epilepsy Alliance, 2015).

The teachers should be knowledgeable that absence seizures may appear like day dreaming; however the difference is that they can easily wake the child up when they are

day dreaming by touching or calling their names, while one cannot wake the child up when having an epileptic seizure. Teachers are urged to be calm and patient during the seizure, and are also advised to repeat the instruction that they might have given during the seizure (Canadian Epilepsy Alliance, 2015).

Teachers should reassure other children that their classmate will be fine; they can do this by explaining the condition to other learners. They should explain to other children that the child with epilepsy is just like everyone else, despite her condition; and should reassure the children that the condition is not contagious and they are not going to contract it from him or her. They should discourage the other learners from teasing the child with epilepsy, because the negative attitudes from other children was found to be more harmful than the condition itself (Canadian Epilepsy Alliance, 2015)

The teacher should supervise the field trips, but should not be overprotective (Canadian Epilepsy Alliance, 2015).

It is also important for the teachers to encourage parents to disclose the problems including epilepsy that affect the children and should reassure the parents that their disclosure is confidential (Epilepsy Society, 2015).

The teachers should ensure that the information they are disseminating to the learners about epilepsy is correct, because it is not only useful in the classroom, but later in life as well (Driscoll, 2009).

2.7 SUMMARY

This chapter presented an in-depth literature review. The next chapter will present the methodology of the research, which includes the research design and methods.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

In chapter 2 the literature review was discussed. The research design and methods deemed appropriate for the study on the knowledge attitudes and practices of senior secondary school teachers in Oshana is presented in this chapter.

3.2 RESEARCH DESIGN

The study is quantitative, descriptive and cross-sectional. In this study the researcher will equate the term “approach” with “design”.

A research design is a plan or blueprint that describes how the research will be conducted. Parahoo (1997), as cited by De Langen (2009) describes a research design as a plan that describes how, when and where data are to be collected and analysed. It focuses on the kind of study proposed and its desired result. The research design begins with a problem, or question, and in the context of the logic of the research, determines what kind of evidence will address the research question adequately (De Vos, et al, 2011). A post-positivist approach using random sampling, deductive reasoning and measurement by numbers and validity as well as reliability was used in this study.

3.2.1 Descriptive cross – sectional design

Descriptive studies observe, describe and document aspects as they occur naturally, without any intervention by the researcher (De Vos et al, 2011). Cross-sectional studies

examine the relationship between variables of interest as they exist in a defined population at a certain point in time (Kanchanaraksa, 2008).

A cross-sectional descriptive design was used in this project, because all data was collected at one time (De Vos et al, 2011). The design was chosen, because it will help describe the knowledge, attitudes and practices of secondary school teachers towards epilepsy as they appear, without any educational intervention by the researcher.

3.3 STUDY POPULATION:

A population is any defined group that is selected as a subject for research. It is a group or total amount of people, events, organization units, case records or other sampling units which helps to address the research questions. The group should have a given set of characteristics, about which the researcher wishes to draw conclusions (De Vos et al, 2011).

The study population in this study consisted of all the secondary school teachers in Oshana Region, which consists of 377 qualified, full time teachers in 13 secondary schools. It excludes teachers at primary schools.

3.4 SAMPLE AND SAMPLING PROCESS:

A sample is a group of people or elements that form part of a study population. It is a small portion of the total set of the population; together they comprise the subjects of the study. Sampling is the most feasible way of studying large populations, given resources, time and financial limitations (De Vos, et al, 2011). It is a procedure used by social

researchers because they do not have time or resources to do research on the whole population (Seale, 2009).

3.4.1 Sampling process

In this study, cluster sampling was used and it was done in two stages. In the first stage, five schools were selected by means of random sampling with the numbers elicited by a computer to select the five schools contacted for research.

During the second stage, the teachers in the five selected schools were selected using stratified random sampling, to ensure proportional representation of the sample, because the number of teachers varies at each school.

The total study population is 377. Grinel and Williams (1990), as cited by De vos et al (2011), has stated that a 10% sample of the population is sufficient for controlling sampling errors. Epi Info 7 was used to calculate the sample size assuming a 30% of the population, which is 113. To determine the number of teachers to be sampled at each of the five schools, the following equation was used: $nps = (ns/t5ns)*n$, where nps is the number of teachers to be sampled at each school, ns is the total number of teachers at each school, t5ns is the total number of teachers in the five sampled schools and n is the total study sample (113).

The number of teachers at each school was determined using the equation as stated above, to obtain a proportional representation of teachers at each school. The teachers sampled were again selected randomly by writing 'yes' and 'no' on pieces of papers

which were put in a basket. The teachers were asked to take a piece of paper from the basket. Those who took a piece of paper written ‘no’ were excluded from the study, while the ones who took a piece of paper written ‘yes’ were included in the study and the questionnaires were distributed to them.

The process of sampling at each school is described in Table 3.1 below.

Table 3.1: The sampling frame

Names of schools selected	Number of teachers at each school	Number of teachers sampled
Mweshipandeka SSS	42	23
Oshakati SSS	39	22
Andimba Toivo yaToivo SSS	40	22
Iipumbu SSS	45	25
Gabriel Taapopi SSS	37	21
Total	203	113

3.5 DEVELOPMENT OF THE DATA COLLECTION INSTRUMENT:

In this study, a structured self-administered questionnaire was used to collect data. A questionnaire is a document containing questions, designed to obtain information, appropriate for analysis. The main aim of a questionnaire is to obtain facts and opinions about a phenomenon from people who are informed on a particular issue. A

questionnaire has an advantage of collecting large amounts of information from a large number of people in a short period of time and in a relatively cost effective way (De Vos, 2011). The researcher chose this instrument due to this advantage.

The questionnaire in this study consisted of three sections. The first section contained the demographic characteristics of the study sample, the second section dealt with the participants' knowledge and practice, while the third section dealt with the teachers' attitudes towards epilepsy. The questions in the questionnaire consisted of YES and NO options, as well as AGREE DISAGREE and DO NOT KNOW options. It also consisted of open ended questions for the teachers to express their feelings. The questionnaire was in English. The demographic characteristics of the respondents were dealt with in item 1 in the questionnaire. This item has also dealt with the independent variables such as age gender and marital status as well as the teachers' level of education, while items 2- 3 dealt with knowledge, attitudes and practices towards epilepsy, which are the dependent variables.

The construction of the instrument was based on information gained from a literature search (Jenkins, 2008). See headings 2.3 and 2.4 in the literature review chapter, as well as the discussion on content validity (3.6.1.2.).

3.6 TESTING OF THE DATA COLLECTION INSTRUMENT

The testing of the instrument includes the testing of validity and reliability.

3.6.1. Validity

According to De Vos et al (2011), validity is the degree to which an instrument actually measures what it is intended to measure. According to Neuman (2011), validity means truthful. Face validity and content validity were determined in this study.

3.6.1.1. Face validity

Face validity refers to whether the instrument appears to measure the relevant construct. To establish face validity, the questionnaire was submitted to three colleagues who are nurses and knowledgeable about epilepsy, and the two supervisors of this thesis. They were asked to evaluate the questions and the thesis outline in relation to the objectives of the study. Confirmation from them ensured that the questions actually assessed the test characteristics identified by the researcher. Flick (2011) has given an example of testing face validity by giving the research instrument to laypeople or experts, whereby they will be able to visibly detect errors during the assessment.

3.6.1.2. Content validity

Content validity is concerned with the sampling adequacy or representativeness of the content of an instrument (De Vos et al, 2011). Content validity focuses on whether the instrument measures the concept that it is intended to measure. To establish content validity, a thorough literature review on epilepsy was conducted and referenced. See Chapter 2 for the literature review section on related articles, consulted in Africa and internationally.

3.6.2. Reliability

Reliability can be defined as the accuracy or precision of an instrument. In general, reliability refers to the extent to which the independent administration of the same instrument consistently yields the same results when repeated, under comparable conditions (De Vos et al, 2011). When the researchers say the study is reliable, it means that other researchers can reproduce the method of conducting the study or results from it (Neuman, 2011).

Inter-rater reliability is a measure of reliability used to assess the degree to which different judges or raters agree in their assessment decisions. Inter-rater reliability is useful because human observers will not necessarily interpret answers the same way; raters may disagree as to how well certain responses or materials demonstrate knowledge of the construct or skill being assessed (McLeod, 2013). Reliability improves automatically when a researcher is familiar with the research environment.

In this study reliability was tested through a pilot study (inter-rater reliability) and enhanced by the researcher's thorough familiarity with the environment in which the study was conducted. The pilot study was conducted at Erundu Secondary School on the 1st of June 2015. The process and the results of the pilot study, as well as how inter-rater- reliability was established, are discussed under point 3.7.

3.7 PILOT STUDY

A pilot study is a small scale research or study conducted before the larger piece of research is conducted to check whether the methodology, sampling, instruments to be

used to collect data an analysis are adequate and appropriate (De Vos et al 2011). De Vos, as cited by Chikukwa (2008), stated that a researcher orientates himself and identifies possible mistakes in the study by conducting a pilot study. David & Sutton (2011) stated that piloting the survey questions allows the researcher to assess the main elements of the data collection process. It is also a means of ensuring that the questions are clear and can be understood by the respondents, which will bring meaningful data to help answer the research question.

The instrument of this study was piloted on the 1st of June 2015, on 10 teachers at Erundu Senior Secondary School. These ten teachers were recruited by random sampling, and were not included in the main study. Inter-rater reliability was established during this phase, whereby the researcher has analysed the ten questionnaires which were then given to a colleague, after which the results were compared, and found to be similar.

3.8 PILOT STUDY REPORT

Before the pilot study was conducted, a questionnaire was prepared and sent to the two supervisors of this study, whereby corrections were made. A Likert scale was introduced in some questions. After the integration of the corrections made by the supervisors, a pilot study was authorized by the supervisors; and was conducted on the 1st of June 2015, on 10 teachers from Erundu Secondary School.

The following changes were made after the pilot study was conducted: Question 1 which caters for demographic characteristics had a phrase “age in years”, this was found to be confusing and was changed to “age” only; Question 2.1.1 which caters for the source of

information about epilepsy was also found to be confusing and was changed to “Where have you heard about epilepsy?”, in order to clarify the question; Question 2.10, was “Do you think epilepsy is contagious?”, the term contagious was clarified in a lay person’s language to “Do you think epilepsy can be transmitted from one person to another?”. Furthermore, a suggestion was given to change the term “student “to learner, which was implemented. All the suggested changes were implemented. No other problems were noted with the rest of the questions.

The time for completing the questionnaire (15 – 20 minutes) was found to be appropriate and the teachers piloted did not make any complaint about it. There was a general feeling among some of the teachers which was noted by the researcher that the teachers value their own time and felt that it was a waste of time to participate in the research. It was also noted that it is a challenge to assemble all the teachers in one place at a time. This has clearly shown the researcher that some difficulties might be experienced during data collection, which was also the aim of conducting a pilot study.

After the noted changes were integrated in the questionnaire, it was sent to the supervisors of this study, with the checklist of changes.

3.9 DATA COLLECTION

The researcher contacted the principals of Oshakati Secondary School, Iipumbu Secondary School, Gabriel Taapopi Secondary School, Mweshipandeka Secondary School and Andimba Toivo yaToivo Secondary School, to introduce herself and explain the purpose of the visit. Each school was visited on a separate day. The aim of the visits

was also to deliver the letter from the director of education in Oshana region, although it was already sent by the director in advance to the respective schools.

An appointment date was given to the researcher to meet the teachers and to talk to them and explain the reason for the visit, as well as to draw the sample randomly, which was usually done during the morning hours (06h45 AM), because it was the only time that the teachers could assemble. The meeting was done in the respective staff rooms. The appointments and distribution of the questionnaires, as well as the data collection done by the researcher herself; were conducted from the 1st of July 2015 to the 10th of August, 2015.

The researcher adhered to the ethical principles discussed under point 3.10. This entails obtaining informed written consent, assuring confidentiality and anonymity and ensuring that no psychological harm will be inflicted. The possible benefits, namely the submission of applicable recommendations to assist with the education of these learners were also explained.

Talking to the respondents, drawing a random sample and distribution of the questionnaires was done by the researcher herself. Each school was given about a week to complete the questionnaires, as it was agreed upon by the respondents and the researcher. The researcher then collected the questionnaires on the agreed date from each school, between the 14th of July 2015 and the 10th of August 2015. The researcher made a follow up on the questionnaires, after seeing that all the questionnaires distributed were not recovered. Additional questionnaires were distributed on the 12th of

August 2015, whereby they were collected after one week by the researcher and they were all recovered, meeting a total of 113.

3.10 DATA ANALYSIS:

Data analysis is a systematic action of inspecting, cleaning, transforming and evaluating data, with the aim of putting it into useful information, which can be used to influence and support decision-making (De Vos et al, 2011). The study has incorporated both a descriptive and an analytical approach, which will be described next.

3.10.1.1 Descriptive phase

The study has followed a descriptive data analysis pattern, in which data was summarised into frequencies, proportions, and rates (CDC, 2014). The frequency tables, graphs and charts were used to summarise data in this study. The frequency tables are the tables that allows the reader to get a big picture of the data, whereby one can see how frequent the specific values are observed and what their percentages are for the same variable (Li, 2013).

A computer software program Statistical Package for the Social Sciences (SPSS 23) was used to analyse the data. In addition descriptive statistical procedures were applied to describe central tendency parameters of scores such as the mode, mean and the median on the knowledge and attitudes towards epilepsy. As part of the descriptive phase, statistical tests of a non-parametric nature were employed.

3.10.1.2 Analytical phase

During this phase, cross tabulations, chi-square tests and p - values were used to test for relationships between the dependent variables such as level of knowledge, attitude and practice; and the independent variables such as the demographic variables, for example level of education of the teachers, age, sex, etc. A conventional level of significance of 0.05 was used to detect differences.

The completed questionnaires were checked for consistency, accuracy and completeness on a daily basis to make data handling easier. The information obtained with the structured questionnaire was assembled as a database. The questions were coded using the SPSS programme.

3.11 RESEARCH ETHICS:

Research ethics are the principles, rules and regulations that all researchers should follow and abide by while conducting research. A researcher is responsible to conduct a study in an ethical manner; this is because any study involving human subjects is of special concern related to the protection of the rights of the human subjects (De Vos, et al, 2011).

Permission to conduct this study was obtained from the Ministry of Education, Oshana Educational Directorate and the principals of the relevant schools which are include in the research. An ethical clearance certificate was also obtained from the University of Namibia.

A written informed consent was obtained from the respondents, who are adults (≥ 18 years). The participants were informed that the study aims to assess the knowledge, attitude and practice towards epilepsy among the senior secondary school teachers in Oshana Region. They were selected, because they deal and take care of many students where some of them might be suffering from epilepsy, a condition teachers do not receive any formal training on. Greater emphasis was also put on the **importance of the study**, because it helps reduce the myths, fears and stigma, surrounding epilepsy. The applicable recommendations to assist with the education of children with epilepsy were also explained.

Confidentiality was maintained in the sense that no information was linked to any participant. No information provided by a respondent during the course of the study was divulged or made available to any person other than the supervisors of the study, and the publication will not mention any respondent's name. There are no foreseeable physical or emotional risks or discomforts to the respondents in this study. All the respondents were equally valued and respected.

The researcher did not **intentionally mislead** subjects; either by withholding or giving incorrect information that influenced them to participate in the study. No false promises were made to anyone in the selected population (De Vos et al, 2011). Participation in the study was voluntary; no coercion to take part in the study was employed. The research respondents had the right to withdraw from the study at any time; they had the right to refuse to provide information. Moreover, participants had the **right** to ask for

clarification about the study, because the researcher's contact details were provided on the consent form.

3.12 SUMMARY

This chapter focused on an overview of research design used in the research process, research population, sample and sampling process, research instrument, the procedures followed during the research process, how data analysis was done and the most important research ethics that were considered when conducting research. It also discussed the way in which the researcher adhered to ethical practices in the entire data collection, analysis and report writing process. The following chapter will present and discuss the research findings.

CHAPTER 4

PRESENTATION OF FINDINGS

4.1 INTRODUCTION

The previous chapter presented the research methodology. It included a discussion on the research design that was used, and the motivation for selecting that particular design. The study population, the sample and the sampling methods that were used to obtain the sample were presented, as well as the research instruments that were used for data collection. Finally, a discussion on the way data analysis was conducted is also presented.

This chapter presents the findings and discussion obtained from the data analysis. One hundred and thirteen (113) questionnaires were distributed to five schools, of which 113 teachers have agreed to participate in the research. All 113 questionnaires were completed and returned after a follow up visit from the researcher, giving a response rate of 100%.

The findings will be presented in three sections, as they were arranged in the questionnaire. See annexure A. The first section will present the demographic characteristics of the study population. The second section will deal with the respondents' knowledge and practice towards epilepsy, while the third section will deal with the teachers' attitude towards epilepsy. The first discussion will present the descriptive phase of the study and the analytical phase will be presented at the end of the chapter.

4.2 THE DESCRIPTIVE PRESENTATION OF THE FINDINGS

The first discussion will be on the demographic characteristics of the respondents.

4.2.1 Demographic characteristics of the respondents

The study involved qualified, full time teachers. The demographic data that were collected focused on:

- Age
- Gender
- Marital status and,
- Academic qualifications

The first discussion will be on the age distribution.

4.2.1.1 Age distribution of the respondents

The respondents' ages ranged between 21 and 60, with a range of 37, and a median of 35. The respondents were almost evenly distributed in all age groups, with the highest, namely 22% (25) falling in the age group of 26 – 30 and the lowest, namely 4% (4) falling in the age group of 51 – 55. Twelve (11%) of the respondents fell in the age group of 21 – 25, while nineteen (17%) were in the age group of 31 – 35.

Nineteen (17%) of the respondents were in the age group of 36 – 40, eight (7%) were in the age group of 41 – 45, seventeen (15%) were in the age group of 46 – 50, four (4%) were in the age group of 51 – 55, while six (5%) were in the age group of 56 – 60).

Three (3%) of the respondents did not indicate their age.

The findings above are illustrated in the bar graph in Fig. 4.1 below.

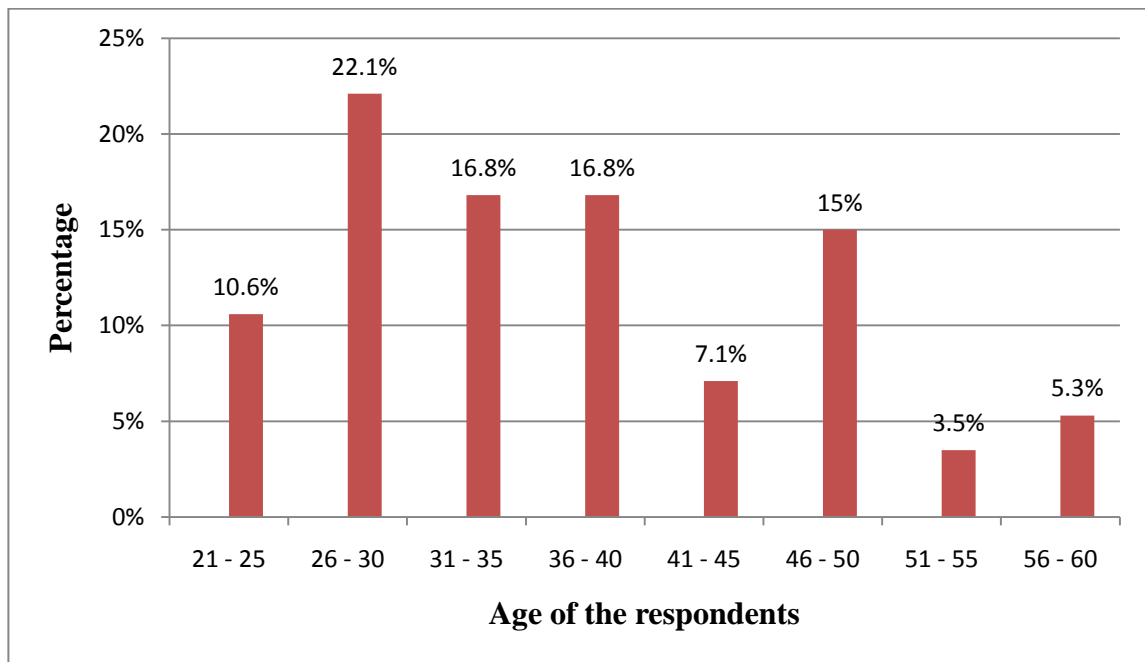


Figure 4.1: The age distribution of the respondents (n = 113)

The next discussion will be on the gender of the respondents.

4.2.1.2 Gender of the respondents

The majority 69 (61%) of the respondents in this study were female, while 43 (38%) were male. One (1%) of the respondents did not indicate his or her gender. Literature had revealed that there are more female teachers than male teachers in Namibia, and it correlates with the findings in this study (Kelleher, 2011).

The next discussion will be on the marital status of the respondents.

4.2.1.3 Marital status of the respondents

The study also surveyed the marital status of the respondents, in which an equal number of the respondents, which is 53 (47%), was detected in both married and single respondents. Two (2%) of the respondents were in a committed relationship, while three (3%) of them were widowed. Two (2%) of the respondents did not indicate their marital status.

4.2.1.4 The academic qualifications of the respondents

The educational qualifications of the respondents was also surveyed, whereby the majority of 69 (61%) of the teachers were holders of a Bachelor's degree in education, twenty-three (20%) had university diplomas, while 21 (19%) did not indicate their qualifications. See Table 4.1 below.

Table 4.1: The academic qualifications of the respondents (n = 113)

Qualification	Frequency	Percentage (%)
University Diploma in Education	23	20
Bachelor's Degree in Education	69	61
Missing	21	19
Total	113	100

4.2.2 Knowledge and practices of the teachers towards epilepsy

The first item that dealt with knowledge focused on being informed about epilepsy, and the source from which this information was gained.

4.2.2.1 Familiarity with epilepsy

A majority of the respondents 108 (96%) revealed that the term epilepsy was not unfamiliar to them. Only 5 (4%) of the respondents had never heard about epilepsy. This is similar to a study conducted in Pakistan, where about 90.9% of the respondents revealed that they have heard about epilepsy (Bhesania et al 2014). Thus in this study, the majority of the teachers were familiar with epilepsy per se.

4.2.2.2 Sources of information

The respondents were asked to state their source of information about epilepsy. The information is displayed in Table 4.2 below.

Table 4.2: Sources of information about epilepsy (n =113)

Source of information	Frequency	Percentage(%)
Radio	6	5.3
TV	11	9.7
Training	7	6.2
Living with epilepsy	1	0.9
Home / Community	64	56.6
Reading about epilepsy	7	6.2
Missing	17	15.0
Total	113	100

In this study the main sources of information was the respondents' immediate home environments and/or their communities. Having the common source of information in this study as the community/home is in contrast to a study conducted in Pakistan, where the common source of information was the printed media (Bhesania et al 2014).

However, it is in agreement with a study conducted in Saudi Arabia, where the main sources of information on epilepsy for teachers were their friends and relatives (Alqahtani, 2015).

4.2.2.3 Perceptions or beliefs about the vulnerable gender group (Who does epilepsy affect?)

One item enquired the respondents which gender they believed was mostly affected by epilepsy, whereby the majority 100 (89%) responded that epilepsy affects both males and females. Seven (6%) of the teachers revealed that epilepsy affects males the most, three (3%) responded that epilepsy affects females, while 3 (3%) of the teachers have no knowledge of which gender was mostly affected by epilepsy. The literature appears to be silent on this specific perception/ belief, but in this study there appeared to be no gender discrimination.

4.2.2.4 Knowledge / awareness of someone they know with epilepsy

On the question of whether the respondents have known anyone with epilepsy, the majority of 82 (73%) revealed that they knew someone with epilepsy, 25 (22%) of them have never known anyone with epilepsy, while 6 (5%) of them did not know whether they knew someone with epilepsy.

This is in agreement with a study conducted in Germany, where it emerged that 52.3% of the respondents knew someone with epilepsy (Omran et al, 2011).

4.2.2.5 Past experience of teaching a learner with epilepsy (LWE)

One item enquired whether the teachers have ever taught a learner with epilepsy, whereby a majority of the respondents 69 (61%) indicated that they have never taught a learner with epilepsy. Twenty-five (22%) of the teachers in this study have taught learners with epilepsy, while nineteen (17%) did not know whether they have taught a learner with epilepsy or not.

The finding in this study of unknown contact with learners with epilepsy is in agreement with a study conducted in Germany, whereby 32% of the participants have never taught a learner with epilepsy (Dumeier, 2015).

The teachers who indicated that they have taught a LWE were asked a follow up question to rate their experience and the findings are displayed on Table 4.3.

Table 4.3: The rate of experience for teaching a LWE (n = 25)

Rating of experience	Frequency	Percentage (%)
Very uncomfortable	5	20
Slightly uncomfortable	4	16
Neutral/Uncertain	7	28
At ease/Relaxed	5	20
Totally relaxed	4	16
Total	25	100

Literature seems to be quiet on the experiences of teachers in having a LWE in their class.

4.2.2.6 Self-rating on knowledge about epilepsy

The respondents were asked to rate their knowledge about epilepsy on an ordinal scale, which is displayed on Table 4.4.

Table 4.4: The respondents' perceived rate of knowledge about epilepsy (n = 113)

Rating of knowledge	Frequency	Percentage (%)
1- Lowest level of knowledge on rating scale	36	31.9
2 – Second lowest level of knowledge on rating scale	25	22.1
3- Neutral	24	21.2
4- Second highest level of knowledge on rating scale	7	6.2
5- Highest level of knowledge on rating scale	7	6.2
Missing	14	12.4
Total	113	100

The findings from this study on Table 4.4 above reveals that the majority of respondents (54%) were not knowledgeable (levels 1 and 2 on ordinal scale) on epilepsy, which is in agreement with a study conducted in Nigeria, where the respondents revealed that they wanted to know more about epilepsy (Ezeala – Adikaibe, Achor, Onwukwe, Ekenze, Onwuekwe, Chukwu, Onyia, Ihekwaba & Obu, 2013).

4.2.2.7 Perceptions of the respondents on what epilepsy is

The respondents were asked to state their opinions on what they thought epilepsy was, where 47 (42%) of the respondents thought epilepsy was a brain disorder, seventeen (15%) thought that epilepsy was a type of mental retardation, fourteen (12%) thought it was a mental illness, thirty one (27%) had no idea what epilepsy was, while four (4%) did not answer the question. See Figure 4.2

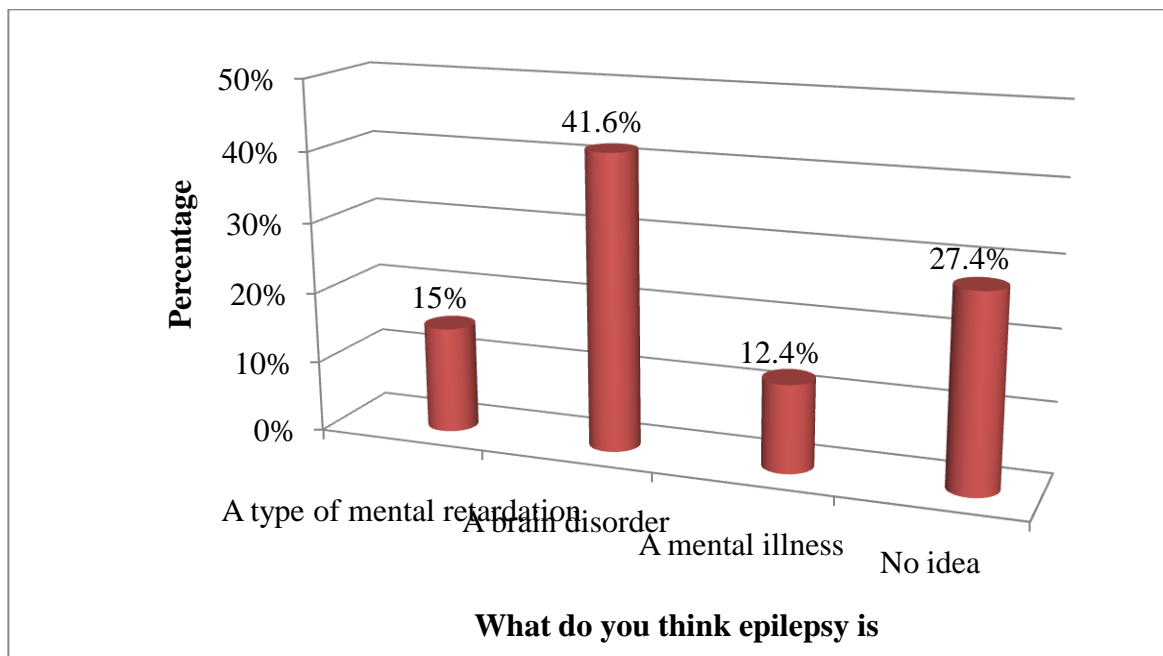


Figure 4.2: The opinions of the respondents on what they think epilepsy is (n = 113)

From the findings of this study although only descriptively; a large number of teachers perceived persons with epilepsy to be mentally disadvantaged (mentally retarded or mentally ill). The findings are similar to a study conducted in Nigeria, where more than half (51.9%) of the respondents considered epilepsy to be a psychiatric disorder (Ezeala-Adikabe et al, 2013).

4.2.2.8 The perceived causes of epilepsy

The survey enquired about the causes of epilepsy, whereby the majority of the teachers 44 (39%) thought epilepsy was an inherited disease, thirteen (12%) thought that it was caused by accidents, sixteen (14%) thought that epilepsy was caused by insanity or mental illness, twenty-four (21%) thought that epilepsy was caused by brain tumours, fifteen (13%) thought that epilepsy was caused by birth defects, nine (8%) thought that epilepsy could result from stroke, while thirty-one (27%) had no idea what caused epilepsy. See Figure 4.3 below for more descriptions.

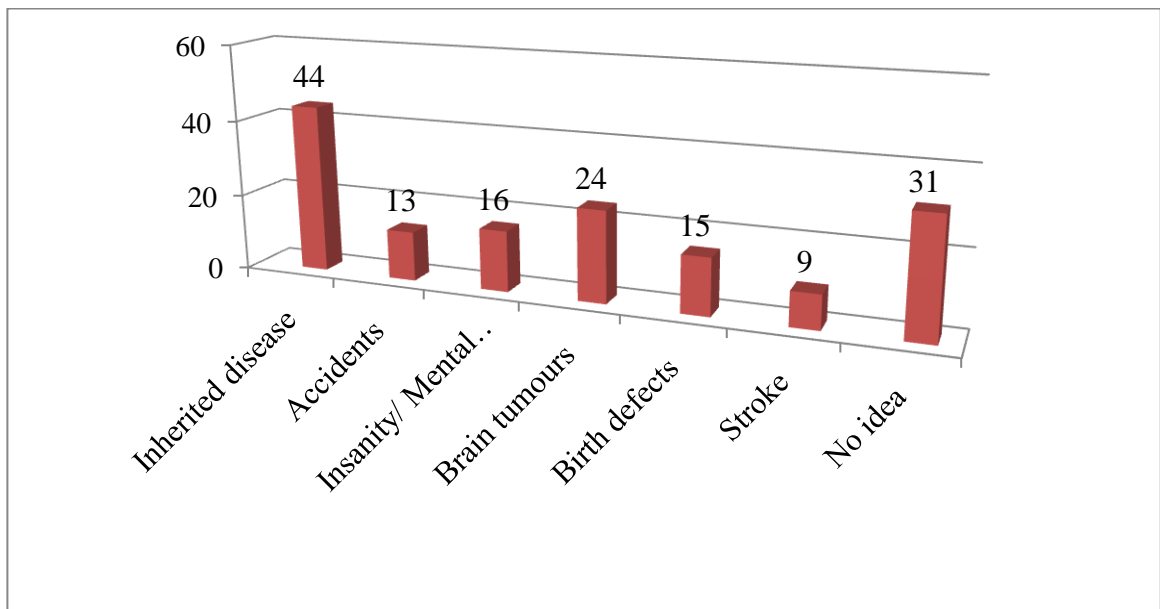


Figure 4.3: The causes of epilepsy as mentioned by the respondents (n = 113).

As the respondents had more than one option to select from, the total number of responses was 152. See Figure 4.3.

In this study a positive result was the possible connection of epilepsy to inheritance. It is not uncommon for respondents to mention brain tumours, trauma or accidents as the causes of epilepsy. Similarly, a study conducted in Nigeria mentioned trauma and brain tumours as the main causes of epilepsy (Ekeh & Ekrikpo, 2015).

A study conducted in Lao Republic has revealed that the respondents were knowledgeable about the possible causes of epilepsy such as cerebral diseases (53.0%), head injury (37.3%), drug or alcohol abuse (24.1%) and heredity (37.3%) (Tran et al, 2007). Other statements have also explored the beliefs of the respondents on the causes of epilepsy. The respondents were asked whether they agree or disagree with the statements given, the findings of which are displayed on Table 4.5.

Table 4.5: The beliefs of the respondents about the causes of epilepsy (n = 113)

Epilepsy can occur after:	Agree	Disagree	Do not know	Missing	Total
Head injury	34 (30.1%)	30 (26.5)	47 (41.6%)	2 (1.8%)	113 (100%)
Alcohol/drug abuse	23 (20.4%)	60 (53.1%)	27 (23.9%)	3 (2.7)	113 (100%)
As evil spirit possession	22 (19.5%)	46 (40.7%)	42 (37.2%)	3 (2.7%)	113 (100%)

The findings in Table 4.5 above which shows that the teachers believed that epilepsy could occur as an evil spirit possession is in agreement with a study conducted in Sudan,

where the respondents had a belief that epilepsy occurred as an evil spirit possession (Babikar & Abbas, 2011). Similar revelations were discovered by a study conducted in Nigeria, where 42.4% of the participants believed that epilepsy occurred due to evil spirit possession and punishment from God (Frank-Briggs, 2015).

4.2.2.9 Witnessing of an epileptic seizure

The teachers were asked whether they have ever witnessed a learner having an epileptic attack and the majority, sixty-five (57.5%) indicated that they had never witnessed a learner having an epileptic seizure. Forty-eight (42.5%) of the teachers have witnessed a learner having an epileptic seizure. This finding correlates with a finding from a study conducted in Sudan, where only 11% of secondary school staff had witnessed an epileptic seizure (Babikir et al, 2011).

In this study most of the teachers had never witnessed an epileptic seizure and it could be assumed that they might be totally overwhelmed should they be exposed to such a situation.

In a follow up to the question regarding the witnessing of an epileptic seizure, the respondents who witnessed a seizure (42.5%), were also asked about their experiences during these witnessed encounters.

4.2.2.10 Experiences during witnessed encounters of epileptic seizures

The experience of witnessing an epileptic seizure is displayed on Table 4.6

Table 4.6: Description of the experiences during a witnessed epileptic seizure**(n = 48)**

Description of the experience (rated on ordinal scale from 1 – 5 with 5 being the highest level of fright)	Frequency	Percentage (%)
5- Highest level of fright	16	33.3
4- Second highest level of fright	8	16.7
3- Neutral	8	16.7
2- Second lowest level of fright	9	18.8
1- Not frightened at all	7	14.6
Total	48	100

The findings of this study where 50% of the teachers felt that it was frightening (levels 5 and 4) to witness an epileptic seizure, is in agreement with a study conducted in Saudi Arabia where about half (54.6%) of the participants in that study reported to be scared when they witnessed an epileptic seizure (Alqahtani, 2015). Fear of epileptic seizures by teachers was felt to be attributed to widespread ignorance, fear and misunderstanding of the condition (Babikar et al, 2011).

4.2.2.11 Epilepsy being perceived as a communicable disease

In the instrument, the wording “communicable” disease was substituted with the term “transmission” to enhance understanding. This question was posed on whether the teachers thought epilepsy was contagious, whereby a considerable number of twenty–

three (20%) of the teachers believe that epilepsy was contagious, fifty-one (45%) stated that they did not think that epilepsy was contagious, while thirty-nine (35%) did not know whether epilepsy was contagious or not.

The findings of 20% of the teachers thinking that epilepsy is contagious in this study is in support with a study conducted in Pakistan, where 25% of the respondents in that study also believed that epilepsy was contagious (Ullah & Nabi, 2015). Moreover, this is in agreement with the revelations of Lugthart (2011), who revealed that many people in Africa believe that epilepsy is contagious and that it can be spread by urine, saliva, flatus, or faeces excreted at all times or during a convulsion, resulting in isolation and unwillingness of witnesses to touch the patient and protect them from injury during a seizure. This was also revealed by a study conducted in Ethiopia, where the participants revealed that epilepsy can be spread by physical contact (45.88%), saliva (14.56%), waste gas (12.64%), blood and sexual intercourse (11.30%) (Gedefa et al, 2012).

4.2.2.12 Beliefs on the control or treatment of epilepsy

On the question of whether the teachers thought that epilepsy could be treated or controlled, the majority eighty-eight (78%) thought that epilepsy can be treated or controlled, six (5%) indicated that it cannot be controlled or treated, seventeen (15%) of them did not know, while two (2%) of them did not answer the question.

The statement of whether the teachers think that epilepsy can be treated or controlled is illustrated further in Table 4.7.

Table 4.7: Beliefs of the teachers on whether epilepsy can be treated or controlled

(n = 113)

Answers	Frequency	Percentage (%)
Yes	88	78
No	6	5
Do not Know	17	15
Missing	2	2
Total	113	100

The belief that epilepsy can be treated or controlled is not unique to this study. In a study conducted in Pakistan, 90% of the participants believed that treatment is effective (Akhtar, 2007).

A follow up to the question on whether epilepsy can be treated or controlled was directed to those who responded in the affirmative that it can be treated. The follow up question focused on the respondents 'perceptions/beliefs of what would constitute appropriate treatment options.

These results are indicate under point 4.2.2.13

4.2.2.13 Beliefs on what constitute appropriate treatment

The beliefs on appropriate treatment are depicted in table 4.8.

Table 4.8: The treatment options for epilepsy as pointed out by the respondents**(n = 88)**

Options for treating or Controlling epilepsy	Frequency	Percentage (%)
Modern medicine	25	28.4
Traditional healers	15	17.04
Both modern medicine and traditional healers	37	42.04
Only through faith and religion	3	3.40
Modern medicine and religion	8	9.09
Total	88	100

From the analysis it emerged that the majority (59%) of the respondents were of the opinion that both modern medicine as well as traditional medicine would be appropriate. It is not uncommon for people to believe that epilepsy can be controlled or treated by traditional healers as the findings have revealed in this study. According to a study conducted in Zambia, traditional healers were mentioned as the preferred treatment of epilepsy (Bhesania et al, 2014). In this study the majority of teachers believed that traditional healers should or could be consulted. These beliefs might influence epileptic learners negatively.

4.2.3 Practices of the respondents towards epilepsy

A question in connection of what the teachers would do if they were to witness a learner having an epileptic seizure, fifteen (13%) indicated that they would hold the learner's legs and arms, four (4%) said they would make the learner smell something to stop the

seizure, thirty–six of them responded that they would avoid touching the learner during the seizure, forty–five (40%) would promptly move the child away from danger, twenty–six (23%) would lay the child on his/her side during the seizure, while fifty–two (46%) of them will avoid touching the saliva of the learner during the seizure. The percentage in this item is more than 100, because the teachers were asked to tick more than one option. See Table 4.9.

Table 4.9: The practices of the respondents during an epileptic seizure (n= 113)

Number	Responses	Frequency	Percentage (%)
1	Hold legs and arms if a learner has a seizure	15	13.3
2	Make the learner smell something to stop the seizure	4	3.5
3	Avoid touching the learner during the seizure	36	31.9
4	Promptly move the learner away from danger during the seizure	45	39.8
5	Lay the child on his/her side during the seizure	26	23.0
6	Avoid touching the saliva during an epileptic seizure	52	46.0

In this item, the researcher regarded the fourth response as priority number 1 and when possible, the fifth response as priority number 2. In this study only 39.8% of the teachers would have tried to move the learner away from danger. Although this response is a positive finding in this study, there is still a concern regarding the safety of the LWE. These findings are not unique to this study. This is similar to a study conducted in Thailand, where the respondents (40.4%) displayed potentially harmful interventions in

seizure management, although they were trained in first aid management of seizures. Only 16.3% of the respondents in the Thai study could give proper first aid management to a seizing LWE (Thacker et al, 2008).

Misconceptions of epilepsy being contagious are hampering the help of LWE. The revelations of the respondents in this study, whereby 46% show that they will avoid touching saliva during a seizure might indicate their belief that epilepsy is contagious. This is similar to a study conducted in Nigeria, where teachers revealed that they would make sure that the saliva from the LWE did not touch another student (Owolabi et al, 2013).

4.2.4 Attitudes of the teachers towards epilepsy

One objective of this study was to explore the teachers' attitudes towards epilepsy. The next discussion will be on the attitudes of teachers towards learners with epilepsy.

4.2.4.1 Social interactions of learners with epilepsy/people with epilepsy in society (Society discriminates against LWE)

Discrimination and stigmatization of LWE is a problem which hampers the performance of the LWE. The respondents were asked whether they feel that society generally discriminates against people with epilepsy, at which the majority of the teachers, fifty-five (49%) felt that society did not discriminate against people with epilepsy, thirty four (30%) of them felt that society discriminated against people with epilepsy, twenty-three (20%) did not know whether society discriminated against people with epilepsy or not, while one respondent (1%) did not answer the question.

Table 4.10: Perceptions of respondents on whether society discriminates against people with epilepsy (n = 113)

Do you think that society discriminates against PWE?		
Responses	Frequency	Percentage (%)
Yes	34	30.1
No	55	48.7
Do not know	23	20.4
Missing	1	0.9
Total	113	100

In this study a majority of the teachers (48.8%) did not believe that people with epilepsy are being discriminated against, which shows that they believed that the attitudes towards LWE are positive. However, 30% of those teachers agreed that LWE are discriminated against, and this is in agreement with a study conducted in Brazil, where it was detected that teachers also believed that children with epilepsy faced discrimination because they were often rejected by their peers and judged by people as inferior because they have epilepsy (Zanni et al, 2012). In addition, in a study conducted in Italy, 61% of the teachers reported noting difficult relationships among the LWE and their classmates (Savarese, Carpinelli, D’Elia and Coppola, 2015).

The teachers’ examples of types of discrimination they had observed in society against LWE/PWE are displayed in Table 4.11.

Table 4.11 Types of discrimination against LWE observed by the respondents (n=34)

Types of discrimination observed:	Frequency
PWE are perceived as a burden	1 (2.94%)
People avoid PWE, because they are afraid they might die in bed/ in their hands	2 (5.88%)
PWE are perceived as abnormal	13 (38.24%)
People perceive epilepsy as transmittable from person to person	10 (29.41%)
LWE are denied education, work and sport activities	4 (11.76%)
LWE are being bullied by their peers	2 (5.88%)
LWE are given separate eating utensils	2 (5.88%)
Total	34 (100%)

4.2.4.2 Willingness to teach a learner with epilepsy (LWE)

In the process of exploring the teachers' attitudes towards epilepsy, the teachers were asked whether they were willing to teach learners with epilepsy, of which eighty-six (76%) revealed that they were willing to teach LWE, twenty-five (22%) were not willing to teach a learner with epilepsy, while two (2%) did not answer the question.

The findings in this study are similar to a study conducted in Sudan, where none of the respondents objected to having a LWE in their class (Babikar, 2011).

An open-ended question formed part of item 4.2.3.2 in which the teachers were requested to motivate their response regarding their willingness or not to teach learners with epilepsy.

A total of 10 comments were received and were descriptively categorized as either positively orientated or negatively orientated.

The positively orientated responses ranged from the reasons that education is for all (31.86%), LWE are normal learners (27.43%), suffering from epilepsy is not the LWE's fault (3.54%), epilepsy is not contagious (0.88%), so there is no danger in teaching a learner with epilepsy, to avoiding discrimination in future (0.88%).

The negatively orientated responses seemed to stem from lack of knowledge, like no training on epilepsy (8.85%) and misinformation, epilepsy being contagious and scary (6.19%), and LWE disturbing classes with seizures (1.77%). These negative responses could be rectified with the correct information.

4.2.4.3 The need for special education for children with epilepsy

On the question whether the teachers were of the opinion that LWE should be sent to a special school, the majority of seventy-seven (68%) thought that they should not, thirty-two (28%) of them thought that the LWE should be sent to a special school, while four (4%) of them did not answer the question. This question is depicted on Table 4.12.

Table 4.12: The teachers' opinions on whether the LWE should be sent to a special school (n = 113)

Answers	Frequency	Percentage (%)
Yes	32	28
No	77	68
Missing	4	4
Total	113	100

Most of the teachers had no objection to epileptic children being in regular schools, a positive attitude towards learners with epilepsy. This is similar to a study conducted in Nigeria, where teachers have shown a fair attitude towards epileptic students (Owolabi et al, 2014). A study conducted in India revealed the same sentiments, where 75.5% of the teachers thought that LWE should not be sent to a special school (Thacker et al, 2008).

There were however 28% of the respondents in this study who thought that LWE should be sent to a special school, in agreement with a study conducted in Brazil, in which 30% of the teachers had objected to having a student with epilepsy in their classrooms; some of the teachers believed that children with epilepsy should attend special classes (Zanni, Matsukura & Filho, 2012).

An open-ended question also formed part of item 4.2.3.3 in which the teachers were requested to motivate their response regarding why they think there is a need to send or not to send LWE to a special school.

A total of three comments was received and again were descriptively categorized as positively or negatively orientated.

The positively orientated response was that LWE are just normal (53.98%) and not different from other learners.

The two negatively orientated responses were that the teachers at special schools are trained to handle LWE (18.58%), and LWE are abnormal (5.31%). These beliefs again

seem to be driven by a lack of correct information, which can be corrected with rising of awareness and proper information dissemination.

4.2.4.4 Beliefs about the academic possibilities of learners with epilepsy

The teachers were asked to indicate the academic possibilities of the LWE, at which the majority ninety-four (83%) of respondents believed that they could achieve a tertiary qualification, one (1%) of them believed that the LWE could only reach Grade 7, four (4%) could only reach up to Grade 9, four (4%) believed that they could only reach up to Grade 10, seven (6%) believed that these learners could reach Grade 12, while three (3%) did not answer the question. See Table 4.15 below for illustrations.

Table 4.13: The teachers' beliefs on the academic possibilities of LWE (n = 113)

Answers	Frequency	Percentage (%)
Grade 7	1	0.9
Grade 9	4	3.5
Grade 10	4	3.5
Grade 12	7	6.2
Tertiary	94	83.2
Declined	3	2.7
Total	113	100

This study shows a positive belief on the abilities of the LWE to achieve an academic qualification, and correlates with a study conducted in Pakistan, where more than half of the respondents (50.9%) believed that LWE can become teachers (Bhesania et al, 2014).

4.2.4.5 Willingness to associate with learners with epilepsy/people with epilepsy

A number of questions were asked under this item, as described below.

On the issue of associating with LWE, the teachers were asked whether they will allow their own children or learners to play with LWE. A majority of the respondents ninety-six (85%) were willing to allow their children or learners to play with LWE, thirteen (12%) of them said they would not allow their children or learners to play with LWE, while four (4%) of them did not answer the question. The findings of this study where the majority of the teachers responded that they would allow their children to play with LWE is in contradiction with a study conducted in Nigeria which revealed that 95% of the participants in that study would not allow their children to play with LWE (Jack – Ide, Maliki, & Onasoga, 2015).

Another item about association also enquired whether the teachers will object to a person with epilepsy (PWE) marrying a close relative such as a brother, sister, daughter or son, at which the majority of sixty-nine (61%) responded that they would not have any objections to such a person marrying a close relative, thirty-six (32%) said they would object to such a person marrying their close relative, while eight (7%) of them did not answer the question.

These were positive findings in this study, unlike in a study conducted in India, where only 6.9% of the teachers said they would not have any objections to their close relative marrying a PWE, while 86.8% would object to such a marriage (Thacker et al, 2008).

However the issue of teachers objecting to LWE/PWE marrying their close relative is not unique to this study. It is similar to a study conducted in Germany, where more than half of the teachers (59.8%) said they would object to their children getting married to PWE (Omran, 2011).

On the question of whether the teachers think a PWE should have children, eighty (71%) of the teachers thought that such a person should have children, ten (9%) thought PWE should not have children, twenty-one (19%) were not sure whether they should have children or not, while two (2%) did not answer the question. These findings are in agreement with a study conducted in Nigeria, where more than half of the respondents felt that PWE could have children (Ekeh et al, 2015).

In this item, from a descriptive analysis, the teachers demonstrated mostly positive attitudinal responses.

Table 4.14: The respondents' willingness to associate with LWE/PWE (n =113)

Responses	Yes	No	Missing	Total
Are you willing to associate with PWE at social gatherings?	99 (88%)	12 (11%)	2 (2%)	113 (100%)
Will you change your attitude towards a learner with a recent diagnose of epilepsy?	21 (19%)	87 (77%)	5(4%)	113 (100%)
Are you willing to have a PWE as a close friend?	90 (80%)	15 (13%)	8 (7%)	113 (100%)

Teachers in this study have shown positive attitudes towards LWE/ PWE, unlike in a study conducted in Malaysia, where 34% of the participants felt hesitant to have a PWE as a close friend (Abeysena, Hasan, Wei, Ahmadi, Ahmed, Yong & Anwar, 2010).

4.2.4.6 A summary of the attitudes of teachers towards epilepsy

Generally, the attitudes of the teachers towards epilepsy in this study are positive; however there are still some misconceptions about epilepsy, whereby some teachers believe that epilepsy is contagious. The fact that some teachers said they will avoid the saliva of a LWE during an epileptic seizure shows that there is a lack of knowledge about epilepsy. This also shows the misconceptions of epilepsy being contagious. This confirms the revelations of some teachers (19.47%) who felt that there is a need for the teachers to be trained on epilepsy.

4.3 ANALYTICAL PHASE PRESENTATION OF FINDINGS

The hypotheses for testing the relationships of the variables were:

H₀ = There is a relationship between the demographic characteristics in this study and the knowledge, attitudes and practices towards epilepsy.

H₁ = There is no relationship between the demographic characteristics in this study and the teachers knowledge and attitudes and practices towards epilepsy.

4.3.1. Relationship of demographic variables to knowledge and practices towards epilepsy

The findings will be presented in cross tabulations; a discussion on knowledge and practices of the respondents (dependent variable) was compared to age, gender, marital status and the educational level of the respondents.

4.3.1.1 Relationship of age and knowledge of the respondents towards epilepsy

Table 4.15: A cross-tabulation of age and knowledge and practices towards epilepsy (n = 113)

Teacher's knowledge about epilepsy			
Age group (in years)	Indicated to have Knowledge about epilepsy	Indicated not to have knowledge about epilepsy	Total (%)
21 – 25	11 (92%)	1 (8%)	12 (11%)
26 - 30	22 (88%)	3(12%)	25 (23%)
31 - 35	19 (100%)	0	19 (17%)
36 - 40	19 (100%)	0	19 (17%)
41 - 45	7(88%)	1 (13%)	8 (7%)
46 - 50	17 (100%)	0	17 (16%)
51 - 55	4 (100%)	0	4 (4%)
56 - 60	6 (100%)	0	6 (6%)
Total	105 (96%)	5 (5%)	110 (100%)

Table 4.15 above presents the relationship between the age and knowledge of the respondents about epilepsy. The findings presented a chi-square of 7.86 and P = 0.345.

The relationship of the respondents' age and knowledge about epilepsy was found to be statistically not significant. In this study there was no association between knowledge about epilepsy and age.

4.3.1.2 Relationship of gender and knowledge of the respondent about epilepsy

Table 4.16: A cross-tabulation of the relationship between gender and knowledge of the respondents (n = 113)

Gender at birth	Teachers' knowledge about epilepsy		Total (%)
	Indicated to have knowledge about epilepsy (%)	Indicated not to have knowledge about epilepsy (%)	
Male	40 (93%)	3 (7%)	43 (38%)
Female	67 (97%)	2 (3%)	69 (62%)
Total	107(95.5)	5 (5.5%)	112 (100%)

On the relationship of gender and knowledge as illustrated on Table 4.16, both males and females were knowledgeable about epilepsy. The relationship has a chi-square of 1.03 and $P=0.31$. In this study there is no relationship. The relationship between gender and knowledge of the respondent is not statistically significant.

4.3.1.3 Relationship between marital status and knowledge of the respondent about epilepsy

Table 4.17: The relationship of the marital status and knowledge of the respondent about epilepsy (n = 113)

Marital status	Teachers' knowledge about epilepsy		Total (%)
	Indicated to have knowledge about epilepsy (%)	Indicated not to have knowledge about epilepsy (%)	
Married	51 (96%)	2 (4%)	53 (47.7%)
Single	50 (94%)	3 (5.7%)	53 (47.7%)
In a committed relationship	2 (100%)	0	2 (1.8%)
Widowed	3 (100%)	0	3 (2.7%)
Total	106 (95.5%)	5 (4.5%)	111 (100%)

In this study there is no statistically significant association between marital status and knowledge about epilepsy (P= 0.93).

4.3.1.4 Relationship between the respondents' level of education and knowledge about epilepsy

The relationship is shown in table 4.18.

Table 4.18: The relationship of the respondents' level of education and knowledge about epilepsy (n = 113)

Respondents' level of education	Teacher's knowledge about epilepsy		Total (%)
	Indicated to have knowledge about epilepsy (%)	Indicated not to have knowledge about epilepsy (%)	
Diploma	22 (95.7%)	1 (4.3%)	23 (25%)
Degree	66 (95.7%)	3 (4.3%)	69 (75%)
Total	88 (95.7%)	4 (4.3%)	100%

The findings presented a chi-square of 0.00 and $P = 0.691$. In this study the relationship between knowledge and the respondents' level of education was not statistically significant.

4.3.2 Relationship of the respondents' attitudes and the demographic characteristics

For this study to measure the relationship of attitudes and the respondents' demographic characteristics, the question on the teachers' willingness to teach a learner with epilepsy was used. The findings are displayed on Table 4.19 below.

4.3.2.1 Relationship of the respondents' age and attitude towards epilepsy

The relationships are displayed in table 4.19.

Table 4.19: The teachers' willingness to teach LWE (n = 113)

	Teachers' attitude towards epilepsy (Teachers' willingness to teach a LWE)		
Age group (in years)	Willing to teach LWE (%)	Not willing to teach a LWE (%)	Total (%)
21 – 25	9 (75%)	3 (25%)	12 (11%)
26 - 30	21 (87.5%)	3 (12.5%)	24 (22%)
31 - 35	17 (89.5%)	2 (10.5%)	19 (17.6%)
36 - 40	14 (73.7%)	5 (26.3%)	19 (17.6%)
41 - 45	6 (75%)	2 (25%)	8 (7%)
46 - 50	11 (68.8%)	5 (31%)	16 (14.8%)
51 - 55	3 (75%)	1 (25%)	4 (3.7%)
56 - 60	3 (50%)	3 (50%)	6 (5.6%)
Total	84 (77.8%)	24 (22.2%)	108 (100%)

The findings in Table 4.8 above have shown that the relationship between age and attitude towards epilepsy in this study was not statistically significant, with a chi-square of 6.54 and $P = 0.48$.

4.3.2.2 Relationship of the respondents' gender and attitude towards epilepsy

Table 4.20: The relationship of the respondents' gender and attitude towards epilepsy (n = 113)

	Teachers' attitudes towards epilepsy (Willingness to teach a LWE)		
Gender at birth	Yes (%)	No (%)	Total (%)
Male	36 (83.7%)	7 (16.3%)	43 (39%)

Female	50 (74.6%)	17 (25.4%)	67(60.9%)
Total	86 (78.2%)	24 (21.8%)	110 (100%)

The findings have shown that in this study the relationship between the gender and attitudes of the respondents was not statistically significant, with a chi-square of 1.27 and $P = 0.26$.

4.3.2.3 Relationship of the respondents' relationship status and attitudes towards epilepsy

Table 4.21: The relationship between the respondents' relationship status and attitudes towards epilepsy (n = 113)

Relationship status	Teachers' attitudes towards epilepsy (Willingness to teach a LWE)		Total (%)
	Yes (%)	No (%)	
Married	36 (69.2%)	16 (30.8%)	52 (47.7%)
Single	45 (86.5%)	7 (13.5)	52 (47.7%)
Committed relationship	2 (100%)	0	2 (1.8%)
Widowed	3 (100%)	0	3 (2.8%)
Total	86 (78.9%)	23 (21.1%)	109 (100%)

From the findings it emerged that there are no statistically significant differences between the teachers' relationship status and their attitudes towards epilepsy ($p = 0.11$).

4.3.2.4 Relationship of the respondents' level of education and attitudes towards epilepsy

Table 4.22: The relationship of the respondents' level of education and attitudes towards epilepsy (n = 113)

Respondents' level of education	Teachers' attitudes towards epilepsy (Teachers' willingness to teach a LWE)		Total (%)
	Yes (%)	No (%)	
Diploma	14 (60.9%)	9 (39.1%)	23 (25.3%)
Degree	55 (80.9%)	13 (19.1%)	68 (74.7%)
Total	69 (75.8%)	22 (24.2%)	91(100%)

The findings from Table 4.22 above provided a chi-square of 3.8 and $P = 0.053$. The relationship between the respondents' level of education and attitudes towards epilepsy is not statistically significant.

The findings of this study are related to a study conducted in Nigeria which revealed that the attitudes of the participants towards epilepsy were not statistically associated with gender and educational qualifications (Frank-Briggs, 2015).

4.4 SUMMARY

The foregoing chapter presented the findings on knowledge, attitudes and practices towards epilepsy among the secondary school teachers in Oshana region. The teachers conducted are full-time qualified teachers.

The descriptive part of the study was presented in Section 4.2, while the analytical part was presented under Section 4.3. The next chapter will discuss the conclusions, recommendations and the limitations of the study.

CHAPTER 5

CONCLUSIONS, RECOMMENDATIONS AND LIMITATIONS

5.1 INTRODUCTION

This chapter will present the summarised research findings and conclusions that were drawn from the study, in the context of the purpose and stated objectives of the study. A number of recommendations are formulated and presented with an acknowledgement of the limitations of the study.

5.2 PURPOSE AND OBJECTIVES OF THE STUDY

The purpose of the study was to assess the knowledge, attitudes and practices of senior secondary school teachers in Oshana Educational Region towards epilepsy. The objectives of the study are to:

- Examine the knowledge of the secondary school teachers in Oshana Region about epilepsy
- Determine the attitudes of the secondary school teachers in Oshana Region towards epilepsy
- Explore the practices of the secondary school teachers in Oshana region towards epilepsy

5.3 CONCLUSIONS BASED ON THE SPECIFIC OBJECTIVES OF THE STUDY

It is concluded that the research aim of this study was achieved. The conclusions of this study will be done according to the objectives of this study, which will be dealt with one by one.

5.3.1 Study objective 1

To examine the knowledge of the secondary school teachers in Oshana Region about epilepsy

The acceptance or discrimination of LWE by their peers and classmates depends on the teachers' knowledge about epilepsy. The teacher has the power to influence the learners and the community at large, because if she/he is knowledgeable about epilepsy, she/he can instil that knowledge in the students directly and to the community indirectly, because the learners will take the knowledge home. Therefore the teachers' knowledge about epilepsy is important, for the improvement of the quality of life for the LWE.

This study revealed that 96% of the respondents are familiar with epilepsy, with the commonest source of information being the home/community (56.6%). Unfortunately, only 6.2% have heard about epilepsy during their training. In contrast of responding to be familiar with epilepsy, 54% of the respondents still indicated that while being familiar, they are not knowledgeable about epilepsy, with only 12.4% indicating to be knowledgeable, while 21.1% were neutral. The findings have revealed that 73% of the

respondents knew someone with epilepsy, 61% have never taught a LWE, while only 22% of them have taught a LWE.

Thus, this study revealed that the majority of the teachers had reported to be familiar, but not knowledgeable about epilepsy and that they also had some disturbing misconceptions towards epilepsy, where some have perceived epilepsy as a mental illness and as being caused by an evil spirit possession.

5.3.2 Study objective 2

To determine the attitudes of the secondary school teachers in Oshana Region towards epilepsy

Negative attitudes towards epilepsy may lead teachers to stigmatise or discriminate against LWE. This will have a negative effect on the learner's performance at school, because they might feel rejected, which will in return negatively affect their self-confidence (Gorongu, 2013).

On the other hand, some of the findings in this study revealed teachers' positive attitudes by indicating that the teachers were willing to teach and associate with LWE. The findings also revealed that the majority of the teachers do not perceive LWE to experience any discrimination and they as teachers were also willing to teach them in mainstream schools and they believe that LWE have the same academic abilities as other learners without epilepsy. In addition, the teachers in this study had no objection in socializing or allowing their family members to socialize with LWE.

However, there were some negative attitudes or misconceptions about epilepsy. Despite the respondents being literate, 20% of the respondents thought that epilepsy was contagious. Some teachers also revealed negative attitudes towards epilepsy, where 22% of them were not willing to teach a LWE, while 28% felt that LWE should be sent to a special school with the reason that they disrupt classes. Sadly, 32% of the respondents said they would object to a PWE marrying their close relative.

5.3.3 Study objective 3

To explore the practices of the secondary school teachers in Oshana region towards epilepsy

When encountering a person with possible emergency, the following acronym in health is followed, namely “AABC”, where the first “A” represents an assessment of the safety of the environment of the person with the emergency. On the item which dealt with the approach to the LWE who has a seizure, the first option would have been to ensure that the environment is safe. It is concluded in this study that most of the teachers would not have been able to ensure the safe environment for LWE during the seizure episode. It was only 39.8% of the teachers in this study who responded that they would try to move the learner away from danger.

However, wrong practices have emerged in this study where (14%) of the respondents revealed that they would hold the legs and arms of an LWE during a seizure, 4% would make an LWE smell something to stop the seizure, 31.9% said they would avoid touching the LWE during a seizure, which could put the LWE in a dangerous situation

as he/she could hurt himself/herself. Moreover, 46% of the respondents said they would avoid the saliva of an LWE, with the reason that if they touch the LWE's saliva, they would end up suffering from the same condition.

5.5 RECOMMENDATIONS

All the submitted recommendations will also be forwarded to the Ministry of Education.

5.5.1 Recommendations regarding continuous education for teachers:

- There is a need to educate teachers on the meaning of epilepsy, especially about the causes, signs and symptoms of the condition, as well as the management of seizures
- The teachers also need to be educated especially on how to recognise absence seizures
- The teachers should also be empowered with knowledge on epilepsy in order to help the LWE to form support groups at school or in the community; with the aim to improve their quality of life
- The Ministries of Health and Education should work together to alleviate fears surrounding epilepsy through health education about epilepsy
- The rising of awareness about epilepsy among the teachers, students and the community at large is highly recommended to improve the quality of life of LWE, through health education and training on how to handle a seizure.

- There is a need to consider the incorporation of epilepsy awareness and its management in the teachers' training curriculum.

5.1.2 Recommendations for further studies

- As referred to in the limitations of the study, a qualitative research study could also be conducted on the attitudes of teachers towards LWE
- A further study on the same topic needs to be conducted nationally
- The findings call for the exploration of whether parents of children with epilepsy allow their children to attend school, because this study has revealed that the teachers who know someone with epilepsy are more than the ones who had taught LWE
- There is a need to explore reasons why many teachers in this study know someone with epilepsy, but only few of the teachers have taught a LWE

5.4 LIMITATIONS OF THE STUDY

The results of this study cannot be generalized to the whole population, because it was only conducted and localized in some schools in Oshana region.

Due to the fact that the respondents might have answered untruthfully to please the researcher, the data quality might have been compromised due to possible Hawthorne effect.

As already mentioned in the recommendations, a qualitative approach could have elicited a deeper understanding of the experiences of the teachers towards epilepsy.

5.6 SUMMARY

This chapter presented the conclusions, recommendations and limitations of the study. This is also the final chapter of this thesis. The way forward of the study was stated in terms of recommendations, based on the implications identified by the study.

Recommendations will be submitted to the Ministry of Education, for possible implementation. It is hoped that the findings of this study will help to improve the care of LWE in Namibia.

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ANNEXURE A: QUESTIONNAIRE AND INFORMED CONSENT FORM**TITLE OF RESEARCH STUDY: Knowledge, attitudes and practices towards epilepsy among the secondary school teachers in Oshana Region**

You are being invited to participate in a research study about knowledge, attitudes and practices towards epilepsy among the secondary school teachers in Oshana region.

This study is being conducted by Ndilimeke P I Angula, in partial fulfillment of the requirements for the degree of master in public health of the University of Namibia.

You were selected as a possible participant in this study because you interact on a daily basis with the learners, 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 that of Education in reducing the burden caused by epilepsy through the improvement of acceptability, access to services, prevention and quality care for the epileptic school going children, by improving the 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 Ndilimeke P I Angula at Cell:

0812492987

E –Mail: ndiliangula@yahoo.com.

I agree to participate in this research study voluntarily.

Age.....

Signed.....

School Name:.....

Date.....

QUESTIONNAIRE FOR THE QUANTITATIVE PHASE

1. Demographic characteristics:

1.1 Age.....

1.2 Gender:

1.2.1 Male

1.2.2 Female

1.3 Marital status:

1.3.1 Married

1.3.2 Single

1.3.3. In a committed relationship

1.3.4 Widowed

1.4 Level of education (Highest qualification):.....

2. Knowledge and practice towards epilepsy

2.1 Have you ever heard about a disease called epilepsy?

2.1.1 Yes

2.2.2 No

2.1.3. If yes, what was your source of information about the condition? (Where have you heard about it?)

.....
.....
.....

2.2 Who does epilepsy affect?

2.2.1 Females

2.2.2 Males

2.2.3 Both males and females

2.2.4 Do not know

2.3 Do you know or have you ever known anyone with epilepsy?

2.3.1 Yes

2.3.1 No

2.3.1 Do not know

2.4 Have you ever taught a learner with epilepsy?

2.4.1 Yes

2.4.2 No

2.4.3 Do not know

2.4.1 If yes to question 2.4., how would you rate your experience?

Very uncomfortable/unsure	1	2	3	4	5	At ease and relaxed

2.5 How would you rate your knowledge about epilepsy?

Not knowledgeable at all	1	2	3	4	5	Well informed

2.6 What do you think epilepsy is? Circle the correct answer.

2.6.1 Epilepsy is a type of mental retardation.

2.6.2 Epilepsy is a brain disorder

2.6.3 Epilepsy is a mental illness

2.6.4 No idea

2.7 What do you think causes epilepsy? Circle the correct answer (s). There is more than one answer.

2.7.1 Accidents

2.7.2 Inherited disease

2.7.3 Insanity or mental illnesses

2.7.4 Brain tumours

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 following 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 occurs as a result of evil spirit possession. Agree Disagree
Do not know

2.9 Have you ever witnessed a learner having an epileptic seizure (convulsions)?

2.9.1 Yes

2.9.2 No

2.10 If answered yes to question 2.6, how do you describe this experience?

Unsettling/frightening	1	2	3	4	5	Not disturbing to me
	<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?

2.11.1 Yes

2.11.2 No.

2.11.3 Do not know

Motivate your answer.

.....

.....

.....

2.12 Do you believe that epilepsy can be treated or controlled?

2.12.1 Yes

2.12.2 No

2.12. Do not know

2.13. If yes to 2.12, please indicate your belief regarding the treatment of epilepsy in the options provided:

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

2.14 What would you do if a learner has an epileptic attack? Please tick off the correct answer. You may tick off more than one answer.

2.14.1	Hold the legs and arms	
2.14.2	Make the student smell something to stop the seizure.	
2.14.3	Avoid touching the student during the seizure	
2.14.4	Promptly move the child away from danger	
2.14.5	Lay the child on his side	
2.14.6	Avoid touching the child's saliva	

3. Attitude towards epilepsy:

3.1 Do you think that society discriminates against persons with epilepsy?

3.1.1 Yes

3.1.2 No

3.1.3 Do not know

If yes, how?

.....

.....

.....

3.2 Are you willing to teach a learner with epilepsy? Yes No

Why.....

.....

.....

3.3 Do you think that a learner with epilepsy should be sent to a special school? Yes No

Please elaborate.

.....

.....

.....

3.4 What is your belief about the academic possibilities of learners with epilepsy? (Up to what grade do you think a learner with epilepsy can reach?)

	Qualification	Tick in this column
3.4.1	Only up to grade 7	
3.4.2	Grade 9	
3.4.3	Grade 10	
3.4.4	Grade 12	
3.4.5	Tertiary qualification	

3.5 Willingness to associate with learners with epilepsy:

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

Yes

No

Please motivate your answer

.....
.....
.....

3.5.2 Would you object to a person with epilepsy marrying a close relative of yours (brothers, sister or child)? Yes No

3.5.3 Do you think persons with epilepsy should have children?

3.5.3.1 Yes

3.5.3.2 No

3.5.3.3 Not sure

3.5.4 Do you agree or disagree with the following statements?

3.5.4.1 I will associate with persons with epilepsy in social gatherings. Agree
Disagree

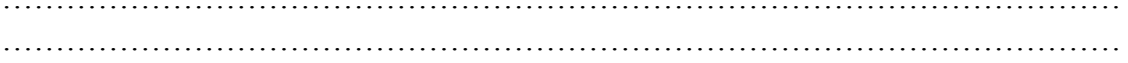
3.5.4.2 I will not change my attitude to an acquaintance with a recent diagnosis of epilepsy. Agree Disagree

3.5.4.3 I could have a person with epilepsy as a close friend. Agree Disagree

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

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

.....
.....



ANNEXURE B: PERMISSION LETTER FROM UNAM RESEARCH COMMITTEE

University of Namibia, Private Bag 13301, Windhoek, Namibia
340 Mandume Ndemufayo Avenue, Pioneers Park
☎ +264 61 206 3111; URL: <http://www.unam.edu.na>



19 February 2015

TO WHOM IT MAY CONCERN

RE: RESEARCH PERMISSION LETTER

1. This letter serves to inform that student: **Ndilimeke Angula** (Student number: **9311831**) is a registered student in the School of Nursing and Public Health at the University of Namibia. His research proposal was reviewed and successfully met the University of Namibia requirements.
2. The purpose of this letter is to kindly notify you that the student has been granted permission to carry out postgraduate studies research. The School of Postgraduate Studies has approved the research to be carried out by the student for purposes of fulfilling the requirements of the degree being pursued.
3. The proposal adheres to ethical principles.

Thank you so much in advance and many regards.

Yours truly,

Name of Main Supervisor: **Prof L Small**

Signed: _____

Dr. C. N.S. Shaimemanya

Signed: _____

Director: School of Postgraduate Studies

Tel: 2063523

E-mail: cshaimemanya@unam.na

**ANNEXURE C: LETTER TO THE PERMANENT SECRETARY, MINISTRY
OF EDUCATION**

P.O. Box 794

Oshakati

02 March 2015

The Permanent Secretary

Ministry of Education

P/Bag 13186

Windhoek

Dear Sir/Madam

**Application for Authorization to conduct a Research Project at Senior Secondary
Schools in Oshana Region**

I am Ndilimeke P I Angula, a student at the University of Namibia, School of Nursing and Public Health. I am pursuing a Masters degree in Public Health. I have successfully completed my course work; I am only left with a thesis, of which a proposal was approved by the University recently. My topic is: **Knowledge, attitudes and practices towards epilepsy among the senior secondary school teachers in Oshana region.** The main supervisor of this study is Prof. L F Small and the co – supervisor is Dr. S. Kuugongelwa, both based at the University of Namibia, School of Nursing and Public Health.

I am humbly requesting your good office to grand me permission to conduct this research, in order to fulfill my dream of obtaining this degree. The planned date of conducting the study is from the 20 th of March 2015. Please take note that no costs will

be incurred by the Ministry of Education, or the teachers. Attached, please find my CV, letter of approval from UNAM, the ethical clearance certificate from UNAM and the research instrument that will be used to conduct this study.

My contact details are: **Ndilimeke P I Angula, NIP Oshakati Main Laboratory, Oshakati State Hospital, Sam Nujoma Drive. Cel: 0812492987, Tel: 065 – 220420 (W), 065 – 231967 (H), e – mail: ndiliangula@yahoo.com.**

Your approval to conduct this study will be greatly appreciated.

Yours faithfully

Ndilimeke P I Angula (Mrs.)

**ANNEXURE D: PERMISSION LETTER FROM THE PERMANENT
SECRETARY OF THE MINISTRY OF EDUCATION**



REPUBLIC OF NAMIBIA

MINISTRY OF EDUCATION

Enquiries: Mr C. Muchila
E-mail: Cavin.Muchila@moe.gov.na
Tel: +264 61 2933200
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Private Bag 13186,
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File no: 11/1/1

Date: 20 March 2015

To: Mrs Ndilimeke P. I. Angula
Cell: 0812492987
Fax: 065 - 220420
ndiliangula@yahoo.com

Dear: Mrs Angula

SUBJECT: PERMISSION TO CONDUCT A RESEARCH STUDY IN OSHANA REGION

Your correspondence regarding the subject above, seeking permission to conduct a research study in the schools of Oshana Region has reference.


Kindly be informed that the Ministry does not have any objection to your request to conduct a research study at identified schools in the region concerned.

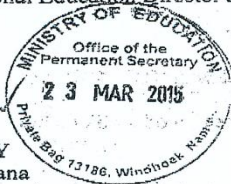
You are, however, kindly advised to contact the Regional Council Office, Directorate of Education, for authorisation to go into the schools and for proper information coordination.

Also take note that the research activities should not interfere with the normal school programmes. Participation by either teachers or learners should be on a voluntary basis. Should you involve minors in your research activities, consent for participation should first be obtained from the parents/guardians of the minor(s).

By copy of this letter the Regional Education Director are made aware of your request.

Sincerely yours


Mr. Alfred Ilukena
PERMANENT SECRETARY
cc: Director of Education; Oshana



All official correspondence must be addressed to the Permanent Secretary