THE ATTITUDE OF TEACHERS AND HIGH SCHOOL LEARNERS TOWARDS EPILEPSY IN MANKWENG AREA (LIMPOPO PROVINCE).

By

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Declaration

I Selaelo Michael Rakubu declare that the dissertation on the 'Attitude of epilepsy among teachers and high school learners in Mankweng area (Limpopo Province) is my own work and has not been submitted in another institution for a request of a degree or related to that and all the references I used in the study have been acknowledged in the reference list.

Signature

Date

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Abstract

The study aimed to determine the attitude of teachers and high school learners towards epilepsy in Mankweng area. Epilepsy is a common childhood neurological disorder, while school is the second most important social institution for the children after the family. Apart from their roles at school, teachers are also charismatic role models in their society which can help to eradicate the stigma and negative attitude towards epilepsy. The study determined the attitude towards epilepsy by using the epilepsy attitude scale which had four sub scales, the negative stereotypes, risk and safety concerns, role and work expectations, and personal fear and social avoidance.

The study comprised of 292 participants, of which 169 (58.3%) were females and 123 (41.7%) were males. The results of the study indicated that high school learners tended to have a negative attitude towards epilepsy compared to teachers in Mankweng area. Participants scored negatively on the negative stereotypes and personal fear and social avoidance of the epilepsy attitude scale. The factor of cultural orientation, learning curve and exposure and non-exposure to epilepsy has shown to be dominant in the negative attitude towards epilepsy amongst the participants.

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List of abbreviations

ANOVA-Analysis of Variance

ATPE-Attitudes Towards People with Epilepsy

EAS- Epilepsy Attitude Scale

EXP-Exposure

MANOVA-Multi Analysis of Variance

NS-Negative Stereotypes

PFSA-Personal Fear and Social Avoidance

SPSS-Statistical Package of Social of Science

RSC-Role and Safety Concerns

RWE-Role and work Expectation

SD-Standard Deviation

WHO-World Health Organization

PWE-People With Epilepsy

CHAPTER 1: INTRODUCTION AND BACKGROUND OF THE STUDY

1.1 Introduction

Epilepsy is a common childhood neurological disorder that has often been misunderstood and subsequently feared. The vast majority of people suffering from epilepsy reside in the developing world (Panter, 2004; & Youssef, Dial, Jaggernauth, Jagdeo, Pascall, Ramessar et al. 2009). It is noted that academic and social problems at school are overrepresented among children with epilepsy, whose academic performance has consistently been found to be poor (Austin, 2000; Sturniolo & Galletti, 1994; & Williams, 2003).

Teachers and children have been reported to have constant fear of epilepsy which has traumatic ramifications to children with epilepsy, such that the academic performance of epileptic children is affected as well as their social life. It is hypothesized by Diop, Boer, Mandlhate, Prilipko, and Meinardi (2003) that the prevalence and incidence of epilepsy have over time shown a cumulative figure, while the level of narrow-mindedness in terms of negative social stigma has also escalated, the repercussion of these attitudes are faced by epileptic children at school. For instance, it is proven that school is the second most important social environment for the child after the family (Diop et al., 2003). School is where children acquire knowledge, develop social skills and balance their psychological well-being (Chiou & Hsieh, 2001; Prpic, Korotaj, Cicvaric, Kirincic, Valerjer, & Toma, 2003; & McGee, Silva, & Williams, 1984). Thus teachers form a crucial part of deterring social negative attitudes towards epilepsy among community members. Research has indicated that most teachers do not feel confident when working with epileptic children (Prpic et al., 2003).

It was hypothesized by Bekiroglu, Ozkan, Gürses, Arpaci, and Dervent (2004), that the quality of life among school children with epilepsy may seriously be affected by the attitudes of their families and school environment if the people around them are unaware or have inadequate knowledge about their condition, setting the need for research project pertaining to attitudes towards epilepsy.

The present study aims to determine the attitudes towards epilepsy among teachers and high school learners in Mankweng area.

1.2 Statement of the problem

Research has consistently shown that children with epilepsy experience significantly greater difficulties in learning and behaviour than the general population (Lhatoo & Sander, 2001; Aldenkamp, Arends & Overweg-Plandsoen, 1999; & Besag, 1995). One of the challenges is that the history of epilepsy has always been filled with misinformation, misconceptions, and misunderstandings, resulting in widespread prejudice and stigmatization of people with epilepsy (Youssef et al., 2009). Difficulties in social adjustment for people with epilepsy are understandable, given the negative popular conceptions about it as described in the literature in China, Africa and Asia (Virmani, Kaul, & Juneja, 1977). It is also theorized by Thacker, Verma, Thacker and Mishra, (2008) that it is indeed unfortunate that a common neurological disorder such as epilepsy carries such strong social stigma. The social attitude, the stigmata and the discrimination against epilepsy and epileptics are often more devastating and harmful than the disease itself.

Through interaction with their teachers, children satisfy their developmental task of emancipation, they develop self-respect, and they build a picture of themselves (Blum & Patterson, 2008).

Therefore children with epilepsy face both the disorder and its effect on their learning ability, as well as the attitude from their perceived charismatic role models (teachers) and their friends who are also their classmates, and yet are expected to compete with the non-epileptic children academically. Hence the need for this study especially from the African perspective, because in the authors knowledge there are no studies reported on this issue.

1.3 Aim of the study

The aim of the study is to determine the attitude towards epilepsy among high school learners and teachers in Mankweng area.

1.4 Objectives of the study

1.4.1. To determine how attitudes towards epilepsy among teachers and high school learners differ according to gender.

1.4.2. To determine how attitudes towards epilepsy among teachers and high school learners differ according to age

1.4.3. To determine how attitude towards epilepsy among teachers and high school learners differ according to level of education.

1.4.4 To determine how attitude towards epilepsy among teachers and high school learners differ according to experience or exposure with epilepsy

1.5 Motivation of the study

The researcher is aware of a few people who have epilepsy and who had to leave school because of epilepsy and the stigma associated with it. Most people attribute the causes of the disorder with witchcraft and identify epileptics as a curse for either their malicious deeds or their families' deeds.

Furthermore, most of the studies and theories reviewed are from a Western perspective, thus there is paucity of research in epilepsy from a non-Western perspective.

1.6 Hypotheses

Based on the objectives of this study, the following hypotheses were identified:

1.6.1. Gender will influence attitudes towards epilepsy among teachers and high school learners.

1.6.2. Age will influence attitude towards epilepsy among teachers and high school learners.

1.6.3. The level of education will influence attitudes towards epilepsy among teachers and high school learners.

1.6.4. The experience or exposure towards epilepsy will influence attitude towards epilepsy among teachers and high school learners.

1.7 Scope of the study

The study was conducted in 30 schools provided by the Department of Education in Mankweng area. Mankweng area is located in the Limpopo Province, one of the nine provinces in South Africa. Mankweng area is situated just outside the capital city of Limpopo Province which is Polokwane and the University of Limpopo is also located in Mankweng area. A list of 30 schools was provided by the Department of Education which comprised of 10 secondary and 20 primary schools for data collection.

1.8 Significance/ Relevance of the Study

The aim of the study is to determine attitudes towards epilepsy among high school learners and teachers in Mankweng area (Limpopo Province). Teachers play an enormous role in the development process especially considering that children spent most of their time with teachers than with their actual parents. Thus teachers should be well informed about the common disorder among children such as epilepsy and the likely repercussion teachers are attributing to children with epilepsy. Learners in high school have an impact on their classmates, on this case who might be epileptic, for instance, they exert peer pressure which presumably have an impact on the epileptic academic performance. From the study, the Department of Education will be informed on how teachers' and high school learners attitude toward epilepsy varies according to demographic variables such as age; gender; level of education; and their personal experience with epilepsy. Thus the study will benefit the Department of Education, Non Governmental Organizations (NGOs), as well as the community to apply relevant measures for psycho education about epilepsy. With that achieved, epileptic children will also get to study in a competitive environment and their potentials can also be secured and restored.

1.9 Conclusion

This chapter summarized the conception of epilepsy and its stigmatization as well as the charismatic role that teachers' should play. This chapter further elaborated on the aim and objectives of the study as well as protocols which were observed in the study.

CHAPTER 2: THEORETICAL FRAMEWORK

2.1 Introduction

In this chapter, concepts used frequently in this study are defined according to the context of the study. Following this, an overview of the theoretical concepts would be assessed and aligned with the study.

2.2 Operational definition of concepts

2.2.1 Attitude

According to Miller (2005), an attitude is the sum of beliefs about a particular behaviour weighted by evaluations of these beliefs. Eagly and Chaiken (2007) define an attitude as a psychological tendency that is expressed by evaluating a particular entity with some degree of favour or disfavour.

For the purpose of this study an attitude would be defined and aligned according with the definition of Eagly and Chaiken (2007), which concentrates on unfavourably reactions or beliefs by teachers and high school learners towards epilepsy.

2.2.2 Epilepsy

According to Lee, Chen, & Fang (2008**),** epilepsy is a chronic neurological condition characterized by recurrent, unprovoked seizures requiring continuous medication for long-term management.

Epilepsy is a chronic neurological disorder characterized by recurrent seizures that affects approximately 40 million people worldwide (Youssef et al., 2009).

Epilepsy is defined in the context of this study as a sudden recurrent seizure experienced by a child without any understandable valid explanation.

2.3 Classification of seizures

According to the Western conceptualization there are two major categories of seizures, namely partial and generalized; partial involves epiletiform activity in localized brain regions while generalized seizures involve the entire brain (Sadock & Sadock, 2007).

2.3.1 Generalized seizure

They exhibit the classic symptoms of loss of consciousness, generalized tonic movements of the limb, tongue biting, and incontinence. Although the diagnostic of the ictal events of the seizure is relatively straightforward, the postictal state, characteristics by a slow, gradual recovery of consciousness and cognition, occasionally present a diagnostic dilemma for psychiatry in the diagnostic room. The recovery period from a generalized tonic clonic seizures ranges from a few minutes to many hours, and the clinical picture is that of a gradually clearing delirium (Sadock & Sadock, 2007).

2.3.2 Absence seizure (Petit Mal)

The epileptic nature of the episode may go unrecognized because the characteristic motor or sensory manifestation of epilepsy may be absent or so slight that they do not arouse the suspicion. Petit mal epilepsy usually begins at childhood by the age of 5 and 7 years and cease by puberty. Brief disruption of consciousness during which the patient suddenly loses contact with the environment, but the patients has no true loss of consciousness and no convulsion movements during the episodes (Sadock & Sadock, 2007).

2.3.3 Partial seizures

They are classified as either simple (without alternations in consciousness) or complex (with an alternation in consciousness). Complex seizure is the most common among adults, it affects approximately 3 of 1000 person. Somewhat more than half of all patients with partial seizures have complex partial seizure. Partial seizure is characterized by psychomotor seizures and limbic epilepsy (Sadock & Sadock, 2007).

2.4 Theoretical framework

Epilepsy is a common disorder which is perceived differently due to several factors, such as ones' cultural orientation of the disorder. For instance, most Western theories perceive the causes of epilepsy as a lack of equilibrium among neurons (Matthew, Kathryn, & Dennis, 2002), while in Africa epilepsy is characterized and associated with ancestral sprits, witchcraft and ritual impurity (Rankoana, 2000). Hence lay theories will be used to explain the causes of epilepsy from an African stand point. The study will be orientated from an African perspective.

The major causal factors of neurological disorders among Africans are reviewed as ancestral spirits, malevolent magic as manipulated by the witches and sorcerers, punishment of sin, other magically caused conditions which expose themselves in various forms of ritual impurity, as well as a wide range of naturally caused illnesses (Kriel, 1998; Andermann, 1995; Onwuekwe, 2007; Kabir, Iliyasu, Galadanci, Abubakar, Salihi, & Aliyu, 2006; Ismail, Rhodes, Wright, & Small, 2005; Dongmo, Echouffo, Njamnshi, Sini, Pepouomi, & Kamdem 2003; & Njamnshi, Faustin, Tabah, Dema, Angwafor, Yepnjio, et al., 2009). It is asserted by Ndetei and Muhangi, (1979) that in Africa, neurological disorders are often perceived as a source of misfortune, ancestors and witches are believed to play a crucial role in causing the disorder. Such disorders may be viewed in terms of magical, social, physical and religious

causes, but rarely as diseases within the Western biomedical paradigm. Kriel (1998) further points out that a large number of illness cases are associated with some external agent that has sent the illness. The external agents are those that do not include the body physiological reaction and may ultimately not be well understood as they lack tangible evidence. The two principal categories of agents associated with illness and other misfortunes are living people and the ancestral spirits. Ancestral spirits have supernatural powers that cause the diseases and misfortunes sent to the living people (Rankoana, 2000).

According to Rankoana (2000), the spirits of the deceased family members are called the ancestors and it is believed that they have the supernatural ability to influence their living kin. It is asserted that ancestors have unlimited power over their living descendants either to bless or to chastise any one who tampers with them. Phenomena such as disease, death, disaster and misfortunes are often regarded as direct intervention by dissatisfied ancestors as a way of disciplining or demanding something from their living people, thus ancestors are respected because of their divine power (Rankoana, 2000; & Mőnnig, 1967).

The ancestral spirits are the guardians of tribal traditions, and particularly the moral obligation to respect the elders. If these obligations are not honoured the ancestors feel disregarded and forgotten by their living kin. That is why they will act against the living members to correct their deviant behaviour (Malan, 1998). In Africa, respect as a phenomena is strongly reinforced among children to adults, thus when the contrary prevails the ancestors act to correct the behaviour thus the outcomes of neurological disorders. For instance, it is postulated by Baskind and Birbeck (2005), that breaking taboos may cause seizures because angered ancestors may send the ailment as a punishment for socially inappropriate behaviour.

Ancestor spirits may cause affliction because they desire sacrifice and offerings, but as a rule they do not wish death upon their descendants as they are interested, instead, with correcting the wrong doing and the well-being of their lives. But the living members of society must fulfill their obligations to the ancestors, because that is regarded as liberation from neurological disorders (Magesa, 1997).

A symbiotic relationship seems to exist between the living and their ancestors, the role of each being to keep the other happy, healthy and viable. The constant remembrance by the living, keeps the "living dead" alive, content and functioning. That is one of the reasons why it is so important to have offspring to perform the necessary ceremonies (Buhrmann, 1984). It has been noted that people who suffer from neurological disorders are punished by the ancestors due to their wrong doing, disrespect to the ancestors, engagement in licentious events within the family, among themselves, and within the community. Baskind and Birbeck (2005), reported a case of a 6 year old girl who was diagnosed by the traditional healer with epilepsy due to the deceased father anger, after the father's death, the paternal grandparents had confiscated the family assets, including this child, leaving the mother destitute.

Most of the evil deeds are ascribed to evil minded people who are jealous of others and want to harm or kill them by making use of magical means. People who specialize in such actions are described as sorcerers (males) and witches (females) (Malan, 1998). It is not well-known how the malevolent magic which Africans also call witchcraft is implemented, however Mbiti (1975), is of the opinion that witches and sorcerers use incantations (the usage of magical formulations, spells or charms) words (which may consist of cursing the other person or wishing the worst to happen to other peoples), rituals (this may include the process of consulting an African doctor to cause harm, disease, or distress to that ascribed person).

It is unlikely that a person may just want to bewitch another person without any explanation although that is not impossible, but in most cases there is a reason why a person bewitches another (Rankoana, 2000). It often arises from mere domestic tension and jealousy that is bound to occur in any closely knit community. For that reason, bewitching is reported mostly among relatives and neighbors in that one party wants to get rid of the other by means of mystical forces (Mbiti, 1975). A popular co-existing belief of witchcraft in Uganda is that of a lizard growing in the head of the patient and is disturbing the brain by running in circles and making the person dizzy, a feeling that is usually followed by a seizure. The lizard may have been there since birth, but can also be the result of witchcraft (Andermann, 1995).

According to Temkin (1945), the following are the instruments that those with the ability to perform malevolent magic (witchcraft) use to pass on epilepsy to other people, sea fish (red mullet, blacktail, mullet, and eel), meat (goat, deer, pig, and dog), birds (cock, turtledove and bustard), vegetables (mint, garlic and onion), baths and certain dishes as well as the use of black garments and goat skins and the crossing of feet and hands. Furthermore, neurological disorders such as epilepsy may be inflicted by means of eggs which have been buried with dead bodies, especially the dead bodies of witches (Temkin, 1945).

According to Mőnnig (1967), a condition that can lead to neurological disorders is that of ritual impurity. This condition is a period in which an individual is contaminated and that during specified time an African individual is susceptible or vulnerable to disease, the period of contamination is, however, rather ineffective in fighting of diseases.

Kriel (1998), is of the suggestion that among Africans any person may find him or herself in a condition which is referred to as being unclean, polluted, or contaminated. Such impurity is not regarded as a disease but as a period of reduced resistance against disease, misfortunes and the influence of witchcraft and sorcery.

Mőnnig (1967), further argues that ritual impurity is a dangerous condition not only to those who are impure, but also for the people with whom they come in to contact with as they may be contaminated as well. This means that if one family member is contaminated and precautions are taken by other family members to stay pure, it may not be useful as the one person who is contaminated may ultimately put the entire family at a high risk for contacting neurological disorders such as epilepsy (Mőnnig, 1967).

Kriel (1998), suggests that various disorders among Africans are regarded as natural diseases. These are the kind of diseases that just naturally occurs and are not the results of manipulated witchcraft or any related phenomena such as ancestral anger. Kriel (1998), continues to identify the following categories of natural diseases: children ailments, disease associated with old age, disease of the blood, dietary illness, diseases caused by adverse environmental factors such as cold and heat, the malfunctioning of bodily organs, hereditary diseases, as well as a general category which includes phenomena such as snake bites and complications caused by taking of wrong medications (Kriel, 1998).

2.4.1 Traditional healers' perspective and healing criteria

According to Gessler, Msuya and Nkunya (1995), proper traditional healers are usually inducted through one of four routes, the inheritance within a family kinship; ancestor-spirits contacted through dreams; the experience of having an illness cured by traditional medicine; a personal decision, followed by a period of apprenticeship (Gessler et al., 1995).

Traditional healers' are people who treat both naturally and supernaturally caused diseases with their herbal remedies and other magical means. They supply both remedial and protective medicine and also do divination. Mőnnig (1967), states that the multiple causes ascribed to various supernatural forces give the traditional healer great prominence. The traditional healer must establish the exact source of every misfortune and disease through

divination, mostly by using his set of divination bones. Further, traditional healers are people who consult with the ancestral spirits to determine their wishes, and then advise people as to which actions to take to appease the ancestors.

Traditional healers recognize the same symptoms that a neurologist elicits to characterize seizure onset, such as olfactory hallucinations, jacksonian march, automatisms. Although traditional healers acknowledge a familial propensity for some seizures and endorse causes of symptomatic epilepsy, they believe witchcraft plays a central, provocative role in most seizures (Baskind & Birbeck, 2005). Although the same symptoms are acknowledged when epilepsy is attributed to supernatural causes, care seeking often does not include attendance at local medical clinics (Kalichi & Birbeck, 2003). Rather, according to Baskind and Birbeck (2005), PWE have almost always sought care from healers before they are seen by the formal medical system, implying traditional healers are more recognized than the medical doctors in terms of epilepsy patients in Africa. Seizures are widely associated with witchcraft, and traditional healers are seen as having the power to mediate witchcraft. Some traditional healers endorse an explanation for epilepsy in which the whole family unit is seen as the victim. This may serve to foster protective feelings toward the PWE.

Alternatively, as witchcraft is commonly believed to be a result of malice incurred by wronging one's enemy, PWE may be seen as having somehow "earned" their ailment through wrongdoing. In African tradition, consulting a traditional healer is out of faith which normally requires that the patient must not be consulting with the western medical scheme because they would disrupt the communication with the ancestors.

There are certain occasions and ceremonies when ancestors of the family must be approached and propitiated. Examples of such occasion are at the death of a person, during marriage ceremonies, when disease occurs in the family and when somebody dreams about his or her

deceased family members more often. A sacrifice of beer, food, snuff, or even the slaughtering of a small or large stock is made to them. Rituals of this nature emphasize that people are not masters of their own destiny. There are special places established where the offerings are made, the proper place for most sacrificial rites is a shrine (Rankoana, 2000).

If the sacrifice is performed to request the ancestors to heal one of the family members, the officiator will introduce and dedicate the patient to them. Forgiveness is asked, should they have angered the ancestors through their conduct. The ancestors are sometimes reprimanded for having caused the illness, after which they are requested to accept the sacrifice and to protect as well as to bless all their descendants (Rankoana, 2000).

However for a quarter of them, therapeutic-means include concoctions of herbs or roots, baths and infusions (Millogo, Ratsimbazafy, Nubukpo, Barro, Zongo, & Preux, 2004).

2.5 Theories of attitude formation

A theory is a general and more or less comprehensive set of statements or propositions that describe different aspects of some phenomenon (Hagan, 2006).

Hagan (2006), further defines a theory as an attempt to develop explanations about reality or ways to classify and organize events, describe events, or even predict future events. A theory is again defined by Babbie (2003), as a system of logical statements or propositions that explains the relationship between two or more objects, concepts, phenomena or characteristics of humans. In this session of the chapter the aim is to correlate the attitude formation and behaviour of teachers and high school learners towards epilepsy according to the attribution theory. The phenomena of attitude formation among teachers and high school learners towards epilepsy is now explained from its core as well as scrutinized according to the attribution theory and theories of attitude formation.

An attitude is any belief or opinion that has an evaluative component, that something is good or bad, likeable or unlikable. Attitudes are learned rather than innate. Attitudes are negative, positive or neutral views of an attitude object (Hogg & Vaugham, 1995). There are different theories that explain the formation of attitudes, bearing in mind that people acquire attitudes differently. Some of the related and applicable explanations advances to the present study are the behavioural approach, self perception theory, and classical conditioning of attitudes. The behavioural approach suggests that the effects of direct and mere exposure effect form the basis of explaining attitude formation.

Zajonc (1968), proposed that the concept exposure, is used to characterize the phenomenon in which the more often a person is seen in a positive way by someone the more pleasing or likeable they appear to be. For example, it is highly possible that a teacher's first time experience or exposure with epilepsy was catastrophic thus deterring the teacher to be involved in anything that has to do with epilepsy while the first experience with epilepsy may be rapturous such as successfully managing a seizure which positively reinforces the teachers to be involved in epilepsy activities. The first time expression of teacher's reaction to epilepsy also has an effect on their learners, either positively, neutrally or negatively reinforcing their behaviour.

The self perception theory claims that people acquire knowledge about what kind of people they are, thus their attitudes are determined by assessing their behaviour. Bem's (1972), theory focuses on gender. He suggests that people form attitudes without deliberately thinking. Bem's theory operates on the notion that different sexes among teachers and high school learners perceive and re-act differently towards matters of epilepsy, for instance, females teachers' or learners' may more likely re-act sympathetically to a seizure while males do not. Classical conditioning involves the formation of attitudes without involving belief, the behaviour occurs when a stimulus comes to evoke a response that it did not previously evoke

simply by pairing it with another stimulus that naturally evokes the response. Classical conditioning involves the process of learning whereby people learn to avoid or repeat certain activities because they bring discomfort or pleasure (Perlman & Cozby, 1983). For instance, teachers and learners may learn to develop the tendency of avoiding seizure event as they bring discomfort to them, concurrently teachers may also learn to repeat certain activities that bring positivism among them. For example, teachers may continue allocating free marks to epileptics because it makes them feel they are helping the epileptic child.

Thus the above stipulated paradigm will be utilized in elaborating the formation of attitudes towards epilepsy among teachers and learners as related to the study.

2.5.1 Attribution theory

The attribution theory was first developed by Heider (1958), who proposed that what people perceived and believed about what they saw, dictated how they would act, even if their beliefs about what they perceived were invalid. Heider's (1958), proposed theory of attribution was further developed by Weiner (1972a), whose theoretical framework has been used primarily in current attribution research.

A final development of the attribution theory was proposed by Kelley (1972), who examined how consistency, distinctiveness and consensus could be used by individuals to establish the validity of their perceptions. According to Baron and Bryne (2000), attribution refers to our efforts to understand the cause behind others' behaviour and on some occasion, the causes behind our behaviour. Further, attribution refers to the process through which we seek to identify the causes of other peoples' behaviour and so gain knowledge of their stable traits and dispositional ones. According to Kelly (1972), we want to know why other people have acted as they have or why events have turned out in a specific way. When we understand the actions or events behind other people's actions we feel in control of the situation and even

hope to do much better in the future. Ajzen (1991), suggests that behaviour is a result of a rational process that is goal-oriented and that follows a logical sequence. According to the attribution theory in relation to this study, when teachers and learners feel they understand the causes and can handle a seizures encountered by epileptics they are more likely to feel in control of the situation and disprove much of their uncertainties pertaining to seizures' management. Kelly (1972), further attributes human behaviour to either internal (motives and intentions) or external (some aspects of the social or physical world) causes and at times the collaboration of the two causes.

Brown and Rogers (1991), propose that people develop a tendency to attribute their positive outcomes to internal causes but negative ones to external factors and this is known as self serving bias. According to Kelly (1972), in our attempts to answer everyday questions we consider three major sources of information. First, we consider "consensus" which is the extent to which some react to some stimulus or event in the same manner as the observed person. The higher the proportion of the other people who react in the same way, the higher the consensus.

Second, we consider "consistency" which is described as the process which the person in question reacts to the stimulus or events in the way as on other occasions, that is, over time. Thirdly, we examine "distinctiveness" which is known to be the extent to which the person reacts in a different manner to other, different stimuli or events (Kelly, 1972). It is further indicated that the tendency to attribute others' actions to dispositional (internal) causes seem to be stronger in situations where both consensus and distinctiveness are low as predicted by Kelly's theory (Van Overwalle, 1997). However in attributing behaviour to certain causes we come across the fundamental attribution error which we perceive others as acting as they do because they have that kind of traits rather than because of the external factors that may influence their behaviour. It was postulated by Jones (1979), that the tendency to explain

other actions as stemming from dispositions even in the presence of clear situational causes, the tendency to overestimate external factors is also known as correspondence bias which is known to be the fundamental attribution error. In relation to the current study, teachers and learners might end up directing the low likely performance of epileptic children to laziness or a lack of dedication to their academic work neglecting personal factors “such as epilepsy” that contribute to their low performance.

2.6 Conclusion

The above stipulated theories would be used in elaborating the attitudes of teachers and learners towards epilepsy. The theories explain how attitude can be formed, how teachers and learners may develop positive or negative attitude towards epilepsy and also how attitude towards epilepsy can be either positively or negatively reinforced. It is worth noting that the study would also be oriented from an African perspective.

CHAPTER 3: LITERATURE REVIEW

3.1. Introduction

In this chapter, an overview of the literature relevant to this study is given. Whitmore and Knafl (2005), defines literature as past research that is summarized and overall conclusions are drawn from many different studies that reflect the past and current state of knowledge pertaining to a particular researched matter. Literature review, however, does not accurately predict the outcomes of the study but it provides a much more definite hostility of the likelihood of the study while it serves to support the hypotheses, objectives and significance of the study, thus the literature review is a vital component of the study.

3.2 Incidence of epilepsy

The statistics published by Epilepsy Foundation (2005), in the United States, purport that 45,000 children under the age of 15 develop epilepsy each year. The statistics interestedly reported that males are more susceptible to develop or suffer from epilepsy when compared to females. It was reported that approximately 300,000 people have their first convulsion each year, of the 300,000 people that suffer from epilepsy each year 120,000 of are under the age of 18. Fifty percent of people with new cases of epilepsy will have generalized onset seizures. Generalized seizures are more common in children under the age of 10, afterwards more than half of all new cases of epilepsy will have partial seizures.

3.3 The role of teachers' in school

Teachers play a crucial role in the inferable future prediction of children at school, this implies that teachers have the power invested in them to determine the likely outcome of children's behaviour. It is supported by the Bureau of Labor Statistics (2008), that teachers play an important role in fostering the intellectual and social development of children during their formative years. The education that teachers impart plays a key role in determining the future prospects of their learners (Blum & Patterson, 2008).

The role of a teacher does not only take place in a classroom as it is also extended to the entire community (Bishop & Boag, 2005). According to the Bureau of Labor Statistics (2008), teachers are the yardstick that measures the achievements and aspirations of the nation. The worth and potentialities of a country get evaluated in and through the work of teachers, and in each country people are the enlarged replica of their teachers'. It is postulated by Lipka and Brinthaupt (1999), that teachers define identity among children, meaning children are more likely to know themselves and develop self-esteem, on the contradictory children might lose their self esteem and identity through teachers. Teachers represent a better-educated section of society and are the future work force of the country. Teachers are perceived as role models both by the children at school and the community at large (Rahman, 2005).

3.4 Demographic variables and attitudes towards epilepsy

3.4.1 Teachers' attitude towards epilepsy and level of education

A higher level of education correlates positively with awareness, knowledge and attitude concerning epilepsy (Bagic, Bagic, & Zivkovic, 2009; Bagic, Bagic, & Zivkovic, 2009; Rahman, 2005; Bishop & Slevin, 2004; Baxendale & O'Toole, 2007; & Youssef et al., 2009).

Community-based studies have reported that better-educated individuals offer more favorable opinions and display positive attitudes (Mirnics, Czikora, Zavecz, & Halasz, 2001; & Hills & MacKenzie, 2002). Thus, it is important that teachers have the knowledge which may ultimately result in an appropriate and positive attitude towards common healthcare issues (Rahman, 2005).

A more similar study to the current study in terms of the demographic variables was conducted by Bishop and Boag (2005), it was observed that attitude and knowledge scores were significantly related to a number of demographic and experience variables. Specifically, scores on both the attitude and knowledge scales of the ATPE were associated with more years of teaching experience, a higher level of education, and a higher self-reported general knowledge of epilepsy. Teachers with higher scores on the attitude scale also tended to be females, currently teaching a student with epilepsy, and teaching in an urban versus a rural setting (Bishop & Slevin, 2004). The relationship between higher levels of education and more positive attitudes toward peoples with epilepsy has consistently been observed in prior attitude research (Mirnics et al., 2001; & Prpic et al., 2003), as has the relationship between more years of teaching experience and attitude toward students with epilepsy.

3.4.2 Gender and attitude towards epilepsy

Demographic variables play a paramount role in the formation of attitudes towards neurological disorders through out the universe. It may be predictable that people of different caliber (for instance, in terms of education [college training education versus university training education]) are more likely to perceive matters differently because of their level of education, age, sex, personal experience or exposure may also precipitate the formation of attitude towards epilepsy or neurological disorders in general. To support that, a study conducted by Mirnics et al. (2001), among teachers illustrated its findings as follows:

epilepsy was considered to be a form of insanity by 15.2 % of the respondents, while women less often thought that epilepsy was a form of insanity. According to Bagic et al. (2009), females considered seizures (25.1%) and males considered injuries (27%) as being worst. The findings also demonstrated that significant differences were found for educational level, people with a lower education background often considered epilepsy to be a form of insanity and lastly their study also purported that respondents who lived with epileptic family members had more prejudice to epilepsy than people living without epileptic members (Mirnics et al., 2001).

It is postulated by Bishop and Slevin (2004), that the demographic variables (education level, rural versus urban school setting, and gender) were examined in an effort to assess whether the teachers' characteristics predicted attitudes, and came to conclude that no such relationship was found in their study. The study by Bishop and Slevin (2004), purports that the attitudes towards epilepsy are not always entirely dependant on demographic variables and that at times teachers should not always be held accountable for children's' poor academic performance.

Ethnicity, religion, residence, and gender were assessed to determine if they have any impact on knowledge of epilepsy and concluded that no relationships were found, but as with other reports, people who knew someone with epilepsy scored significantly higher on questions relating to knowledge than those who did not know someone with epilepsy (Youssef et al., 2009; Jacoby et al., 2004; & Bagic et al., 2009).

3.4.3 Cross cultural differences

Significant cross-cultural differences have been noted in attitudes toward persons with epilepsy around the world (Baker, Brooks, Buck, & Jacoby, 2004; & Baumann, Wilson & Wiese, 1995). Several factors such as socio-cultural bias against epilepsy, educational differences, cultural norms for concealment or disclosure, and methodological problems have been investigated to explain the differences in stigma toward persons with epilepsy across communities (Baker et al., 1999; & Baumann et al., 1995). It is suggested that education is a significant component in influencing the attitudes and behaviour of individuals towards epilepsy (Lowe-Pearce & Camfield, 2005). In a study by Pandian et al. (2006), it was reported that girls were more familiar with epilepsy than boys and it can be assigned to cultural differences and orientation.

3.5 Teachers and attitudes towards epilepsy

A study of 216 Croatian primary teachers by Prpic et al. (2003), reported that most teachers do not feel confident in working with children with epilepsy. Many of the teachers reported treating students with epilepsy differently than they treated non-epileptic students.

However, parents also have a paramount role to play in terms of notifying teachers about their children's' health status. For instance, Prpic et al. (2003), continues to suggest that the majority of teachers reported that they received information about epilepsy not from the learners' parents but from other sources, while more than 90% of the teachers expressed a desire for additional information and education about epilepsy.

According to Bishop and Slevin (2004), teachers' attitudes toward epilepsy have a significant influence on their students' school performance and social skill development. Although attitude is a complex and abstract construct, the study by Bishop and Slevin (2004), has

demonstrated the manner in which teachers' attitudes may be translated into behaviour that normally tend to create problematic results for learners with epilepsy. Williams (2003), hypothesize that stigma resulting from the association of epilepsy and decreased cognitive ability, may lower parental and teacher expectations for the child academic performance. These reduced expectations can negatively affect the child's effort, attitude about his or her abilities, and academic performance which ultimately affects the child's entire life.

Even behaviour that may seem well intentioned has the potential to produce problematic social and academic results (Jung, 2006). For example, in several studies teachers have been found to act over protectively toward children with epilepsy, removing them from healthy peers instead of normalizing the school life of the student with epilepsy. Teachers have also been found to be more likely to make concessions for, and give better grades to, students with epilepsy thinking they are acting favorably to children with epilepsy (Bishop & Boag, 2005). It is further purported by Sanya, Salami, Goodman, Buhari, and Araoye (2005), that most teachers believe that children with epilepsy have subnormal intelligence.

3.6. Epilepsy and its impact on school performance

School performance can be compromised amongst learners with epilepsy. Uncontrolled seizures can cause a decline in school results even when the seizures are of short duration and have subtle symptoms. In addition, patients with symptomatic epilepsy are at increased risk for educational underachievement. There is purport that patients with symptomatic epilepsy or uncontrolled seizures are at increased risk for missing classes, absenteeism may be associated with the decline in school performance seen in these patients (Aquiar, Guerreiro, McBrian, & Montenegro, 2007).

Children with epilepsy have a higher risk of learning disabilities although patterns of specific subtypes have not been identified (Anderson, 2008). Academic weaknesses among epileptic children have not been confined to any area but have mostly being subjected to a variety of subjects such as mathematics, spelling, writing, dictation, reading, reading comprehension, and general knowledge. The risk for school failure appears higher in children with symptomatic epilepsy, while several studies have suggested normal achievement in children with low-severity epilepsy. However, in a prospective study of learners with normal intelligence and idiopathic epilepsy, greater than expected rates of grade retention (34%) and special education placement (19%) were found when these children were compared with sibling controls. Compared with siblings, they scored significantly lower in academic achievement. Medical variables associated with epilepsy including seizure type, age at seizure onset, and seizure frequency were not related to neurological-cognitive findings. As learners with symptomatic epilepsy or abnormal imaging studies were excluded, these findings support a higher risk of educational failure for learners with epilepsy in general (Anderson, 2008).

In a study which children with epilepsy were followed into adulthood, educational problems persisted even in individuals who were on medication and seizures free (Anderson, 2008). Multiple factors, in addition to the impact of seizures and medications, have been associated with this academic vulnerability among children with epilepsy. These include cognitive functions, environmental variables, personality and motivation of the child, family adjustment, and social variables. Clinical seizure variables have been reported to be only modestly predictive of underachievement. Psychologically, lower self-esteem has been associated with decreased academic performance in children with epilepsy. Children who demonstrate both decreases in school self-concept and high-severity epilepsy have been found to be at the highest for educational problems over time. Cognitively, attention and

memory difficulties have specifically been associated with school performance in learners with epilepsy. Socially, low socioeconomic status and cultural variables have been related to academic underachievement. In a study that examined self-esteem, socioeconomic status, attention, and memory in learners with epilepsy, attention was the primary variable associated with achievement scores when intelligence was controlled (Williams, 2003).

3.7 Teachers and knowledge of epilepsy

The quality of teacher and child relationship is an important factor in determining school achievement and the social adjustment of an epileptic child. It is, therefore, of interest to investigate teachers' knowledge of epilepsy and their attitudes toward a child with epilepsy. Poor knowledge, dubious beliefs, and prejudice on the part of teachers may adversely influence such a child's life (Kaleyias, Tzoufi, Kotsalis, Papavasiliou, & Diamantopoulos, 2005). It was found that the most educated group of people had never heard of or read about epilepsy (Youssef et al., 2009; & Rahman, 2005). It is theorized that most teachers were able to describe the symptoms of epilepsy. However, none were found to be aware of the causes of epilepsy. Some ambiguity arose on what their perception of first aid is, as a third of them indicated that they would stick a pencil in a child mouth during a fit (Law, Khalpey, Govender & Wang, 1999). To further prove the inadequacy of knowledge among teachers, it was noted in one of the studies conducted in Malaysia which revealed that about 5% of teachers thought that epilepsy was caused by evil spirits. Similarly, several studies conducted in developing countries have reported that both patients and the general population still believe that seizures are due to possession by evil spirits (Seneviratne, Rajapakse, Pathirana, & Seetha, 2002; & Ndoye, Sessouma, Séne-Diouf, Boissy, & Wone, 2005).

Previous surveys among teachers in less developed regions have identified serious knowledge gaps, and teachers participating in such surveys have frequently expressed a desire for further

education regarding epilepsy (Prpic et al., 2003; & Essien & Alikor, 2005). Even in more developed settings, teachers may lack basic first-aid knowledge on seizure management (Tzouf & Kaleyias, 2005). Several studies have indicated that a high level of discrimination prevails towards epilepsy (Daoud, Safi, Otoom, Wahba, & Alkofahi, 2007; Bagic et al., 2009; Thacker et al., 2008; Ndoye et al., 2005; Njamnshi et al., 2009; & Radhakrihnan, Pandian, Santhoshkumar, & Thomas, 2000).

According to Rahman (2005), knowledge and attitude among the general population regarding epilepsy vary widely between countries. In developed countries, public attitude towards epilepsy has greatly improved over the years resulting in a more favorable social environment. On the other hand, cultural beliefs, superstition and a lack of information about epilepsy still exist in developing countries which influence the knowledge of teachers and learners towards epilepsy. This consequence leads to various social and medical morbidities (Rahman, 2005).

It is purported that teachers' knowledge about epilepsy is surely shifting from a negative to a more positive perspective. For instance, in a study conducted by Bishop and Boag (2005), it was established that teachers' composite scores on the attitude scale of the ATPE were almost entirely on the positive side of the continuum, suggesting predominantly positive attitudes toward epilepsy and people with epilepsy. Dantas, Cariri, and Filho, (2001), assessed knowledge and attitudes towards epilepsy among 300 teachers in Brazil where almost all the teachers had heard about epilepsy, yet misperceptions and a lack of accurate understanding about epilepsy were evident among teachers. For example, some teachers' still thought that epilepsy was contagious, while knowledge about the clinical characteristics of and initial procedures to attend to a person during a seizure was unsatisfactory (Dantas et al., 2001).

Kankirawatana (1999), conducted a survey among 360 school teachers in Thailand relating to epilepsy awareness, attitudes, and first-aid management of seizures. Results of the study reported that 38% of the respondents had not heard of or read about epilepsy, and 46.6% believed that epilepsy is a chronic incurable disease. In the same study 15.4% of the respondents preferred to place all children with epilepsy in a special classroom. Half of the respondents who reported to have an experience with first-aid management of seizures used improper and potentially harmful measures (Kankirawatana, 1999).

However, one problem teachers face is that about 60% of the teachers investigated received information about children's diseases not from the parents but from other sources which usually cannot offer accurate, important, and adequate information to teachers. Their results demonstrated that the social stigma of epilepsy is ongoing, with no variation regarding social or cultural environment. Often in this case, instead of normalizing maximally the life of that child at school, in the family, and in interactions with peers, teachers act over protectively toward children with epilepsy, removing them from their healthy peers, this tendency was also observed in adults toward all children with chronic illnesses (Prpic et al., 2003).

3.8 Epilepsy and stigma

Improvements in the perception and ATPE findings indicated that the apparent underlying belief in the concept of an "epilepsy personality", or that persons with epilepsy may be defined in terms of characteristics that separate them from persons without epilepsy in the context of social living, is troubling, perhaps particularly so in the light of the frequently endorsed belief that persons with epilepsy are more likely to develop criminal tendencies (Bishop & Boag, 2005).

In a study by Prpic et al. (2003), nearly half of the teachers questioned believe that children with epilepsy differ from non epileptic children by their behaviour, whereas nearly the same percentage, 45.8%, had a different opinion. The opinion among the teachers on the question of whether learners with epilepsy differ from healthy learners in mastering the school program was uneven: 53.2% of the teachers believed that they do differ, while 46.3% believed that there is no difference.

On the other hand, 73.6% of teachers stated that learners with epilepsy can achieve excellent school results, whereas 26.4% thought that learners with epilepsy are not able to achieve such result (Prpic et al., 2003). Particularly problematic is the continued existence of stigma and erroneous beliefs about epilepsy that fosters prejudice against persons with epilepsy. As long as teachers either hold negative attitudes about epilepsy, lack accurate information about epilepsy, or harbor potentially dangerous myths, children with epilepsy will continue to be at increased risk for social and academic problems. Taylor (2000), is of the opinion that even today the term epilepsy when used as a noun, suggests that an individual is not normal, is somehow different, perhaps "not right in the head".

Epilepsy is a relatively common chronic condition in school-age children. The implications of epilepsy are general, affecting behavioural, psychosocial adjustment and quality of life of sufferers and their families. These negative implications are often related to discrimination and the stigma which exists in our society. Many people have irrational beliefs about epilepsy mainly because of a lack of information. Some people do not know how to deal with a seizure, others believe that it is contagious or that it may cause learning disabilities or other conditions. All of these inappropriate ideas are culturally reinforced and can promote negative attitude and behaviour towards PWE.

3.9 The repercussion of a negative attitude amongst the epileptic

Epilepsy is both a medical diagnosis and a social label. It can lead to enormous physical, social, psychological, and economic hardships for students and their families largely because of fear, misunderstanding, and stigma (Gibbons, 2004). It is evident that epilepsy plays an enormous role in reducing learning capability among children with epilepsy. However, this does not generalize to all children diagnosed with epilepsy (Katzenstein, Fastenau, Dunn, Joan, & Austin, 2007). Children who are labeled could feel they are devalued or discriminated against, feel threatened when interacting with others, or feel they must avoid social situations in which they could potentially be rejected (Maas, 2000).

According to the classical conditioning theory, the way in which a particular object is perceived may let that particular object turn out to be like that (Perlman & Cozby, 1983). It is suggested by Katzenstein et al. (2007), that if teachers perceive children as performing poorly in school based solely on the label of epilepsy, they may be placing these children at a disadvantage for receiving the best possible education and support.

As part of the most critical predicaments, epileptic children may end up with inadequate social competence. Achenbach (1991), is of the opinion that maladaptive behaviour, problems and psychopathology are likely to be witnessed among children with epilepsy. It has been highlighted by Rantanen, Timonen, Hagstrom, Hamalainen, Eriksson, and Nieminen (2008); Rodenburg, Dekovic, and Aldenkamp (2005); Gulgonene, Demirbilek, Korkmaz, Dervent, and Townes (2000); and Thome-Souza, Kuczynski, Assumpção, Rzezak, Fuentes, Fiore and Valente (2004), that social skills amongst uncomplicated epileptic children were evident to be delayed, thus the negative attitude by teachers reinforce the difficulties observed by children with epilepsy.

3.10 Exposure amongst high school students

Research has shown that the number of children who knew someone with epilepsy also significantly increased with age, with each age level, more children know someone with epilepsy, with a large increase between 11 and 12 years of age. However, it was noted that those who knew someone with epilepsy, with those who knew someone with epilepsy scoring better on each section. Further, when the Elementary School Epilepsy Survey was conducted, it was observed that females scored significantly higher than males (Lowe-Pearce & Camfield, 2005).

It is postulated by Rahman (2005); and Derry, Hutchinson, John, Matijevic, Young, and Parrent (2002), that a high level of familiarity was observed which almost all participants were aware of epilepsy. However, a study by Austin, Shafer and Deering (2002) reported that only half (52%) of the participants were familiar with epilepsy, in both studies participants were university students.

Increasing awareness and decreasing stigma about epilepsy are priorities of the WHO (Martiniuk, Speechley, Secco, Donner, & Campbell, 2004). However literature proves that a more negative attitude towards epilepsy prevails. In a study to determine the attitude towards epilepsy among high school learners it was found that 41% of the students believed that epilepsy interferes with education, 62.4% of the students felt that epilepsy was a hindrance to a happy life, 58.1% of the students thought that epilepsy interferes with marriage life, while 43.2% believed it had an impact on a person sexual life. Twenty-nine percent of students felt epilepsy interfered with employment. A contradictory study was reported by Young et al. (2002), and Derry et al. (2002), in which university students in the Canadian expressed favorable attitudes toward marriage and employment among people with epilepsy. Thirteen percentages said they would be reluctant to sit adjacent to a child with epilepsy in the

classroom or to play alongside a child with epilepsy. Further, it was reported that 45% of the students believed that society discriminated against persons with epilepsy (Pandian, Santosh, Kumar, Sarma & Radhakrishnan, 2006).

It was further noted that 50.4% of the high school learners correctly identified epilepsy as a brain disorder, while 60% of the students believed that epilepsy is a mental illness. Misconceptions purported prevalent among students, included the beliefs that epilepsy is a hereditary disease (34.1%), a contagious disease (13.9%), while 11.2% thought it resulted from an ancestors' sin (Pandian et al., 2006). It is reported that less than 60% of the students were able to identify the correct causes of epilepsy, but it was encouraging to note that only two people which is equivalent to less than 1% of the population identified demon possession as the cause and only 5% indicated insanity or mental illness as the cause of epilepsy (Youssef et al., 2009).

3.10 Conclusion

This chapter elaborated on teachers and learners' knowledge of epilepsy; social stigma towards epilepsy; repercussions of epilepsy while the attitude towards epilepsy and children with epilepsy formed the core of the review. The above stipulated paradigms would be used to explain the causes of negative and positive attitudes towards epilepsy by teachers.

CHAPTER 4: RESEARCH METHODOLOGY

4.1 Introduction

This chapter incorporates the methodological aspects used in the research study. The rationale for the methods chosen is provided, the manner in which the participants were selected is discussed as well as the instruments used. The chapter also elaborates on the procedure followed in the collection of data and the statistical methods utilized for data analysis.

4.2 Research design

According to Bryman (2001), a research design is a framework for the collection and analysis of data. The study determines attitudes amongst teachers and high school learners, thus it is a cross sectional study. The study consisted of 292 participants and has adopted the likert scale for the collection of data. It is quantitative in nature. The independent variables of this study were made up of demographic variables (gender; age; level of qualifications and personal exposure to epilepsy) while the dependent variables were attitudes (negative stereotypes; risk and safety concerns; work and role expectations; and personal fear and social avoidance) of the EAS.

4.3 Sampling procedure

The study adopted the convenient and stratified sampling procedure for selection of participants. The targeted sample for the study is high school learners and teachers in Mankweng area. A list of 30 schools was provided by the Department of Education of which 20 schools were primary while 10 were secondary schools for authorization of the data collection.

Teachers were selected using a convenient sampling while the learners were selected using the stratified sampling procedure. Learners in grade 12 and grade 11 were the targeted sample for the study. Learners were first asked if they were willing to participate and then allocated numbers which determined whether they were eligible to participate in the study or not. Convenient sampling was chosen on the notion that the educational process should not be disrupted, thus only teachers who were currently available and willing to participate were asked to fill in the questionnaires. The tertiary group consisted of 145 participants, the less than grade 12 group consisted of 101 participants while the grade 12 group consisted of 46 participants. A minimum of 5 participants and a maximum of 8 participants were selected from the targeted sample per school. Overall, the study comprised of 292 participants, 169 (58.3%) females and 123 (41.7%) males.

4.4 Instrument

The epilepsy attitude scale comprises of 46 items and is developed by Dilorio, Kobau, Berkowitz, Kamin, Antonak, Austin et al. (2004). Twenty-three items assess the respondents' cognitive beliefs about persons with epilepsy, including the abilities and limitations of persons with epilepsy, the characteristics of a person with epilepsy, feelings about disclosure, and beliefs in perceived quality of life of a person with epilepsy. Thirteen items address affective reactions toward people with epilepsy (e.g., fear, pity, shame, and discomfort). Ten items assess the respondents' intentions toward social distancing behaviour (e.g., would ride in a car if driver has epilepsy; would be nervous around a person with epilepsy because he or she might have a seizure; would not date a person with epilepsy).

The epilepsy attitude scale also comprises of the four factor scale which are negative stereotypes; risk and safety concerns; work and role expectations; and personal fear and social avoidance. Participants were asked to provide their level of agreement or disagreement

(slight, moderate, strong) on a six point likert scale. The total possible scores will range from 46 to 276, with higher scores indicating more negative attitudes toward epilepsy.

It is purported that these factor scales are scientifically both valid and reliable and have been reported in a recent study (Dilorio, Kobau, Anderson, & Price, 2006).

4.4.1 Reliability of the attitude scale

In a study conducted by DiIorio et al. (2004), reported that the Cronbach's alpha was computed for each of the four factors and the composite score. Reliability was adequate for all factors (factor 1, = 0.73; factor 2, = 0.85; factor 3, = 0.76; factor 4, = 0.79; composite scale, = 0.71). Test–retest reliability was also examined for the four factors. The 100 participants who responded during both W1 and W2 were selected. Test–retest reliability was examined with intra-class correlation coefficients as follows: $r = 0.58$ for negative stereotypes, $r = 0.72$ for risk and safety concerns, $r = 0.58$ for work and role expectations, $r = 0.62$ for personal fear and social avoidance, and $r = 0.77$ for the composite scale (DiIorio et al., 2004).

Descriptive analyses were conducted for the 46 likert scale questions to examine the data. A reliability analysis was performed to ensure that items were internally consistent and had item–total correlations $\geqslant 0.3$ and an overall $\geqslant 0.7$. The reliability coefficient for the 46-item attitude scale was = 0.88. All items were retained for factor analysis, including 9 items with reliability (DiIorio et al., 2004).

4.5 Procedure

An authorization letter was obtained both from the University of Limpopo Ethics Committee and the Department of Education and all protocols stipulated in the letters were observed during the data collection. The researcher explained the aim and significance of the study to the school principal and consent for data collection was required. Issues pertaining to

anonymity, honesty, confidentiality, and voluntary participation were agreed upon in line with the research ethical standards. Data were collected in all 30 schools provided by the Department of Education. A demographic questionnaire and the EAS were administered, both questionnaires were completed within the time frame of 15-20 minutes.

4.6 Data analysis

After the data have been collected, SPSS (Version 17), MANOVA and quasi experimental design methods were utilized for data management and analysis. The SPSS is a systematic process that begins with preparing the data for computer entry, followed by entering the data in the computer and then by data processing and analysis (Sarantakos, 2005). The quasi experimental design was used for comparing attitude towards epilepsy between teachers and the control group which was high school learners, the following variables were compared: gender; age; level of qualification; and exposure towards epilepsy. The MANOVA method was made use of when comparing the three independent variables, and in this study the variables were 20-35, 36-51 and 52 and above in relation to age groups, the t-test was used for two variables such as male and females.

4.7 Ethical considerations

Participants in the study were made aware of the aim and objectives of the study as initiated by Smith (1993). The participants were also made aware of their rights within the study, such as discontinuing participation, informed participation, and confidentiality. By filling in the scale the teachers had provided the most sensitive and personal information, thus the teachers were made aware that the information they provided should remain confidential (Haslam & Mc Grarty, 2003). At times when the teachers were filling in the questionnaires some of the bad memories were triggered, affecting their ability of the answering questions. In this case

the teachers were made aware that they had the option of discontinuing participation in the study because that would also affect the reliability of the study.

After the participants were informed about the purpose of the study, how they were selected, potential benefits, confidentiality pledge, right to withdraw and that participation was voluntary (Pilot & Hungler, 1999) the data were collected. The study was approved by the University of Limpopo Ethics Committee and the Department of Education.

4.8 Conclusion

The purpose of this chapter was to outline the methodologies adopted in this study. Issues of how the sample was chosen, the population sample, the instruments used to collect data and their reliability and validity, as well as the ethics which had guided the entire study were elaborated in this chapter.

CHAPTER 5: RESULTS OF THE STUDY

5.1 Introduction

In this chapter the results of the study are represented by graphs and figures. Each graph and figure is explained briefly and the significant variables are also pointed out.

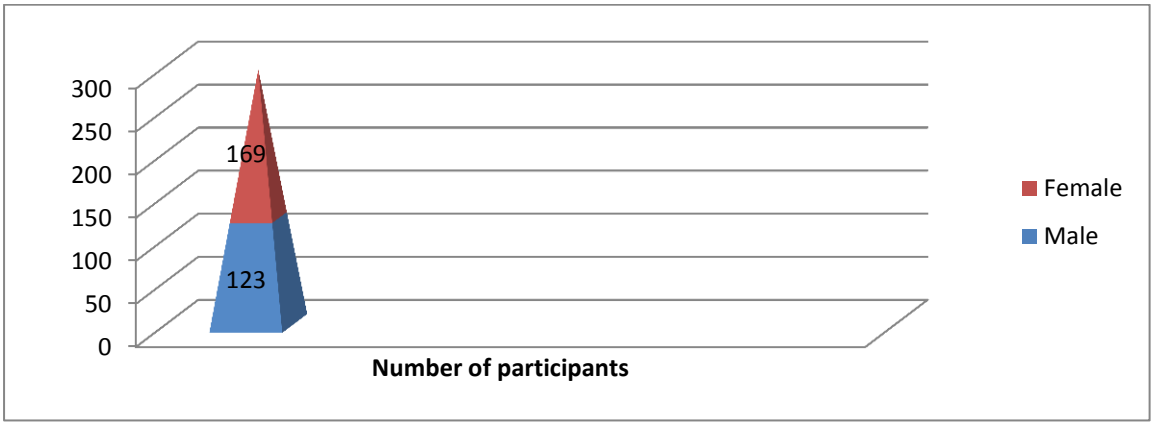
Table 5.1.1: Descriptive Statistics for gender and age and characteristics of the sample

Gender	Age	n	NS Mean(SD)	RSC Mean(SD)	RWE Mean(SD)	PFSA Mean(SD)
Male	20-35	39	62.05 ± (14.04)	32.79±(8.47)	24.26±(5.59)	62.23±(14.48)
	36-51	34	61.08±(10.82)	33.70±(5.11)	28.76±(5.12)	55.06±(11.67)
	>51	7	63.43±(5.25)	34.43±(2.76)	30.43±(4.39)	58.285±(12.21)
	<20	43	50.88±(12.09)	33.00±(9.87)	24.05±(7.58)	53.44±(12.28)
Female	20-35	37	64.43±(8.53)	34.97±(4.98)	27.78±(5.98)	60.92±(8.43)
	36-51	67	65.43±(9.75)	35.04±(6.88)	30.63±(6.62)	61.99±(10.46)
	>51	17	67.23±(9.44)	33.65±(6.25)	26.12±(4.33)	64.47±(14.24)
	<20	48	56.85±(9.17)	37.14±(8.22)	24.00±(7.26)	54.67±(10.07)

The above table indicates that in the male age group there were 39 participants between 20-35 years, 34 participants between 36-51, 7 participants in the more than 51 age group, 43 participants in the less than 20, while in the female age group there were 37 participants between 20-35, while there were 67 participants between 36-51, they were 17 participants in the more than 51 and lastly 48 participants in the less than 20 years age group.

Figure 5.1

Participant's distribution of gender



This figure indicates the number of participants with regard to gender and shown that the study consisted of 169 (58.3%) females and 123 (41.7%) males.

Table 5.1.2: Descriptive statistics for variables related to level of education and nature of exposure to epilepsy

Education	Exp	n	NS Mean(SD)	RSC Mean(SD)	RWE Mean(SD)	PFSA Mean(SD)
Tertiary	Exp	79	65.06±(10.99)	33.86±(6.04)	28.25±(5.60)	60.69±(12.45)
	No exp	66	66.19±(7.29)	34.97±(6.09)	28.00±(5.89)	63.09±(11.18)
< grade 12	Exp	49	53.98±(11.03)	32.65±(9.20)	23.18±(7.72)	54.61±(12.18)
	No exp	52	55.75±(12.28)	36.63±(9.19)	24.90±(7.61)	55.02±(11.47)
Grade 12	Exp	28	63.25±(9.85)	34.86±(6.75)	27.00±(5.63)	62.89±(9.25)
	No exp	18	56.05±(11.65)	34.05±(7.25)	33.00±(6.61)	52.67±(4.01)

Table 5.1.1 shows that in the tertiary education level there were 145 participants, 79 were exposed to epilepsy and 66 were not exposed to epilepsy, the less than grade 12 consisted of 101participants of which 49 were exposed to epilepsy and 52 were not exposed to epilepsy.

Among the grade 12 level of education there were 46 participants of whom 28 participants were exposed to epilepsy and 18 participants were not exposed to epilepsy.

Figure 5.2

Sample distribution for level of education variable

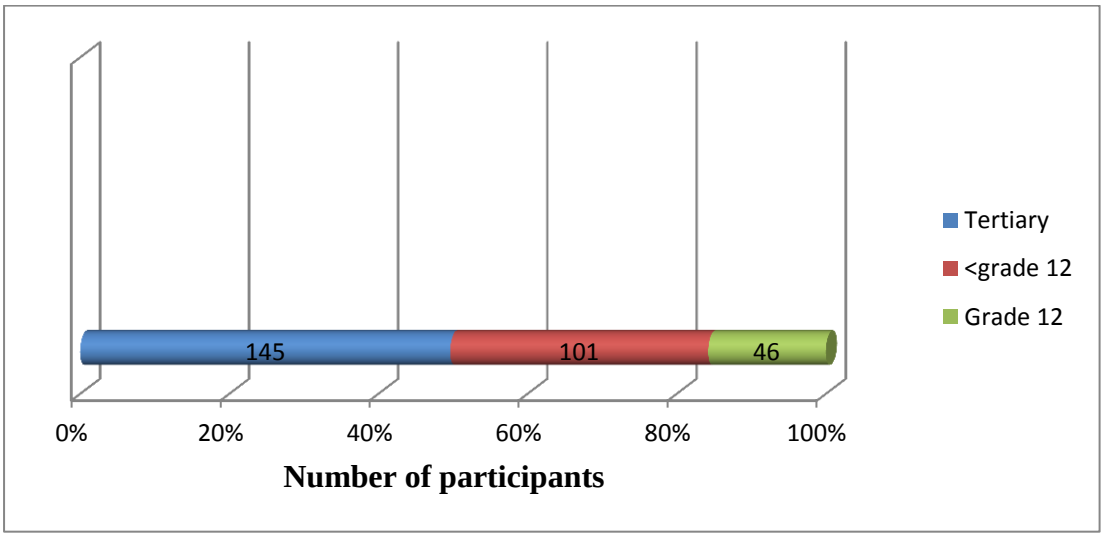


Figure 5.2 illustrates the sample distribution. The number of participants with tertiary level of education was 145 (49.2%), while the study had consisted of 101 (35.3%) individuals who had an educational level of less than grade 12, while there were 46 (15.6%) grade 12 learners who participated in the study.

Table 5.3: MANOVA for variables of gender and age for EAS

	Test	F	DF	P
Gender	Wilks	2.02	4, 28	0.09
Age	Wilks	9.01	12, 75	0.00*
Gender and age	Wilks	1.61	12, 75	0.08

The above table represents the MANOVA results for the EAS with regard to gender and age. It also shows that there is an effect for age on EAS scores.

Table 5.3.1: Post-hoc analysis for differences in the negative stereotypes according to age variable

AGE	20-35	36-51	>51	<20
20-35	-	1.00	1.00	0.00**
36-51	1.00	-	1.00	0.00**
>51	1.00	1.00	-	0.00**
<20	0.00**	0.00**	0.00**	-

*p< 0.05, **p< 0.01, **p< 0.00

Table 5.3.1 represents the post hoc analysis (bonferroni) on the negative stereotypes of the EAS. It is apparent that the less than 20 years differed with the 20-35, 36-51 and 51 and above age groups.

Table 5.3.2: Post hoc analysis for differences in the risk and safety concern according to age variable

AGE	20-35	36-51	>51	<20
20-35	-	n/s	n/s	n/s
36-51	n/s	-	n/s	n/s
>51	n/s	n/s	-	n/s
<20	n/s	n/s	n/s	-

This table illustrates that there was no difference on the risk and safety concerns sub-scale with regard to age.

Table 5.3.3: Post hoc analysis for differences in the role and work expectation as according to variable of age

AGE	20-35	36-51	>51	<20
20-35	-	0.01**	1.00	0.29
36-51	0.01**	-	0.41	0.00**
>51	1.00	0.40	-	0.13
<20	0.29	0.00**	0.14	-

*p< 0.05, **p< 0.01, **p< 0.00

The above table characterizes the post hoc analysis on the role and work expectation of the EAS. The difference was found among the less than 20 years group compared with the 20-35 and 36-51 age groups. According to table 5.1.1, it is apparent that the 36-51 age group showed more negative attitudes on the EAS than the other groups on the role and work expectation.

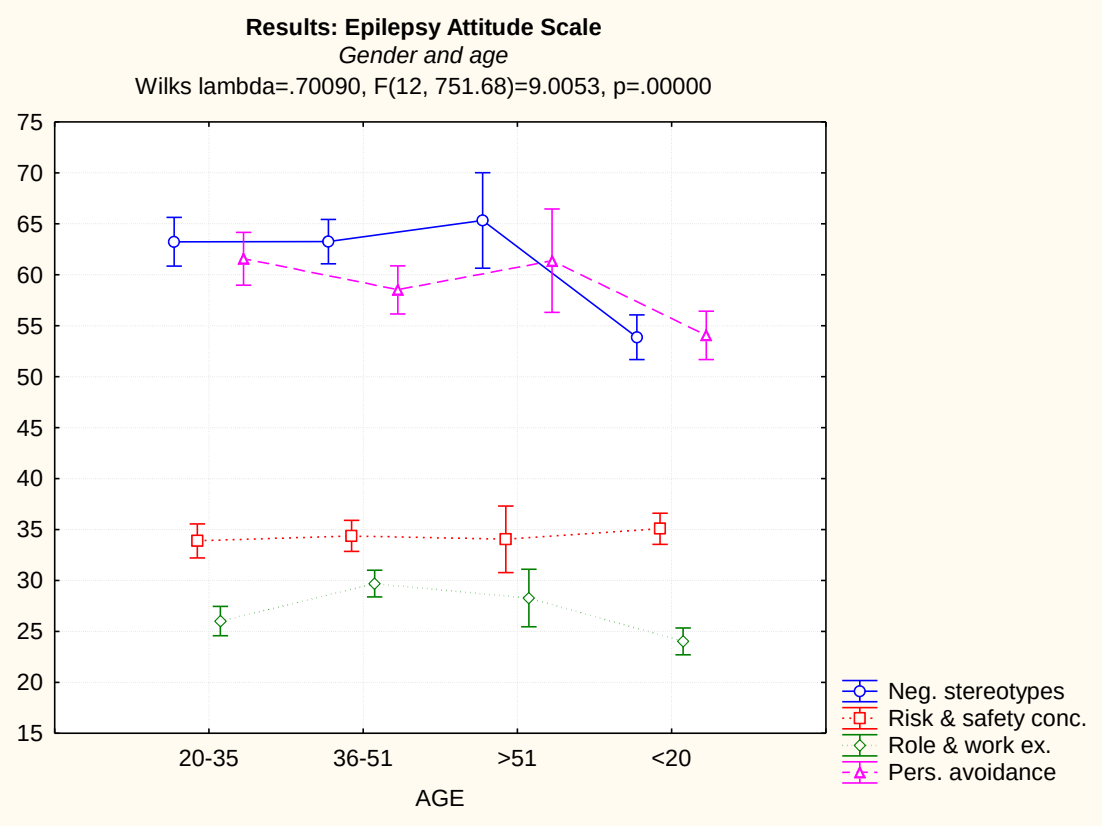
Table 5.3.4: Post hoc analysis for differences in the personal fear and social avoidance as according to age variable

AGE	20-35	36-51	>51	<20
20-35	-	1.00	1.00	0.01**
36-51	1.00	-	1.00	0.01**
>51	1.00	1.00	-	0.01**
<20	0.01**	0.01**	0.01**	-

*p< 0.05, **p< 0.01, p< 0.00**

Table 5.3.4 represents the post hoc analysis on the personal fear and social avoidance sub-scale of the EAS. It is apparent that the less than 20 age group differed with the 20-35, 36-51 and the above 51 age groups on the personal fear and social avoidance scale. The descriptive in table 5.1.1 indicates that the less than 20 years have a more negative attitude towards epilepsy on the personal fear and social avoidance of the EAS.

Figure 5.1.3: Results for epilepsy attitude scale according to age variable



The above figure illustrates the EAS distribution. It is apparent that the participants showed more positive attitudes on the risk and safety concerns and the work and role expectation sub-scales with regard to age. Negative attitudes were reported on the negative stereotypes and personal fear and social avoidance with regard to age. It was captivating to note that in almost all sub-scales the age group of less than 20 years were scoring slightly less compared to the 20-35, 36-51 and 51 and above age groups, thus the results suggest a more positive attitude towards epilepsy amongst the less than 20 years on the EAS than in the other groups.

Table 5.4: MANOVA for variables of qualifications and exposure to epilepsy

	Test	**F**	**DF**	**P**
Qualification	Wilks	13.37	8, 57	0.00**
Exposure	Wilks	3.19	4, 28	0.05*
Qualification and Exposure	Wilks	2.98	8, 57	0.01**

*p< 0.05, **p< 0.01, p< 0.00**

This table represents the MANOVA with regard to level of education and exposure to epilepsy. It is apparent that the level of education and personal exposure to epilepsy has an effect on scores in the EAS.

Table 5.4.1: Post-hoc analysis for differences on the negative stereotypes as according to variables of qualification and exposure to epilepsy

Qualification	Exp	Tertiary		<grade 12		Grade 12	
		Exp	No exp	Exp	No exp	Exp	No exp
Tertiary	Exp	-	1.00	0.00**	0.00**	1.00	0.01**
	No exp	1.00	-	0.00**	0.00**	1.00	0.05*
< Grade 12	Exp	0.00**	0.00**	-	1.00	0.05*	1.00
	No exp	0.00**	0.01**	1.00	-	0.05*	1.00
Grade 12	Exp	1.00	1.00	0.05*	0.05*	-	0.35
	No exp	0.01**	0.05*	1.00	1.00	0.35	-

*p< 0.05, **p< 0.01, p< 0.00**

The above table characterizes the post hoc analysis on the negative stereotypes sub scale of the EAS. The less than grade 12 group, both with exposure and no exposure to epilepsy showed significant differences comparative to grade 12 participants both with exposure and with no exposure to epilepsy as evident in table 5.1.2.

Table 5.4.2: Post hoc analysis for differences on the risk and safety concerns as according to variables of qualification and exposure to epilepsy

Education	Exp	Tertiary		<grade 12		Grade 12	
		Exp	No exp	Exp	No exp	Exp	No exp
Tertiary	Exp	-	1.00	0.00**	0.01**	1.00	0.05*
	No exp	1.00	-	0.00**	0.01**	1.00	0.05*
< grade 12	Exp	0.00**	0.00**	-	1.00	0.05*	1.00
	No exp	0.00**	0.01**	1.00	-	0.05*	1.00
Grade 12	Exp	1.00	1.00	0.05*	0.05*	-	0.35
	No exp	0.01**	0.05*	1.00	1.00	0.35	-

*p< 0.05, **p< 0.01, p< 0.00**

The above table represents the post hoc test with regard to the risk and safety concerns of the EAS. The above table shows that the less than grade 12 both with and without exposure to epilepsy showed a difference compared to the grade 12 participants with and without exposure to epilepsy. The results indicate a negative attitude towards the risk and safety concerns of the EAS, while the descriptive table 5.1.2 shows the findings.

Table 5.4.3: Post hoc analysis for differences in the role and work expectation variables of qualification and exposure to epilepsy

Qualification	Exp	Tertiary		<grade 12		Grade 12	
		Exp	No exp	Exp	No exp	Exp	No exp
Tertiary	Exp	-	1.00	0.01**	0.06	1.00	0.08
	No exp	1.00	-	0.01*	0.16	1.00	0.06
< grade 12	Exp	0.01**	0.05*	-	1.00	0.21	0.01**
	No exp	0.06	0.16	1.00	-	1.00	0.01**
Grade 12	Exp	1.00	1.00	0.21	1.00	-	0.05*
	No exp	0.08	0.06	0.01**	0.01**	0.05*	-

*p< 0.05, **p< 0.01, p< 0.00**

The above table signifies the post hoc analysis on the role and work expectation sub scale of the EAS. The findings of the above table are also presented in table 5.1.2. The above table indicates that the tertiary education group with exposure showed differences when compared to the less than grade 12. Furthermore the less than grade 12 with exposure showed differences amongst the grade 12 with no exposure to epilepsy. The grade 12 level of education with no exposure showed differences on the less than grade 12.

Table 5.4.4: Post hoc analysis for differences in the personal fear and social avoidance as according to variables of qualification and exposure to epilepsy

Education	Exp	Tertiary		<grade 12		Grade 12	
		Exp	No exp	Exp	No exp	Exp	No exp
Tertiary	Exp	-	1.00	0.05*	0.07	1.00	0.10
	No exp	1.00	-	0.05*	0.05*	1.00	0.05*
< grade 12	Exp	0.05*	0.05*	-	1.00	0.05*	1.00
	No exp	0.07	0.05*	1.00	-	0.05*	1.00
Grade 12	Exp	1.00	1.00	0.05*	0.05*	-	0.05*
	No exp	0.10	0.05*	1.00	1.00	0.05*	-

*p< 0.05, **p< 0.01, p< 0.00**

Table 5.4.4 illustrates the post hoc test for group differences of the level of education and nature of exposure versus non exposure to epilepsy on the personal fear and social avoidance sub-scale of the EAS. The tertiary level of education with exposure to epilepsy differed as compared to the less than grade 12 with exposure on the personal fear and social avoidance sub-scale. Furthermore, the table indicates that the less than grade 12 both with exposure and no exposure showed differences when compared to the tertiary level of the education group. The grade 12 group of education showed differences on the non exposed tertiary level of education and also among the grade 12 with exposure. The mean scores in the descriptive table 5.1.2 are also evident of the results presented in table 5.4.4.

Figure 5.1.4: Results for epilepsy attitude scale for variables of education and nature of exposure to epilepsy

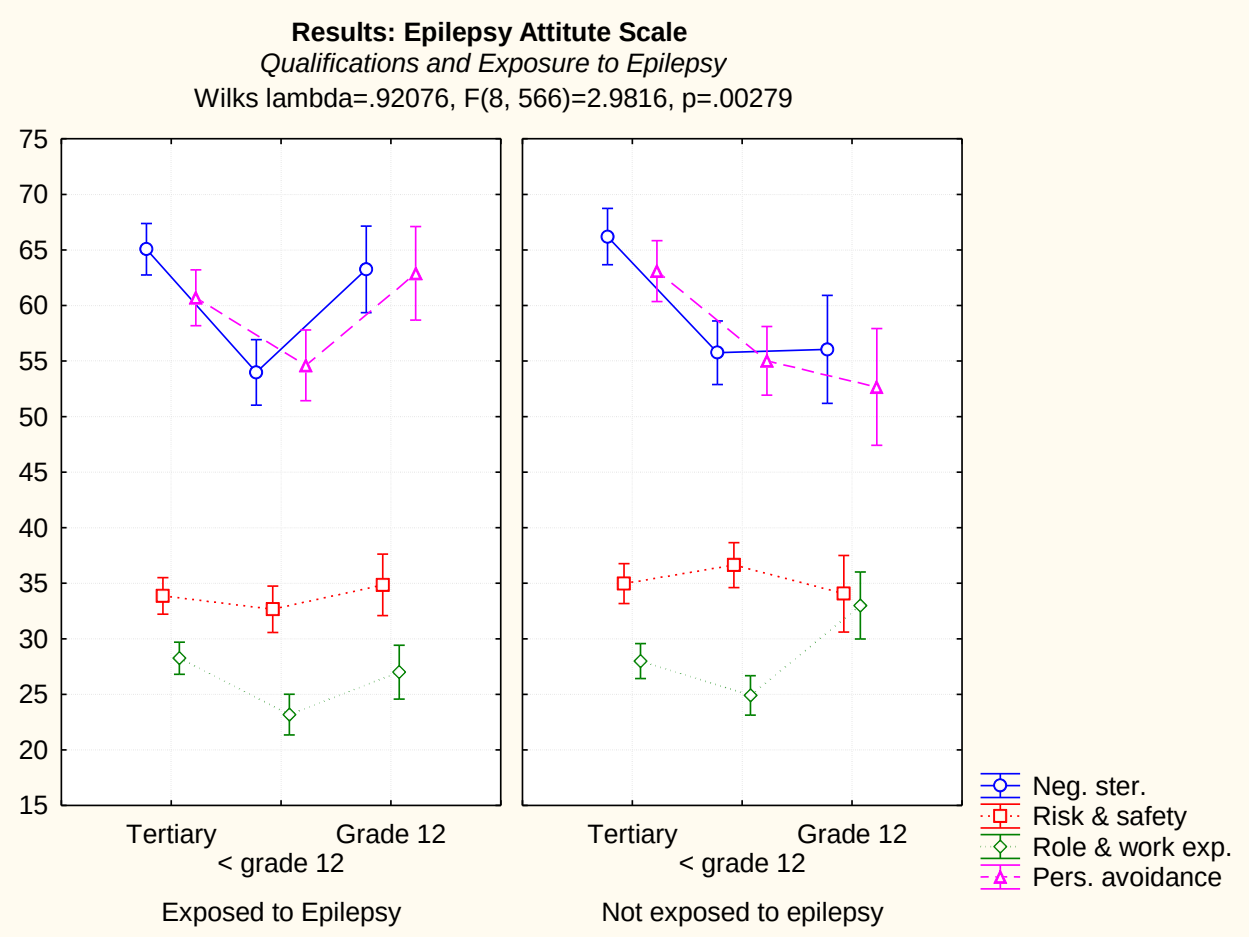


Figure 5.1.4 illustrates the level of scores amongst for the variables on the nature of exposure to epilepsy and the level of education. According to the descriptive in table 5.1.2, the participants scored positively on the role and work expectation and the risk and safety concerns. From the same table it is apparent that the participants scored negatively on the negative stereotypes and personal fear and social avoidance of the EAS.

5.1.5 **Conclusion**

The above graphs and tables represent the findings of the study which would be elaborated in chapter 6. The relation between significant and non-significant points is shown by the usage of graphs while the mean scores are also used to highlight the level of significance in this chapter.

CHAPTER 6: DISCUSSION OF RESULTS

6.1 Introduction

In this chapter, the findings of the study are discussed according to the literature, theories of attitude formation and attribution theory. The meaning, the implication of the study results and the congruency or lack of congruency with the results of other studies are explored. In addition, all the tables made use of in chapter 5 are now put in to words to elaborate on the causes of the findings. The limitations of the study are also outlined, and finally the recommendations are made to assist and direct future research.

6.2 Gender, age and its findings on the EAS

According to the results highlighted in table 5.3, gender did not significantly have an effect on the attitudes towards epilepsy amongst the selected sample. The findings of the study do not lend support to the theory of Bem (1972), who postulated that different sexes among teachers perceive and re-act differently towards matters of epilepsy.

However, it is important to note that males scored slightly less in the sub-scale of risk and safety concerns and role work expectation indicating more positive attitude towards epilepsy as compared to females. Table 5.1.1 indicate the findings, these results are partially in support of the findings obtained by Bagic et al. (2009) and Mirnics et al. (2001).

Learners with grade 12 illustrated a significant difference in the personal fear and social avoidance sub-scale. The learning curve from school and cultural context plays a huge role in this children's' negative attitude towards epilepsy among high school learners. According to the learning theory, learners of less than 20 years had learned the behaviour from their educators (Perlman & Cozby, 1983). This means that learners with epilepsy at school are being prejudiced by their class mates, their friends, and their alleged role models, thus

children with epilepsy are now being held at a disadvantageous state of mind. According to the personal fear and social avoidance scale it means children are forever worried that their friends could have seizures at any time, which ultimately causes fear of engaging with them, letting alone dating the epileptics.

It has been noted that teachers are charismatic in the community that they belong to (Bishop & Boag, 2005; & Bureau of Labor Statistics, 2008), and also children spend most of their time at school (Bishop & Boag, 2005). The statement declares that epileptics are indirectly experiencing negative attitudes from both teachers and their classmates, in the sense that teachers influence children to act negatively towards epileptics. It is purported that teachers clarify the role of identity among children, thus children are more likely to know and develop self esteem and contradictory loss their identity and self esteem through teachers (Lipka & Brinthaupt, 1999).

Significant results were shown in table 5.3.3 between the age group of 36-51 years and role and work expectation of the EAS. The results suggest that teachers in the mentioned age group believe that children with epilepsy are not competitive at school. However, the reality about the significant age group (36-51) is that they were reared between culture and the transformation of knowledge, thus their perception and thought of epilepsy are influenced proportionally by both culture and the knowledge that they accumulated in their respective fields. According to the self-perception theory people acquire knowledge about what kind of people they are, thus their attitudes are determined by assessing their behaviour (Zajonc, 1968).

Teachers in this category have learned as a result of oral culture as part of their tradition by their fore fathers which still prevails in them. Teachers believe that children are possessed by supernatural spirits as a result of witchcraft or punishment by the ancestors (Kriel, 1998;

Onwuekave, 2007; Kabir et al., 2005; Ismail et al., 2005; & Dongmo et al., 2003). Thus teachers between 36 -51 years detach themselves from anything that has to do with epilepsy, which again impacts on the well-being of epileptic children both socially and academically (Rantanen et al., 2008; Rodenburg et al., 2005; Gulgonen et al., 2000; & Thome-Souza et al., 2004).

6.3 Qualification, exposure and there findings on the EAS

The high level of education serves as an advantage for teachers to score positively towards epilepsy on the negative stereotypes and personal fear and social avoidance sub-scales, as teachers progress academically there also attend several workshops which most could be about epilepsy thus teachers have an advantage of increasing their knowledge about epilepsy. The results of the study were anticipated, noting that the attitudes of teachers were compared with the high-school learners. The results of the study presented in tables 5.4.1 and 5.4.4 is supported by Mirnics et al. (2001) and Prpic et al. (2003), who postulate that the link between higher level of education and positive attitudes towards persons with epilepsy has consistently been observed in prior attitude research, the positive attitude means teachers are knowledgeable and conscious of epilepsy. It is further emphasized that educated individuals offer more favourable opinions and display positive attitudes towards epilepsy, teachers have more knowledge compared to high school learners thus have more positive attitudes as compared to high school learners (Mirnics et al., 2001; Hills et al., 2002; Bagic et al., 2009; Bagic et al., 2009; Rahman, 2005; Bishop & Slevin, 2004; Baxendale & O'Toole, 2007; Youssef et al., 2009; & Lowe-Pearce & Camfield, 2005).

It is interesting to note that in all four sub-scales teachers scored positively towards epilepsy irrespective of whether they were exposed or not exposed to epilepsy. Although the scores were all positive it was observed that the sub-scale of the risk and safety concerns as well as

the role and work expectation were scored low as evidenced by their mean scores in table 5.1.2 indicating a positive attitude towards epilepsy. It is worth noting that teacher's positive scores are accredited to their level of qualifications, exposure and the external knowledge they had acquired, such as attending workshops about chronic diseases.

The grade 12 learners both exposed and not exposed to epilepsy scored significantly high to the negative stereotypes. Learners in this category believe that their class mates are somehow mentally distorted and they believe they cannot associate with epileptic children. According to the attribution theory, we want to know why other people have acted as they have or why events have turned out in a specific way (Kelly, 1972). When we understand the actions or events behind other people's attitudes we feel in control of the situation and even hope to do much better in future. Perhaps children who are exposed tried to understand the events of a seizure and thus failed also to ask themselves what would happen if they had to go through an event like a seizure which these children find it catastrophic. Thus children develop a tendency of disliking epilepsy and all its events without a proper understanding or knowledge. The attribution theory suggests that behaviour is the result of a rational process that is goal-oriented and that follows a logical sequence (Ajzen, 1991).

However, learners whom are not exposed to epilepsy are likely to act more negatively towards people with epilepsy compared to those who have been exposed. According to Prpic et al. (2003), teachers have a tendency to offer extra marks to epileptic learners which causes the negative attitude towards learners with epilepsy solely because learners without epilepsy also need the extra marks which they do not get, thus learners without exposure to epilepsy start to act unfavourably and negatively towards learners with epilepsy for that reason (Bishop & Boag, 2005).

It is highlighted in table 5.4.1 that learners reflected a high note on a negative attitude towards learners with epilepsy. This means that non epileptic learners believe that children with epilepsy could have a seizure at any time and that may not be the cause of the negative attitude, but that they will be exposed that they cannot handle a seizure, thus they react negatively to epilepsy due to poor management of seizures. According to the classical conditioning, people learn to avoid or repeat certain activities because they bring discomfort to them, thus learners without epilepsy learn to isolate themselves from those with epilepsy (Perlman & Cozby, 1983).

It is purported that the role and work expectation is the least sensitive scale on the qualification and exposure variables as evident in figure 5.1.4. Table 5.4.3 indicates that learners of less than grade 12 who are exposed to epilepsy scored negatively towards epilepsy and learners who were not exposed also scored negatively towards epilepsy, these results means learners question the ability of their epileptic classmates in terms of performance and delivering according to the expectation. Thus, if learners in class have a group assignment or discussion they are likely not to want to be involved with learners who have epilepsy, which in itself is a stigma attached to epilepsy as a result of a lack of knowledge or misinterpretation of knowledge.

It is shown in table 5.4.4 that learners who are in less than grade 12 shows a negative attitude towards epilepsy both being exposed and not on the sub-scale of personal fear and social avoidance. Young as they are, the non epileptic learners have already developed a fear for epilepsy and people with epilepsy. It is interesting to note that the personal fear and social avoidance were scored significantly high as indicated by figure 5.1.4.

It is also important to note that the attitude of learners is influenced by non exposed teachers as is shown in table 5.4.4. This phenomenon goes back to the issue of learning procedure

because teachers have learned to perceive epilepsy and its background negatively (Perlman & Cozby, 1983). The unfortunate part is that misleading information is learned such as the issue of the ancestors as being the major cause of epilepsy (Kriel, 1998; Onwuekave, 2007; Kabir et al., 2005; Ismail et al., 2005; & Dongmo et al., 2003). Culture should not be taken for granted but people also need to learn, particularly teachers' because the future of the country gets evaluated through their deeds, to more positive attitude is anticipated from them (Bishop & Boag, 2005; & Bureau of Labor Statistics, 2008).

6.4 Conclusion

The results of the study have indicated a partially positive and negative attitude towards epilepsy among teachers. The positive attitude towards epilepsy among teachers may be attributed to positive exposure and experience with epilepsy, as was noted that most teachers had someone who suffer from epilepsy in their family or knew someone from school. However, the negative attitude towards epilepsy was attributed to African cultural orientation, such as witchcraft and allocations of roles amongst genders. It is clear that the dissemination of valid information amongst high school learners could be crucial phenomena to eradicate the negative attitude towards epilepsy, the dissemination of knowledge should begin amongst teachers for they are influential.

It is apparent from table 5.1.1, table 5.1.2 and figure 5.1.4 that participants scored negatively on the negative stereotypes and personal fear and social avoidance sub-scales, while risk and safety concerns and role and work expectation were positively scored on the attitudes towards epilepsy.

Finally, the findings of the current study showed that there were no differences according to gender and attitudes towards epilepsy among teachers and high school learners. Differences according to age groups on attitudes towards epilepsy were noted on the negative stereotypes,

role and work expectation and personal fear and social avoidance sub-scale on attitudes towards epilepsy, further level of education and nature of exposure to epilepsy showed differences in all the four sub-scales of the EAS.

6.5 Limitations

The sample population of the study was not representative of the whole sample of teachers in the chosen geographical area. The geographical area used in the study was inadequate for first time study in South Africa.

From the methodological limitation the findings of the study would not be applicable to other varying environments and samples unless a conformation study is conducted. Because the study has never been reported before in South Africa the reliability and validity of the EAS was not proven before in the applied geographical area.

The above mentioned limitations are not addressed in the current study thus as a prerequisite future studies should try to cover the above factors.

6.6 Recommendations

The level of negative attitudes towards epilepsy amongst learners surely requires an intervention before they pass on this inappropriate knowledge to other vulnerable groups. Although the attitudes of teachers were positive as compared to high school learners, an epilepsy association should be in contact with teachers for dissemination of reliable and valid information.

It is fundamental that there should be de-stigmatization campaigns, to provide correct information and appropriate education (Reno, Fernandes, Bell, Sander, & Li, 2007).The workshops provided by the Department of Education should continually pay attention to children chronic diseases such as epilepsy. Teachers also need to be fully equipped about their level of influence in the community, for instance their high level of influence in the adaptation of positive or negative attitude towards epilepsy will influence communities' attitude.

Most teachers reported not to feel confident and comfortable in working with children with epilepsy (Prpic et al. 2003), thus the controversy of whether children with epilepsy should have their own private schools also arises and needs to be addressed. It was found in the current study that African cultural orientation plays an enormous role in attitude formation towards epilepsy among teachers, this issues need to be addressed because with or without our knowledge most high ranking members in society such as teachers influence the communities attitudes towards chronic diseases, such as epilepsy.

7. **References**

Achenbach**,** T. (1991). *Manual of the Child Behaviour*. Burlinton: Department of Psychiatry.

Andermann, L.F. (1995). Epilepsy in developing countries. *Trans-culture Psychiatry Research, 32,* 351-384.

Ajzen, I. (1991). The theory of planned behaviour: Special issue: Theories of cognitive self-regulation. *Organizational Behaviour and Human Decision Processes, 50,* 179-211.

Austin, J.K., Shafer P.O., & Deering, J.B. (2002). Epilepsy familiarity, knowledge, and perceptions of stigma: report from a survey of adolescents in the general population. *Epilepsy Behaviour, 3,* 368-375.

Aldenkamp, A.P., Overweg-Plandsoen, W.C.G., & Arends, J. (1999). An open, nonrandomized clinical comparative study evaluating the effect of epilepsy on learning. *Journal of Children Neurology, 14,* 795-800.

Anderson, V. (2008). *Journal of Pediatrics and Child Health, 28,(4),* 278-280.

Aquiar B., Guerreiro, M., McBrian D., & Montenegro M. (2007). Seizure impact on the school attendance in children with epilepsy. *Seizure, 16,(8),* 698-702.

Austin, J. (2000). Impact of epilepsy in children. *Epilepsy Behaviour Supplement, 1, (1),* 9-11.

Babbie, E. (2003). *The practice of social science (10th Ed).* Belmont, CA: Wadsworth.

Bagic, A., Bagic D., & Zivkovic I. (2009). First population study of the general public awareness and perception of epilepsy in Bosnia and Herzegovina. *Epilepsy Behaviour, 14,* 154–161.

Bagić A., Bagić D., & Živković I. (2009). *First population study of the general public awareness and perception of epilepsy in Croatia.* U.S.A. Elsevier Inc.

Baron, R.A., & Bryne, D. (2000). *Social Psychology ninth edition*. U.S.A: Library of Congress Cataloging-in-publication data.

Baker, G.A., Brooks, J., Buck, D., & Jacoby, A. (2004). The stigma of epilepsy: A European perspective. *Epilepsia, 41,* 98-104.

Baskind, R., & Birbeck, G. (2005). *Epilepsy Care in Zambia. A Study of Traditional Healers*: Zambia: Elsevier Inc.

Baumann, R.J., Wilson J.F & Wiese, H.J. (1995). Kentuckians' attitude toward children with epilepsy. *Epilepsia, 36,* 1003-1008.

Baxendale, S., & O'Toole, A. (2007). Epilepsy myths: alive and foaming in the 21st century. *Epilepsy Behaviour, 11,* 192-196.

Bekiroglu, N., Ozkan, R., Gürses, C., Arpaci, B., Dervent, A. (2004). *A Study on Awareness and Attitude of Teachers on Epilepsy in Istanbul, 13,(7),* 517-22.

Bem, S.L. (1972). Gender Schema theory and self-schema theory compared: A comment on marks, Crane Bernstein and Siladis "self-schemas and gender*". Journal of Personality and Social Psychology, 43,* 1192-1194.

Besag, F.M.C. (1995). Epilepsy, learning, and behaviour in children. *Epilepsia, 36, (1),* 58-63.

Bishop, M., & Boag, E.M. (2005). *Teachers' knowledge about epilepsy and attitudes toward students with epilepsy: Results of a national survey*. U.S.A: Elsevier Inc.

Bishop, M., & Slevin, B. (2004). *Teachers' attitudes toward students with epilepsy: Results of a survey of elementary and middle school teachers*. U.S.A: Lexington.

Blum, R., & Patterson J.M. (2008). A conference on culture and illness in childhood: *Pediatrics, 91, (5),* 1025-1030.

Brown, J.D., & Rogers, R.J. (1991). Self serving attribution: *The role of physiological arousal. Personality and Social Psychology Bulletin, 17*, 501-506.

Brundtland, G,.H. (2002). Welcome: The WHO view and launch of the second phase of the Global Campaign Against Epilepsy. *Epilepsia, 43, (6),* 5-11.

Bryman, A. (2001). *Social Research Methods*. New York: Oxford University Press.

Buhrmann, M.V. (1984). *Living in two worlds: Communication between a white healer and her black counterpart.* Republic of South Africa: Human & Rousseau (Pty.) Ltd.

Bureau of Labor Statistics. (2008). *Teachers, Preschool, Kindergarten, Elementary, Middle, and Secondary, Occupational Outlook Handbook*: U.S.A. Department of Labor.

Chiou, H., & Hsieh, L. (2001). Comparison of epilepsy and asthma perception among preschool teachers in Taiwan. *Epilepsia, 42,* 647-650.

Dantas, F.G., Cariri, G.A., & Filho, A.R. (2001). Knowledge and attitudes toward epilepsy among primary, secondary and tertiary level teachers. *Arquivos Neurologie-Psiquiatria, 59,* 712-716.

Derry, P., Hutchinson, I., John, V., Matijevic, S., Young, G.B., Parrent L. et al.(2002). An epilepsy questionnaire study of knowledge and attitudes in Canadian college students. *Epilepsia, 43,* 652-658.

Daoud, A., Al Safi, S., Otoom, S., Wahba, L., & Alkofahi, A. (2007). Public knowledge and attitudes towards epilepsy in Jordan. *Seizure, 16,* 521-526.

DiIorio, C A. Kobau, R., Holden, E., Berkowitz, J M., Kamin, S L., Antonak, R F et al., (2004). *Developing a measure to assess attitudes toward epilepsy in the US population*. USA: Elsevier Inc.

Dilorio, C.A., Kobau, R., Anderson, A., & Price, P. (2006). Further validation and reliability testing of the attitudes and beliefs about living with epilepsy (ABLE) components of the CDC program instrument on stigma. *Epilepsia and Behaviour, 8,(3),* 552-559.

Diop, A.G., Boer, H.M., Mandlhate, C., Prilipko, L., & Meinardi, H. (2003). *The global campaign against epilepsy in Africa. Switzerland*: Elsevier Science B.V.

Dongmo L., Echouffo B., Njamnshi A.K., Sini, V. ,. Pepouomi M.N .,& Kamdem P. (2003), Difficulties faced in the management of epilepsy in rural Cameroon: The case of Mbangassina locality. *African Journal of Neurology Science, 22, (1),* 107-123.

Eagly, A.H., & Chaiken, S. (2007). The Advantages of an Inclusive Definition of Attitude. *What is an Attitude?, 25, (5)* , 582-602.

Essien, A.A., & Alikor, E.A. (2005). Childhood epilepsy: knowledge and attitude of primary school teachers in Port Harcourt, Nigeria. *Nigerian Journal of Medicine: Journal of the National Association of Resident Doctors, 14,* 299-303.

Epilepsy Foundation. (2005). *Epilepsy and Seizure Statistics*: U.S.A

Gessler, M. C., Msuya, D. E., & Nkunya, M. H. (1995). Traditional healers; traditional medicine. Tanzania. *Journal of Ethnology Pharmacology, 48,* 145-160.

Gibbons, F.X. (2004). Stigma Perception: *Social comparison among mentally retarded person. American Journal of Mental Deficiency, 90,* 98-106.

Gulgonene, S., Demirblilek, B., Korkmaz., Dervent, A., Townes, B. (2000). Neuropsychological functions in idiopathic occipital lobe epilepsy. *Epilepsy, 41*, 405-411.

Hagan, F.E. (2006). *Research methods in Criminal Justice and Criminology (7th Ed). Boston*: MA. Allyn and Bacon.

Haslam, S.A., & McGarty, C. (2003). *Research methods and statistics in psychology*. London: Sage publications.

Health 24. (2008). South Africa: Online Association Publishers.

Heider, F. (1958). *The Psychology of Interpersonal Relations.* New York: Wiley.

Hills, M.D., & MacKenzie, H.C. (2002). New Zealand community attitudes toward people with epilepsy. *Epilepsia, 43*, 1583-1589.

Hogg, M.A., & Vaugham, G.M. (1995). *Social psychology: Introduction*. New York: Prentice -Hall.

Ismail, N., Rhodes, P., Wright, J., Small, N. (2005). Evidence of cultural hybridity in response to epilepsy amongst Pakistani Muslims living in the U.K. *Chronic Illness, 1, (2),* 165-177.

Jacoby, A., Gorry, J., Gamble, C., & Baker, G.A. (2004). Public knowledge, private grief: a study of public attitudes to epilepsy in the United Kingdom and implications for stigma. *Epilepsia, 45*, 1405-1415.

Jones, E.E. (1979). The rocky road from acts to dispositions. *American Psychology, 34*, 107-117.

Jung, J. (2006). *Journal of Applied Social Psychology, 19, (2),* 159-173.

Kabir M., Iliyasu Z., Galadanci H S., Abubakar I S., Salihu H M., & Aliyu M H. (2005). Postpartum beliefs and practices in Danbare village, Northern Nigeria. *The Journal of the Institute of Obstetrics and Gynecology, 26, (3),* 211-255.

Kaleyias, J., Tzoufi, C., Kotsalis., Papavasiliou, A., & Diamantopoulos, N. (2005). *Knowledge and Attitude of the Greek Educational Community Toward Epilepsy and the Epileptic Student, 6, (2),* 179-186.

Kalichi, E., & Birbeck, G. (2003). A door-to-door survey to determine the prevalence of epilepsy in rural Zambia. *Tropical Medicine & International Health, 5, (1),* 51-55.

Kankirawatana, P. (1999). Epilepsy awareness among school teachers in Thailand. *Epilepsia, 40,* 97-501.

Katzenstein, J.M., Fastenau, P.S., Dunn, D.W, & Austin, J.K. (2007). *Teachers ratings of the academic performance of children with epilepsy*. U.S.A: Elsevier Inc.

Kelly, H.H., (1972). *Attribution in Social Interaction. In Attribution Perceiving the Causes of Behaviour*. E.E. Jones, et al. Morristown, MJ: General Learning Press.

Kriel, J.D. (1998). Meer as net genesing van siekte: Noord-Sotho dingaka en hul dienste (More than just curing of illness: North Sotho dingaka and their service). Pretoria. *S.A. Journal of Ethnology, 21,* 3-5.

Law, L., Khalpey, R., Govender, K., & Wang, Y. (1999). *Epilepsy in Primary School Children*. South Africa: Rhodes University.

Lee, I., Chen, Y., & Fang, C. (2008). *Seizure precipitants in children with intractable epilepsy*. Taiwan: Elsevier B.V.

Lhatoo, S.D., & Sander, W.A.S. (2001). The epidemiology of epilepsy and learning disability. *Epilepsia Supplement, 1, 42,* 6-9.

Lipka, R.P., & Brinthaupt, T.M. (1999). *The role of self in teacher development*. U.S.A: State University of New York Press.

Lowe-Pearce, C., & Camfield, C.S. (2005). Elementary school epilepsy survey (ESES): *A New Measure of Elementary School Students' knowledge and Attitudes about Epilepsy*: Canada. Elsevier Inc.

Maas, C.J. (2000). The interaction process between teacher and students: the labeling of students on the basis of relative characteristics. *Social Behaviour, 28,* 515-528.

Magesa, L. (1997). *African religion: the moral traditions of abundant life*: New York: Orbis Books.

Malan, J.S. (1998). *Cultural Anthropology: an African perspective*. Sovenga: Department of Anthropology.

Martiniuk, A., Speechley, K., Secco, M., Donner, A., & Campbell, M. (2004). Evaluation of an Epilepsy Education Program for Grade 5 Students: *A cluster randomized trial. Poster presented at the UWO Faculty of Medicine Moffat Graduate Research Day:* London.

Matthew J., Kathryn M.R., Dennis D.S. (2002). Hippocampal GABA transporter function in temporal-lobe epilepsy. *Nature 376,* 174-177.

Mbiti, J.S. (1975). *Introduction to African religion.* London: Heinemann International.

McGee, R., Silva. P.A., & Williams, S. (1984). Perinatal, Neurological, environmental land developmental characteristics of seven year old children with stable behavioural problems. *Journal of Children Psychology. Psychiatry, 25*, 573-586.

Miller, K. (2005). *Communications theories: perspectives, processes, and contexts*. New York: McGraw-Hill.

Millogo, A., Ratsimbazafy, V., Nubukpo, P., Barros., Zongo, I., & Preux, P.M. (2004). *Epilepsy and traditional medicine in Bobo-Dioulasco*. Burkina Faso: Blackwell synergy.

Mirnics, Z., Czikora, G., Zavecz, T., & Halasz. (2001). Changes in public attitudes towards epilepsy in Hungary: Results of survey conducted in 1994 and 2000. *Epilepsia, 42, (1),* 86-93.

Mőnnig, H.O. (1967). *The Pedi*. Pretoria: J.L. Van Schaik Ltd.

Ndetei, D. M., & Muhangi, J. (1979). The prevalence and clinical presentation of psychiatric illness in a rural setting in Kenya. *British Journal of Psychiatry, 135,* 269-272.

Ndoye, N.F., Sow, A.D., Sessouma B., Séne-Diouf F., Boissy L., & Wone, I. (2005).Prevalence of epilepsy, its treatment gap and knowledge, attitude and practice of its population in sub-urban Senegal: an ILAE/IBE/WHO study. *Seizure 14,* 106-111.

Njamnshi A, K., Faustin, N., Tabah, E, N., Dema, F., Angwafor S, A., Angwafo F., (2009). Public awareness, perceptions, and attitudes with respect to epilepsy in Ebolowa and Sangmelima-Urban Cameroon. E*pilepsy and Behaviour, 14, (4),3*3-628.

Onwuekwe, I. O. (2007). *Convulsive Epilepsy-Perspective from Africa*. MBBSFWACP, Neurologist, Department of Medicine, Neurology Unit: University of Nigeria.

Pandian J, D., Santosh, D., Kumar T, S., Sarma, P, S., Radhakrishnan K (2006). High school students' knowledge, attitude, and practice with respect to epilepsy in Kerala, southern India. *Epilepsy and Behaviour, 9(3),* 7-492.

Panter, K. (2004). *Is perceived stigma related to quality of life in individuals with epilepsy?* University of Bristol: M.S.C Project.

Perlman, D., & Cozby, P.C. (1983). *Social psychology*. New York: Holt, Rinehert and Winston.

Pilot, D., & Hungler, B. (1999) *Nursing Research: Principles and Methods*. Philadelphia :Lippincott.

Prpic, L., Korotaj, Z., Cicvaric, j.I., Kirincic,E.A., Valerjier., & Toma, V. (2003). *Teachers opinions about capabilities and behaviour of children with Epilepsy*. U.S.A: Elsevier.

Radhakrishnan, K., Pandian, J. D., Santhoshkumar, T. & Thomas, S. V. (2000). Prevalence, knowledge, attitude and practice of epilepsy in Kerala, South India. *Epilepsia, 41, (8),* 1027-1035.

Reno B.A., Fernandes P.T., Bell G.S., Sander J.W., & Li L.M. (2007). Stigma and attitudes on epilepsy: a study with secondary school students. *Arq Neuropsiquiatry*, 65, (1) 49-54.

Rahman, A. (2005). Awareness and knowledge of epilepsy among students in a Malaysian university. *Seizure, 14,(8),* 593-596

Rankoana, S.A. (2000). *Aspects of the Ethnobotany of the Dikgale community in the Northern Province*: Republic of South Africa, University of the North.

Rantanen, K., Timonen, K., Hagstrom, P., Halalainen, P., Eriksson, K., & Nieminen P. (2008). *Social Competence of Preschool Children with Epilepsy*, *14,(2),* 338-343.

Rodenburg, A.M., Dekovic, M., Aldenkamp, A.P. (2005). Family Factors and Psychopathology in children with epilepsy: A literature review. *Epilepsy Behaviour 6,* 488-503.

Sadock, B.J., & Sadock, V.A. (2007). *Synopsis of Psychiatry. Behavioural Science/Clinical Psychiatry.* New York: Wolters Kluwer/Lippincott Williams & Wilkins

Sanya, E.O., Salami T.A., Goodman O.O., Buhari O.I., & Araoye, M.O. (2005).Perception and attitude to epilepsy among teachers in primary, secondary and tertiary educational institutions in middle belt Nigeria. *Tropical Doctor 35,* 153-156.

Sarantakos, S. (2005). *Social Research*. China: Palgrave Macmillan.

Seneviratne, U., Rajapakse, P., Pathirana, R., & Seetha, T. (2002). Knowledge, attitude, and practice of epilepsy in rural Sri Lanka. *Seizure 11,* 40-43.

Smith, M. (1993). Gaining access, in N. Gilbert (Ed), *Researching social life*. London: Sage Publications.

Sturniolo, M.G., & Galletti, F. (1994). Idiopathic epilepsy and school achievement. *Arch Disorder Child, 70,* 424-448.

Taylor, M. (2000). *Managing Epilepsy, a clinical handbook.* Oxford: Blackwell Science.

Temkin, O. (1945). *The falling sickness*. U.S.A: The Johns Hopkins press.

Thacker, A., Verma, A.M., Ji, R., Thacker, P.R., & Mishra, P. (2008). *Knowledge, awareness and attitude about epilepsy among schoolteachers in India*. India: Elsevier Ltd.

Thome-Souza, S., Kuczynski E., Assumpção, F., Rzezak, P., Fuentes, D., Fiore Lia; Valente, K. D. (2004). Which factors may play a pivotal role on determining the type of psychiatric disorder in children and adolescents with epilepsy? *Epilepsy & Behaviour, 5, (6),* 988-994.

Tzoufi, M., & Kaleyias, J. (2005). Knowledge and attitude of the Greek educational community toward epilepsy and the epileptic student. *Epilepsy Behaviour, 6,* 179-186.

Van Overwalle, F. (1997). Dispositional attributions require the joint application of the methods of different and agreement. *Personality and Social Psychology Bulletin*, 23, 974-980.

Virmani, V., Kaul, V., & Juneja, S. (1977). Sociocultural and economic implications of epilepsy in India. In: Penry, J.K., Editor, 1977. *Epilepsy, the eighth International symposium*. New York: Raven Press.

Weiner, B. (1972a). *Attribution in Social Interaction. In Attribution: Perceiving the Causes of Behaviour*. Morristown: Learning Press.

Whitmore, R., & Knafl, K. (2005). The integrative review updated methodology. *Journal of Advanced Nursing, 52, (5),* 546-553.

Williams, J. (2003). *Learning and behaviour in children with Epilepsy*. U.S.A: Elsevier Science.

Young, G.P., Derry, P., Hutchinson, John,V, S., Matijevic & Parrent, L *et al.* (2002). An epilepsy questionnaire study of knowledge and attitudes in Canadian college students. *Epilepsia, 43,* 652-658.

Youssef, F., Dial, S., Jaggernauth, N., Jagdeo, C., Pascall, A., Ramessar, L. et al. (2009). *Knowledge of Attitudes Toward, and Perceptions of Epilepsy among College Students in Trinidad and Tobago, 15, (2),* 160-165.

Zajonc, R.B. (1968). Attitudinal effects of mere exposure. *Journal of Personality and Social Psychology, 9,* 1-27.

8. Appendix A

8.1 Biographical questionnaire

The purpose of this study is to determine the attitudes towards epilepsy among teachers, high school learners, security guards and university students in Mankweng area. You were randomly selected to participate in the study. Your voluntarily participation is highly appreciated.

Please fill in the questionnaire as honestly and as spontaneously as possible. There is no right or wrong answer. Some questions may be very private, but be assured that your responses would be handled anonymously and confidentially.

Demographic variables

1. Sex Male ☐ Female ☐

2 Please specify your ethnic group …….

3. Please Specify your age ……..

4. When was or is your birthday …….

5. Please specify your level of education ……..

6. Are you aware with epilepsy? Yes ☐

No ☐

8.2 Epilepsy Attitude Scale

1-Slightly agree, 2-Moderately agree, 3-Strongly agree, 4-Slightly disagree, 5-Moderately disagree, and 6 strongly disagree.

Scale A

		1	2	3	4	5	6
1	People with epilepsy are not as smart as those without epilepsy						
2	People with epilepsy should not marry						
3	Epileptics are possessed by supernatural spirit						
4	Those who suffer epilepsy are unreliable						
5	The epileptics are mentally ill						
6	I would Consider divorce if my spouse is diagnosed with epilepsy						
7	Epileptics should not have biological children						
8	Epileptics can perform well in public school						
9	People with epilepsy have trouble managing day-to-day activities						
10	Epileptics have seizures when they do not listen to doctors						
11	Epileptics should not be elementary schoolteachers						
12	Seizures require medical assistance						
13	Epileptics should not do many recreational activities						
14	Parents should expect less of epileptic children						

1-Slightly agree, 2-Moderately agree, 3-Strongly agree, 4-Slightly disagree, 5-Moderately disagree, and 6 strongly disagree.

Scale B

		1	2	3	4	5	6
1	Epilepsy is something to be ashamed of						
2	I would allow a child to ride in a car with a driver who has epilepsy						
3	I would have a ride in a car with a driver who has epilepsy						
4	Feel comfortable if child rode in car if driver had epilepsy						
5	Hire someone with epilepsy to baby-sit infant						
6	People with epilepsy can safely operate heavy machinery						
7	I know a lot about epilepsy						
8	I would feel comfortable if a child had a teacher with epilepsy						
9	Epileptics should tell employers they have epilepsy						

1-Slightly agree, 2-Moderately agree, 3-Strongly agree, 4-Slightly disagree, 5-Moderately disagree, and 6 strongly disagree.

Scale C

		1	2	3	4	5	6
1	I am prepared to help someone having a seizure						
2	I believe people with epilepsy can do anything I can do						
3	Epileptics are able to cope with everyday life						
4	People with epilepsy cannot have as good a quality of life						
5	Epileptics can be as successful at work as others						
6	Epileptics can work 40 hours per week						
7	I expect as much from people with epilepsy as others						

8	People with epilepsy can lead normal lives						
9	Epilepsy is nothing to be embarrassed about						

1-Slightly agree, 2-Moderately agree, 3-Strongly agree, 4-Slightly disagree, 5-Moderately disagree, and 6 strongly disagree.

Scale D

		1	2	3	4	5	6
1	Epileptics should not drive						
2	Epileptics should be worried that seizures could happen at any time						
3	People with epilepsy can't safely do work activities						
4	People with epilepsy can have a seizure at any time						
5	I would be nervous around person with epilepsy because they might have a seizure						
6	I would not date a person with epilepsy						
7	I feel uncomfortable being around a person with epilepsy						
8	Not want to work with someone who has epilepsy						
9	Not want my child to date someone with epilepsy						
10	Afraid to be alone with someone with epilepsy						
11	Be embarrassed if someone in family had epilepsy						
12	Epileptics should hide their condition						
13	I feel sorry for people with epilepsy						
14	Avoid person with epilepsy who has frequent seizures						

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
EDUCATION

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Mr. S.M. Rakubu
P.O. Box 15
Sovenga
0727

Dear Researcher

Request for Permission to Conduct Research

1. Your letter of request bears reference.
2. The Department wishes to inform you that you are granted permission to conduct research. The title of your research project is **"THE ATTITUDES OF TEACHERS AND HIGH SCHOOL LEARNERS TOWARDS EPILEPSY IN THE MANKWENG AREA OF LIMPOPO"**

3. The following conditions should be observed:
   - 3.1 The research should not have any financial implications for Limpopo Department of Education.
   - 3.2 Arrangements should be made with both the Circuit Offices and the schools concerning the conduct of the study. Care should be taken not to disrupt the academic programme at the schools.
   - 3.3 The study should be conducted during the first three terms of the calendar year as schools would be preparing themselves for the final end of year examinations during the fourth term.
   - 3.4 The research is conducted in line with ethics in research. In particular, the principle of voluntary participation in this research should be respected.
   - 3.5 You share with the Department, the final product of your study upon completion of the research assignment.

4. You are expected to produce this letter at schools/offices where you will be conducting your research, as evidence that permission for this activity has been granted.

5. The Department appreciates the contribution that you wish to make and wishes you success in your investigation.

.....
Head of Department

2016/01/31
.....
Date