

EFFECT OF A TRAINING PROGRAM ON THE KNOWLEDGE AND ATTITUDE OF SPECIAL EDUCATION TRAINEE- TEACHERS ON EPILEPSY AND SEIZURE DISORDERS IN OYO TOWN

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**A RESEARCH PROJECT SUBMITTED TO THE CENTER FOR CHILD AND
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IBADAN**

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Declaration

I declare that this research was carried out by me and submitted to the Center for Child and Adolescent Mental Health. No Part of this research has been presented or published anywhere else.

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KEY TO ABBREVIATIONS

- CNVs-** Copy number variants
- EEG-** Electroencephalography
- ID-** Intellectual disabilities
- IQ-** Intelligent quotient
- LASU-** Lagos State University
- MRI-** Magnetic resonance imaging
- NCE-** Nigeria Certificate in Education
- SMR-** Standardised mortality ratio
- SPSS-** Statistical software
- SUDEP-** Sudden unexplained death in epilepsy
- UI-** University of Ibadan
- WHO-** World Health Organisation

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ABSTRACT

Background: Children spend a significant time of their day in schools under the supervision of their teachers. Children with Intellectual disabilities are more likely to experience seizure disorder therefore, their teacher's knowledge about epilepsy is important in case a student experiences seizure in school. Also, poor knowledge and attitude towards students with epilepsy has been recorded among teachers. Therefore, this study was conducted among special education trainee teachers who will become teachers of these children in future. The objective of this study was to determine the effect of training about epilepsy on trainee teachers' knowledge, attitude and first aid management of seizure disorder.

Methodology: This study was conducted among 40 trainee-teachers in the Department of Education for Learners with Intellectual disabilities. The instruments used for this study were self-completed questionnaires adapted from previous studies of epilepsy and these includes Socio-demographic Questionnaire, The Knowledge of Epilepsy Questionnaire, Attitude towards Epilepsy Questionnaire, Awareness of first Aid towards a child having seizure. After completing baseline questionnaires on knowledge, attitude and first aid management of epilepsy, the participants received training on epilepsy for 2 hours per week for three weeks. Post intervention data was collected one week after the last intervention session. The correct responses were summed up to create a Knowledge and Attitude scale such that higher scores indicated positive knowledge and attitude. Socio-demographic details were presented in percentages and numbers. The comparison of the effect of the intervention was carried out using paired t test and chi-square was also used. The training involved didactic lecture, discussions, role-plays and video presentations.

Results: Majority of the participants were female (77.5%) and most (75.7%) were between the ages of 20-24 years. Fifty percent had heard about epilepsy, 17.5% knew someone who had epilepsy and 40.0% claimed to have witnessed an epileptic seizure. No statistically significant

association was found between socio-demographic variables and knowledge and attitude before and after the intervention. The intervention resulted in statistically significant improvements in participants' knowledge of epilepsy (Pre-Post Mean = 6.43 vs 10.89, $p = 0.001$), more positive attitude towards persons with epilepsy (Pre-Post Mean = 10.68 vs 15.16, $p = 0.001$), and more awareness of first aid management of seizure (Pre-Post Mean = 3.42 vs 4.61, $p = 0.001$). The training was well received such that 87.9% of the participants indicated they were very satisfied with the programme, 90.9% were willing to come for further training if offered, and 72.7 % would recommend the training to others. .

Conclusion: The epilepsy training improved the trainee-teachers knowledge, attitude and awareness of first aid management of epilepsy. This emphasizes the potential benefit of incorporating an epilepsy tailored intervention programme into teachers' training curricula. They reported low baseline knowledge and negative attitude towards epilepsy indicates need to improve public awareness about epilepsy in this part of the world.

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CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND

Epilepsy is a chronic brain disorder characterised by intermittent, often unpredictable seizures with associated significant psychological and social consequences for everyday living (Fisher et al, 2005). Epilepsy is the most common non-infectious neurological disease of childhood in low and middle-income countries, and its incidence is highest in the first decade of life, a period during which children begin and complete a critical period of social and educational development (Bishop et al, 2005). It is estimated that epilepsy affects approximately 50 million people worldwide, 40 million of which live in low and middle income countries (World Health Organisation, 2000).

In Nigeria, the prevalence of epilepsy is estimated to be 20.8/1000 in rural and 4.7/1000 in semi-rural areas (Osakwe, Otte and Alo, 2014). Although little is known about the exact prevalence of epilepsy among students in Nigeria, it is likely to be lower in comparison to high-income countries, because stigma arising from misconceptions about the condition keeps students with epilepsy away from school (Danesi et al (1981) cited in Eze et al, 2015). Social discrimination, negative attitudes, and stigma against people with epilepsy are often more devastating and harmful than the disease itself (Eze et al, 2015).

These issues arise from misconceptions about the disease, with the public tending to be frightened about helping an individual having a seizure (Thacker et al, 2008). In some Nigerian communities, epilepsy is regarded as a sign of possession by evil spirits or is thought to be contagious via saliva (Austin, 2000). Children with epilepsy are at an increased risk of educational under-achievement, intellectual/learning disabilities, mental health problems, social isolation, and poor self-esteem (Williams, 2003). For instance, a child with epilepsy may not be allowed to attend school because the parents are worried

that the family name may be brought into public disrepute (Austin, 2000). Sadly, school authorities may even expel children with epilepsy from school because they ‘contaminate’ other children (Eze et al, 2015). Even when a child with epilepsy attends school he or she is at increased risk of performing poorly and eventually being withdrawn if the epilepsy is poorly controlled (Adewuya, Oseni and Okeniyi, 2006). Based on the World Report on Disability (2011), approximately 25 million Nigerians live with a disability (including people living with epilepsy) with 3.6 million of them having very significant difficulties in functioning (WHO, 2011).

More so, the bill prohibiting discrimination against people living with disabilities in Nigeria has recently been signed into law after 9 years of relentless advocacy (Ewang, 2019). Teachers’ knowledge about and attitudes towards epilepsy can have a direct impact on school children with epilepsy in terms of school performance, social skills development, and post-school success in employment, social skills, and social network development (Eze et al, 2015). Unfortunately, studies conducted in Nigeria have reported low knowledge and negative attitudes, poor first aid skills and management towards children with epilepsy among teachers (Sanya et al, 2005; Eze et al, 2015). However, it is not clear whether these findings in relation to qualified teachers are different from those of undergraduates who are training to become teachers (hereafter referred to as “trainee-teachers”).

This information is important as it has been suggested that inadequate or poor quality teacher training can lead to erroneous ideas about the causes and management of common mental health and neurological problems like epilepsy (Bishop, 2006). Therefore this project aims to examine the effect of epilepsy education on the level of knowledge about, attitude towards, and management of students with epilepsy among trainee teachers at the Federal College of Education (Special), Oyo, Nigeria. The findings of the study could

contribute to improving teacher training about epilepsy and result in positive impact on the well-being of students with epilepsy in Nigerian schools.

1.2 PROBLEM STATEMENT

Epilepsy is the most common chronic health condition among children with intellectual disabilities (Robertson et al, 2015). About 22 million people world-wide were diagnosed with a new case of epilepsy (Igbini, 2018). Nearly 80% of epileptic cases occur in developing nations (Murray, 2014 in Igbini, 2018). Some early studies on epilepsy reported a prevalence of between 8 and 13 per 1000 inhabitants in the urban communities of Lagos, but with a computed rate of 3.1 per 1000. Osuntokun et al (1999) reported a prevalence rate of 5.3 per 1000 among the inhabitants of Igbo-ora, a community with comprehensive health facilities, with the highest age-specific prevalence ratio occurring below the age of 20 years i.e. within 5 to 14 years age group. Children spend a lot of time at school, and for those with a chronic condition such as epilepsy the severity of that condition can influence their school experience (Olson et al, 2004).

Epilepsy is a relatively common chronic condition in school-age children (deBoer et al, 2007). According Shovon (1990) cited in Olubunmi (2006), the incidence rates are highest in childhood and many are reluctant to disclose their condition because of the stigma attached to these disease. The implications of epilepsy were further described to include behavioural problems, psychosocial adjustment and impact on the quality of life of affected children and their families (deBoer et al, 2007). These negative implications are often related to discrimination and the stigma which exists in society (Ndour et al, 2004; deBoer, 2007).

In addition, there are many erroneous beliefs about epilepsy and intellectual disabilities. Children with epilepsy experience these erroneous attitudes mainly in social environments

such as schools (deBoer, 2007). Thus teachers' attitudes may impact the educational experience of children with epilepsy (Ojinnaka, 2002). The attitudes towards school pupils with epilepsy are influenced by the degree of school teacher's knowledge of the disorder (Ozer, 1991). The author's experience of passing through a teacher-training College and recent discussions with current students and lecturers in a major College of Education for children with special needs indicated that trainee-teachers in Nigeria do not usually receive formal instruction on epilepsy during their training. Children with ID are at increased risk of having epilepsy. A prevalence rate of 6 and 15% lifetime epilepsy has been reported among those with mild to moderate ID and for those with severe ID epilepsy occurs in around 25% whilst epilepsy is reported in more than 50% those with profound ID (IQ<20) (Ring, 2013).

There is therefore, a need for trainee-teachers to receive training on epilepsy, so they could be correctly informed about the disorder and encouraged to have a positive attitude towards affected persons including children they will be teaching when they qualify as teachers. This is particularly important for trainee-teachers in Colleges of Education where the focus is to train teachers who are going to teach children with special needs such as intellectual disability.

1.3 JUSTIFICATION OF THE STUDY

Children with intellectual disability are at increased risk of epilepsy and the prevalence of epilepsy increases with increasing severity of intellectual disabilities. Also children with intellectual disability and epilepsy are at increased risk of psychiatric morbidity compared to their peers with either epilepsy or intellectual disability alone (Beavis et al, 2007). However, previous studies (Sanya et al, 2005; Eze et al, 2015), in addition to the researcher's personal experience and recent informal discussions with current trainee-teachers and

lecturers in Colleges of Education for special needs in Nigeria identified that trainee-teachers aiming to teach children with intellectual disabilities receive little or no training on epilepsy and its management. This study is designed to bridge this gap by providing training on epilepsy to trainee teachers in the Department of Education for Learners with Intellectual Disabilities in a College of Education for special needs. The findings could help to influence policy on content of training curriculum and improve the training of teachers in relation to epilepsy thereby improving their knowledge, reducing negative attitudes and equipping them with the skills for emergency first aid support if a student in their class develops a seizure.

1.5 AIMS

This study aims to assess the effect of training regarding seizure disorder and epilepsy on the knowledge, attitude and awareness of first-aid skills for children having seizures, among special education trainee-teachers at Federal College of Education Special, Oyo.

1.5.1 Specific Objectives

1. To determine baseline knowledge of special education trainee-teachers on seizure disorders and epilepsy
2. To determine baseline attitude of special education teachers towards children with seizure disorders and epilepsy
3. To determine the effect of training regarding seizure disorder and epilepsy on the knowledge of special education trainee-teachers
4. To determine the effect of training regarding seizure disorder and epilepsy on the attitude of special education trainee teachers towards children with seizure disorder and epilepsy

5. To determine the effect of training regarding seizure disorder and epilepsy on the special education trainee teachers awareness of first-aid skills for children having a seizure.
6. To determine the level of satisfaction of the trainee-teachers regarding the intervention.

1.6 NULL HYPOTHESES

There will be no difference in knowledge mean scores before and after the intervention

There will be no difference in attitude mean scores before and after the intervention

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CHAPTER TWO

LITERATURE REVIEW

2.1 DEFINITION OF SEIZURE DISORDER AND EPILEPSY

Seizure disorder and Epilepsy are chronic brain disorder characterised by intermittent, often unpredictable seizures with associated significant psychological and social consequences for everyday living (Fisher et al, 2014).

A seizure is a brief change in normal electrical brain activity, resulting in alterations in awareness, perception, behaviour or movement (Fischer et al, 2014). Seizure affects persons of all ages but is particularly common in children. Khair (2015) defined seizure as an uncontrolled electrical activity in the brain which may produce a physical convulsion, minor physical signs, thought disturbances, or a combination of symptoms, seizures can be caused by head injuries, brain tumours, lead poisoning, and maldevelopment of the brain, genetic and infectious illness and fevers (Khair2015). Another definition of seizure is a sudden attack (as of disease) especially the physical manifestations (as convulsions, sensory disturbances, or loss of consciousness) resulting from abnormal electrical discharges in the brain (as in epilepsy) (Fischer, et al, 2014). However, epilepsy on the other hand was defined conceptually in 2005 as a disorder of the brain characterized by an enduring predisposition to generate epileptic seizures (Fisher et al, 2014). This definition is usually practically applied as having two unprovoked seizures more than 24 hours apart. The International League Against Epilepsy (Fisher et al, 2014) further recommended through a task force to alter the definition for special circumstances that do not meet the two unprovoked seizures criteria. Therefore the task force proposed that epilepsy to be considered a disease of the brain defined by having any of the following conditions (1) At least two unprovoked (or reflex) seizures, occurring greater than 24 hours apart; (2) one unprovoked (or reflex) seizure and a probability of further seizures similar to the general

recurrence risk (at least 60%) after two unprovoked seizures, occurring over the next 10 years or (3) diagnosis of an epilepsy syndrome.

According to WHO (Megiddo et al, 2016) Epilepsy is defined as a chronic disorder of the brain that affects people worldwide. It is characterised by recurrent seizures, which are brief episodes of involuntary movement that may involve a part of the body (partial) or the entire body (generalized), and are sometimes accompanied by loss of consciousness and control of bladder function. Therefore, epilepsy is any of various disorders marked by abnormal electrical discharges in the brain and typically manifested by sudden brief episodes of altered or diminished consciousness, involuntary movements, or convulsions (Khair, 2015).

2.2 Classification of Epileptic Seizures

There have been many attempts to classify epileptic seizures. The most commonly used and widely accepted classification system is the International Classification of Epileptic Seizures. Seizures in this classification system are divided into three categories namely partial seizures, generalised seizures and unclassified seizures. Partial seizures are subdivided into different simple partial seizures. Generalised seizures are also subdivided into different complex partial seizures (O'Donohoe, 1994).

The explanation of different epileptic seizures follows;

Partial seizures: According to (O'Donohoe 1994; Thielle et al, 1999) partial seizures are subdivided into the following clinical types of simple partial seizures.

Partial seizure with motor symptoms: It is noted that this type of partial seizure may spread slowly through the motor area. For example, a jerking of all fingers, and then to the wrist and hand, at a later point it could move to the arm and face. Partial seizure with motor symptoms has been termed Jacksonian seizure.

Partial seizure with somatosensory or sensory symptoms: If the part of the brain that is

affected is related to the visual sense, abnormal visual experiences occur such as hallucinations. Other senses may also be affected. These sensory seizures result in a distorted environment. A feeling of disorientation of body parts may occur.

Partial seizure with autonomic symptoms: Partial seizure with autonomic symptoms can begin in a part of the brain that is concerned with involuntary functions such as dilation of pupil. Other experience, include flushing, sweating, recurrent vomiting and abdominal cramps.

Partial seizure with psychic symptoms: Partial seizure with psychic symptoms originates in the part of the brain dealing with emotions and feelings. It is seldom that this type of seizure happens without impairment of consciousness.

Generalised seizures: According to Allwood and Gagiano (2000) as well as Baddeley and Ellis (2002) generalised seizures are subdivided into the following clinical types of complex seizures.

Absence seizures: An absence seizure is also referred to as a petit mal attack. Absence seizures are characterised by short brief interruptions in consciousness. An absence seizure may be seen as a stare, small movements of the eye, or fluttering the eyelids and the attack is of short duration. The learner is not aware of the seizure activity during this time and there is no recall of events, which occurred.

Myoclonic seizures: Myoclonic seizures are characterised by quick, sudden muscular movements. These fast jerks can range from mild to severe and have different forms. These types of seizures are like being jerked by an electrical shock. Myoclonic seizures are very brief, shock-like muscular contractions that may occur alone or in clusters.

Atonic seizures: Atonic seizures are also called drop attacks. They are characterised by a quick loss of muscle tone. The muscles or body go limp. The learner suddenly drops and falls on the ground. This type of seizure can cause physical injury.

Tonic-clonic seizures: Tonic-clonic seizures are formerly referred as grand mal seizures. They are characterised by convulsions and loss of consciousness. What is usually seen is that a learner loses consciousness and falls to the ground. The tonic phase is when the body lies rigid. Other behaviour is tongue biting, uncontrolled movements and saliva flow from the mouth. After the tonic-clonic seizure the learner may experience sore muscles and a headache.

Unclassified seizure: An unclassified seizure is the seizure, which cannot be classified because there is a lack of enough information to indicate what type of seizure it is (O'Donohoe 1994).

2.3 Prevalence of Seizure disorder and Epilepsy

Epilepsy is the most common non-infectious neurological disease of childhood in low and low-middle-income countries, and its incidence is highest in the first decade of life, a period during which children begin and complete a critical period of social and educational development (Bishop and Boag, 2006; Eze et al, 2015). It is estimated that epilepsy affects approximately 50 million people worldwide, 40 million of which live in low- and middle income countries (WHO, 2000). Recent active epilepsy prevalence in Nigeria was estimated as 20.8/1000 in rural and 4.7/1000 in semi-rural areas (Ozakwe, Alo and Otte 2014). Although little is known about the exact published prevalence of epilepsy in students in Nigeria, it is likely to be lower in comparison to high-income countries, because stigma arising from misconceptions about the condition keep students with epilepsy away from school (Eze et al, 2015).

2.3 Psychosocial Effects of Seizure disorder

Social discrimination, negative attitudes, and stigma against people with epilepsy are often more devastating and harmful than the disease itself (Eze, et al, 2015). These issues arise from misconceptions about the disease, with the public tending to be frightened about

helping an individual having a seizure (Mcclin and deBoer, 1995 cited in Eze et al, 2015). In some Nigerian communities, epilepsy is regarded as a sign of possession by evil spirits or is thought to be contagious via saliva (Thacker et al, 2008). Children with epilepsy are at an increased risk of educational under-achievement, intellectual/learning disabilities, mental health problems, social isolation, and poor self-esteem (Austin, 2000; William, 2003). For instance, a child with epilepsy may not be allowed to attend school because the parents are worried that the family name may be brought into public disrepute (Sbarra, Rimm-Kaufmann, Pianta, 2002). Sadly, school authorities may even expel children with epilepsy from school because they 'contaminate' other children (Eze et al, 2015). Even when a child with epilepsy attends school he or she is at increased risk of performing poorly and eventually being withdrawn if the epilepsy is poorly controlled (Adewuya, Oseni and Okeniyi, 2006). Poor educational achievement due to epilepsy may lead to low-paying jobs or unemployment later in life.

2.4 Treatment of Seizure Disorder

Despite the fact that epilepsy manifests in various ways, there are common themes and procedures for its treatment. Physicians often start with the least invasive treatment, only moving to more invasive procedures (i.e., surgical treatments) when all other less invasive therapies have proven unsuccessful (Bohac, 2011). By far the most common treatment for epilepsy is drug treatment (Deckers et al., 2001; Kwan and Brodie, 2000). It has been estimated that approximately 70% of learners with epilepsy acquire total control of their seizures with treatment (Allwood and Gagiano 2000), while 30% learners with epilepsy do not benefit from treatment (Mtshali, 2005). This means that the drugs may not have beneficial effect on every person and type of seizures (Thiele et al, 1999). Treatment of seizures in the vast majority of learners takes the form of medication called anticonvulsant or anti-epileptic drugs (Allwood and Gagiano 2000). In very few cases, surgery may be an option. If the attempt to control seizures has failed, a special diet may be prescribed

(Goodman and Borkowski, 2003). The explanation of these three different forms of treatment of epilepsy follows:

Anti-epileptic drugs: Anti-epileptic drugs are the drugs prescribed to control seizures (Mtshali, 2005). It is important to know that the type of anti-epileptic drugs prescribed will depend on the type of epilepsy and the individual's responses to a particular drug. Correct diagnosis is an essential pre-requisite to prescription of drugs. It is equally important that a learner's response to drugs is closely monitored (Allwood and Gagiano 2000). Side effects may be experienced when taking anti-epileptic drugs, but if they are promptly recognised and treatment is modified accordingly, the side effects can be minimised (Thiele et al, 1999).

Anti-epileptic drugs need to be taken as prescribed to maintain a steady state of medication in the blood stream. If the blood level of medication is too low, seizures may not be controlled. However, if the blood level is unnecessarily high, medication may have a toxic effect producing significant side effects (O'Donohoe, 1994). The therapeutic range is the level of medication at which most learner's seizures are controlled with minimal side effects. Drugs may have to be taken for some time before there is an appropriate effect on seizures. This will vary with different antiepileptic drugs (Laidlaw et al, 1999; Smith, 1990).

Surgery: Surgery for epilepsy refers to the removal of the part of the brain in which seizures originates (Johnson and Parkinson, 2002). Several complications can arise from surgery and thus it is usually reserved for the most severe cases where drug therapy has been documented as ineffective (Baddeley and Ellis, 2002). As surgery involves removing part of the brain in which a seizure originates, it has wide implications. Surgery may result in personality changes and intelligence alterations. Vision may also be affected and there may be impaired language skills and memory problems. Surgery for epilepsy can be quite effective and the success rate is high. Although this may sound encouraging, the surgery

itself can result in the onset of depression. In cases in which seizures were successfully reduced by at least 90%, the most commonly reported postoperative emotion was depression (Thiele et al, 1999).

Ketogenic diet: Ketogenic diet is a high fat, adequate protein, low carbohydrate diet designed to minimise epilepsy (Johnson and Parkinson, 2002). It has been used for many years as the alternative treatment for learners with difficulty to control seizures. The diet has been reported to control seizures in more than 70% of learners who had seizures, which were difficult to control. However, it is stated that ketogenic diet may have unpleasant side effects which include weight loss, diarrhoea which can lead to dehydration, abdominal pain, vitamin deficiencies and lethargy (Goodman and Borkowski, 2003). These factors should be taken into consideration before subjecting a learner to ketogenic diet.

2. 5 Intellectual Disabilities and Seizure Disorder

2.5.1 Definition and Types of Intellectual disabilities

Intellectual disability refers to a significant general impairment in intellectual functioning that is acquired during childhood, typically operationalised as scoring more than two standard deviations below the population mean on a test of general intelligence (Einfeld and Emerson, 2006). While estimates of the prevalence of intellectual disability vary widely, it has been estimated that approximately 2% of the adult population have intellectual disability (Hatton et al, 2014).

To have an intellectual (learning) disability (ID) is to have a developmental disorder characterised either by never having been able to acquire the educational and functional skills expected for the person's age, or, early in life suffering a neurological insult that arrested the person's development such that they could not go on to develop the expected level of functioning. Whatever the cause, those considered as having an ID manifest

significantly limited abilities across a wide range of everyday functions including cognitive, language, motor and social activities (Ring, 2013).

Based on the World Report on Disability (2011), approximately 25 million Nigerians live with a disability (including people living with epilepsy) with 3.6 million of them having very significant difficulties in functioning (WHO, 2011). More so, the Bill prohibiting discrimination against people living with disabilities in Nigeria is yet to be signed into law (Blake and Kerr, 2014).

The individuals with ID receive little or no support and are often excluded from social, economic and political affairs in the society. The most common avenue of social aid is usually through families, non-governmental organisations and religious organisations.

2.5. 2 Epilepsy in Intellectual Disabilities

Across the population of those with ID as a whole, a prevalence of epilepsy of 26% has been reported though this average figure obscures the fact that prevalence of epilepsy increases in line with increasing severity of ID (Ring, 2013). Amongst those with mild to moderate ID lifetime epilepsy prevalence has been reported at between 6 and 15%. In those with severe ID epilepsy occurs in around 25% whilst epilepsy is reported in more than 50% those with profound ID (IQ<20). Particularly high rates of epilepsy are reported in some specific ID syndromes (Ring, 2013). For instance, in Rett and Angelman syndromes prevalence rates for epilepsy of 80% or more are reported. Not only is epilepsy more common in those with ID than in the rest of the population: it tends to have a worse prognosis, with lower rates of seizure freedom and high rates of multiple antiepileptic drug use, incurring more side-effects and higher treatment costs (Pennington et al, 2012). Adults with ID and epilepsy have high rates of morbidity and mortality, including sudden unexplained death in epilepsy (SUDEP). Indeed, the Standardised Mortality Ratio (SMR) for SUDEP in adults with intellectual disability and epilepsy is in excess of 30 (Kiani, 2013).

There appear to be multiple aetiologies underlying the association between epilepsy and ID and this is currently a very active area of research that in the future may suggest novel treatment approaches. Aetiological processes include not only effects of well-described genetic anomalies such as those leading to Rett and Angelman syndromes, but in an as yet undetermined proportion of people with ID and epilepsy the effects of an unknown number of rare but clinically significant sub microscopic copy-number variants (CNVs) (Bartnik et al, 2012) . There is also evidence from experimental research to suggest that changes associated with epileptogenesis and seizures in early post-natal life may have effects on developmental processes in the brain including disruption of synaptic plasticity, dendritic development and ion channel maturation that may lead to later impairment in cognitive development (Ring, 2013).

2.5.3 Diagnosis of Epilepsy in people with Intellectual Disabilities

The diagnosis of epilepsy in people with ID may be complicated by a range of issues including; conflicting eye witness accounts of possible seizure events together with the difficulty that patients themselves may have in providing a history; the presence, particularly in those with more severe or profound ID, of stereotyped movements or mannerisms that may be mistaken for seizure-related movements; other paroxysmal disturbances of behaviour, for instance related to pain or frustration. Other factors that can potentially further compound the challenges in clarifying the diagnosis include the difficulty that some people with ID may have in tolerating investigations such as EEG and MRI.

Evidence suggests that in people with ID there are significant rates both of misdiagnosis of non-epileptic seizures as epilepsy in about a third of cases, and failure to diagnose or to treat episodes that are epileptic in nature (Chapman et al, 2011). Hence it is important when managing refractory epilepsy in people with ID that the diagnosis is carefully

reviewed and at the same that episodes considered to be behavioural in nature are re-considered to check that an epilepsy diagnosis is not being missed.

2.6 Teachers Attitude towards Children with Epilepsy and Seizure Disorder

Although teachers' knowledge and beliefs have been studied widely over the past few decades, very little attention has been given to teachers' beliefs regarding children with chronic medical conditions, especially by researchers in educational disciplines (Roux, 2009). Assessing teachers' beliefs and knowledge is critical to understanding teaching practices related to a wide range of topics, including understanding how teachers view children with chronic illnesses and how these views, in turn, affect a child's educational experience. Teachers' attitudes include information about stigmatization and misinformation about epilepsy in schools. Teacher knowledge and beliefs have been shown to be an important factor in determining teacher practices in the classroom. Thus, it follows that, teachers' beliefs and knowledge about epilepsy could have a significant impact on their ability to positively influence the successful school adjustment in children with epilepsy. In addition, most teachers surveyed worldwide receive little to no formal training regarding epilepsy or the needs of student with epilepsy (Roux, 2009). Of the studies that have been conducted, few have assessed teachers' knowledge about how epilepsy affects student's academic achievement and classroom behaviour, and rarely have teachers in the United States been studied (Roux, 2009). In a study conducted by Abdulhamail et al (2013) they concluded that primary school teacher's knowledge about epilepsy needs improvements. Their attitudes correlated highly with their knowledge. The authors further stated that educational campaigns about epilepsy are needed to develop a well informed and tolerant community (Abdulhamail, 2013). Additionally, while students with epilepsy are placed in special education more often than other students, special education teachers have not been studied as a group with respect to their knowledge and attitudes about students with epilepsy (Roux, 2009).

Attitudes and beliefs about chronic illnesses held by influential school personnel are hypothesized to directly impact children's comfort levels in schools. Often teachers and other school personnel may be concerned that they are not prepared for a medical emergency, and, thus, they are distant and unsure when interacting with chronically ill children (Sexson and Madan-Swain, 1995). Additionally, teachers may feel added pressure to take care of a chronically ill student emotionally, physically, and providing extra attention, while trying to properly teaching the other students in the class. This can create anxiety and frustration for chronically ill children, parents, teachers, other students, and other school personnel (Sexson and Madan-Swain, 1995). Bishop and Slevin (2004) found that in the last two decades very little research has been focused on epilepsy in the schools and particularly teachers' attitudes regarding epilepsy.

2.6.1 Knowledge and Beliefs of Epilepsy among Nigerian Teachers

In Nigeria, several studies have revealed poor knowledge and attitude towards children with seizure disorder by their teachers. In a study conducted by Akpan, Ikpeme and Utuk, (2012) poor knowledge and negative attitudes towards seizure disorder was displayed by the teachers. The authors opined that the teachers' knowledge and attitude could be improved by community education. A study conducted by Eze et al, (2015) among trainee teachers in a regular college of education found that majority of their participants had heard about epilepsy through mass media and other sources but not through their school. In the same study, majority of the participants did not have knowledge about cause and triggers (Eze et al, 2015). Akpan, Ikpeme and Utuk (2012) findings revealed that 22.0% of the participants believed that epilepsy is caused by evil spirit (Akpan, Ikpeme and Utuk, 2012; Eze et al, 2015). This corroborates another study conducted in South-Eastern Nigeria (Ojinnaka, 2002). A recent study from Nigeria found significant deficits in the general knowledge about epilepsy and first aids measures in the classrooms even in those with high level of education (Mustapha, Odu and Akande, 2013). Many studies attribute deficit in knowledge

in Nigeria to problems with ease of accessing information as compared to developed countries (Bishop and Boag, 2006; Eze et al, 2015).

Similarly, many of the studies cited above reported negative attitude towards epilepsy. This negative attitude could be attributed to the overall poor knowledge about epilepsy among the teachers (Eze et al, 2015).

2.6.2 Classroom Practices and Support for Learners with Epilepsy

Teachers are at the frontline in educational programs and practices, therefore in order to support the learner with epilepsy in the classroom the following aspects should be put into place: individual education plan, supportive environment, behaviour management and strategies that will reduce destructive behaviour. Mtshali (2005) highlighted teacher's support strategies in the classroom for learners with epilepsy. They include the following:

Individual Education Plan: Educators should have individualised educational plans for each learner who has a chronic condition. The individualised education plan should be prepared by the collaborative effort of the different profession which includes the parents, educators, doctors, psychiatrist and other related professionals. The document includes the name, pictures and other demographic information of the child. It should also include the diagnosis and description of the condition, health history including specific symptoms and level of severity. The emergency procedures should be put on the first page of the plan. Ongoing daily treatments such as health care procedures, medication administration, dosage, and possible side effects should be included in the plan. The plan should also provide the information on the additional accommodation measures taken. This includes identification of physical access and changes in instruction and activities. Example: rest breaks and changes in activity types and lengths .

Supportive Environment: The physical structure of the classroom environment has an effect on the behaviour and safety of both educators and learners (Mtshali, 2005). Teachers

are responsible for the learner`s health and safety while they are in their classroom. Teachers have to make sure that dangerous chemicals or sharp scissors are kept away from all learners including learners with epilepsy. Teachers have to put in place clear and firm strategies about dealing with bags and other equipment at the start of the lesson, a time when safety issues should be discussed. The classroom environment should be barrier free and it should be arranged in such a way to allow easy movement between desks and tables. It is necessary to make sure all learners in the classroom know first aid procedures for seizures (Mtshali,2005).

Informative Education for other Learners about Epilepsy: Teachers have the responsibility of helping other learners understand and accept the learner with epilepsy.

When teaching learners about epilepsy the teachers should explain that epilepsy or seizure is not a disease and is not contagious, but is a neurological condition. They also have to explain that seizure happens, when the brain receives many different messages to which the body reacts and the learner became unconscious and after the seizure the learner`s consciousness returns to normal. Furthermore, teachers should discuss the causes of epilepsy such as head injury and stress the issue of safety precautions such as the use of helmets, speed reduction while driving and the use of seat belts (Mtshali, 2005). Teachers can organise activities such as safety role plays, discussion about famous people who suffered from epilepsy and many more to teach other pupils about all they need to know.

Behaviour Management: Learners with epilepsy exhibit more behaviour problems than other learners who have special educational needs. They also have more behaviour problems compared to other learners with chronic conditions. Effective behaviour management is essential to the smooth running of a school and classroom.

Classroom Rules: Teachers should carry the learners along in setting up rules in the classroom. Rules are essential for the smooth running of any lesson and should be formulated jointly by the learners and the teachers (Westwood 2003 in Mtshali, 2005). Research indicates that most learners with special educational needs, including learners with epilepsy,

function best when they know what is expected of them. Therefore, it is important to keep rules short, clear and explicitly stated so that learners know what is expected of them. It is important that the teacher should frequently refer to the rules if it is expected to successfully manage learners. If there is a classroom rules for learners when seizures occurs, other learners will not be frightened during seizure activity in the classroom, nor will they be horrified by such an occurrence, but they will be prepared to respond in a helpful and supportive manner. Learners will be expected to assist the teacher when seizures happen in the classroom. They will be expected to help with first aid procedures for seizures and they will also be expected to stand far from the learner to allow for sufficient oxygen to reach the learner (Mtshali, 2005).

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CHAPTER 3

METHODOLOGY

3.1 Study Location

The study was conducted at Federal College of Education (Special) Oyo. The institution was established in 1977, located in Oyo town, Oyo State, Nigeria. The College is the only one of its kind in Nigeria and sub-Saharan Africa. It has the largest number of students with special needs that could be found in any higher institution in Nigeria and the largest concentration of specialized facilities for teaching and training of teachers of persons with special needs in Nigeria. The institution has 7 schools which offer different courses in different programs. The programs offered by the College are Pre-NCE (Nigeria Certificate Education), Nigeria Certificate in Education, Nigerian Certificate in Education Part-Time & Sandwich Programme, University of Ibadan Degree, Lagos State University Sandwich Degree and Post Graduate Diploma in Education.

The schools within the College are:

School of Secondary Education - Arts & Social Sciences

School of General Education

School of Secondary Education - Languages

School of Secondary Education - Sciences Programme

School of Special Education

School of Secondary Education - Vocational & Technical Education

School of Early Childhood Care, Primary and Adult & Non Formal Education

The School of interest for this study is the School of Special Education which has 8 departments listed below:

Department of Education for Learners with Communication and Behaviour Disorders

Department of Gifted and Talented Education

Department of Education for Learners with Hearing Impairments

Department of Education for Learners with Intellectual Disabilities

Department of Education for Learners with Learning Disabilities

Department of Education for Learners with Physical and Health Impairments

Department of Rehabilitation Education

Department of Education for Learners with Visual Impairments

For purposes of this study, the Department of Intellectual Disabilities was selected because when the trainee-teachers in this department qualify as teachers, they are more likely to encounter students in their class with epilepsy given the high association between Intellectual Disability and Epilepsy.

3.2 Study design

The study was a one-group pre-post intervention study without a control group.

3.3 Study population

The study population were trainee-teachers in the Department of Intellectual Disabilities (ID) at the Federal College of Education Special Oyo. The Department of ID was selected because when the trainee teachers qualify, they are likely to work with students with ID who, research has shown are at increased risk of seizures and epilepsy compared with the general population of children and those with special needs without ID.

3.3.1 Inclusion criteria

1. Trainee teachers in Department of ID
2. Year 2 trainee teachers
3. Who gave consent

3.3.2 Exclusion criteria

1. Students who are not in the ID department
2. Level 100 (because they were new and may still be settling into their course)
3. Level 300 (because they were busy with teaching practice and their final year exams)
4. Blind or Deaf students (because the researcher does not have the expertise for Braille or Sign language which would be required for these categories of students to be able to participate in the intervention)

3.4 Sample size calculation

The sample size is based on the formulae:

$$n = \frac{\sigma_d^2 (Z_\beta + Z_{\alpha/2})^2}{\text{difference}^2}$$

where :

n = sample size

σ = standard deviation of the within - pair difference

difference = clinically meaningful difference

Z_β = corresponds to power (.84 = 80% power)

$Z_{\alpha/2}$ = corresponds to two - tailed significance level (1.96 for $\alpha = .05$)

If the intervention increases the participants' pre-post knowledge about epilepsy by $\frac{1}{2}$ (i.e. 0.5) Standard Deviation, the sample required was calculated as follows:

$$N = \frac{1^2 (0.84 + 1.96)^2}{0.5^2}$$

$$N = 7.84/0.25 = 32$$

To allow for up to 20% drop out due to academic demands on the trainee-students' time, the following formula was used:

$N^{**} = N / (1 - W)$, where, N^{**} is the adjusted sample size, N is the unadjusted sample size (32), and W is the proportion expected to dropout = 20% (or 0.2)

$$N^{**} = 32 / 1 - 0.2$$

$$N^{**} = 32 / 0.8 = 40 \text{ participants.}$$

3.5 Sampling Technique

All 115 students in 200 Level class in the Department of ID were invited to volunteer to participate in the intervention. Eligible students who volunteered and provide consent were recruited consecutively until the sample size of 40 was reached. A list of another 10 volunteers was kept to be used to replace any of the recruited students who drop out before

the first intervention session but this was eventually not required because the only drop-outs occurred at the point of post-intervention measurement.

3.6 DATA COLLECTION

3.6.1 Study instruments

The following self-completed questionnaires were used for the study

Socio-demographic Questionnaire (Appendix III)

The socio-demographic questionnaire was used to elicit information on age, gender, marital status, close contact with persons with epilepsy.

The Knowledge of Epilepsy Questionnaire (KOEQ) (Appendix III)

This is a 16-item questionnaire adapted from other previous studies of epilepsy including in Nigerian schools (Ani et al, 2011; Young, et al, 2002; Krishnaiah et al 2016; Teferi and Shewangizaw, 2015). The questionnaire covers a series of factual statements about epilepsy such as the nature of seizures and the aetiology - including beliefs about whether the condition is caused by evil spirits or whether it is infectious. The students answered “yes” or “no” or “don’t know”. The results were analysed categorically in line with the latter answers. In addition, the correct responses were summed to create a “Knowledge Scale” such that a higher score indicated better knowledge. The Knowledge Scale was analysed as a continuous measure.

Attitudes towards Epilepsy Questionnaire (AEQ) (Appendix III)

The trainee-students’ attitude towards epilepsy was assessed by a ten-item social distance questionnaire adapted from previous studies of attitude to epilepsy in Nigeria (Ani et al 2011; Adewuya and Makanjuola, 2008). The items had a yes” or “no” or “don’t know response format. The results were analysed categorically in the latter format. In addition,

correct responses were summed to create an “Attitude Scale” such that a higher score indicates more positive attitude. The “Attitude Scale” was analysed as a continuous measure.

Awareness of First aid towards a child having seizures

This was measured with 7 questions to assess the participants’ awareness of the appropriate first-aid procedures if they were to come across a child having an epileptic seizure. The questions were adapted from good practices recommended by reputable organisations such as World Health Organisation

https://www.who.int/mental_health/neurology/epilepsy/epilepsy_global_toolkit.pdf?ua=1

and Epilepsy Society [https://www.epilepsysociety.org.uk/seizure-first-](https://www.epilepsysociety.org.uk/seizure-first-aid#.XCepm1X7TIU)

[aid#.XCepm1X7TIU](https://www.epilepsysociety.org.uk/seizure-first-aid#.XCepm1X7TIU) as well as other studies (Goel et al 2013). Respondents indicated “yes”, “no” or “don’t know”. The first aid questions were analysed categorically. In addition, the correct answers summed and analysed as continuous variable.

Client satisfaction questionnaire

A 10 item client satisfaction questionnaire was adapted from Atkinson and Greenfield, (2004). Seven of the items were scored on a scale of 1-4 Likert scale, while 3 questions were open ended to gather responses about what the participants liked, disliked and would recommend to be improved about the intervention.

3.6.2 Study procedure

The study was publicised among Level 200 students in the ID Department. The first 40 volunteers who met the inclusion criteria and provided consent were selected. A baseline

measure comprising the study questionnaires (except satisfaction questionnaire) was completed on the first day prior to start of the intervention. The intervention was delivered by the researcher as 2 hour sessions once a week over three weeks. The students were encouraged to attend all three sessions. The sessions were fitted into gaps in the students' timetable to ensure they did not miss out on their other studies. Post intervention measures comprising the study questionnaire and the satisfaction questionnaire were repeated a week after the last (third) intervention session. All 40 students attended the 3 intervention sessions but two were not present to complete the post-intervention measures.

3.6. 3 Intervention

The intervention was adapted from existing training packages on epilepsy such as The World Health Organisation Epilepsy toolkit

https://www.who.int/mental_health/neurology/epilepsy/epilepsy_global_toolkit.pdf?ua=1

other epilepsy organisations such as Epilepsy Society

<https://www.epilepsysociety.org.uk/seizure-first-aid#.XCepm1X7TIU> as well as manuals

used in previous studies in Nigeria (Igbiginie, 2018). The intervention was delivered in a group format which the students are used to as their normal teaching format. The sessions included power point slides presentations, discussions, quiz, video demonstrations, and role play. The first session covered information about epilepsy such as seizure types, myths and beliefs associated with the condition. The second session covered first aid procedures for persons having a seizure, as well as a review of the information in the first session. The third and the last session reviewed the materials covered in the first two sessions and role play.

3. 7 Data Analysis

The data was cleaned and coded for analysis with Statistical Package for the Social Sciences (SPSS version 20) software. Socio-demographic details of the participants are presented

with numbers and percentages for categorical variables (e.g. gender) and Mean and Standard Deviation for continuous measures (e.g. age). Comparison of the effect of the intervention was carried out using Paired t Tests comparing the “Knowledge of Epilepsy Scale” and “Attitude to Epilepsy Scale”, and the “Knowledge of first aid Scale” at baseline, and post intervention. The three scales were sufficiently normally distributed to meet the requirement for parametric statistics; hence Paired-t tests were used. The satisfaction questions were presented with numbers and percentages while the qualitative comments were themed. Consideration was given in the analyses to whether the effect of the intervention should be tested with Chi-Square applied to test the change in proportion of answers to each of the individual questions in the Knowledge of Epilepsy Scale Questionnaire, The Attitude to Epilepsy Questionnaire, and the Knowledge of first aid Questionnaire. However, this was not proceeded with as it would have amounted to 33 separate inferential tests which would have carried the risk of Type 1 Errors. Instead, and as explained above, three summative continuous measures were used for inferential statistics to test the effect of the intervention. The level of significance was set at 0.05.

3.8 Ethical Considerations (Appendix VI)

Ethical approval to carry out this study was obtained from Oyo State Ministry of Health Ethical Review Committee. Permission was obtained from the Head of Department of ID at Federal College of Education Special Oyo.

Informed Consent Form (Appendix I)

The participants were briefed about the study and how long it will take them to participate. Interested students registered with their course representative and thereafter they were provided with a detailed informed consent form. They were informed of their right to withdraw from the intervention prior to or during the study.

Confidentiality

The information collected was used for research purposes only, and neither the name nor any identifying information of the participants will be used in any publication or presentation of the study results. All information collected for the study was kept confidential and only group (aggregate) data were shared.

Beneficence to Participants

The training improved education to aid recognizing and responding to their learners with epilepsy in their practice.

This research could benefit the wider population of teachers as the participants may share their newly acquired knowledge with their colleagues.

Non-maleficence

There is no known risk associated with the study and it did not involve any invasive procedures.

Voluntary Participation

Participation in this study was voluntary. Participants were not forced to answer any questions and they could withdraw from the study at any time with no effect or any consequences.

Conflicts of Interest

The study was done in the scope of partial fulfilment of requirements for the degree of Master of Science in Child and Adolescent Mental Health, University of Ibadan. There was no conflict of interest.

(Word count-1851)

CHAPTER 4

RESULTS

4.1 Demographic Characteristics

Forty (40) Special education trainee teachers in the Department of Education for learners with Intellectual Disabilities participated in the study and two (2) did not participate in the post intervention survey because one missed two of the sessions and the other was not available to take the post intervention survey. Their ages ranged between 15 and 30 years (mean 21.08, SD 2.5), with 31 (77.5%) were female and 38 (97.4%) were single. Only 24(60%) stated that they had heard of epilepsy, 7 (17.5%) had knowledge of someone who suffer from epilepsy and 2 (5%) had a family member with epilepsy. The characteristics information of the participants are summarised in Table 1.

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Table 1: Socio-demographics characteristics of respondents (N = 40)

Variables	Frequency n (%)
Sex	
Male	9(22.5)
Female	31(77.5)
Marital status	
Single	38(97.4)
Married	1(2.6)
Age group (Years)	
15-19	7(18.9)
20-24	28(75.7)
25 and above	2(5.4)
Ever heard of epilepsy	
Yes	24(60)
No	16(40)
Knowledge of someone who suffers epilepsy	
Yes	7(17.5)
No	33(82.5)
Has family member with epilepsy	
Yes	2(5)
No	38(95)
Ever seen/witnessed someone having an epileptic seizure	
Yes	16(40)
No	24(60)

4.1a Relationship between age and knowledge

Pearson correlation showed a negative correlation between age and baseline knowledge such that older participants tended to have lower knowledge of epilepsy than younger ones but the association was not statistically significant ($p = 0.53$) (Table 2).

Table 2: Relationship between age and knowledge (N=40)

<u>Variables</u>	<u>Pearson correlation</u>	<u>p value</u>
Age (Years)	-0.108	0.530

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4.2 Knowledge about Epilepsy

Table 3a and 3b provides a comparative pre and post intervention knowledge scores of the participants. Overall, the participants' knowledge of epilepsy improved after the intervention. Most participants (89.7% before and 94.7% after) correctly identified that epilepsy is a neurological disorder. Incorrect knowledge that epilepsy can spread by saliva from an affected person reduced from 56.4% who indicated this to be true pre-intervention to 18.4% who still held this view post-intervention. Pre intervention 65.8% indicated that epilepsy can be cured by prayer but this reduced to 44.7% at post intervention. Similarly, most respondents (65.8%) correctly indicated pre-intervention that epilepsy can be treated by medication and this knowledge increased further (81.5%) post intervention. Knowledge that exam stress, light, and sleep deprivation can trigger seizures increased from pre-intervention to post-intervention (41% vs 81.6%), (42.1% vs 78.9%) and (23.1% vs 71.1% respectively).

The correct answers were summed to create a "Knowledge Scale" and Table 3 shows a statistically significant improvement in the Knowledge Scale at post intervention compared with pre-intervention ($p = 0.001$).

Table 3a: Effect of training on knowledge of Epilepsy among Special Education Trainee teachers

Variable Knowledge	Correct answer	N = 40			N = 38			X ²	pValue
		Pre Intervention (%)			Post Intervention (%)				
		Yes	No	Don't know	Yes	No	Don't know		
Epilepsy is a neurological disease	Yes	35 (89.7)	2 (5.1)	2 (5.1)	36 (94.7)	1 (2.6)	1 (2.6)	10.669*	0.001
A person who has epilepsy is most likely pass it onto his/her children genetically	No	15 (39.5)	18 (47.4)	5 (13.2)	24 (63.2)	14 (36.8)	0 (0)	2.541*	0.255
Epilepsy can be spread by saliva from an affected person	No	22 (56.4)	12 (30.8)	5 (12.8)	7 (18.4)	29 (76.3)	2 (5.3)	4.804*	0.331
Epilepsy can be acquired by touching someone who has seizure without wearing gloves	No	9 (23.1)	26 (66.7)	4 (10.3)	7 (18.4)	31 (81.6)	0 (0)	2.728*	0.199
Seizures normally occur at fixed times and places	No	13 (34.2)	15 (39.5)	10 (26.3)	7 (18.4)	28 (73.7)	3 (7.9)	7.952*	0.033
People affected by epilepsy can sometimes predict when they may have a seizure	Yes	15 (39.5)	16 (42.1)	7 (18.4)	24 (64.9)	13 (35.1)	0 (0)	3.273*	0.203
Most people affected by epilepsy die as a result of the disease	No	23 (59)	9 (23.1)	7 (17.9)	8 (22.2)	25 (69.4)	3 (8.3)	3.925*	0.395
Epilepsy can be the result of a sin committed by the person's ancestor	No	18 (46.2)	18 (46.2)	3 (7.7)	8 (21.6)	19 (51.4)	10 (27)	4.666*	0.381
Epilepsy can be treated successfully with medication	Yes	25 (65.8)	6 (15.8)	7 (18.4)	31 (81.5)	2 (5.3)	5 (13.2)	8.554*	0.020
Epilepsy can be cured by prayer	No	27 (69.2)	5 (12.8)	7 (17.9)	17 (44.7)	17 (44.7)	4 (10.6)	6.428*	0.096
Epilepsy can be caused by an evil curse or evil spirits	No	17 (43.6)	16 (41)	6 (15.4)	8 (21.1)	27 (71.1)	3 (7.9)	7.133*	0.066

Table 3b: Effect of training on knowledge of Epilepsy among Special Education Trainee teachers

Variable Knowledge	Correct answer	N= 40			N = 38			X ²	pValue
		Pre Intervention (%)			Post Intervention (%)				
		Yes	No	Don't Know	Yes	No	Don't Know		
A student with epilepsy seizure attack can be triggered by stress of taking an exam	Yes	16 (41.0)	16 (41.0)	7 (17.9)	31 (81.6)	5 (13.2)	2 (5.3)	3.378*	0.481
Dazzling lights can trigger seizure in some people with epilepsy	Yes	16 (42.1)	16 (21.1)	14 (36.8)	30 (78.9)	5 (13.2)	3 (7.9)	3.761*	0.376
Sleep deprivation can trigger seizures in people with epilepsy	Yes	9 (23.1)	14 (35.9)	16 (41)	27 (71.1)	9 (23.7)	2 (5.3)	3.972*	0.305
Abdominal pain can be a warning sign of seizure	Yes	14 (35.9)	12 (30.8)	13 (33.3)	30 (78.9)	4 (10.5)	4 (10.5)	1.553*	0.873
Every seizure makes the affected person to shake and fall to the ground	No	30 (76.9)	4 (10.3)	5 (12.8)	18 (47.4)	19 (50)	1 (2.6)	5.946*	0.101

*Fisher's Exact Test

Table 4: Comparison of pre-intervention and post-intervention Knowledge Scale scores

<u>Variables</u>	<u>Mean</u>	<u>t</u>	<u>df</u>	<u>pvalue</u>	<u>Lower</u> <u>(CI)</u>	<u>Upper</u> <u>(CI)</u>
Knowledge before (N=40)	6.43	-6.2	36	0.001	-5.918	-3.00
Knowledge After (N=38)	10.89					

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4.2a: Associations between characteristics information and baseline knowledge

Independent sample t test was used to explore for association between the baseline Knowledge scores and dichotomous socio demographic variables. Association between demographics information and baseline knowledge are shown in Table 5. There was no statistically significant difference in the knowledge scores of males and females ($p = 0.13$). There was no significant difference in the knowledge scores of those who had heard and those who had not heard about epilepsy ($p = 0.52$), or who knew or did not know someone who suffered from epilepsy, or had witnessed an epileptic seizure or not (p -values of 0.99 and 0.57 respectively).

Table 5: Characteristics mean difference between the demographic information and knowledge (N= 40)

Variables	f	t	df	P value	Lower (CI)	Upper (CI)
Male	9	1.568	37	0.125	-0.37	2.92
Female	31					
Ever heard of epilepsy						
Yes	24	-0.650	37	0.519	-1.83	0.94
No	16					
Knowledge of someone who suffered epilepsy						
Yes	7	0.016	37	0.987	-1.89	1.92
No	33					
Ever witnessed someone having epileptic seizure						
Yes	16	0.577	37	0.568	-1.01	1.81
No	24					

4.2b: Associations between demographic information and knowledge scores after intervention.

An independent sample t test was carried out to determine the associations between the socio-demographics information and knowledge after intervention. There was no significant difference in knowledge between males and females, those that have heard about epilepsy or not, those that knew someone suffering from epilepsy or not and those who had witnessed an epileptic seizure or not with p-values of 0.40, 0.86, 0.83 and 0.86 respectively.

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Table 6: Characteristics mean difference between the socio-demographics and knowledge after intervention (N= 38)

<u>Variables</u>	<u>f</u>	<u>t</u>	<u>df</u>	<u>p value</u>	<u>Lower (CI)</u>	<u>Upper (CI)</u>
Male	9	-0.848	36	0.402	-4.30	1.76
Female	31					
Ever heard of epilepsy	24					
Yes	16	0.177	36	0.860	-2.36	2.81
No	7					
Knowledge of someone who suffered epilepsy	7					
Yes	33	0.221	36	0.827	-3.57	2.87
No	16					
Ever witnessed someone having epileptic seizure	16					
Yes	24	0.175	36	0.862	-2.77	2.33
No	24					

4.3 Attitude towards Epilepsy

The comparative scores of the respondent's attitude towards epilepsy are shown in Table 4. Pre-intervention, majority of the respondents believed that some people with epilepsy can live a normal happy life (67.5%) and the proportion of those holding this positive view increased further post-intervention to 94.7%). The respondents who held the negative belief that that children with epilepsy should only attend special schools reduced from 59% pre-intervention to 31.6% post intervention. Similarly, the proportion of respondents who held the negative belief that people affected by epilepsy should not work as teachers reduced from 50% pre-intervention to 13.2% post-intervention. Those who indicated that they would be worried if their child befriended another child with epilepsy reduced from 61.5% pre intervention to 28.9% post-intervention.

The correct answers to the attitude questions were summed and compared pre and post-intervention. As shown in Table 7, there was significant change towards more positive attitude towards people with epilepsy from pre-intervention to post-intervention ($p = 0.001$)

Table 7: Respondents attitude towards epilepsy

Attitude Variable	Correct answer	N = 40 Pre Intervention N (%)			N = 38 Post Intervention N (%)		
		Yes	No	Don't Know	Yes	No	Don't Know
Some people with epilepsy can live a normal happy life	Yes	27 (67.5)	12 (30)	1 (2.5)	36 (94.7)	1 (2.6)	1 (2.6)
A student who suffers from epilepsy is not likely to do well in his/her exams	No	13 (33.3)	23 (59)	3 (7.7)	15 (39.5)	22 (57.9)	1 (2.6)
People with epilepsy should not work as teachers	No	20 (50)	13 (32.5)	7 (17.5)	5 (13.2)	30 (78.9)	3 (7.9)
Children with epilepsy should not be allowed to play with other children	No	8 (22.5)	27 (69.2)	3 (7.7)	6 (15.8)	31 (81.6)	1 (2.6)
Children with epilepsy should always attend special schools instead of regular schools	No	23 (59)	11 (28.2)	5 (12.8)	12 (31.6)	26 (68.4)	0 (0)
I would object if my brother or sister wants to marry someone with epilepsy	No	18 (45)	18 (45)	4 (10)	14 (36.8)	19 (50)	5 (13.2)
People with epilepsy should not have children	No	7 (17.5)	32 (80)	1 (40)	1 (2.6)	36 (94.7)	1 (2.6)
I would be ashamed if my relative has epilepsy	No	25 (62.5)	12 (30)	3 (7.5)	13 (35.1)	22 (59.5)	2 (5.4)
I would be worried if my child befriended another child with epilepsy	No	24 (61.5)	10 (25.6)	5 (12.8)	11 (28.9)	25 (65.8)	2 (5.3)
People with epilepsy should hide their illness as much as possible	No	11 (27.5)	23 (57.5)	6 (15)	4 (10.5)	32 (84.2)	2 (5.3)

Table 8: Comparison of pre-intervention and post-intervention Attitude Scale scores

<u>Variables</u>	<u>Mean</u>	<u>t</u>	<u>df</u>	<u>p value</u>	<u>Lower (CI)</u>	<u>Upper (CI)</u>
Attitude before (N=40)	10.68	-4.86	37	0.001	-6.34	-2.61
Attitude after (N=38)	15.16					

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4.3a: Association between demographics information and baseline attitude

Associations between dichotomous socio-demographic variables and baseline Attitude scores were assessed using independent sample T-Test. There was no difference in the attitude scores of male and female participants ($p = 0.42$). This was the same for other socio demographic variables (ever heard of epilepsy, knowledge of someone with epilepsy and ever witnessed someone having epileptic seizure with p-values of 0.66, 0.88, and 0.20 respectively (Table 9).

Table 9: Characteristics mean difference between the demographic information and attitude (N= 40)

<u>Variables</u>	<u>f</u>	<u>t</u>	<u>df</u>	<u>p value</u>	<u>Lower (CI)</u>	<u>Upper (CI)</u>
Male	9					
Female	31	0.82	38	0.417	-1.95	4.60
Ever heard of epilepsy						
Yes	24					
No	16	0.451	38	0.655	-2.18	3.43
Knowledge of someone who suffered epilepsy						
Yes	7					
No	33	0.169	38	0.867	-3.33	3.93
Ever witnessed someone having epileptic seizure						
Yes	16					
No	24	1.301	38	0.201	-0.98	4.53

4.3b: Associations between demographic information and Attitude scores after intervention.

Table 10 showed the independent sample t test for association between the socio-demographics variables and attitude after intervention. There was no significant difference in attitude of male and female respondents ($p = 0.22$). This is same for other socio-demographic variables as shown in Table 1e with p values for ever heard of epilepsy, knowledge of someone with epilepsy, and ever witnessed epilepsy are 0.66, 0.78, and 0.52 respectively.

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Table 10: T- test statistics association between the socio-demographics and attitude after intervention (N=38)

<u>Variables</u>	<u>Mean</u>	<u>t</u>	<u>df</u>	<u>pvalue</u>	<u>Lower (CI)</u>	<u>Upper (CI)</u>
Male	9	-1.241	36	0.223	-5.53	1.33
Female	31					
Ever heard of epilepsy						
Yes	24	-0.450	36	0.656	-3.61	2.30
No	16					
Knowledge of someone who suffered epilepsy						
Yes	7	0.279	36	0.782	-3.18	4.19
No	33					
Ever witnessed someone having epileptic seizure						
Yes	16	0.643	36	0.524	-3.83	1.98
No	24					

4.4 Awareness of First Aid towards a person having an epileptic seizure

There were significant differences in the pre and post intervention in terms of awareness of first aid for people with epileptic seizure as shown in Tables 11 and 12. For example, Table 6 shows that at pre intervention, 32.5% knew that nothing should be placed in the child's mouth during seizure and this knowledge increased to 65.8% post intervention.

Pre-intervention, a majority of the respondent (70%) felt confident that could provide first aid to a child with seizure and even more (86.8%) felt confident about providing first aid post-intervention.

The correct answers to the first aid questions were summed to create a scale which showed a significant improvement in knowledge of first aid from pre-intervention to post-intervention ($p = 0.001$).

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Table 11: Respondents awareness of first aid towards a person suffering from epileptic seizure

First Aid Awareness Variable	Correct answer	N = 40 Pre Intervention N (%)			N = 38 Post Intervention N (%)		
		Yes	No	Don't Know	Yes	No	Don't Know
Put something in the child's mouth to prevent him /her from choking with his / her tongue.	No	21 (52.5)	13 (32.5)	6 (15)	13 (34.2)	25 (65.8)	0 (0)
Hold the child tight so that he / she stops shaking	No	23 (59)	11 (28.2)	5 (12.8)	8 (21.1)	30 (78.9)	0 (0)
Lie the child on his / her back so you can see the face to make sure he/she is alright	No	30 (75)	6 (15)	4 (10)	28 (73.7)	9 (23.7)	1 (2.6)
Call for help from other people around	Yes	36 (90)	3 (7.5)	1 (2.5)	20 (52.6)	17 (44.7)	1 (2.6)
Move the child to an area where he / she cannot hurt him / herself while having seizure	Yes	31 (77.5)	8 (20)	1 (2.5)	34 (89.5)	4 (10.5)	0 (0)
Pour water on the child to cool him/her down	No	23 (57.5)	11 (27.5)	6 (15)	14 (36.8)	24 (63.2)	0 (0)
Overall, I feel confident that I will be able to provide first aid to a child in my class who starts to have seizure	Yes	28 (70)	8 (20)	4 (10)	33 (86.8)	3 (7.9)	2 (5.3)

Table 12: Comparison of pre-intervention and post-intervention Knowledge of first aid scores

<u>Variables</u>	<u>Mean</u>	<u>df</u>	<u>p value</u>	<u>Lower (CI)</u>	<u>Upper (CI)</u>
First aid before (N=40)	3.42	37	0.001	-1.66	-0.71
First aid awareness after (N=38)	4.61				

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4.5 Client Satisfaction

As shown in Table 13a and 13b, majority (51.5%) rated the training as “good” and 48.5% rated the training as “excellent”. Most of the respondents (71.4%) indicated that what they liked best about the training was the opportunity to gain confidence, 80% wanted the training to last longer and 70% suggested that others should be trained.

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Table 13a: Client satisfaction

Variables (n=33)	Frequency n (%)
Training ratings	17(51.5)
Good	16(48.5)
Excellent	
Wanted information gotten	
Yes generally	5(15.2)
Yes definitely	28(84.8)
Plan to recommend training to others	
Yes Probably	9(27.3)
Yes, definitely	24(72.7)
Satisfaction with training	
Quite dissatisfied	1(3)
Mostly satisfied	12(36.4)
Very satisfied	20(60.6)
Training makes you feel confidence	
No, things got worse	1(2.5)
No, I didn't really help	1(2.5)
Yes, a little	4(10)
Yes, a lot	27(67.5)
Overall satisfaction with training	
Not very satisfied	2(6.1)
Mostly satisfied	2(6.1)
Very satisfied	29(87.9)
Willingness to come back for training	
Yes probably	3(9.1)
Yes definitely	30(90.9)

Table 13b: Clients satisfaction themed responses (n=33)

Responses	Frequency (%)
What I like best about training	
Role play	1(4.8)
Opportunity to gain and build confidence in the management of epilepsy seizure	15(71.4)
Videos and interactions	3(14.3)
Refreshment	1(4.8)
Trainer	1(4.8)
What I don't like about training	
Time clashes with our break	1(20)
Training was short	4(80)
Suggestions for improvement	
Scope of training should be increased to cover other areas of mental health	1(5)
Other people should be trained	14(70)
Specialist hospital should be provided for people with epilepsy seizure	2(10)
Training time should be increased	2(10)
Training should be done regularly	1(2.5)

(Word count 975)

CHAPTER 5

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Discussion

Epilepsy is a common chronic condition among school age children (deBoeretal, 2007). However, children with intellectual disabilities may be at increased risk of epilepsy. Ring (2013) reported a prevalence rate of 26% and increase in line with severity of the intellectual disabilities. It is therefore important for teachers of children with intellectual disabilities to be knowledgeable about it.

This study was therefore designed to examine the effect of epilepsy training on knowledge, attitude and first aid management skills of Special education trainee-teachers in Federal College of Education Special Oyo.

Socio demographic characteristics of the respondents

At pre intervention, 40 trainee-teachers participated in the study while 38 participants were studied at post intervention. The results of this study showed high proportion of females (77.5%) which is common to other studies among teachers including that reported by Eze et al (2015) study's among trainee-teachers in Lagos on effect of health education on knowledge, attitude and first aid management of epilepsy. This is also similar to Akpan et al (2013) who reported a female preponderance rate in their study. Only one of the respondents was married and majority of the participants (75.7%) were within ages 20-24 years and others are within 15-19 years (18.9%) and 25-above (5.4%). Eze et al (2015) reported a higher rate (62.8%) of respondents who were single in their study among trainee teachers in Lagos. This difference may be attributed to larger number of participants in their study. Incidentally, 62.8% of their respondents were within the same age group of participants in this study. However, this study does not claim to be representative of the typical profile of students in Nigeria universities.

Knowledge about Epilepsy

Most of the participants already heard about epilepsy (60%) which agrees with Sanya et al (2005) cross sectional study on the perception and attitude of teachers in the middle belt of Nigeria. Similarly, Eze et al (2015) study also revealed 92% rate of knowledge about epilepsy. However, it was surprising that only 17.5% indicated they knew someone who suffers from epilepsy even though majority had heard about epilepsy. Forty percent has a family member who suffers from epilepsy. However, it is difficult to interpret this figure because the study did not define what is meant by “family member”. It is therefore possible that some respondents may have answered with reference to their nuclear family while others may have had in mind the extended family. However, in keeping with the fact that epilepsy is a relatively common problem, 40% of the participants indicated that they have seen someone having an epileptic seizure.

Most of the respondents recognised that epilepsy is a neurological disease. This is in line with Bishop et al (2005) opinion that epilepsy is a neurological disease that affects children.

In this study, majority of the respondents believed epilepsy can be contacted by touching the saliva of someone with epilepsy. Majority of Eze et al (2015) respondents held similar belief about epilepsy. Furthermore, majority of the respondents in this study reported that epilepsy can be caused by evil spirit (43.6%) which is similar to views reported by Mieke et al (1997) among Zimbabwe respondents among whom the same proportion (46.2%) believed epilepsy can be caused by generational sins. This rate is higher than Eze et al (2015), Ojinnaka (2002), and Sanya (2005) studies which reported that 35.4%, 22.4% and 27.7% of their respondents respectively believed that epilepsy is a spiritual attack. This finding corroborates Austin (2000) submission that epilepsy is believed in many Nigerian communities to be a sign of possession of evil spirit and that the saliva is contagious. These

findings can be linked to general belief in spiritual attack as a cause of illness in Nigeria and some parts of Africa.

Generally, knowledge about epilepsy at pre-intervention was low. This is in line with other studies in Nigeria. However, studies from developed countries show better knowledge (Bishop and Boag, 2008). This might be due to factors such as public awareness about epilepsy and ease of accessing information in developed countries (Eze et al, 2015).

This study also found a negative correlation between the age and knowledge of the respondents but this was not significant. This is therefore similar to the findings of Abulhamil (2013) which showed no correlation between age and knowledge, although the study was conducted among teachers. However their study was among teachers and not trainee-teachers. In this study, there was no significant association between any of the socio-demographic variables such as gender and knowledge at baseline. This is in contrast to other studies (Antonak and Liveh1995; Bishop 2006) who found significantly higher knowledge among females compared to males in their studies. It is also somewhat surprising that the knowledge of epilepsy among those who have a family member who suffers from the condition was not significantly better than that of those who do not have an affected family member.

Attitude towards Epilepsy

Eze et al (2015) opined that negative attitude of teachers towards epilepsy can be attributed to overall poor knowledge about epilepsy among teachers. Generally, participant's attitude towards epilepsy was relatively more negative at pre intervention. In this study, only 67.5% of the respondents believed people with epilepsy can live a normal happy live, although this increased to 94.7% at post intervention.

Also, at pre intervention 33% believed students might not do well in exams because of epilepsy but surprisingly many participants at post intervention (39.5%) still held this belief.

It is not clear why this belief increased but it may be that having been exposed to more information about epilepsy, the participants became more aware of the impact and may have assumed that this could be more negative for the affected children's education. A significant proportion of the participants (45%) would not want their relative to marry someone with epilepsy. This can be linked to fear and social discrimination associated with epilepsy (Thacker et al, 2008).

Other studies in Nigeria report negative attitudes towards epilepsy. For example, Eze et al (2015) conducted their training among trainee-teachers in Lagos and they reported poor attitude among their respondents. Similarly, studies conducted by Ojinnaka (2002) and Sanya (2005) also reported a very high proportion of negative attitude among the teachers. Although, findings from this study are in line with other studies conducted among trainee-teachers and teachers in Nigeria, on the contrary, reports from developed countries indicated teacher's positive attitudes towards people with epilepsy (Bishop and Boag, 2006). The current study found no significant association between gender and attitude of the respondents at baseline and after intervention. This is in contrast to a study in Turkey among teachers which found female teachers had more negative attitude towards students with epilepsy than male teachers (Aydem, 2011).

First Aid Awareness

Generally, participants' first aid awareness was fair but improved further after the training. The mean score of first aid at pre intervention increased from 3.42 to 4.61 at post intervention. However, indicating on a questionnaire that a person knows what to do does not necessarily mean being able to do the right thing when the crisis arises. This is because there are still superstitious beliefs associated with epilepsy which may alter people's behaviour when faced with an actual seizure. This may lead to default behaviours that may

include pouring water on the child, intensive prayer sessions as well as giving herbal concoctions.

It is concerning that 57.5% of the participants admitted that pouring water on the child to cool the child down is an appropriate first aid for a seizure. Also, majority (59%) at pre intervention indicated that holding the child down can stop the shaking. Majority (52.5%) also admitted to putting something in the child's mouth during seizure. It is a commonly held belief in this part of the country that people should put spoon in the child's mouth to stop them from clenching their teeth and biting their tongue. All these can be related to erroneous beliefs associated with epilepsy in Nigeria. The findings of this study are similar to Ojinnaka (2002) and Eze et al (2015) although both studies were conducted at different parts of the country. This may be attributed to the nation-wide culturally held-belief about how to manage epilepsy. This underscores the need for this type of intervention.

Effect of Intervention

This study found that there was an increase in respondent's knowledge, positive attitude and first aid management knowledge at post intervention. Eze et al (2015) also reported an increased rate in knowledge, attitude and management skills at twelve weeks post intervention. This is also similar to Frucht et al (2000) findings in a study conducted in Brazil among students studying health related causes. The study also involved the use of audio-visual aids and discussions which may have helped to sustain the interest of the participants and led to the improvement in knowledge, attitude and management skills at post intervention. Audio-visual presentation was also used in another study in Australia (Roberts and Aida Farhana, 2010) and the authors reported increase in knowledge and attitude although the post intervention measure was immediately after the training.

Evaluation of the Training Programme

Majority of the respondents rated the training good (51.5%) and others thought the training was excellent. Most are very satisfied with the information they got (60.6%) and 72.7 % would recommend the training to others. Overall 87.9% of the respondents were very satisfied with the training and 90.9% were willing to come for further training. The study asked what participants liked about the training and majority stated that has given them the opportunity to gain and build confidence in the management of epilepsy. This may be so because the respondents receive little or no training in the management of children with epilepsy during the course of their training. The participants' suggestion for improvements includes a wider training scope for mental health, regular training and longer duration.

Limitations of the Study

The noteworthy limitations of this study include:

This study was a quasi experimental pre-post with no control group. It therefore means that it is not possible to rule out the possibility that the improvements observed in the study could potentially be accounted for by other factors not specifically due to the intervention.

The study only examined trainees in the department of education for learners with intellectual disabilities, therefore, it may be difficult to generalise the findings among other areas of special education. Also, the duration of the intervention was short, lasting for only three sessions over three weeks. Majority of the participants noted this in the CSQ. This time limitation was necessitated by the duration of the MSc programme.

Conclusion

Teacher's role cannot be underestimated in almost all societies of the world. These roles include nurturing, advising, care giving as well as educator. Teachers apart from the parents are the other professionals that come in contact with children almost every day and each child spends good time of their day in school. Therefore, teachers are in the frontline in the

care of children, therefore it is important for teachers to gain necessary experience and skills needed to cater for these children properly most especially, those with special needs. This study indicates poor knowledge, attitude and management skill among trainee-teachers of learners with intellectual disabilities in Federal College of Education (Special) Oyo. There were significant improvement in knowledge, attitude and management skill at the end of the two hours per week training which lasted for three weeks and a two weeks post intervention. Poor knowledge, attitude and management skills may be due several factors which include lack of public awareness, culture and lack of specific instruction on epilepsy in the teacher training program.

Therefore, as part of the efforts to reduce the stigma and social discrimination against children with epilepsy, teacher training curricula should be modified to incorporate epilepsy education. Refresher courses and seminars should regularly be conducted for practicing teachers to increase and sustain their knowledge, attitudes, and first aid management of epilepsy in their students.

Recommendations

1. Teachers of children with intellectual disabilities should be trained on epilepsy.
2. Seminars and workshops should be organised from time to time to update their knowledge. Several studies have documented educational courses resulted in significant improvement of teachers beliefs and attitude (Albara et al, 2014).
3. Topics on epilepsy should be included in the special education training program in other to equip the teachers with the appropriate knowledge needed to provide adequate services and care needed for their students.
4. Public educational epilepsy campaigns should be encouraged as this can improve the quality of life of children with epilepsy and their families by helping develop a well informed and tolerant community. This may include Television programs,

support groups and laws against discrimination. Existing epilepsy resources, available through national epilepsy societies should be made accessible to all teachers.

(Word count- 2129)

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APPENDIXES

APPENDIX I: LETTER OF INFORMATION

EFFECT OF A EPILEPSY TRAINING PROGRAM ON THE KNOWLEDGE AND ATTITUDE OF SPECIAL EDUCATION TRAINEE-TEACHERS ON EPILEPSY AND SEIZURE DISORDERS IN OYO TOWN.

Introduction:

This study is being conducted by Miss Onibokun, Olusaanu a Masters student of the Centre for Child and Adolescent Mental Health, University of Ibadan, Nigeria. I am currently conducting research on the effect of an epilepsy training program on the knowledge and attitude of special education trainee-teachers on epilepsy and seizure disorders in Oyo town and I invite you to participate in this study.

Purpose of the Study:

This study aims to assess the effect of training regarding seizure disorder and epilepsy on the knowledge, attitude and awareness of first-aid skills for children having seizures, among special education trainee-teachers at Federal college of Education Special, Oyo.

If you agree to participate:

If you agree to participate in this research, you will participate in mental health training program on epilepsy and seizure disorders. Before the training you will be given questionnaires to fill, which will contain socio demographic information and the questions related to the theme of the training. The training programme will be carried out two hours each day for three days. You will also be asked if you are willing to be contacted regarding a 2 weeks follow-up evaluation. If you agree to do this, you will be asked to sign a consent form and provide your contact information so I can contact you when it is time for the follow-up evaluation.

Confidentiality:

The information collected will be used for research purposes only, and neither your name nor any identifying information will be used in any publication or presentation of the study results. All information collected for the study will be kept confidential; only group (aggregate) data will be shared.

Risks & Benefits:

There are no known risks to participating in this study. This research will benefit the wider population of special education teachers and teaching support staff by assessing the effectiveness of training in children's mental health and by providing the opportunity to participate and share feedback on professional development needs with researchers. The anticipated benefit for school staff includes improved education to aid in recognizing and responding to staff and student mental health needs.

Voluntary Participation:

Participation in this study is voluntary. You may refuse to participate, refuse to answer any questions or withdraw from the study at any time with no effect on your admission status.

Questions

If you have any questions about the conduct of this study or your rights as a research participant you may contact the Office of Research Ethics, The University of Ibadan. If you have any questions about this study, please contact Miss Onibokun, Olusaanu (Phone: 08079947559 or Email onibokun4real@gmail.com).

This letter is yours to keep for future reference.

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APPENDIX II: CONSENT FORM

Statement of person obtaining informed consent:

I have fully explained this research to _____ and have given sufficient information about the study, including that on procedures, risks and benefits, to enable the prospective participant make an informed decision to or not to participate.

DATE: _____

NAME: _____

Statement of person giving consent:

I have read the information about the study/research. I understand that my participation is voluntary. I know enough about the purpose, methods, risks and benefits of the research/study to decide that i want to take part in it. I understand that I may freely stop being part of the study at any time without any consequences. I have received a copy of the information leaflet to keep to myself.

NAME:

DATE: _____

SIGNATURE/THUMB PRINT:

APPENDIX III: SOCIO-DEMOGRAPHIC, KNOWLEDGE, ATTITUDE AND FIRST AID MANAGEMENT QUESTIONNAIRE

EFFECT OF A TRAINING PROGRAM ON THE KNOWLEDGE AND ATTITUDE OF SPECIAL EDUCATION TRAINEE-TEACHERS ON EPILEPSY AND SEIZURE DISORDERS IN OYO TOWN.

Instruction: Please answer the question to the best of your ability and where relevant tick () in the box that applies to you.

ID NO: _____

Socio-demographic information

Gender Male [] Female []

How old are you -----

Marital Status - Single [], Married [], Separated [], Divorced [], Widowed [],

Have you ever heard of a disease called epilepsy? Yes [] No []

Do you know someone who suffers from epilepsy? Yes [] No []

Do you have an immediate family member (e.g. father, mother, brother or sister) who suffers from epilepsy? Yes [] No []

Have you ever seen/witnessed someone having an epileptic seizure? Yes [] No []

Knowledge of epilepsy

Please answer “Yes” or “No” to the following questions. If you are unsure of the answer, please tick the box for “Don’t know”

Variable	Yes	No	Don't know
Epilepsy is a neurological disease			
A person who has epilepsy is most likely pass it onto his/her children genetically			
Epilepsy can be spread by saliva from an effected person			
Epilepsy can acquired by touching someone who is have a seizure without wearing gloves			
Seizures normally occur at fixed times and places			
People affected by epilepsy can sometimes predict when they may have a seizure			
Most people affected by epilepsy die as a result of the disease			
Epilepsy can be the result of a sin committed by the person's ancestor			
Epilepsy can be treated successfully with medication			
Epilepsy can be cured by prayer			
Epilepsy can be caused by an evil curse or evil spirits			
A student with epilepsy can seizure attack can be triggered by stress of taking an exam			

Dazzling lights can trigger seizure in some people with epilepsy			
Sleep deprivation can trigger seizures in people with epilepsy			
Abnormal pain can be a warning sign of seizure			
Every seizure makes the affected person to shake and fall to the ground			

Attitude towards epilepsy

Please answer “Yes” or “No” to the following questions. If you are unsure of the answer, please tick the box for “Don’t know”

Variable	Yes	No	Don't know
Some people with epilepsy can live a normal happy life			
A student who suffers from epilepsy is not likely to do well in his/her exams			
People with epilepsy should not work as teachers			
Children with epilepsy should not be allowed to play with other children			
Children with epilepsy should always attend special schools instead of regular schools			
I would object if my brother or sister wants to marry someone with epilepsy			
People with epilepsy should not have children			
I would be ashamed if my relative has epilepsy			
I would be worried if my child befriended another child with epilepsy			
People with epilepsy should hide their illness as much as possible			

Awareness of first aid for a child having epileptic seizure

Please answer “Yes” or “No” to the following questions in relation to what should be done to help a child having seizure. If you are unsure of the answer, please tick the box for “Don’t know”

Variable	Yes	No	Don't know
Put something in the child's mouth to prevent him /her from choking with his / her tongue.			
Hold the child tight so that he / she stops shaking			
Lie the child on his / her back so you can see the face to make sure he/she is alright			
Call for help from other people around			
Move the child to an area where he / she cannot hurt him / herself while having seizure			
Pour water on the child to cool him/her down			
Overall, I feel confident that I will be able to provide first aid to a child in my class who starts to have seizure			

APPENDIX IV: CLIENT SATISFACTION QUESTIONNAIRE

EFFECT OF A TRAINING PROGRAM ON THE KNOWLEDGE AND ATTITUDE OF SPECIAL EDUCATION TRAINEE-TEACHERS ON EPILEPSY AND SEIZURE DISORDERS IN OYO TOWN.

CLIENT SATISFACTION QUESTIONNAIRE

(1) How would you rate the training?

_____1 _____2 _____3 _____4
Poor Fair Good Excellent

(2) Did you get the kind of information you wanted from the training?

_____1 _____2 _____3 _____4
Not at all Not really Yes generally Yes definitely

(3) Would you recommend the intervention to other trainee-teachers?

_____1 _____2 _____3 _____4
Definitely not No, probably not Yes, Probably Yes, definitely

(4) How satisfied are you with the training you received?

_____1 _____2 _____3 _____4
Very dissatisfied Quite dissatisfied Mostly satisfied Very satisfied

(5) Has the training helped you to feel more confident about epilepsy?

_____4 _____3 _____2 _____1
Yes, a lot Yes, a little No, it didn't really help No. things even got worse

(6) Overall, how satisfied are you with the training?

_____4 _____3 _____2 _____1
Very satisfied Mostly satisfied Not very satisfied Very dissatisfied

(7) Would you come back for more training like this if you have the opportunity?

_____1 _____2 _____3 _____4
No, definitely not No, probably not Yes, probably Yes, definitely

(8) What I liked best about the training is

(9) What I didn't like about the training is

(10) My suggestions to improve the training are:

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APPENDIX IV: TRAINER'S GUIDE

INTERVENTION GUIDE FOR EPILEPSY TRAINING PROGRAM FOR

SPECIAL EDUCATION TRAINEE TEACHERS OF LEARNERS WITH

INTELLECTUAL DISABILITIES

BY

ONIBOKUN, OLUSAANU ANUADE

2019

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INTRODUCTION AND OVERVIEW

Welcome to the Epilepsy training program. This training will provide you with foundation on how to identify and manage epilepsy and seizure disorder among learners with intellectual disabilities.

This study aims to assess the effect of training regarding seizure disorder and epilepsy on the knowledge, attitude and awareness of first-aid skills for children having seizures, among special education trainee-teachers at Federal college of Education Special, Oyo.

The researcher identified that if teachers are fully knowledgeable about epilepsy this can go a long way in educating parents and others. Training the teachers can also help eradicate erroneous beliefs about epilepsy. It is also important to note that epilepsy affects large percentage of children with intellectual disabilities; therefore it is important to train the teachers.

The training is divided into 3 sessions and each session will take place once a week for 3 weeks. Each training session will include videos, activities, lectures and role plays.

GROUND RULES FOR SESSIONS

- 1 Please be punctual
2. Come every week. Each session builds on the previous week. It is therefore necessary for every session to be attended in order to benefit fully from the programme.
3. It is essential for every session to be attended by every participant in order to gain the full benefit of the programme.
5. Confidentiality is very paramount in group sessions, so it should be stressed continually throughout the sessions. However if you want to share what you have learnt with other people it's alright, but do not mention the names of other participants.

6. Try to express yourself as honestly as possible about questions and activities

.7. There will be regular breaks and refreshments.

Participants can add more rules if they w

SESSION 1

EPILEPTIC SEIZURE

Learning Objectives:

At the end of this session, Participants will be able to:

- i. Describe an epileptic seizure
- ii. Mention the different types of seizure
- iii. List at least two myths about epilepsy

Content:

Activity 1.1: Play a video about epilepsy and ask participants to write down what they think about the video and what they would do if they were in such situation.

What is Epileptic seizure?

Epilepsy is one of the most common serious neurological (brain) conditions. Anyone regardless of gender, race, age or background can develop epilepsy. People with epilepsy tend to have repeated seizure which means too much electrical activity in the brain. According to Ring (2013), epilepsy affects about 26% of children with Intellectual disabilities.

Causes of Epilepsy

There is no known cause of epilepsy in many cases. However, some can be linked to genetic factors, infection in the brain, intellectual disabilities and so on.

Types of Seizure

Generally, seizure is divided into two; i. Focal and Generalised ii. Simple and Complex

Focal (partial) seizures

Focal seizures also known as partial seizure only affect one part of the brain. Often seizures start in those areas of the brain that may have been damaged by a head injury, or an infection like meningitis. Sometimes a seizure can start in one part of the brain but then spreads to the whole of the brain.

Focal seizures could be simple (without loss of consciousness) or complex (complete loss of consciousness)

Activity 1.2: Play a video of tonic seizure. Ask participants to write out their observations.

Focal aware seizures (also known as simple partial seizures)

These affect a smaller part of the brain. Indicators in simple partial seizure:

- You may observe the child's arm twitching or some other unusual movement.
- The child may experience strange sensations or visions, such as seeing shapes, colours or faces. The child may feel 'dreamy', sick, or experience emotions such as fear or anger.
- Tingling sensation or numbness across parts of the body. In some children, this kind of seizure acts as a warning that a second seizure could happen. The child knows the seizure is going on but cannot stop it.

Activity 1.3: Play a video of tonic seizure. Ask participants to write out their observations and how it different from the previous video.

Focal seizures with impaired awareness (also known as complex partial seizures)

These usually affect a larger area (but still only part) of the brain. During a focal seizure with impaired awareness a child may experience strange and unusual feelings. The indicators include:

- The child may appear unresponsive and switched off from what is going on around them.
- Inappropriate or automatic movements such as plucking at clothing, lip smacking, slurred speech, repeating words, head turning, wandering aimlessly, running or even undressing. The child does not lose consciousness but their level of consciousness is altered.

Activity 1.4: Play a video of tonic seizure. Ask participants to write out their observations and how it different from the previous video.

Generalised seizures

These seizures affect the whole brain. There are different types of generalised seizures and it is always associated with loss of consciousness even just for a few seconds. The following are the more common generalised seizures:

Activity 1.5: Play a video of tonic seizure. Ask participants to write out their observations and how it different from the previous video.

Tonic-clonic seizure

Most people will recognise a tonic-clonic seizure and is often referred to as “warapa” in this locality. Features of includes:

- Suddenly stiffens
- Loss of consciousness
- Falling to the ground.
- Irregular breathing
- Grunting noise and tongue or cheek biting
- Bowel and/or bladder incontinent
- Often accompanied with moments of confusion, headache and dizziness
- The child’s breathing may also be affected turning their lips blue..

Activity 1.6: Play a video of tonic seizure. Ask participants to write out their observations and how it different from the previous video.

Absence seizure

This is characterised by lack of concentration and can be described as what looks like daydreaming. The child may appear to be in trance state. The child may remain in their position and appear awake but are not conscious for few seconds. This can occur for as many times a day. This can affect the child's learning and ability to retain information.

Activity1.7: Play a video of tonic seizure. Ask participants to write out their observations and how it different from the previous video.

Myoclonic seizure

These are sudden muscle spasms or jerks affecting the child's arms, head and sometimes the whole body. The child will quickly recover from a brief loss of consciousness. These seizures are more common in the morning, shortly after waking or if the child is tired.

Activity1.8: Play a video of tonic seizure. Ask participants to write out their observations and how it different from the previous video.

Atonic seizure

These are sometimes known as 'drop attacks'. The child's body will go limp because muscles suddenly relax. If the child is standing, they will fall to the ground. The child will usually recover and get up very quickly.

Activity1.9: Play a video of tonic seizure. Ask participants to write out their observations and how it different from the previous video.

Tonic seizure

These are similar to tonic-clonic seizures but without the convulsions. The child's body will suddenly stiffen. If the child is standing, they will fall to the ground. The child's breathing may also be affected.

Activity 1.10: Ask the participant to write what they now think about the video played at the beginning of the session at the back of the paper

Activity 1.11: Discuss some myths and superstitious beliefs about epilepsy in their locality

Evaluation

Allow participants to ask questions

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SESSION 2

FIRST AID TREATMENT FOR SEIZURE

Learning Objectives:

At the end of this session, participants will be able to

- i. Demonstrate how to care for a child with seizure in the classroom
- ii. Describe the step by step recovery position

Content:

Recall: Last time, we learnt that:

- i. Epilepsy is recurrent seizures which occur as a result of misfiring and electrical activities in the brain.
- ii. This can occur at any stage in life.
- iii. There is no known specific cause of epilepsy.
- iv. There are some superstitious and religious beliefs about epilepsy which cannot be scientifically proven.
- v. There are scientific tests such as EEG, CT scan etc that can reveal the abnormal electrical activities of the brain.

First Aid for Seizure

Epilepsy is normally treated with anti-epileptic drugs (AEDs). A child will usually take their medication as prescribed by the physician.

Anti-epileptic drugs can have some side effects. These are more intense when a child starts new medication or changes dosage. Common side effects can include drowsiness, dizziness, weight loss or gain, or mood changes.

A child's short-term memory and ability to concentrate can also be affected by anti-epileptic drugs. When you assess a child's learning and progress, make sure potential side effects are taken into account. It is important for teachers to take note of changes in behaviour, mood and concentration of the child and report to the parents.

Activity 2.1: Play a video of how to manage seizure. Ask participants to take note of each step

How to manage seizure in the classroom:

- Stay calm and assure other children to remain calm
- Remove any object like furniture that can injure the child
- Take note of the time the seizure started and when it ended
- Do not hold them down in an effort to stop the jerking or seizure
- Do not put anything in their mouth
- Support the head by placing a cushion or rolled up jacket under the child's head
- Make the room is well ventilated and stop other children from crowding around
- Place the child in a recovery position as soon as the jerking stop
- Speak softly and gently to the child and tell them what has happened
- The child may be confused for a while after the seizure. They could have headache and want to sleep
- Make sure an adult stays until the child fully recovers
- Tell the child's parents about the seizure and inform them about any change in the pattern of the seizure
- If the seizure last longer than 5minutes, call the parents and seek medical help

Activity 3: Play recovery position video

Step - By - Step Recovery Position

- Kneel on the floor to one side of the child
- Place the child arm that is nearest to you at the right angle to their body, so that it is bent at the elbow with the hand pointing upwards. This will keep it out of the way when you roll them over.
- Gently pick up their other hand with your arm against theirs. Place the back of their hand on their opposite cheek. Keep your hand there to guide and support their head as you roll them.
- Use your other arm to reach across to their knee that is furthest from you, and pull it up so that their leg is bent and their foot is flat on the floor.
- Gently pull their knee towards you so that they roll over onto their side, facing you.
- Move the bent leg that is nearest to you in front of their body so that it is resting on the floor.
- Gently raise their chin to tilt their head back slightly, as this will open up their airway and help them to breathe.
- Check and ensure there is nothing blocking their airways such a food

Activity 4: Allow participants in groups to role play first aid treatment for epilepsy

Evaluation: Allow participants to ask question

SESSION 3

Learning Objectives:

At the end of this session, participants will be able to

- i. Describe seizure and epilepsy
- ii. Mention some possible seizure triggers
- iii. Discuss first aid treatment for epilepsy in the classroom

Content:

We learnt so far:

Epilepsy is a neurological disorder caused by excessive activities of the neurone of the brain.

Seizures vary from person to person. There are many different types of seizures and epilepsy syndromes. Some are very visible such as a child suddenly losing consciousness, falling down and starting to jerk. Others are less obvious and difficult to detect. You may think a child is daydreaming or not paying attention. During these seizures a child momentarily loses consciousness but does not jerk.

If there is a child with epilepsy in your class, talk to the parents. They will give you all the information you need to know including what type of seizure the child usually has. This factsheet also includes a checklist for teachers for your quick reference. It will cover all the relevant questions you want to ask the child's parents.

Activity 3.1: Suggest the possible type of seizure for the following symptoms

A child seems to daydream and not take in information.

A child falls down suddenly for no obvious reason.

A child rolls their eyes and blinks very fast.

A child makes repeated movements that may look out of place.

A child nods their head as if falling asleep and acts as if nothing has happened.

A child stops what they are doing and stares at nothing for a moment or two.

What can trigger seizure?

In many cases seizure happen without specific reason, however, some events can trigger seizure in children and it varies from one another.

Common seizure triggers are:

- Lack of sleep/being tired
- Forgetting to take medication
- Menstruation/puberty
- Stress or anxiety
- Boredom
- Dehydration or too much liquid
- Not eating regular meals
- Recreational drugs or alcohol
- Flashing or flickering lights
- Sunlight

Activity 3.2: List five dos and don'ts during a seizure episode

Evaluation:

Allow participants to ask questions about the training

Important points to note:

- Epilepsy is one of the most common serious neurological conditions.
- People with epilepsy tend to have repeated seizures.
- Seizures vary from person to person.
- Seizure lasts for about 5 minutes (Seek medical help if it last longer)
- There are different types of seizures and not all of them involve a sudden fall and jerking.
- A child may seem to daydream and not take in information during an episode.
- A child falls down suddenly for no obvious reason.
- A child rolls their eyes and blinks very fast.
- A child makes repeated movements that may look out of place.
- A child nods their head as if falling asleep and acts as if nothing has happened.
- A child stops what they are doing and stares at nothing for a moment or two.
- Common triggers includes stress, forgetting to take medication, light flashes and so on
- Treatment is usually with anti epileptic drugs
- A child makes repeated movements that may look out of place.
- A child nods their head as if falling asleep and acts as if nothing has happened.
- A child stops what they are doing and stares at nothing for a moment or two.

Remember:

- To keep calm
- Clear the surrounding and anything that could injure the child
- Do not put anything soft under the child's head to stop any injury.
- Do not turn the child on their side into the recovery position as soon as the jerking stops.
- Do remember, the child may be confused for a while after the seizure. They could have a headache and may want to sleep.
- Do make sure an adult stays until the child fully recovers.
- Do tell the child's parents about the seizure. If you notice any difference in seizure pattern this can be important information.

Summary:

A teacher could be the first adult to see a child having an epileptic seizure since children spend large percentage of their time in the school. A parent might also tell a teacher about their child epilepsy or a teacher might need to educate a parent about their child's problem, what to do and where to seek help. This training has helped you understand this condition and how it can affect a child's learning. It has also exposed you to how to recognise seizures and how to deal with them. Epilepsy is a highly stigmatised condition and can have a long-term negative effect. Some children will have very low self-esteem and self-confidence. Others may have missed educational opportunities. Teenagers and young adults often feel socially isolated from their friends. The way you react and how readily you accept the child and their condition can make a big difference. You can help remove any stigma of epilepsy and change common misconceptions. I believe this training has exposed you to the important part you will play in helping each child with epilepsy lead as fulfilling a life as possible.

Thank you for participating in this training.

APPENDIX V: TRAINEE'S GUIDE

**INTERVENTION GUIDE FOR EPILEPSY TRAINING PROGRAM FOR
SPECIAL EDUCATION TRAINEE TEACHERS OF LEARNERS WITH
INTELLECTUAL DISABILITIES**

BY

ONIBOKUN, OLUSAANU ANUADE

2019

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The researcher identified that if teachers are fully knowledgeable about epilepsy this can go a long way in educating parents and others. Training the teachers can also help eradicate erroneous beliefs about epilepsy. It is also important to note that epilepsy affects large percentage of children with intellectual disabilities; therefore it is important to train the teachers.

The training is divided into 3 sessions and each session will take place once a week for 3 weeks. Each training session will include videos, activities, lectures and role plays.

EPILEPTIC SEIZURE

What is Epileptic seizure?

Epilepsy is one of the most common serious neurological (brain) conditions. Anyone regardless of gender, race, age or background can develop epilepsy. People with epilepsy tend to have repeated seizure which means too much electrical activity in the brain. According to Ring (2013), epilepsy affect about 26% of children with Intellectual disabilities.

Causes of Epilepsy

There is no known cause of epilepsy in many cases. However, some can be linked to genetic factors, infection in the brain, intellectual disabilities and so on.

Types of Seizure

Generally, seizure is divided into two; i. Focal and Generalised ii. Simple and Complex

Focal (partial) seizures

Focal seizures also known as partial seizure only affect one part of the brain. Often seizures start in those areas of the brain that may have been damaged by a head injury, or an infection like meningitis. Sometimes a seizure can start in one part of the brain but then spreads to the whole of the brain.

Focal seizures could be simple (without loss of consciousness) or complex (complete loss of consciousness)

Focal aware seizures (also known as simple partial seizures)

These affect a smaller part of the brain. Indicators in simple partial seizure:

- You may observe the child's arm twitching or some other unusual movement.
- The child may experience strange sensations or visions, such as seeing shapes, colours or faces. The child may feel 'dreamy', sick, or experience emotions such as fear or anger.
- Tingling sensation or numbness across parts of the body. In some children, this kind of seizure acts as a warning that a second seizure could happen. The child knows the seizure is going on but cannot stop it.

Focal seizures with impaired awareness (also known as complex partial seizures)
These usually affect a larger area (but still only part) of the brain. During a focal seizure with impaired awareness a child may experience strange and unusual feelings. The indicators include:

- The child may appear unresponsive and switched off from what is going on around them.
- Inappropriate or automatic movements such as plucking at clothing, lip smacking, slurred speech, repeating words, head turning, wandering aimlessly, running or even undressing. The child does not lose consciousness but their level of consciousness is altered.

Generalised seizures

These seizures affect the whole brain. There are different types of generalised seizures and it is always associated with loss of consciousness even just for a few seconds. The following are the more common generalised seizures:

Tonic-clonic seizure

Most people will recognise a tonic-clonic seizure and is often referred to as “warapa” in this locality. Features of includes:

- Suddenly stiffens
- Loss of consciousness
- Falling to the ground.
- Irregular breathing
- Grunting noise and tongue or cheek biting
- Bowel and/or bladder incontinent
- Often accompanied with moments of confusion, headache and dizziness
- The child’s breathing may also be affected turning their lips blue..

Absence seizure

This is characterised by lack of concentration and can be described as what looks like daydreaming. The child may appear to be in trance state. The child may remain in their position and appear awake but are not conscious for few seconds. This can occur for as many times a day. This can affect the child’s learning and ability to retain information.

Myoclonic seizure

These are sudden muscle spasms or jerks affecting the child’s arms, head and sometimes the whole body. The child will quickly recover from a brief loss of consciousness. These seizures are more common in the morning, shortly after waking or if the child is tired.

Atonic seizure

These are sometimes known as ‘drop attacks’. The child’s body will go limp because muscles suddenly relax. If the child is standing, they will fall to the ground. The child will usually recover and get up very quickly.

Tonic seizure

These are similar to tonic-clonic seizures but without the convulsions. The child’s body will

suddenly stiffen. If the child is standing, they will fall to the ground. The child's breathing may also be affected.

Myths and superstitious beliefs about epilepsy

Many believe epilepsy is more related to spiritual causes and it can be acquired through contact with body fluid.

Beliefs vary depending on the knowledge, cultural background and experiences.

However, many of these beliefs do not have scientific proof.

FIRST AID TREATMENT FOR SEIZURE

First Aid for Seizure

Epilepsy is normally treated with anti-epileptic drugs (AEDs). A child will usually take their medication as prescribed by the physician.

Anti-epileptic drugs can have some side effects. These are more intense when a child starts new medication or changes dosage. Common side effects can include drowsiness, dizziness, weight loss or gain, or mood changes. A child's short-term memory and ability to concentrate can also be affected by anti-epileptic drugs. When you assess a child's learning and progress, make sure potential side effects are taken into account. It is important for teachers to take note of changes in behaviour, mood and concentration of the child and report to the parents.

How to manage seizure in the classroom:

- Stay calm and assure other children to remain calm
- Remove any object like furniture that can injure the child
- Take note of the time the seizure started and when it ended
- Do not hold them down in an effort to stop the jerking or seizure
- Do not put anything in their mouth
- Support the head by placing a cushion or rolled up jacket under the child's head
- Make the room is well ventilated and stop other children from crowding around
- Place the child in a recovery position as soon as the jerking stops
- Speak softly and gently to the child and tell them what has happened
- The child may be confused for a while after the seizure. They could have headache and want to sleep
- Make sure an adult stays until the child fully recovers
- Tell the child's parents about the seizure and inform them about any change in the pattern of the seizure
- If the seizure lasts longer than 5 minutes, call the parents and seek medical help

Step - By - Step Recovery Position

- Kneel on the floor to one side of the child
- Place the child's arm that is nearest to you at the right angle to their body, so that it is bent at the elbow with the hand pointing upwards. This will keep it out of the way when you roll them over.
- Gently pick up their other hand with your arm against theirs. Place the back of their hand on their opposite cheek. Keep your hand there to guide and support their head as you roll them.

- Use your other arm to reach across to their knee that is furthest from you, and pull it up so that their leg is bent and their foot is flat on the floor.
- Gently pull their knee towards you so that they roll over onto their side, facing you.
- Move the bent leg that is nearest to you in front of their body so that it is resting on the floor.
- Gently raise their chin to tilt their head back slightly, as this will open up their airway and help them to breathe.
- Check and ensure there is nothing blocking their airways such as a food

What can trigger seizure?

In many cases seizure happen without specific reason, however, some events can trigger seizure in children and it varies from one another.

Common seizure triggers are:

- Lack of sleep/being tired
- Forgetting to take medication
- Menstruation/puberty
- Stress or anxiety
- Boredom
- Dehydration or too much liquid
- Not eating regular meals
- Recreational drugs or alcohol
- Flashing or flickering lights
- Sunlight

Important points to note:

- Epilepsy is one of the most common serious neurological conditions.
- People with epilepsy tend to have repeated seizures.
- Seizures vary from person to person.
- Seizure lasts for about 5 minutes (Seek medical help if it last longer)
- There are different types of seizures and not all of them involve a sudden fall and jerking.
 - A child may seem to daydream and not take in information during an episode.
 - A child falls down suddenly for no obvious reason.
 - A child rolls their eyes and blinks very fast.
 - A child makes repeated movements that may look out of place.
 - A child nods their head as if falling asleep and acts as if nothing has happened.
 - A child stops what they are doing and stares at nothing for a moment or two.
- Common triggers includes stress, forgetting to take medication, light flashes and so on
- Treatment is usually with anti epileptic drugs
 - A child makes repeated movements that may look out of place.
 - A child nods their head as if falling asleep and acts as if nothing has happened.
 - A child stops what they are doing and stares at nothing for a moment or two.

Remember:

- To keep calm

- Clear the surrounding and anything that could injure the child
- Do put something soft under the child's head to stop any injury.
- Do turn the child on their side into the recovery position as soon as the jerking stops.
- Do remember, the child may be confused for a while after the seizure. They could have a headache and may want to sleep.
- Do make sure an adult stays until the child fully recovers.
- Do tell the child's parents about the seizure. If you notice any difference in seizure pattern this can be important information.

Summary:

A teacher could be the first adult to see a child having an epileptic seizure since children spend large percentage of their time in the school. A parent might also tell a teacher about their child epilepsy or a teacher might need to educate a parent about their child's problem, what to do and where to seek help. This training has helped you understand this condition and how it can affect a child's learning. It has also exposed you to how to recognise seizures and how to deal with them. Epilepsy is a highly stigmatised condition and can have a long-term negative effect. Some children will have very low self-esteem and self-confidence. Others may have missed educational opportunities. Teenagers and young adults often feel socially isolated from their friends. The way you react and how readily you accept the child and their condition can make a big difference. You can help remove any stigma of epilepsy and change common misconceptions. I believe this training has exposed you to the important part you will play in helping each child with epilepsy lead as fulfilling a life as possible.

Thank you for participating in this training.

Onibokun, Olusaanu

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APPENDIX VI- ETHICAL APPROVAL

TELEGRAMS..... TELEPHONE.....



MINISTRY OF HEALTH
DEPARTMENT OF PLANNING, RESEARCH & STATISTICS DIVISION
PRIVATE MAIL BAG NO. 5027, OYO STATE OF NIGERIA

Your Ref. No.
All communications should be addressed to
the Honorable Commissioner governing
Our Ref. No. AD 13/479/1163

20 March, 2019

The Principal Investigator,
Centre for Child and Adolescent Mental Health,
University of Ibadan,
Ibadan.

Attention: Onibokun Oluwalana

**ETHICS APPROVAL FOR THE IMPLEMENTATION
OF YOUR RESEARCH PROPOSAL IN OYO STATE**

This acknowledges the receipt of the corrected version of your Research Proposal
titled: "Effect of Epilepsy Training Program on the Knowledge and Attitude of
Special Education Trainee-Teachers on Epilepsy and Seizure Disorders in Oyo town"

2. I wish to inform you that the committee has reviewed the proposal and made the
following observations and comments,

- *Re-write the summary page*
- *Application letter not signed*
- *Alternate hypothesis is required*

Recommendation: Tentative Approval

3. I am therefore directed to ask you to correct all the above observed ethics concerns
and forward a final copy to the Ministry for final approval.

Thanks


Dr. Abbas Gbolahan
Director, Planning, Research & Statistics
Secretary, Oyo State, Research Ethical Review Committee