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KNOWLEDGE, ATTITUDE, AND AWARENESS OF COMMUNITY MEMBERS REGARDING EPILEPSY IN SELECTED VILLAGES OF LIMPOPO AND MPUMALANGA PROVINCES, SOUTH AFRICA

BY

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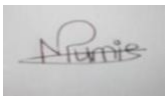
DECLARATION

I, Munyadziwa Muimeleli, student number 15002498, hereby declare that the mini-dissertation titled "***Knowledge, attitude, and awareness of community members regarding Epilepsy in selected villages of Limpopo and Mpumalanga Provinces, South Africa***" submitted by me has not been previously submitted for a degree at this or any other institution or university, that it is my own designed and executed work, and that all reference material contained therein has been duly acknowledged.

Signature: 

Date: **24-02-2022**

PREFACE

This mini-dissertation is presented in article format and comprises three sections: Section A presents the thesis overview, Section B provides the manuscripts/articles with their journal guidelines for authors and Section C presents the conclusion, limitations and recommendations of the thesis.

Section A: Mini-Dissertation Overview

This section provides the overview that details the background, problem statement, purpose and objectives of this study, research design and methods and the ethical considerations.

Section B: Paper/Article/Manuscript

This section has a total of two manuscripts

- First manuscript was submitted to The Open Nursing Journal and is under review. The manuscript is titled "*Community members knowledge and attitude regarding Epilepsy in Sub Saharan African context: A systematic Review"* .
- The second manuscript was submitted to Archives of Public Health and awaiting response. The manuscript is titled "*Knowledge, attitude and awareness of community members regarding Epilepsy in selected villages of Limpopo and Mpumalanga provinces, South Africa*"

Section C: Conclusion, Recommendation and Mini-Dissertation Limitations

This last section presents conclusions from this mini-dissertation, makes dynamic recommendations and presents the study limitations reflecting in all that was presented within each section and is informed by the whole research process.

DEDICATION

- This research is in honor of my parents. Munyadziwa Nyadzani Gladys and Munyadziwa Rueben Zwidoiitea, my mother and father, who gave birth to me and nurtured me thus far.

- For his patience, support, drive, and affection during the studies, my beloved dearest hubby Rambwa Avhasei.

- My motivation comes from my daughter Rambwa Munyadziwa Mukona and son Rambwa Seani.

- Munyadziwa Phenyo, my only sister, for her unwavering love, support, and encouragement throughout my educational journey.

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- My friend Mushedzha Dzivhuluwani deserves special recognition for her unwavering support throughout my education.

LIST OF ACRONYMS AND ABBREVIATIONS

CHW	Community Healthcare Worker
DoH	Department of Health
ESHC	Executive School Higher Degree
GCAE	Global Campaign Against Epilepsy
HBM	Health Belief Model
HIV/AIDS	Human immunodeficiency Virus/ Acquired Immunodeficiency Syndrome
PLWE	People/person Living With Epilepsy
SHDC	School Higher Degree Committee
UHDC	University Higher Degree Committee
WHO	World Health Organization

ABSTRACT

In rural communities of most African countries, there are different beliefs with regards to the causes of Epilepsy disease or condition. It is believed that Epilepsy is caused by witchcraft or other forms of demon possessions, together with many other misconceptions. Many community members have different perspectives regarding Epilepsy condition with the detrimental result that epileptic patients feel stigmatised and discriminated. The study was done to assess knowledge, attitudes and awareness of community members regarding Epilepsy in selected villages of Limpopo and Mpumalanga Provinces, South Africa. A quantitative, descriptive design was used. A nonprobability purposive sampling was used to select the study site and selected villages. The population comprised of all community members residing in the selected villages of Limpopo and Mpumalanga province. A multistage sampling was conducted to sample villages and respondents and sample size was calculated using Raosoft. During data collection, the respondents were selected purposively and 4290 participants participated in the study. After data collection, the data was analysed using SPSS Version 26.0. Cross-tabulations was used to determine the socio-demographic characteristic, knowledge, attitudes and awareness levels of community members in each province. Ethical considerations were adhered to. Results revealed an insufficient level of knowledge and poor attitude towards Epilepsy in both provinces of Limpopo and Mpumalanga. Awareness ,Knowledge and attitude are reciprocal. If one is not knowledgeable ,the attitude is also negative. Regarding awareness the participants were not aware of Epilepsy as almost half of the participants in the Limpopo province have never heard or read about Epilepsy. Awareness campaigns and educational programs should be implemented to help alleviate the discriminations, stigma and misconceptions caused by lack of knowledge as this will also help in bettering the attitudes of community members.

Keywords: Attitude, Awareness, Community members, Epilepsy, Knowledge, Limpopo and Mpumalanga provinces..

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OVERVIEW OF THE MINI DISSERTATION

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1. 1 Introduction

Epilepsy is described as a noncommunicable condition accompanied by repeated seizures, which are defined as episodes of uncontrollable movements involving different areas of the body or the entire body, according to the World Health Organization (WHO, 2019). Seizures can also be characterized as a brain malfunction caused by "misfiring" neurons (Fagan and Geller, 2010). Epilepsy is one of the most common neurological diseases globally, affecting around 50 million individuals worldwide, with 5 million new cases diagnosed each year (WHO, 2019). Globally, roughly 2.4 million people are diagnosed with Epilepsy each year, according to the Department of Health 2017 (DoH, 2017).

In countries with high income, annual new cases are between 30 and 50 per 100 000 people in the general population. In low and middle-income countries, this amount can be doubled or tripled. According to Henok and Lamaro (2017), the reported prevalence of active Epilepsy in developing countries ranges from 5 to 10 per 1,000 people, and it is more prevalent in rural communities. In developing countries, nearly 80% are People Living With Epilepsy (PLWE).

The cause of the disease is still not known globally in about 50% of Epilepsy cases (WH0, 2019). A study conducted in Europe by Murthy, Govindappa, Marimuthu and Dasgupta (2019) revealed that participants believed Epilepsy is a mental illness, brain disease, and hereditary disease. The findings further indicated that people would run away if a PLWE attacked. A research study done in Turkey concluded that there are misconceptions regarding Epilepsy. Participants believed that Epilepsy is a psychiatric disease; some believed it is an infectious disease, while others thought Epilepsy is a very dangerous disease and a lifelong condition (Kartal and Akyildiz, 2016). The above cases are evidence that the type of knowledge or awareness that one has about epilepsy impacts the type of attitude that one will portray.

In ancient Rome, if a person with Epilepsy touched you, you were considered unclean and had to spit to cleanse yourself of the demons that were transferred to you (Howell, 2020). In Babylon, according to their ancient textbook, Sakkiku, written around 500BC, Epilepsy was thought to be caused by ghosts and demons, and the Babylonians used exorcism, enemas, and amulets to cleanse the body. Likewise, in India in 1500–800BC, treatment was directed at cleansing the body, using enemas, purges, and vomitus (Howell, 2010).

Indeed there are a lot of misconceptions regarding the cause of Epilepsy. Most people in developing countries believe that Epilepsy is a contagious, communicable disease that can be

spread by urine, faeces, or saliva excreted during an epileptic attack. Such beliefs play a significant role in People Living With Epilepsy (PLWE) being misunderstood, and the public has a negative attitude, which is all due to poor knowledge (Ekeh and Ekrikpo, 2015). Historically, epilepsy was believed to be a curse; people thought that God was punishing people by throwing themselves to the ground, making them convulse and immediately restoring the individual's consciousness (Ekeh and Ekrikpo, 2015).

In Saudi Arabia, Menit (2015) revealed from the findings that participants have never heard about Epilepsy, and only 14.4% knew what Epilepsy is and is about. Another study in South Ethiopia conducted by (Henok, 2017) revealed that many Ethiopian community members have never heard about Epilepsy. The study's findings conducted by Henok (2017) in Ethiopia concluded that the level of knowledge about Epilepsy and attitudes towards Epilepsy was not satisfactory, and people need to be given more information regarding epilepsy.

Kiwanuka, Anyango and Olyet (2018) concluded from their studies conducted in Northern Uganda that the community needed to be further given health education on the causes, transmission and management of Epilepsy. The study revealed that community members wouldn't allow their close relatives to marry a person with Epilepsy and wouldn't help a patient with Epilepsy. Another study conducted by Bigelow (2015) on first-year medical students in Mulago Hospital situated in Uganda revealed that students would never allow their children to get married to PLWE. Most of the students believed that PLWE could never reach their full potential as this is a mental illness. The students had a negative perception and attitude towards Epilepsy as some thought that supernatural powers could also cause it.

Awareness of Epilepsy in public should be raised to avoid negative attitudes and impacts on PLWE, the parents, the community as a whole and the health system (Alsharif, El-Fetoh, Ali, Alanazi, Alanazi, FalahAlana, Alshalan, Alfuhigi, Alruwaili, Alhazmi, Alruwaili, Alanizy, Alshammari, Altimyat and Alshammari, 2017). According to Kartal and Alkyildiz (2016), information campaigns have been found to successfully improve the knowledge and attitude of the general public towards Epilepsy; nevertheless, complete information about the target group is a vital part of organizing a campaign successfully. Public awareness studies are also essential to help point out any misunderstandings and misconceptions, which will help design targeted campaigns to improve the knowledge of the community on epilepsy.

In rural African communities, there are widespread beliefs that Epilepsy is due to possession of bewitchment by evil spirits or the devil. In Sub-Saharan Africa, despite the high prevalence of

Epilepsy, like human immunodeficiency virus/ acquired immunodeficiency syndrome (HIV and AIDS), Epilepsy continues to be socially stigmatised (Kartal and Alkyildiz, 2016). In South Africa, Epilepsy affects 1 in every 100 people (epilepsy.org.za). In their study, in Kwazulu-Natal, Gilani, Naidoo and Ross (2015) revealed considerable gaps in the medical knowledge of Zulu speaking people. According to the study which was done in Limpopo province, people who have Epilepsy become ostracised and discriminated against by many communities (Nesthikweta, 2003). The study revealed that Epilepsy might be a public health problem of unknown proportions in many developing countries, and South Africa is one of the countries at its developing stage.

The above cases reveal that people in certain areas around the world have poor or low knowledge and negative attitudes except those that are close or family members of people living with Epilepsy. Misconception on Epilepsy increases stigma and discrimination against people living with Epilepsy. However, with this kind of statistics and results on other studies worldwide regarding Epilepsy, the researcher strives to determine community knowledge, attitude and awareness in Limpopo and Mpumalanga provinces in South Africa.

1.2. Conceptual framework

The study was guided by the Health Belief Model (HBM). The HBM (Becker and Marshall, 1974) is one of the most generally recognized conceptual frameworks for health behaviour, concentrating on individual behavioural change. According to (Abraham and Sheeran, 2016), decision-makers use the HBM to determine if the benefits of a proposed behaviour change outweigh the practical and psychological costs or barriers. Individuals, in other words, make an internal assessment of the net benefits of changing their behaviour before deciding whether or not to act. The model's four dimensions of this assessment are perceived susceptibility to illness (risk perception), perceived severity of illness, perceived benefits of behaviour modification, and perceived barriers to action.

Self-efficacy, or one's belief in one's own ability to carry out a prescribed action, was eventually identified as an essential component or aspect. According to (Abraham and Sheeran, 2016), HBM has the advantage of defining a specific set of common-sense beliefs that appear to explain or mediate the impacts of demographic variables on health behaviour patterns and are changeable through educational intervention. People have varying perspectives and ideas about Epilepsy; however, good health education and awareness of Epilepsy may influence people's knowledge, perceptions, and attitudes towards Epilepsy.

Susceptibility Perception Individuals' acceptance of personal susceptibility to an illness is thought to differ significantly. At one extreme, the person refuses to believe that they could get a disease. If patients with Epilepsy believe that going to the doctor for medical check-ups will help them manage their symptoms, they will go more often. A person in a more moderate viewpoint may acknowledge the "statistical" potential of a disease occurrence but believes it is unlikely to occur (Abraham and Sheeran, 2016). Finally, a person may express concern that he is in imminent danger of developing the illness. A person caring for an epileptic person may fear contracting the disease if he gets in contact with urine, faeces or saliva that are excreted during an epileptic attack. In short, as it has been measured, susceptibility refers to the subjective risks of contracting a condition.

Seriousness as perceived convictions about the significance of a particular health issue might also differ from person to person. The degree of severity can be determined by the level of emotional arousal elicited by the prospect of getting an illness, as well as the types of challenges a person believes a particular health condition will bring. Of course, a person can consider a health issue regarding its medical or clinical implications. Because of the risk of bone loss, Epilepsy patients may not take anti-Epilepsy medications. The person would be concerned with whether an illness could cause him to die, limit his physical or mental functioning for an extended length of time, or permanently handicap him.

Therefore, a person may not believe that Epilepsy is a medically serious condition but may nevertheless believe that its occurrence would be serious if it created important psychological and economic tensions within his family (Abraham and Sheeran, 2016). Perceived susceptibility and having strong cognitive components are partly dependent on knowledge. The acceptance of one’s susceptibility to a disease that is also believed to be serious is thought to provide a force leading to action, however, without defining the course of action likely to be taken.

1.3 Problem statement

The researcher is a health care provider who has been in contact with an epileptic patient who was so scared about his condition and verbalised that he could not tell his friends because they believed that Epilepsy is caused by demon possession or witchcraft. The researcher observed that what happens to PLWE may be caused by a lack of knowledge and having a negative attitude towards PLWE. There are so many misconceptions on epilepsy, such as the belief that

Epilepsy is a contagious, communicable disease that can be spread by urine, faeces, or saliva excreted during an epileptic attack (Ekeh and Ekrikpo, 2015).

All the misconceptions related to Epilepsy are due to a lack of knowledge and misunderstanding. When an individual lacks knowledge, their attitude differs; hence it is vital to gauge knowledge and attitude as it is the first measure towards alleviating negative attitudes. Fear, misunderstandings, and discrimination are implications that this problem may have on epileptic PLWE (WHO, 2019). The researcher noted that epileptic patients are afraid of revealing their conditions because community members often perceive them as demon possed or crazy. This made the researcher wonder if people know what Epilepsy is and what their thoughts on it are. If such problems can persist, misconceptions on Epilepsy will continue for years; hence the need raised to assess knowledge, attitudes and awareness of community members regarding Epilepsy in selected villages of Limpopo and Mpumalanga Provinces

1.4 Rationale of the study

There are no known studies conducted on knowledge, attitude and awareness regarding Epilepsy in the selected villages of Limpopo and Mpumalanga provinces, South Africa. The study was done to bridge the knowledge gap among community members. The study aimed to determine the community knowledge, attitude and awareness regarding Epilepsy in selected rural villages of Limpopo and Mpumalanga Province, South Africa.

1.5 Significance of the study

The study's findings would contribute to the body of knowledge, especially in health care settings where PLWE are treated regarding the knowledge, attitude and awareness of Epilepsy.

This may help healthcare providers gain knowledge and improve their practice where Epilepsy is involved. The healthcare providers may know from the findings of the study what the community members know about Epilepsy and what they do not know, hence being able to advise accordingly.

The study's findings may help the community members of Limpopo and Mpumalanga provinces gain knowledge on Epilepsy, portray a good attitude towards PLWE and assist them in making decisions related to first aid management and care PLWE. The study could be used to assist

policymakers in developing public policies related to the care and treatment/management of PLWE.

1.6 Study purpose and objectives

1.6.1 Purpose of the study

The purpose of the study is to determine the knowledge, attitudes and awareness of community members regarding Epilepsy in selected villages of Limpopo and Mpumalanga Provinces.

1.6.2 Objectives of the study

1. To assess the knowledge of community members regarding Epilepsy in the selected villages of Limpopo and Mpumalanga Provinces.
2. To measure the attitude of community members regarding Epilepsy in the selected villages of Limpopo and Mpumalanga Provinces.
3. To assess the level of awareness of community members regarding Epilepsy in the selected villages of Limpopo and Mpumalanga Provinces.

1.7 Definition of concepts

The main concepts of this research project have been identified and are defined as follows:

- **Awareness:** Awareness is described as describing the experience one has had in life (Puddicombe, 2013). In this study, awareness is the state of being acquainted with Epilepsy in the selected villages of Limpopo and Mpumalanga Provinces.
- **Attitude**: According to Richard (2016), attitude is a psychological, mental and emotional being that characterizes an individual acquired through experiences. In this study, an attitude refers to the behaviour of community members in the selected villages of Limpopo and Mpumalanga Provinces towards Epilepsy.
- **Epilepsy:** According to WHO (2019)., epilepsy is a non-communicable disease characterized by recurrent seizures to different parts of the body or the entire body. In this study, Epilepsy is characterized by recurrent seizures that cannot be passed on from one individual to another.
- **Knowledge:** According to Haradhan (2016), knowledge is a collection of an individual's experiences, appropriate information and skilled insight offering a structure that estimates and integrates new information and experiences. In this study, knowledge

refers to the information or understanding that community members have in the selected villages of Limpopo and Mpumalanga Provinces.

2. METHODOLOGY

2.1 Research approach

The research approach is a plan and procedure that consists of different steps of broadened assumptions to detail methods of data collection, analysis and interpretation (Chetty, 2016). The study will use quantitative research to be able to assess the levels of knowledge, behaviours/attitude and awareness possessed by community members regarding Epilepsy. This approach was chosen to attain greater knowledge and understanding of how much knowledge do community members have, what attitude they portray and if the community are aware of Epilepsy in the selected villages of Limpopo and Mpumalanga provinces.

2.2 Research design

According to Creswell (2014), the research design is a set of methods and procedures used to collect and analyse the variables mentioned in the research problem. This study used a cross-sectional and descriptive study with reasons to obtain information. The researcher gained understanding to accurately describe and infer the communities' levels of knowledge, attitude and awareness on Epilepsy.

2.3 Study setting

According to Polit and Beck (2012), a study setting is where data is collected. The study will be conducted in a natural environment of selected villages of Limpopo and Mpumalanga Province, South Africa. In the Limpopo Province, Mtititi, Malavuwe and Bochum were established, while Clara, Acornhoek and Jerusalem villages in Mpumalanga Province were included.

Mtititi village is located in the Vhembe District Municipality and is a rural area. Mtititi is 141 kilometres from Polokwane, the provincial capital of Limpopo, and Malavuwe is 201 kilometres distant. Vhembe district has a population of 1 393 948 people, with the bulk of the people being black (1375053), white (11170), and coloured (2689). (Stats SA, 2016). Mtititi and Malavuwe

have respective populations of 3341 and 2362 persons. The most often spoken languages in these communities are Tshivenda and Xitsonga, and the majority of citizens rely on government social payments/grants, such as child and elderly grants (Stats SA, 2016).
Bochum is a settlement in the Blouberg local municipality in the Capricorn district, 93 kilometres northwest of Polokwane. Bochum is also known as a rural hamlet where the majority of the elderly and teens rely on social assistance. Bochum has a large black population. Northern Sotho is the most widely spoken language in Bochum. This area has a population of 6777 people. The most spoken language in this area is Sepedi (Census, 2011).

Clara, part of the Bushbuckridge local municipality, is also one of the study's chosen villages. Clara has a population of 9586 people. The predominant language spoken in the area is Tsonga. Jerusalem is the second village in Mpumalanga province under Ehlanzeni district In Hazy View. The area has a population of 8813 people., there are 16 schools and one hospital, Bongani Hospital. The most common language spoken in the area is siSwati (Census 2011). Acornhoek, part of the Bushbuckridge Local Municipality, is also one of the study's chosen villages. Acornhoek has a population of 24693 people. The predominant language spoken in the area is Tsonga.

2.4 Study population and Sampling

2.4.1 Study Population

According to Kenton and Scott (2020), the population is the entire pool from which statistical sample will be taken, such as a group of people, objects, hospitals or measurements. In this study, the target population will be all community members residing in the selected villages of Limpopo and Mpumalanga provinces. The target population includes all genders (male and female), from 18 to 60 years.

2.4.2 Sampling

According to Trochim and Conjoint (2020), sampling is the process where units are selected, such as people or organizations from a population of interest. After the study is done, the results may be generalized back to the population which provided the sample. Multistage sampling was conducted to sample villages and respondents.

2.4.2.1 Sampling of the villages

In this study, nonprobability, purposive sampling was used. The reason for using purposive sampling follows from high prevalence rates of Epilepsy recorded in these two provinces, their cultural diversity and the lack of known literature on knowledge, attitude and awareness on Epilepsy disease. The villages to be considered in the study are Malavuwe, Mtititi, Bochum, Clara, Acornhoek and Jerusalem.

2.4.2.2 Sampling of Respondents

The respondents for the study will be sampled using cluster sampling. Cluster sampling is a probability sampling technique in which all the elements in a population are categorized into different groups called clusters (Frey, 2018). The six selected villages in both Limpopo and Mpumalanga provinces were regarded as clusters, meaning the researcher had six clusters and respondents were selected purposively during data collection.

2.4.2.3 Sample size

The question of sample size is an equally important decision when collecting data The sample size for each population was attained using Rao-Soft (Raosoft Inc, 2020). The following was adjusted using the `population size of the selected villages in Limpopo and Mpumalanga Provinces. (https://census2011). The sample size was computed based on a 1% margin of error and a 99% confidence level..

Table 1: Proportional distribution and Sample size calculation using RAOSOFT (Raosoft Inc, 2020).

Province	**Villages**	**Population size**	**Sample size**	**+10%**
Limpopo	Mtititi	6722	604	668
	Malavuwe/Nweli	8453	616	678
	Bochum	6383	602	664
Mpumalanga	Clara	3576	560	616
	Acornhoek	33529	651	716
	Jerusalem	8813	618	680
Total sample size				**4022**

2.4.3 Inclusion and Exclusion

2.4.3.1 Inclusion criteria

All community members who reside in the selected villages of Limpopo and Mpumalanga in South Africa will be approached for inclusion in the study.

2.4.3.2 Exclusion criteria

All PLWE, caregivers, parents , children and family members of PLWE will be excluded from the study, including anyone who does not reside in the selected community.

2.5 Data collection/ Measurement instrument

The researcher used questionnaires to collect data in the study (see Annexure G). The instrument was adapted and modified from a research article by Karimi and Akbarian (2016). The researcher developed section D on the questionnaire. The questionnaire was adapted by the researcher in English and was translated into five languages by an independent bilingual person to ensure that the different language versions provide the same meaning as the English one. The languages that were used are: English, Venda, Pedi, Siswati and Tsonga (Annexure G). The questionnaire consisted of close-ended questions, which took about 15- 20 minutes to complete.

This is how the questionnaire was structured:

- Section A- Demographic factors which included the participants' age, gender, religion, village name, ethnicity and their level of education. Survey participants were asked to provide their actual age to enable all possible categorisations of the age variable to be thoroughly investigated during this research's statistical data analysis stage. This section of the questionnaire took 2 – 3 minutes to complete. Variables such as Knowledge, Attitude and Awareness are latent variables and cannot be measured directly. These variables were measured through proxy questions whose combination helped measure knowledge, attitude and awareness.
- Section B – The Knowledge of survey participants was gathered with eight proxy questions. These proxy questions will be closed-ended questions, measured on an ordered scale. The responses were rated on a Likert scale ranging from 1 to 3, where 1= YES, 2= NO, 3 = DO NOT KNOW. This section took 3-5 minutes to complete.

- Section C – This section contains proxy items for measuring attitude latent variables. This section seeks to gather data on participants' behaviour and feelings towards people living with Epilepsy (PLWE). A combination of 10 proxy statements will be used to collect participants' responses on attitude variable, and the responses will be measured on an ordered Likert scale which ranges from 1 to 5, where 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree and 5 = Strongly Agree. This section of the questionnaire will take 4-6 minutes to complete.
- Section D - Awareness: This section consists of three questions based on the community members' awareness of Epilepsy. Awareness proxy questions are binary or dichotomous variables involving only two possible responses (1-Yes and 0-No). This section will take 3 – 4 minutes to complete.

2.6 Pre-test of the instrument

According to Michalos (2014), a pre-test is a stage where the questionnaire will be tested on members of the target population to evaluate the instrument's reliability and validity. The researcher pre-tested the instrument on 10% of the sample sizes of the respondents for Bochum villages, respectively. Pre-testing was done with community members for this investigation. The participants who participated during pre-testing of the questionnaire did not form part of the main study. This assisted in determining any issues with the questionnaire and assessing if the questionnaire helps respond to the research objectives, such as misunderstanding of the question, language errors, or mistakes in numbering.

2.7 Plan for data collection

Data collection is a step by step process of collecting data from a specified sample of participants about variables of interest in a research study (Brink, 2012). In the study, the researcher used questionnaires as a data collection technique. As mentioned below, data collecting in this area comprised preparation, data collection instrument, pre-testing, validity and reliability.

2.7.1 Preparation

The researcher sought ethical approval before submitting a letter to the Department of Health in the South African provinces of Limpopo and Mpumalanga requesting data collection. In all of the villages chosen, the researcher sought community involvement, including preliminary

contacts with community leaders, obtaining permission to collect data, and enlisting their help in mobilizing community participation.

It helped recruit community members, because the leaders assisted the researcher to reach out and soliciting their involvement. The researcher also sought community health workers' (CHW) assistance during data collection.

Participants were also informed that participation was voluntary. Therefore they had a choice to participate or not to participate. They were also allowed to leave at any time when they felt they were not comfortable continuing with the questionnaire. Respondents signed a consent form to participate in the study. The researcher explained the research's goal to the respondents once permission was given

Respondents who could read and write completed the questionnaire, while the researcher and CHW's assisted those who had difficulty. The meetings took place in a quiet, private location provided by the respondents.

The dressing code was smart casual to avoid intimidating the participants by wearing formal clothes or a uniform. The physical appearance was natural for the participants to feel comfortable and be able to fill in the questionnaire without feeling heavily intimated.

Since the data was obtained during the COVID-19 pandemic, the COVID-19 precautions were followed. This was done to safeguard the participants' safety. The researcher and the CHWs ensured that they sanitized themselves and the participants and that all parties engaged wore masks. All used and shared pens were sanitized before and after each party's use.

2.8 Plan for data management and analysis

According to Xia and Gong (2015), data analysis is a process in which cleansing, transforming, and modelling data is done to find helpful information, informing conclusions and supporting decisions that have been made. Data were analysed using Statistical Package for the Social Sciences (SPSS) Version 26.0.

Descriptive statistics were presented using texts, tables and pie charts. Cross-tabulation analysis calculated frequencies and proportions of the community members demographic characteristics. Knowledge, attitude and awareness. After completion, the raw data was stored in secured and locked cabinets for safety. The software data was stored in an electronic computer system where a file was created, archived and encrypted with all the research data.

2.9 Validity & Reliability

According to Price, Jhangiani, Chiang, Leighton and Cuttler (2015), validity refers to how the scores from a measure represent the variable they are supposed to measure. Validity consists of face validity, content validity, predictive validity, criterion-related validity, convergent and concurrent validity. Reliability refers to the consistency of a measure (Price, Jhangiani, Chiang, Leighton and Cuttler, 2015), where reliability has three types known as overtime (test-retest, across time (internal consistency) and different researchers (inter-rater reliability).

2.9.1 Validity

The type of validity that was used is face validity because it enables the researcher to check if the instrument is fit for purpose and hence, adequate to sufficiently measure the levels of knowledge, attitude and awareness. Face validity refers to how an assessment or test seems to measure the variable or the construct that it is supposed to measure (Connel, Carlton, Grundy, Buck, Keetharuth, Ricket, Barkham, Robotham, Rose and Brazier, 2018). And in this study, the questionnaire was fit for the data that was being collected, and it measured levels of knowledge, attitude and awareness regarding Epilepsy.

Internal and external validity was ensured by using heterogeneous groups, randomly selecting participants, and replicating the study across different populations. The researcher used content validity, defined as the extent to which all the questions in the instrument and the scores can represent all the possible questions that can be asked about a particular content (Creswell, 2014). Content validity was ensured by allowing peer review, where unclear statements were amended while also discarding ineffective questions or statements. If the test is known to have content validity, face validity can be assured (Harada, 2017).

2.9.2 Reliability

In this study, test-retest reliability was done to the participants before the actual data collection took place to ensure the tool's reliability in the selected villages of Limpopo and Mpumalanga provinces. The researcher gave the community members a questionnaire used to collect data. After two weeks, the same group was given the same questionnaire to detect if the results were the same across time.

The researcher made use of scatterplots, measures of agreement (Kappa) and correlation coefficients to ascertain the degree of consistency in the responses gathered on two different occasions. In other words, the computation of these statistics enabled the researcher to check

the correlation between the two sets of scores. In addition, proxy questions constituting each of the three research instruments (Knowledge, Attitude and Awareness) were assessed for internal consistency using the Cronbach Alpha Test. Cronbach Alpha values range from 0.0 to 1.0 (Taber, 2018). According to Field (2016), a score of less than 0.7 is unacceptable, a score above 0.7 is acceptable and considered reliable, while a score of 0.8 is good and 0.9 is regarded as excellent and determines high reliability

2.10 Ethical consideration

According to Tabler (2018), ethical considerations are important when conducting a research study. The researcher conducting the research study using human data considered the vital values and principles of ethical conduct, where the research ethics committee evaluated if the research proposal was ethically acceptable. The researcher also included the management of risk for Covid-19, which was included in the respondent's consent letter (Annexure E): (a) All participants should be sanitized before taking the questionnaire and pen, (b) Participants will be eligible for participation only if they wear a mask, (c) Participants must maintain social distancing.

2.10.1 Ethical clearance

The research proposal was presented first at the Department of Public Health and then taken over for further assessment to the Faculty of Health Sciences for quality purposes. The proposal was then submitted to the Research Ethics Committee of the University of Venda for a thorough evaluation, and applications were made in order to obtain ethical clearance. Once the ethical clearance was gained, it was sent together with the research proposal to the University of Venda's Higher Degree Committee for approval. When gained, it was taken to the Department of Health Limpopo and Mpumalanga so that permission to conduct research could be granted. Community consent was requested from the community tribal offices/royal house of the selected communities of Limpopo and Mpumalanga provinces. Community Entry was also conducted to seek permission from traditional Leaders to access their people.

2.10.2 Permission to conduct the study

The study targets are community members from Limpopo and Mpumalanga provinces. In writing, the researcher sought permission to collect data from the Department of Health of Limpopo and Mpumalanga (refer to letter ANNEXURE B1 and B2), including the Royal Council

of the selected villages. The researcher asked for permission to hold preliminary meetings with the community leaders and enlist their support to mobilize community participation. These required the researcher to write a letter (Annexure D) prior to the study, which indicated the purpose of the study, the extent of time, the potential impact and the outcomes of the study to the Royal Councils. The local traditional leaders of all the selected villages were requested permission in writing and verbal approval had been granted from the Royal Council.

2.10.3 Informed consent

The researcher and the CHW identified themselves to the participant and mentioned the institution they are from, including the research topic and purpose. The researcher explained the benefits of participation risks to the participant. The researcher identified guaranteed confidentiality to the participants by reading the respondents' information letter (Annexure E) and the informed consent (Annexure F). The participants were given assurance that they could withdraw from the study at any time because participation in this study was voluntary. Participants were provided with information about persons to contact if they had any further questions about the study.

2.10.4 Confidentiality

An adequate level of confidentiality of the research data was ensured. To ensure that there is total confidentiality, research participants were not expected to reveal their identities. Hence their contributions remained anonymous during data collection; participants had the right to privacy, anonymity and confidentiality.

2.10.5 Respect

The researcher respected the norms, values, traditions and personal beliefs of the participants. If a participant wanted to withdraw from the study or refused to give any information, their decisions were respected without threatening them. Furthermore, the was no penalty given, and no participant was made to feel wrong. The setting for collecting data was respected and would not be changed because of the study.

2.10.6 The beneficent principle

According to Brink (2016), beneficence requires the researcher to do a good job and, above all, to avoid causing damage. The participant's safety and well-being were ensured, and they were

kept safe from any form of discomfort or danger. It was explained that voicing their opinion on Epilepsy had no legal ramifications.

2.10.7 Justice Principle

Participants were chosen fairly, in a convenient manner, and treated fairly. Furthermore, all of the people who took part in the study did so voluntarily.

2.10.8 Anonymity

The researcher is prohibited from disclosing any information that could lead to the identification of the study participants**.**

2.11 Dissemination of the findings

A final copy of the mini dissertation will be submitted to the Department of Health, Department of Education and to the University of Venda library to be used by future researchers. The findings will be published in accredited journals and presented at conferences.

2.12 Structure of the mini dissertation

The mini dissertation titled ‘***’knowledge, attitudes and awareness of community members regarding Epilepsy in selected villages of Limpopo and Mpumalanga Provinces, South Africa***’’ is written in article format style and comprised of three (3) sections. The first section is the overview of the study, consisting of the background, conceptual framework, problem statement, rationale, significance, purpose, objectives and definition of concepts in the study. This section also includes the methodology where the research approach, study setting, sampling, data collection, analysis and ethical consideration was fully described.

The second section consists of the two manuscripts.

- The first manuscript is a systematic review titled ***“community members knowledge, and attitude towards epilepsy in a sub haran african context: a systematic review’’*** which is under review, and journal guidelines have been attached.

- The second manuscript is titled ‘’***knowledge, attitudes and awareness of community members regarding Epilepsy in selected villages of Limpopo and Mpumalanga Provinces, South Africa****’’.*

The third section covers all the aspects of the study and concludes. This section consists of the general discussions, strengths and limitations, conclusion and recommendations.

3. Summary

Orientation of the study detailing the knowledge, attitudes and awareness of community members in selected villages of Limpopo and Mpumalanga provinces, South Africa, was presented. The mini dissertation is a part of the project named: Glad Africa Epilepsy Research Project that is focused on Epilepsy, and the dissertation was written in article format. The focus of the section was to outline the introduction and background, conceptual framework, problem statement, rationale, significance, purpose, objectives and definition of concepts of the study. The study's methodology was also outlined, including the research approach, design, sampling, data collection, analysis, validity and reliability, together with the ethical considerations. The second section consists of two manuscripts that were written in connection with the study.

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SECTION 2

MANUSCRIPT/ARTICLES

Introduction

This section consists of two manuscripts. The first manuscript is a systematic review approved by the journal's editorial advisory board and is now under review (see ANNEXURE J). The second manuscript is a research article that has been submitted and awaiting approval (see ANNEXURE K). Both the manuscripts followed the appropriate journal parameters, and the guidelines websites have been attached

2.1 MANUSCRIPT 1: COMMUNITY MEMBERS' KNOWLEDGE AND ATTITUDES TOWARDS EPILEPSY IN A SUB-SAHARAN AFRICAN CONTEXT: A SYSTEMATIC REVIEW

Submitted to *The Open Nursing Journal* following the Journal Author Guidelines found at https://openpublichealthjournal.com/manuscript-preparation.php and titled as follows:

Munyadziwa M, Mabunda JT, Mashau NS and Makhado L. Community Members' Knowledge and Attitudes Towards Epilepsy in a Sub-Saharan African Context: A Systematic Review**. *The Open Nursing Journal* (Under review)**

COMMUNITY MEMBERSS' KNOWLEDGE AND ATTITUDES TOWARDS EPILEPSY IN A SUB-SAHARAN AFRICAN CONTEXT: A SYSTEMATIC REVIEW

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ABSTRACT

Background: Epilepsy is one of the most common neurological diseases globally, and people living with Epilepsy (PLWE) and their families suffer from different misconceptions, stigma, and discrimination.

Objective: This systematic review was conducted to determine community members' knowledge and attitudes regarding Epilepsy in Africa.

Methods: The present systematic review included studies published in the English language from January 2010 to July 2021 conducted in Africa and focusing on knowledge and attitudes regarding Epilepsy. The researchers had a search strategy where they went through different search engines and used appropriate keywords to get studies that needed to be reviewed and included. For eligible studies, the researchers searched PubMed, EBSCOhost, Google Scholar, and Science Direct. The included studies were appraised using the checklist of CASP, and data were analyzed using content analysis.

Results: Eighteen (18) publications were identified and included in the review. Studies were in different parts of the African continent and incorporated students, teachers, and community member samples. The following themes emerged from the reviewed studies: knowledge regarding Epilepsy and attitudes towards Epilepsy.

Conclusions: Knowledge about Epilepsy, attitudes towards Epilepsy and misconceptions are widely prevalent in Africa, and more accessible approaches to increase knowledge and improve attitudes are urgently needed within Africa.

Keywords: Africa, Attitude, Community members, Epilepsy, Knowledge, Misconceptions.

INTRODUCTION

Epilepsy is defined as a brain disease mainly characterized by seizures [1]. A seizure occurs when the functioning of the cerebrum is disturbed due to abnormal paroxysms leading to the discharge of cerebral neurons [2]. People living with Epilepsy will often have two of those seizures occurring more than 24 hours apart, and the cause of the disease is still unknown [1,3]. With the cause still unknown, studies have shown that this could negatively impact knowledge and attitudes regarding Epilepsy since the numbers of people being affected by Epilepsy are rapidly increasing [4,5,6,7,8,9,10].

Globally, Epilepsy affects 50 million people worldwide, with 80% of them living in developing countries and five million people globally diagnosed yearly [11]. In Africa, 10 million live with Epilepsy; meanwhile, in South Africa, 1 in every 100 is affected by Epilepsy [12]. The burden of Epilepsy in Sub-Saharan Africa is high [13]. With a very high burden of Epilepsy and the cause of the disease still unknown globally in about 50% of Epilepsy cases [15], this reveals a knowledge gap that needs to be bridged regarding Epilepsy [1,4,7,8,9,10,14,15,16,17,18,19].

Most articles revealing a lack of knowledge regarding Epilepsy have been shown in Africa. Epilepsy is also one of the most stigmatized disorders, and people living with Epilepsy (PLWE) are being discriminated against, stigmatized and misunderstood [20]. Lack of knowledge and awareness on Epilepsy is mainly the cause of stigma and negative attitudes towards PLWE [21]. Although the causes of stigma are complex amongst community members, lack of knowledge has been a vital factor in negative attitudes towards PLWE [22]. There is very poor knowledge on the causes, management, and whether the disease is curable or not, with negative practices of management that can cause harm to a patient, such as inserting a spoon in the mouth during a seizure [7].

Community members need to be acquainted with proper and adequate knowledge of Epilepsy to reduce the available misconceptions to prevent other harmful practices. Appropriate educational needs need to be met to enable community members to have sufficient knowledge of Epilepsy. This would also help decrease the negative attitudes, misconceptions, and stigma around Epilepsy [23]. Family members and relatives of PLWE require more education and training about Epilepsy through education programs to decrease misconceptions about Epilepsy and increase understanding [23]. With so many Epilepsy misconceptions and gaps among community members' knowledge regarding Epilepsy, the review was based on those factors.

Purpose of the Systematic Review

With the lack of knowledge, misconceptions of Epilepsy and improper management techniques of Epilepsy are portrayed in different studies. The review aims to determine the variability of community members' knowledge and attitudes amongst other African communities.

2 MATERIALS AND METHODS

This systematic review was conducted through the following steps, thus, 1) test the search strategies in PubMed, EBSCOhost, Google Scholar, and Science Direct, 2) Test the search strategies; 3) Identify relevant studies by each sample; 4) Assess the level of evidence; 5) Extract data from studies and 6) Summarize data; 7) Interpret the findings and 8) Report the evidence.

Search strategy

The researchers searched PubMed, EBSCOhost, Google Scholar, and Science Direct for eligible studies. The literature was searched using the title, abstract, and keywords of the review. The keywords that were used are Africa, Attitude, Community members, Epilepsy, Knowledge and Misconceptions. Studies that did not contain aspects of knowledge and attitude towards Epilepsy were excluded, and studies that were not conducted in Africa. Due to the different research methods, the researchers did not exclude studies of a specific design. The researchers had a search strategy where they went through different search engines and used appropriate keywords to get studies that needed to be reviewed and included, as presented in Table 1.

Table 1: Search Databases and keywords

Search Engine	Keywords
PubMed	((((knowledge) AND (attitude*)) AND (community members)) AND (Epilepsy)) AND (africa)
EBSCOhost (UNIVEN Library)	Knowledge, attitude, community members, Epilepsy, Africa
Google Scholar	The knowledge and attitude community members have regarding Epilepsy in Africa.
ScienceDirect	The knowledge and attitude community members have regarding Epilepsy in Africa

Study selection

As a guidance tool for the systematic review, the researchers used the preferred Reporting Items for Systematic Reviews and Meta-analysis (PRISMA) flow diagram (Figure 1) that was adapted from the PRISMA flow diagram generator. The PRISMA flow diagram was used to identify which data will be included and which ones are eligible for exclusion. MM,MJT,MNS and ML checked all abstracts for inclusion and exclusion eligibility based on title and abstract data. The full texts of the eligible studies were then subjected to an in-depth review by MM, MJT, MNS, and ML independently and discussed and reached consensus for the suitability of studies to be included in the review based on the inclusion and exclusion criteria as presented in Fig 1.

3 RESULTS

The overall studies that were searched and found were 33664, from that 1593 were nonduplicate, and 1538 articles were excluded from the review because they did not match the study aims. Fifty-five articles were retrieved, and the studies left to be read in full were 37. Studies that were included in the review are eighteen (18).

Eligibility criteria

The researchers included studies within a ten-year time frame (2010 to 2021, July 31) based on community members' knowledge and attitudes of Epilepsy within the African context. The researchers included studies written and published in English. Studies that were based on health care workers (nurses, doctors, psychologists, and medical/health care students) knowledge and their attitudes, as well as data that was not full free text, were excluded

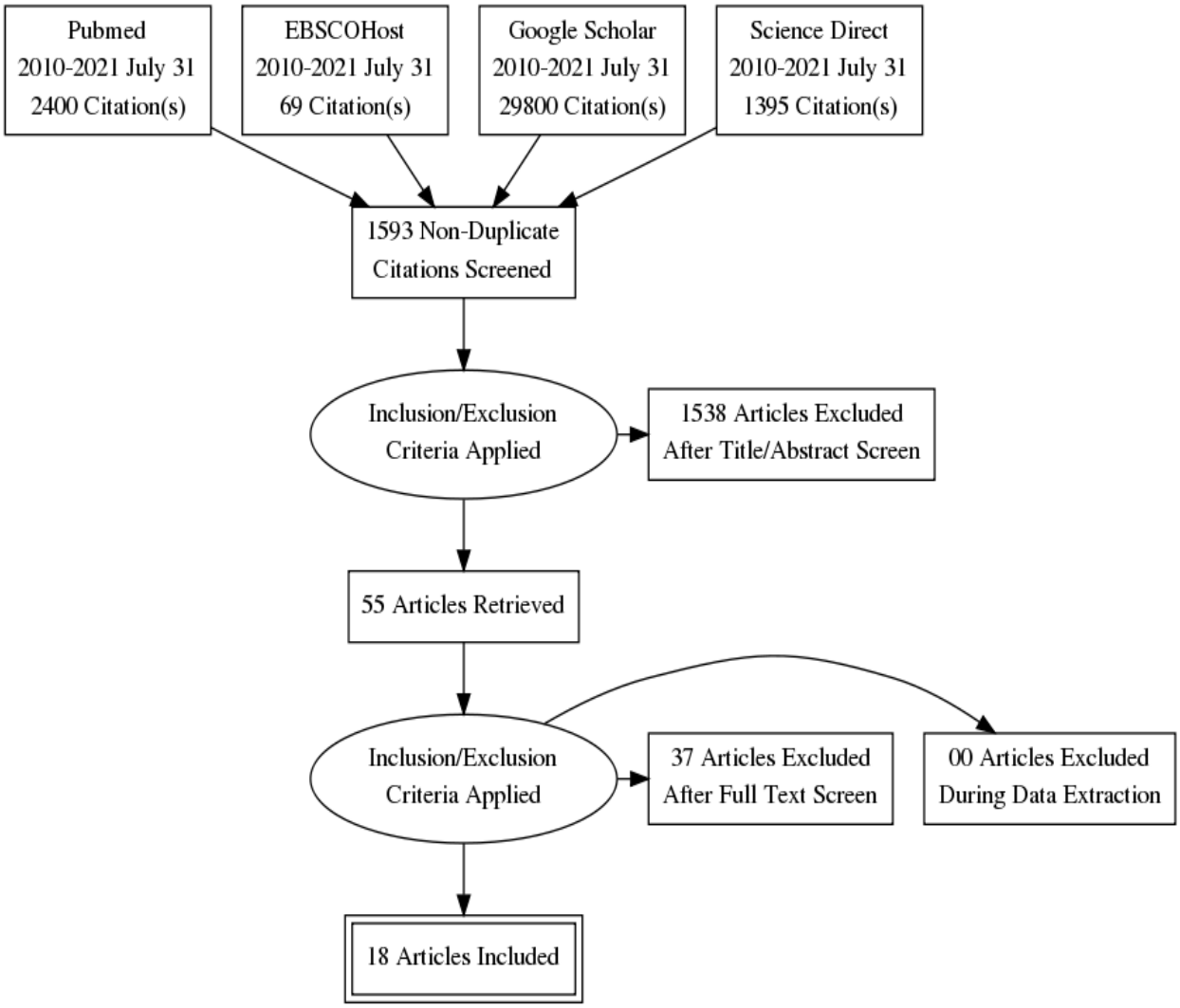

Figure 1: PRISMA flow chart

Appraisal of selected studies

Appraisal of selected studies was done using the Critical Appraisal Skills Programme (CASP) [24]. The researchers used a checklist of cohort studies to assess the articles and ensured their relevance and trustworthiness. Eighteen (n=18) studies were assessed using the cohort study checklist, and the results are shown in Table 2. The cohort study checklist contains 14 questions

Table 2: selected studies using CASP

Authors and year	Study Design	Study assessment
Kaddumukasa et al. 2016	Cross-sectional study	64%
Owolabi et al. 2014	Cross-sectional study	75%
Gebrewold et al. 2016	Cross-sectional study	67%
Henok et al. 2017	Cross-sectional descriptive study	86%
Ezeala-Adikaibe et al. 2014	Cross-sectional descriptive study	85%
Kiwanuka et al. 2018	Cross-sectional study	79%
Wubetu et al. 2020	Cross-sectional study	86%
Anene-Okeke et al. 2020	Cross- Sectional study	79%
Assadeck et al. 2020	Cross-sectional descriptive study	72%
Teferi et al. 2015	Cross-Sectional study	86%
Fekadu et al 2019	Cross-Sectional study	78%
Molla et al. 2021	Cross-Sectional study	86%
Babikar et al. 2011	Cross-Sectional study	66%
Ezeala-Adikaibe et al. 2013	Cross-sectional descriptive study	80%
Millogo et al. 2019	exploratory qualitative study	74%
Tirukelem et al. 2021	Cross-sectional descriptive study	82%
Asnakew et al. 2020	Cross-Sectional study	68%
Gugsa et al. 2019	Cross-Sectional study	65%

Characteristics of the included studies

The characteristics of the study were found to justify further studies included. The studies included were published in English from the year 2010 to the year 2021 on July 31st. The characteristics included are the author and year of publication, objectives of the study, the country where the study was conducted, the study design, population and sample size, outcomes of the study, and the study's limitations.

Table 3: Characteristics of included studies

Authors and year	Objectives/ Aim of the study	Country	Study Design	Population & Sample Size	Documented outcomes	Limitation of the study
Kiwanuka and Olyet 2018	Assess the knowledge, attitude and beliefs of Epilepsy	Uganda	Cross-sectional design	240 Community members of Erute South	Most respondents had a negative attitude towards Epilepsy and had a low level of knowledge with misconceptions of the causes, treatment etc.	
Gebrewold et al 2016	Assess and understand teachers' social and demographic determinants of knowledge, attitude, and practice towards Epilepsy.	Ethiopia	Cross-sectional study	Eight hundred forty-four teachers participated in the study.	A high percentage of teachers associated Epilepsy with insanity. The level of knowledge was poor, and the teachers had a negative attitude towards Epilepsy.	
Henok and Lamara 2017	Assess knowledge and attitude of Menit members regarding Epilepsy.	Ethiopia	Cross-sectional study	846 individuals from the Menit community	The level of knowledge and attitude towards Epilepsy was not satisfactory. The participants lacked knowledge on the causes of Epilepsy and had little knowledge on the treatment or management too.	
Kaddumukasa et al	Determine the knowledge and attitude of community members to Epilepsy and its treatment.	Uganda	Cross-sectional study	177 from urban areas and 200 participants	Most people have never read or heard about Epilepsy, and most of the participants did not know	Self-reported practices by the participants did not match the actual

2016				from rural areas.	anyone who has or has had Epilepsy.	behaviour. Another limitation was that most of the participants were females, so males' beliefs and attitudes towards Epilepsy might not have been thoroughly presented in the study.
Ezeala-Adikaibe et al. 2013	Determine the knowledge and attitude of secondary school learners to Epilepsy and its treatment that could pose a barrier to the treatment and care of epilepsy patients within the community.	Nigeria	A cross-sectional and descriptive study	969 Secondary school students	87.6% had heard about Epilepsy, yet most of the participants had low knowledge regarding the causes of Epilepsy and had a negative attitude.	
Anene-Okeke et al. 2020	Assess the awareness, knowledge and attitude towards Epilepsy among secondary school students	Nigeria	Cross-sectional study	1020 students	The majority of the students had poor knowledge and attitude towards Epilepsy.	

Wubetu et al 2019	Assess the general community knowledge and attitude towards Epilepsy and its associated factors	Ethiopia	Cross-sectional study	565 study participants	The study showed an unfavourable attitude and a very low level of knowledge. The community members lacked knowledge on the cause and treatment of Epilepsy.	
Ezeala-Adikaibe et al 2014	Determine the knowledge and attitude of urban dwellers to Epilepsy and its treatment and identify the gaps in knowledge.	Nigeria	Cross-sectional study	Two hundred eighty-one community residents of Enugu, South East.	The mean score on knowledge regarding Epilepsy was very low, and the attitude towards Epilepsy was regarded as poor.	
Owolabi et al 2014	Evaluate knowledge and attitudes of school teachers and evaluate factors associated with good knowledge and positive attitude.	Nigeria	Cross-sectional study	124 males and 76 females of teachers in North-Western Nigeria	All respondent has heard about or read about Epilepsy. There is low knowledge and misconceptions about Epilepsy, with a fair attitude portrayed towards epileptic students.	
Tirukelem et al 2021	Assess the community's attitude towards patients living with Epilepsy and associated factors.	Ethiopia	Cross-sectional study	762 individuals in South Achefer District, Northwest Ethiopia	The respondents from the study had poor knowledge regarding Epilepsy but had a favourable attitude towards Epilepsy.	

Asnakew et al 2020	Assess the knowledge and attitude of the community regarding Epilepsy.	Ethiopia	Cross-sectional study	782 participants	Respondents in the study had poor knowledge and an unfavourable attitude towards Epilepsy.	
Milogo et al 2019	Assess the participants' knowledge, attitude, attitudes and practices regarding Epilepsy	Burkina Faso	Qualitative exploratory study	Twenty-nine participants were engaged. 21 males and eight females	All respondents showed good knowledge of the symptoms of Epilepsy and very little on the causes. The participants had a negative attitude towards people living with Epilepsy.	
Babikar et al 2011	Assess the knowledge, attitude and practices that school teachers have when dealing with Epilepsy in school children	Sudan	Cross-sectional study	Two hundred participants were engaged. One hundred teachers from public schools and 100 teachers from private schools.	The school teachers had poor knowledge and a negative attitude towards Epilepsy.	
Molla et al 2021	Assess the knowledge and attitude amongst rural residents in Ethiopia regarding Epilepsy.	Ethiopia	Cross-sectional study	723 adults participants were randomly selected to	The participants demonstrated to have a low level of knowledge and a negative attitude towards Epilepsy	

				participate in the study		
Fedaku et al	Assess the perception and attitudes of community members regarding Epilepsy.	Ethiopia	Cross-sectional study	Three hundred sixty-one participants were males, and 657 participants were females.	Most participants had low knowledge and negative attitudes towards Epilepsy.	Since the study was done in a modernized health institution, they may tend to report the perceived benefit of medicines. The place of residents as the study setting included semi-urban and urban areas, and the study may not be generalized for the rural setting.
Tefari et al 2015	Assess the knowledge, attitude and practice related to Epilepsy and its factors	Ethiopia	Cross-sectional study	There were 357 males and 3030 females	The participants revealed good knowledge, good attitude and safe practices regarding Epilepsy.	

Guggsa et al 2020	Characterize the demographic and social factors of knowledge, attitude and practices of clerics and healers regarding Epilepsy.	Ethiopia		A total of 440 clerics and healers participated in the study.	Participants had poor knowledge of the cause of Epilepsy and had negative attitudes towards people living with Epilepsy.	
Assadeck et al 2020	Evaluate the knowledge, attitude and practices that school teachers amongst secondary and primary school have regarding Epilepsy.	Nigeria	A cross-sectional and descriptive study.	A total of one-hundred and forty-five (145) teachers participated in the study.	The participants had poor knowledge and negative attitudes towards Epilepsy.	

Thematic analysis of the selected studies

Results that were found relevant through the topic and the keywords used were twenty-one. Some of the articles were not included in the review because they were not within the time frame of inclusion and not in English, While others were excluded because they were not full texts. The articles considered for review described community members' knowledge and attitude regarding Epilepsy. The researchers read the articles thoroughly and familiarized themselves with the data where all included studies were read, and initial codes were generated to search the themes. Thematic evaluations to pick out the commonalities of the studies selected in the review has been achieved, and themes have been identified together with the subthemes. Two themes emerged from this.

Themes	**Sub-themes**
Knowledge	• The level of knowledge regarding Epilepsy [4,5,6,7,8,9,10,14,15,16,17,20,25,28,29,30,31]
Attitude	• Negative attitude towards Epilepsy [4,5,6,7,8,9,14,15,16,17,20,25,28,29,30,31,33].
	• Positive attitude towards Epilepsy [10,32,34].

The level of Knowledge regarding Epilepsy.

Numerous studies have reported that participants have a low level of knowledge regarding Epilepsy [4,5,6,7,9,10,14,15,16,17], and a few had favourable knowledge on Epilepsy [8,]. Poor knowledge regarding Epilepsy leads to an increase in stigma, misconceptions, and negative attitudes towards Epilepsy. Poor or little knowledge regarding Epilepsy may often mean community members are not receiving sufficient information regarding Epilepsy. A study in Ethiopia revealed that about 97.1 % have ever heard about Epilepsy yet remain with a low level of knowledge regarding Epilepsy [25]. A study on Ethiopian teachers revealed that 36.9% of teachers had heard about Epilepsy on public media, and only 2.3% heard about Epilepsy from medical doctors [7]. Another study in Uganda revealed that nine participants had learnt about Epilepsy from health care providers [26]. Most studies reported that community members have heard about Epilepsy, yet they have a poor or low level of knowledge regarding Epilepsy [4,5,6,7,8,14,15,16,17,19,23,27,28]. This reveals that the community has heard about Epilepsy but have not received enough or sufficient facts regarding Epilepsy where they sit and read or listen to health care providers talk about Epilepsy. A study that revealed a good level of

knowledge regarding Epilepsy reported factors such as education and environmental background, which have been shown to influence the understanding of Epilepsy. Another study done in Ethiopia revealed that members residing in urban areas in a community close to a health care institution have shown to have more knowledge than those living in rural areas [25]. This indicates that some demographical factors influence the level of knowledge. Hence, it is vital to thoroughly assess these factors when studies are done so that targets can be made to engage all community members when health education and awareness programs are implemented to increase the level of knowledge one has regarding Epilepsy.

Attitude towards Epilepsy

Negative attitude towards Epilepsy

Several studies reported negative attitudes towards Epilepsy and people living with Epilepsy. The most common form of negative attitudes was reflected in most studies where participants reported that they would never marry a person living with Epilepsy. A study in Southwest Ethiopia reported that 79.6% would not allow marriage with a PLWE. About one-third of the population did not agree to either work with PLWE, have a close relationship with them, or live with them [7]. The study had 13.2% positive attitudes portrayed and 86.8% negative attitudes as most community members considered Epilepsy to be a mental disorder, and no one can eat, drink, or marry them [7]. Another study in southeast Nigeria revealed that 84.2 said they would not marry a PLWE or have a child with a PLWE.

Meanwhile, in Enugu state, 70.7% reported that PLWE should not marry, 69.7% disagreed that they should have any children, and 12.2% said they should not be given the authorization to drive [1]. A study in Nigeria revealed that 60% of the participants' teachers said that PLWE should be separated from non-epileptic [27]. In Ethiopia, 76.7% of teachers would prefer Epilepsy to be cured or controlled before allowing that student in the class. Most studies revealed negative attitudes towards Epilepsy which is mainly caused by the lack of knowledge [7], and understanding regarding Epilepsy would lead to a positive attitude being portrayed [9].

Positive attitude towards Epilepsy

A positive attitude is mainly associated with a good level of knowledge. A study done in Northwest Ethiopia reported that participants of the study area were familiar with Epilepsy and had a good positive attitude towards Epilepsy [10]. Participants revealed that they would have a handshake with a PLWE, have close relations with them, and work with them, yet only 2.8% reported that

they would marry a patient with Epilepsy [10]. Another study in Northwestern Nigeria reported a low level of knowledge regarding Epilepsy but a fair attitude towards students. 82% of teachers in the study had a good attitude towards Epilepsy, and 81% accepted that they were not knowledgeable about it. This shows that individuals can still have good attitudes towards people living with Epilepsy without proper or adequate knowledge. A good attitude towards Epilepsy is vital to ensure that people living with Epilepsy cannot be stigmatized and misconceptions towards Epilepsy can be alleviated.

4 DISCUSSION

Despite Sub-Saharan Africa having the highest burden of Epilepsy and having little knowledge on a negative attitude towards Epilepsy, there is very little literature in our setting compared to the developed countries. South Africa is one of the countries that shows a larger gap in the literature regarding Epilepsy knowledge and attitudes. The numbers of people who are being affected or infected by Epilepsy are high [12].

The main factors that have been reported to influence issues related to knowledge and attitudes in Sub-Saharan Africa are factors such as the rurality of the context of the participants, characterized by lower levels of education, socio-economic status and misconceptions adapted from generation to generation that seem to be unchanging throughout Sub-Saharan Africa studies. This is evidenced by studies conducted in urban settings comprised of educated community members who revealed higher levels of Epilepsy knowledge and positive attitudes towards Epilepsy [27,28].

Most studies included in this systematic review revealed that community members lack the necessary understanding of Epilepsy. Most of the community members were found not to know what Epilepsy is, its causes, its signs and symptoms, and how to manage an epileptic patient when convulsions or seizures occur [1,4,6,14,15,16,17,19,22,25,26,28]. Knowledge and understanding are vital elements needed by all community members regarding Epilepsy. When community members possess sufficient information regarding Epilepsy, it has the potential to assist them in making moral and non-judgemental decisions that won't have a negative impact on the lives of PLWE and, in the process, improve their attitude towards Epilepsy as well as PLWE.

An individual's attitudes are based mainly on what they know. The attitude of community members in most studies seemed to be plausible. Members of the community must be given sufficient information where Epilepsy is concerned. For the attitude to change, good knowledge must be in

hand. When a community member has enough knowledge, the decisions that one makes regarding Epilepsy will be different. The attitude portrayed differs from the community members' level of knowledge or occupation, such as teachers, students, adults, traditional healers, and other public individuals. Results would vary due to the different backgrounds of the study participants.

As indicated above, community members were reported to have poor knowledge and negative attitudes (n=18) [4,5,6,7,8,9,10,14,15,16,17,19,22,23,25,26]. However, three studies revealed to have favourable knowledge and attitude towards Epilepsy. This may be due to a lack of proper information regarding Epilepsy, alluding to that the level of knowledge correlates with attitude. Even though there is information, the community members cannot access it due to socio-demographic challenges such as income level, education (illiteracy), and residential area (mostly rural). This should not be the case as educational knowledge should reach different individuals regardless of demographics, economic, and social status.

Scalable approaches should be implemented to help change community members' level of knowledge and attitudes towards Epilepsy. Moreover, because there is still an increase in misconceptions, stigma, and poor knowledge, there is a need for an approach that should be put in place. Such matters need to be looked at. Consistent education needs to be engraved and taught to the community to help alleviate and lessen misconceptions and stigma towards Epilepsy.

Strengths and Limitations

Our literature search focused on studies that were published from 2010–2021 July. Only articles written and published in the English language were included based on the inability to interpret results and translate other languages, which could have led to missing articles that are written in other languages. Another limitation is that only studies conducted in Sub-Saharan Africa were included and cannot be generalized to other African countries and abroad.

CONCLUSION

Epilepsy knowledge is vital in Sub-Saharan Africa. New strategies are required to address the low level of knowledge in the community regarding Epilepsy and the negative attitudes towards Epilepsy. Awareness campaigns and programmes should be put in place to help community members gain knowledge and understanding regarding Epilepsy. Information should be put up on all media platforms to help community members gain access to information regarding Epilepsy. This will help them be more informed and knowledgeable about Epilepsy and change

public perceptions and attitudes. New approaches that address knowledge and create an effective positive reaction towards Epilepsy must be implemented to help PLWE live in a healthy and acceptable community.

LIST OF ABBREVIATIONS

PLWE: People Living with Epilepsy

CASP: Critical Appraisal Skills Programme

PRISMA: Preferred Reporting Items for Systematic Reviews and Meta-analysis.

AUTHORS CONTRIBUTION

All authors participated in the manuscript submitted for journal review. The following authors were involved in the stated phases of the project: study conception (MM, LM), study design (MM, JTM, NSM, LM), data collection (MM, JTM, NSM, LM), Data analysis and interpretation (MM, JTM, NSM, LM), table development (MM, JTM, NSM, LM), substantial revisions to the manuscript (MM, JTM, LM), critical revisions to the final manuscript (MM, JTM, LM) and scholar guidance (JTM, NSM, LM).

CONSENT FOR PUBLICATION

Not applicable.

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CONFLICT OF INTEREST

The authors declare no conflict of interest, financial or otherwise.

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SUPPLEMENTARY MATERIAL

Data sets can be made available by the corresponding author through reasonable requests.

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2.2 SECOND MANUSCRIPT: KNOWLEDGE, ATTITUDES AND AWARENESS OF COMMUNITY MEMBERS REGARDING EPILEPSY IN SELECTED VILLAGES OF LIMPOPO AND MPUMALANGA PROVINCES, SOUTH AFRICA

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Knowledge, attitude and awareness of community members regarding Epilepsy in selected villages of Limpopo and Mpumalanga provinces, South Africa

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Abstract

Background: Epilepsy is a chronic non-communicable disease that affects around 50 million individuals worldwide, and it affects more than 70 million people. People with Epilepsy and their families face a variety of misconceptions, stigma, and prejudice in many areas of the world. The study aimed to measure community members' knowledge, attitude, and awareness in chosen communities in South Africa's Limpopo and Mpumalanga provinces.

Methods: A cross-sectional descriptive study was conducted from February 2021 to February 2022. The study was conducted in selected villages of two large provinces in South Africa: Limpopo and Mpumalanga provinces. The study used a 32-Item questionnaire adapted from literature and completed by 2930 and 1360 participants in Limpopo and Mpumalanga provinces, respectively. Multistage sampling was conducted to sample villages and respondents. The respondents were selected randomly until the sample size was reached. Data were collected through administered questionnaire, then entered, cleaned and coded using SPSS for analysis.

Results: In Limpopo province, around 44.1% agreed that Epilepsy is associated with fever, 25.2% disagreed, and 30.4% did not know. In Mpumalanga, 29.8% agreed, 44.6% disapproved, and 25.7% were unsure. In the survey, participants from Limpopo province agreed that people with Epilepsy had trouble learning (54.8%), 41.8% disagreed, and 13.4% did not know, whereas, in Mpumalanga, 68.5% agreed, 18.1% disagreed, and 13.5% did not know. The general knowledge and attitude toward Epilepsy were statistically unfavourable. Ethnicity and level of education were significantly associated with knowledge and attitude.

Conclusion: This study's level of knowledge and attitude about Epilepsy was not sufficient. There is a significant gap in the analysed factors, demanding the need to educate community members through awareness campaigns or programs to raise community knowledge and reduce stigma and various misconceptions about Epilepsy.

Keywords: Attitude, Awareness, Community members, Epilepsy and knowledge

INTRODUCTION

Epilepsy is one of the most frequent neurological diseases worldwide. Epilepsy is defined as a non-communicable condition characterized by repeated seizures, which are defined as episodes of uncontrollable movements affecting various regions of the body or the entire body [1]. Seizures can also be defined as brain malfunction caused by the "misfiring" of neurons [2]. Epilepsy is a chronic non-communicable condition that affects approximately 50 million individuals worldwide. This disease affects more than 70 million people worldwide, with around five million people diagnosed with Epilepsy each year [3].

According to the South African Department of Health (DoH) (2017), around 2.4 million people worldwide are diagnosed with Epilepsy each year [4]. Annual new cases in high-income nations are between 30 and 50 per 100,000 people in the general population. This figure can be multiplied or tripled in poor and middle-income countries. In South Africa, one in every 100 people has Epilepsy, and several misconceptions limit a person's quality of life, such as receiving different treatment because they have Epilepsy, not reaching their full potential, and different community perceptions, such as people believing they have been bewitched [5]. Stigma, discriminations, myths and misconceptions are due to inadequate public knowledge on Epilepsy [6][7].

Epilepsy remains a significant public health problem due to its health implications and socially, culturally, psychologically, and economically affected people [8]. Studies have shown that indeed some community members are aware of Epilepsy. Still, they do not have enough or sufficient knowledge regarding Epilepsy which in turn makes them have different misconceptions, stigma and negative attitudes towards Epilepsy and PLWE (People Living with Epilepsy) [9] [10].

Studies reported that although community members have heard about Epilepsy, it remains that they still have a poor or low level of knowledge regarding Epilepsy and negative attitudes towards Epilepsy [8] [11] [12]. This reveals that the community have not received enough or sufficient facts/ information regarding Epilepsy. The information could be from either healthcare providers where they sit and read or listen to health care providers talk about Epilepsy or other forms of media, including radio, television and many more.

In South Africa, studies on Epilepsy are limited. There is no known study conducted assessing community members' knowledge, attitude, and awareness regarding Epilepsy in the selected villages of Limpopo and Mpumalanga provinces, South Africa. Therefore, the study was

conducted to assess community members' knowledge, attitude, and awareness in selected villages of Mpumalanga and Limpopo provinces, South Africa.

2 METHODS

2.1 STUDY PERIOD AND AREA:

The study was conducted from February 2021 to February 2022. The study was conducted in a natural setting of selected villages of Limpopo and Mpumalanga provinces, South Africa. The researcher had face-to-face interactions with the participants. Community members who live with PLWE in the selected villages will be the study's population sample.

In Limpopo, the study was done in Mtititi, Malavuwe and Bochum villages. Malavuwe is a village located in Vhembe District Municipality and is 201.4 km away from the Capital City Limpopo (Polokwane). Its nearest hospital (Donald Fraser) is located 20 km away from the village. Meanwhile, Mtititi village is situated in Vhembe District Municipality and is located 141 km away from Polokwane, the provincial capital city of Limpopo. Its nearest hospital (Malamulele Hospital) is 28 km away from the village. Bochum is a town in Blouberg local municipality located in Capricorn district and is located 93 km northwest from Polokwane capital city. Its nearest hospital is located 2.6 km away from the community. All these villages are rural-based communities. Tshivenda, Xitsonga and Northern Sotho are the most spoken languages with most residents that depend on government social grants, that is, child and old aged grants for their wellbeing [13].

Jerusalem and Clara are the chosen communities in the Mpumalanga province. Clara is located in the Bushbuckridge local municipality, 134 kilometres from Mpumalanga's capital, Nelspruit. The predominant language spoken in the area is siSwati. Ehlanzeni is a district in Jerusalem. The nearest Bongani hospital is in Hazy View, which is 19 kilometres distant. The predominant language in the area is siSwati [13]. Acornhoek is located in the Bushbuckridge local municipality, 124 kilometres from Mpumalanga's capital, Nelspruit

2.2 Study design, population and variables:

A cross-sectional descriptive design assessed community members' knowledge, attitude and awareness regarding Epilepsy. The source population was all the people/ community members that reside in the selected villages of Limpopo and Mpumalanga provinces. The variables that were considered to be dependent and independent in the study are the following:

Independent variable:

This includes the socio-demographic factors, which are gender, ethnic group, level of education, employment status and religion.

Dependent variables:

The level of knowledge regarding Epilepsy which can either be good or poor, the attitude towards Epilepsy which can either be positive or negative and the awareness regarding Epilepsy which can be being acquainted or not acquainted with Epilepsy.

2.2.1 Inclusion Criteria:

All community members above the age of 18years old who reside in the selected villages of the Limpopo and Mpumalanga in South Africa were approached for inclusion in the study.

2.2.2 Exclusion criteria:

All PLWE, caregivers, health care providers, parents and family members of PLWE were excluded from the study, including anyone who does not reside in the selected villages of Limpopo and Mpumalanga provinces.

2.3 Sample size determination:

The sample size for each population was attained using Rao-Soft [14] (See table 1). The following was adjusted using the population size of the selected villages in Limpopo and Mpumalanga Provinces. The sample size was computed based on a 1% margin of error and a 99% confidence level.

Table 1: Proportional distribution and Sample size

Province	Villages	Population size	Sample size	+10%
Limpopo	Mtititi	6722	604	668
	Malavuwe/Nweli	8453	616	678
	Bochum	6383	602	664
Mpumalanga	Clara	3576	560	616
	Acornhoek	33529	651	716
	Jerusalem	8813	618	680
Total sample size				**4022**

2.4 Sampling technique:

In this study, non-probability purposive sampling was used to select the provinces and selected villages. The reason for using purposive sampling follows from high prevalence rates of Epilepsy recorded in these two provinces, their cultural diversity and the lack of known literature on knowledge, attitude and awareness on Epilepsy disease. The villages considered in the study were Malavuwe, Mtititi and Bochum in Limpopo province, Clara, Acornhoek and Jerusalem in Mpumalanga province. Purposive sampling was used to choose participants for the study. The villages were used as the study clusters for each province, and participants were selected purposively.

2.5 Data collection and tools

The study's data was collected using administered questionnaires for knowledge, attitude and awareness, respectively. The researcher adapted the questionnaire in English and translated into six languages by an independent bilingual person to ensure that the different language versions provide the same meaning as the English one and maintain consistency. The languages that were used are: English, Venda, Swati, Pedi, and Tsonga. The questionnaire consisted of close-ended questions, which took about 15-20 minutes to complete. The questionnaire was pretested two weeks before the actual data collection period among 10% of the sample size. The participants who participated during pretesting of the questionnaire did not form part of the main study, and their results were not included in the final data analysis.

2.5.1 Knowledge:

The participants' general knowledge was assessed by using a pretested questionnaire consisting of 13 questions. These proxy questions were closed-ended, and the responses were rated on a scale ranging from 1 to 3, where 1= YES, 2= NO, three = DO NOT KNOW. One mark was allocated for each correct answer on the question, and if the participant gave a wrong answer, zero points were allocated. The mean score ranges from zero to thirteen (13), and it was used to determine the level of knowledge one has regarding Epilepsy.

Those who got eight (8) to thirteen (13) points were considered to have a good level of knowledge, and those who scored between zero (0) to seven (7) were considered to have a low level of knowledge regarding Epilepsy.

2.5.2 Attitude:

This section gathered data on participants' behaviour and feelings towards people living with Epilepsy (PLWE). A combination of ten (10) proxy statements was used to collect participants' responses on attitude variable, and the responses were measured on an ordered Likert scale which ranges from 1 to 5, where 1 = Agree, 2 = Disagree

2.5.3 Awareness:

This section consisted of three questions based on the community members' awareness of Epilepsy. Awareness proxy questions are binary or dichotomous variables involving only two possible responses (1-Yes and 0-No). For each answer on the question, one mark was allocated, and if the participant gave no as an answer, zero points were allocated. The mean score ranges from zero to five (5), and it was used to determine the level of awareness regarding Epilepsy. Those who got three (3) to five (5) points were considered to be acquainted with Epilepsy, and those who scored between zero (0) to two (2) were considered not to be acquainted with Epilepsy.

2.6 Data processing and analysis

After the data were checked for completeness and consistency, the data was then exported to SPSS Version 21 for analysis. Descriptive statistics were presented using texts, tables and pie charts. Cross-tabulation analysis calculated frequencies and proportions of the community members' demographic characteristics, knowledge, awareness, and attitudes.

2.7 Data quality control

Data quality was assured by pretesting the questionnaire before the actual data collection was done. Pretesting was done on 10% of the study population, and the results from the pretest were not included for final data analysis. Data quality was also assured by ensuring that data collectors are well trained intensively so and supervised during data collection. The questionnaire was thoroughly assessed and checked for completeness, accuracy, and clarity by both the authors and the data collectors. The questionnaire was translated from the different languages to English and English to the other languages to ensure consistency.

2.8 Ethical consideration

The research proposal was presented first at the Department of Public Health and then taken over for further assessment to the school of health sciences for quality purposes. The proposal was then submitted to the research ethics committee of the University of Venda for a thorough evaluation, and applications were made to obtain ethical clearance. Once the ethical clearance was gained, it was sent together with the research proposal to the University of Venda Higher Degree Committee for approval, which, when gained, was taken to the department of Health Limpopo and Mpumalanga provinces so that permission to conduct research can be gained. When gained, the next step was to conduct community entry to get permission from the tribal offices or royal houses of the selected villages. The participants were informed about confidentiality, respect and informed consent obtained.

3. RESULTS

3.1 Demographic characteristics of Community members

In this study, there was a huge participation from the Limpopo communities given the involvement of the tribal authorities wherein about 2930 participants completed the questionnaire in Limpopo province, and low participation was marked with 1360 participants who completed the questionnaire in Mpumalanga province. All completed questionnaires were included in the study, which amounted to 4290. This, in turn, boosted the sample power given the significant participation of community members. Most participants were females in both Limpopo (61%) and Mpumalanga (59.4%) provinces. Northern Sotho/Pedi (31.2%), Venda (35.8%) and Tsonga (30.5%) ethnic groups had more participants in Limpopo province; meanwhile, in Mpumalanga Province majority were Tsonga (56%) and Swati (40.4%) ethnic group. About 20.9% of participants had no formal education, and 41.6% had no grade 12; only 3.3% had tertiary education in Limpopo province. In Mpumalanga province, 11.5% had no formal education, 12.3 had grade 12, and only 1.4% had tertiary education.

Most of the participants in both Limpopo (79.6%) and Mpumalanga (70.5%) provinces were not employed. Religiously most participants were Christians. In Limpopo, we had 72.2%, and in Mpumalanga province, it was 84.4%.

TABLE 2: Demographic Characteristics of Community members

		Limpopo Province (N=2930)		**Mpumalanga Province (N=1360)**	
		Freq	**%**	**Freq**	**%**
Gender	Female	1786	61.0	808	59.4
	Male	1143	39.0	550	40.4
	Other	1	.0	2	.1
Ethnicity	Northern Sotho/Pedi	914	31.2	27	2.0
	Swati	3	.1	549	40.4
	Ndebele	14	.5	6	.4
	Venda	1050	35.8	2	.1
	Tsonga	895	30.5	762	56.0
	Afrikaans	4	.1	2	.1
	Zulu	3	.1	5	.4
	Southern Sotho	46	1.6	4	.3
	Coloured	0	0	2	.1
	Other	1	.0	1	.1
Level of Education	No formal education	612	20.9	156	11.5
	Primary education	604	20.6	355	26.1
	Secondary education without Grade 12	1220	41.6	663	48.8
	Secondary education with Grade 12	396	13.5	167	12.3
	Tertiary education	98	3.3	19	1.4
Employment status	Not employed	2332	79.6	959	70.5
	Self-employed	463	15.8	276	20.3
	Employed	135	4.6	125	9.2
Religion	Christianity	2115	72.2	1148	84.4
	Traditional	699	23.9	205	15.1
	Other	116	4.0	7	.5

3.2 Awareness of Epilepsy /seizures

Table 3 below provides the level of awareness among community members. The findings revealed that only about 54% of community members have seen a seizure in Limpopo province and about 65% in Mpumalanga province. It was also shown that the most community members from Mpumalanga province have heard or read about Epilepsy, and in Limpopo province, only about 48% have. There were also some marked limitations when it comes to having access to Epilepsy information which was mostly low in both provinces.

Table 3: Level of awareness among community members

	Limpopo Freq (%)	**Mpumalanga Freq (%)**
Ever seen seizure		
Not Aware	**1581(54.0%)**	476 (35.0%)
Aware	1349(46.0%)	**884(65.0%)**
Read or Heard of Epilepsy		
Not Aware	**1531(52.3%)**	369(27.1%)
Aware	1399 (47.7%)	**991(72.9%)**
Access to Epilepsy info		
Do not have	**2117(72.3%)**	**804(59.1%)**
Have	813(27.7%)	556(40.9%)

3.3 The level of knowledge regarding Epilepsy

In the analysis, the causes of Epilepsy which are; Epilepsy being a contagious disease, caused by a brain tumour, being genetical, caused by malnutrition, a curse from God, caused by witchcraft and being demon-possessed, were variables that are statistically revealing that respondents had poor knowledge towards Epilepsy. 54.8% of participants in Limpopo believed that PLWE had difficulty in learning, and in Mpumalanga, they were 68.5%. This shows that community members have insufficient knowledge regarding Epilepsy and its effect on the brain. Regarding epileptic seizures occurring when there is abnormal electric discharge in the brain, 42.0% of participants in Limpopo province agreed, 22.9% disagreed, and 35.1% did not know. In Mpumalanga province, 44.6% agreed, 18.9% disagreed, and 36.5% did not know. Overall, regarding the symptoms and treatment/management of Epilepsy, statistically, it showed that community members have poor knowledge of Epilepsy. Such as, 44.5% of community members

in Limpopo agreed that Epilepsy is associated with fever, 25.2% did not agree, and 30.4% did not know. In Mpumalanga province, 29.8% agreed, 40.6% disagreed, and 25.7% did not know.

Table 4: Knowledge of Epilepsy

		Province			
		Limpopo Province		Mpumalanga Province	
Items		**Freq**	**%**	**Freq**	**%**
Epilepsy is a contagious disease	Yes	689	23.5	432	31.8
	No	1605	54.8	721	53.0
	Don't know	636	21.7	207	15.2
Epilepsy is the disease associated with high fever	Yes	1303	44.5	405	29.8
	No	737	25.2	606	44.6
	Don't know	890	30.4	349	25.7
Epilepsy is a chronic brain disease that cannot be cured or controlled	Yes	1293	44.1	635	46.7
	No	996	34.0	516	37.9
	Don't know	641	21.9	209	15.4
Epilepsy can affect people of all races, ages and socioeconomic conditions	Yes	2223	75.9	1034	76.0
	No	393	13.4	201	14.8
	Don't know	314	10.7	125	9.2
People living with Epilepsy have difficulties in learning.	Yes	1605	54.8	931	68.5
	No	931	31.8	246	18.1
	Don't know	394	13.4	183	13.5
An epileptic seizure occurs when there is abnormal electric discharge in the brain	Yes	1231	42.0	607	44.6
	No	670	22.9	257	18.9
	Don't know	1029	35.1	496	36.5
Brain tumour can cause Epilepsy	Yes	1014	34.6	556	40.9
	No	959	32.7	379	27.9
	Don't know	957	32.7	425	31.3
Brain injury causes Epilepsy	Yes	1176	40.1	647	47.6
	No	959	32.7	365	26.8
	Don't know	795	27.1	348	25.6
Epilepsy can be genetical	Yes	1154	39.4	641	47.1

	No	1177	40.2	489	36.0
	Don't know	599	20.4	230	16.9
Epilepsy is caused by malnutrition	Yes	281	9.6	134	9.9
	No	1840	62.8	882	64.9
	Don't know	809	27.6	344	25.3
Epilepsy is a curse from God	Yes	893	30.5	267	19.6
	No	1263	43.1	789	58.0
	Don't know	774	26.4	304	22.4
Epilepsy is caused by witchcraft	Yes	660	22.5	375	27.6
	No	1446	49.4	719	52.9
	Don't know	824	28.1	266	19.6
Epilepsy is when you are demon-possessed	Yes	484	16.5	399	29.3
	No	1515	51.7	639	47.0
	Don't know	931	31.8	322	23.7

3.4 Attitudes towards Epilepsy

About 61.3% of the participants agreed that PLWE could not drive, and in Mpumalanga, 72.0% agreed. 59.3% of the participants in Limpopo agreed that PLWE would never be allowed to marry, and in Mpumalanga province, it was 59.5% that had agreed. Among the study participants in Limpopo province, 59.3% of participants agreed that PLWE could not be employed at any job, and 59.5% of participants in Mpumalanga agreed to this. Statistically, both Mpumalanga and Limpopo provinces had an unfavourable attitude towards Epilepsy.

Table 5: Attitude towards Epilepsy

		Limpopo Province		Mpumalanga Province	
		Freq	%	Freq	%
PLWE cannot be allowed to drive	Agree	1796	61.3	979	72.0
	Disagree	1134	38.7	381	28.0
PLWE cannot be employed in any job	Agree	1738	59.3	809	59.5
	Disagree	1192	40.7	551	40.5
PLWE will never be allowed to marry	Agree	1478	50.4	505	37.1
	Disagree	1452	49.6	855	62.9
I would be afraid to be alone with PLWE	Agree	1437	49.0	632	46.5
	Disagree	1493	51.0	728	53.5
PLWE cannot have children	Agree	1308	44.6	700	51.5
	Disagree	1622	55.4	660	48.5
Epilepsy can be cured with traditional medicines	Agree	1781	60.8	625	46.0
	Disagree	1149	39.2	735	54.0
I can allow my son/daughter to marry PLWE	Agree	1926	65.7	657	48.3
	Disagree	1004	34.3	703	51.7
I would be nervous about being near a PLWE because he/she might have a seizure	Agree	1214	41.4	611	44.9
	Disagree	1716	58.6	749	55.1
Epilepsy is a shame in the community	Agree	840	28.7	395	29.0
	Disagree	2090	71.3	965	71.0
If there is a PLWE I can allow a community health worker to visit my family	Agree	2631	89.8	1234	90.7
	Disagree	299	10.2	126	9.3

4 DISCUSSIONS

In South Africa, different studies were done on Epilepsy. Some of the studies closely related to this study are studies done in South Africa KwaZulu-Natal and Limpopo Province. The study in Limpopo mainly focused on the perceptions of Epilepsy [15], and the study in KwaZulu-Natal was medical knowledge on Epilepsy [16]. Meanwhile, in Limpopo and Mpumalanga provinces, there are traces of known studies that have been conducted regarding the knowledge, attitude and awareness of Epilepsy. Therefore, this study aims at closing the gap by assessing the knowledge, attitude and awareness of community members towards selected villages of Limpopo and Mpumalanga provinces, South Africa.

Community members are an important group because they contribute significantly to the life of PLWE. As a community member, it is important to be knowledgeable about Epilepsy because a PLWE may require assistance one day. If you are knowledgeable about Epilepsy, you may be able to assist. Knowledge is important because it allows one to have a different perspective on various aspects, which in this case could help to change ones' attitude towards Epilepsy. In this study, knowledge was insufficient, and community members from both provinces had a negative attitude toward Epilepsy.

The current study showed that about half of the participants in Limpopo and Mpumalanga provinces had disagreed that Epilepsy is a contagious disease. A study done in Saudi Arabia revealed that community members were knowledgeable[17], and 72.25% of participants disagreed that Epilepsy is an infectious disease [19]. Yet the current study shows lower statistical values than those in a study done in Southwest Ethiopia, where about 51% disagreed [13]. This difference could be due to cultural differences as the studies were done in different settings.

Religion plays an essential role in how one views certain aspects. For instance, most Christians believe that demons can inflict diseases, which could be why community members believe Epilepsy is related to devil superstitions hence the results below. In comparison with a study that was done in Khartoum State [18], where 21.1 % of the participants who were teachers related Epilepsy to devil superstitions and in this study, participants had unfavourable knowledge as more than a quarter of the participants in Mpumalanga agreed that Epilepsy is when you are demon-possessed and in Limpopo, it was favourable since only 16.3% agreed. The difference in the results in the different studies could be due to their levels of education. The study that was done in Khartoum was done on teachers where the majority had a bachelor's degree (51.4%). In contrast, when we look at our study, both provinces had most community members who had secondary education with no grade 12 yet had a low percentage.

A study that was done in the North of Iran [19] revealed that 31.5% of participants agreed that Epilepsy is hereditary/genetic. In the present study, there was slightly a high number in Limpopo and Mpumalanga provinces. The results could be due to the difference in the sample used because the study done in North of Iran was done on relatives of PLWE who lived with a PLWE or had a close relationship with a PLWE, while the current study was done on the public. More on the results, such results could be caused by community members seeing that an individual living with epilepsy either have a relative close to them or has Epilepsy. This could gauge one to believe that it is hereditary since they are not knowledgeable about the causes of Epilepsy.

In the question about allowing a PLWE to marry you, more than half of the participants in the current studies from Limpopo had agreed that PLWE would never be allowed to marry; the same applied to Mpumalanga. Results show how community members have a negative perspective towards people living with Epilepsy. A study done in Ethiopia [20] had 21.1% of participants who did not agree to their family members marrying a PLWE. Another study revealed that almost half of the participants (44.6%) disagreed about ever marrying a PLWE [21]. Marriage is a life commitment, and when a person engages themselves in such a relationship, they look into different factors such as health conditions.

Regarding the study at hand, literature revealed that many community members lack knowledge of the causes, symptoms, and treatment/management of Epilepsy. So, when one is not knowledgeable about Epilepsy, this can make one refuse to engage in a lifelong commitment such as marriage because they would have thoughts such as "what if he/she has seizures, what would I do?". Such can sway community members in disagreeing to marry a PLWE.

More on attitude, a study was done in Ethiopia shows that 35.6% of the participants had a positive attitude [22]. The attitude was more positive than a study done in Egypt, where only 8% had a good attitude [23]. A study in Italy revealed poor attitudes towards Epilepsy as 46% of the participants revealed that PLWE is limited to regular jobs [24]. Participants in the current study residing in both provinces had a negative attitude as more than half had agreed that PLWE could not be employed at any job. Meanwhile, in Sudan, 88% agreed that PLWE should work [25]. There are different Jobs, and each type of employment comes with its challenges. The nature of employment, the environment where one works, and the equipment or resources used to play a significant role in an individual's health status. Where Epilepsy is concerned, it is essential to consider those aspects and the risks involved.

Awareness is important as it allows an individual to understand different perspectives. A study in South-East Nigeria revealed that about 99% of the participants have heard about Epilepsy [26]. The study done in Nigeria [26] announces higher results than a study that was done in Germany

on high school students, as 94% had heard about Epilepsy [27]. Both studies show more significant results than those shown in the current study. Almost half of the participants were aware of Limpopo, and more than a quarter and half were aware of Mpumalanga province. A study done in Turkey revealed to be more aware of Epilepsy than the study at hand as 73.5% reported their awareness about Epilepsy [28].

In the current study, almost half of the community members from Limpopo province revealed that they had witnessed a PLWE having a seizure. More than half (65%) of the participants knew Mpumalanga province. Results in the Limpopo province of the current study are slightly similar to those of the study that was done in Saudi Arabia, where 49.75% of the participants revealed that they had witnessed a seizure before in their life [29]. The lowest percentage was revealed from a study done in Tahou on teachers where only 25% of the teachers had witnessed or seen a student having a seizure [30]. Regarding awareness, most studies revealed that community members aware of Epilepsy, as they have either read or heard about it, but revealed lesser awareness on witnessing a PLWE having a seizure.

With most of the studies that have been done on the knowledge, attitude and awareness of Epilepsy, a gap remains that needs to be bridged on those variables.

5. Conclusions and recommendations

The study revealed a huge gap in the literature, insufficient knowledge and an unfavourable attitude towards Epilepsy. This demonstrates the need for community engagement in education and awareness, which will help alleviate different misconceptions, stigma and myths around Epilepsy. Educational programmes can be drawn up and implementation taken to recruit and educate community members. This will also help change the public perspective regarding Epilepsy. Awareness campaigns can be done with motivational speakers available. This can help change the community members' attitudes towards Epilepsy and equip their minds with information on Epilepsy and ways to live around PLWE.

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Contributions

MM, MJT, MNS and ML apprehended and designed the study. MM, MJT, MNS and ML organized the fieldwork and collected the data. ML and MM analyzed the data. MM wrote the paper, and all the authors in the study revised the paper and reviewed it critically for appropriate intellectual content. ML, MJ and ML approved the paper.

Ethics Declarations

The University of Venda Research Ethics Committee approved and gave ethical clearance to the authors. The researchers consulted the royal council/tribal office of all the communities involved regarding the permission of the study, and they gave us consent for community engagement. Participants in the study signed and consented to be part of the study.

Data availability

All the data sets that were used for the study are available from the corresponding author on reasonable request.

Conflict of interest

The authors declare that they are no conflicts of interest.

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SECTION 3

STUDY CONCLUSIONS, STRENGTHS AND LIMITATIONS, AND RECOMMENDATIONS

Introduction

This section of the study about knowledge, attitudes and awareness of community members in selected villages of Limpopo and Mpumalanga provinces concludes all sections of the study. The section involves general discussions, strengths and limitations, conclusion and recommendations as discussed below.

General discussions

The study titled ‘’Knowledge, attitudes and awareness of community members in selected villages of Limpopo and Mpumalanga provinces, South Africa’’ assessed knowledge, attitude and awareness amongst community members in selected villages Mpumalanga and Limpopo provinces. The aim was achieved as community members engaged themselves in the study, and 2930 participants from Limpopo province participated and 1360 from Mpumalanga province. The data was collected using a questionnaire that consisted of four (4) sections (refer to Annexure: N). The results revealed that both Limpopo and Mpumalanga provinces lacked knowledge and have negetuve attitude towards Epilepsy. A study from South Indian village yielded the same results (Krishnaiah, Alwar and Ranganathan, 2016) .Although some studies show positive results (Caveness, Merritt, Gallup, 1974) (Canger and Cornaggia, 1985) (Jensen and Dam,1992) ,from the current study findings, it was evident that community members know of Epilepsy, yet they do not acquire the relevant knowledge of what Epilepsy is, what are its causes, symptoms and treatment/management. The community members are well informed about Epilepsy by getting information from healthcare providers, awareness campaigns, reading, watching television, or listening to the radio. Community members showed negative attitudes as more than half of the respondents in Limpopo and Mpumalanga agreed that PLWE cannot be employed for any job. More than half of the participants residing in Mpumalanga agreed that PLWE could not have children, with 44.9% of the respondents agreeing that they would be nervous about being near a PLWE because they might have a seizure. This shows that the community members need to be educated about Epilepsy as this will also help change their perspective towards Epilepsy. The study was about assessing the knowledge, attitude and awareness of community members in selected communities of Limpopo and Mpumalanga provinces and this section includes the conclusion, limitation and recommendations. Looking at the study findings, the findings reveal that there is lack of knowledge. When one is not

knowledge about a certain subject, they tend to have a negative attitude and have a different perspective towards it. In this study community members have insufficient knowledge regarding Epilepsy which leads to them having negative attitudes as well. Most of the participants were not aware of Epilepsy which remains a challenge. The study revealed that awareness must be promoted, as well as ensuring that community members are educated through healthcare practitioners involvement.

Limitations

The limitation is the questionnaire with close-ended questions, leading to the limited outcome of the research study. The respondents have limited options, and they could not express themselves in a questionnaire. If the research study was based on both quantitative and qualitative approaches with interviews, perhaps this would better the results.

Recommendations

Recommendations for the community members

The community members must be educated about Epilepsy to help eliminate misconceptions, myths, discrimination, and stigma around Epilepsy.

Recommendationsfor further research

Based on the study's findings, the researcher recommends a study to be done to develop a guideline or awareness programme that will help acquaint the community members with knowledge regarding Epilepsy.

Conclusions

The study noted overall insufficient knowledge, poor attitude towards Epilepsy although awareness was sufficient. Although Epilepsy studies were done globally, little has been done to ensure that community members are knowledgeable so that misconceptions, stigma and discrimination are reduced. Studies recommended and developed strategies to combat these challenges, however, some regions still lack epilepsy-related knowledge, required attitudes and awareness.

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ANNEXURE A: ETHICAL CLEARANCE

ETHICS APPROVAL CERTIFICATE

RESEARCH AND INNOVATION
OFFICE OF THE DIRECTOR

NAME OF RESEARCHER/INVESTIGATOR:
Ms M Munyadziwa

STUDENT NO:
15002498

PROJECT TITLE: **The knowledge, attitude and awareness of epilepsy in selected villages of Limpopo and Mpumalanga Provinces, South Africa.**

ETHICAL CLEARENCE NO: SHS/20/PH/33/0302

SUPERVISORS/ CO-RESEARCHERS/ CO-INVESTIGATORS

NAME	INSTITUTION & DEPARTMENT	ROLE
Dr JT Mabunda	University of Venda	Supervisor
Dr NS Mashau	University of Venda	Co-Supervisor
Ms. M Munyadziwa	University of Venda	Investigator – Student

Type: Masters Research
Risk: Straightforward research without ethical problems
Approval Period: February 2021 – February 2023

The Human and Clinical Trails Research Ethics Committee (HCTREC) hereby approves your project as indicated above.

General Conditions
While this ethics approval is subject to all declarations, undertakings and agreements incorporated and signed in the application form, please note the following.

- The project leader (principal investigator) must report in the prescribed format to the REC:
  - Annually (or as otherwise requested) on the progress of the project, and upon completion of the project
  - Within 48hrs in case of any adverse event (or any matter that interrupts sound ethical principles) during the course of the project.
  - Annually a number of projects may be randomly selected for an external audit.
- The approval applies strictly to the protocol as stipulated in the application form. Would any changes to the protocol be deemed necessary during the course of the project, the project leader must apply for approval of these changes at the REC. Would there be deviated from the project protocol without the necessary approval of such changes, the ethics approval is immediately and automatically forfeited.
- The date of approval indicates the first date that the project may be started. Would the project have to continue after the expiry date: a new application must be made to the REC and new approval received before or on the expiry date.
- In the interest of ethical responsibility, the REC retains the right to:
  - Request access to any information or data at any time during the course or after completion of the project,
  - To ask further questions; Seek additional information; Require further modification or monitor the conduct of your research or the informed consent process.
  - withdraw or postpone approval if:
  - Any unethical principles or practices of the project are revealed or suspected.
  - It becomes apparent that any relevant information was withheld from the REC or that information has been false or misrepresented.
  - The required annual report and reporting of adverse events was not done timely and accurately.
  - New institutional rules, national legislation or international conventions deem it necessary

ISSUED BY:
UNIVERSITY OF VENDA, RESEARCH ETHICS COMMITTEE
Date Considered: November 2020

Name of the HCTREC Chairperson of the Committee: Prof MS Maputle

Signature:...

UNIVERSITY OF VENDA
OFFICE OF THE DIRECTOR
RESEARCH AND INNOVATION
2021 -02- 05
Private Bag X5050
Thohoyandou 0950

ANNEXURE B1: PERMISSION LETTER OF (DoH) LIMPOPO

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

Department of Health

Ref	:	LP_2020-12-011
Enquires	:	Ms PF Mahlokwane
Tel	:	015-293 6028
Email	:	Phoebe.Mahlokwane@dhsd.limpopo.gov.za

Lufuno Makhado

PERMISSION TO CONDUCT RESEARCH IN DEPARTMENTAL FACILITIES

Your Study Topic as indicated below**;**

Epilepsy intervention programme in rural communities of Limpopo and Mpumalanga Provinces

1. Permission to conduct research study as per your research proposal is hereby Granted.
2. Kindly note the following:
    a. Present this letter of permission to the institution supervisor/s a week before the study is conducted.
    b. In the course of your study, there should be no action that disrupts the routine services, or incur any cost on the Department.
    c. After completion of study, it is mandatory that the findings should be submitted to the Department to serve as a resource.
    d. The researcher should be prepared to assist in the interpretation and implementation of the study recommendation where possible.
    e. The approval is only valid for a 1-year period.
    f. If the proposal has been amended, a new approval should be sought from the Department of Health
    g. Kindly note that, the Department can withdraw the approval at any time.

    Your cooperation will be highly appreciated

pp **Head of Department** **Date** 16/03/2021

Private Bag X9302 Polokwane
Fidel Castro Ruz House, 18 College Street. Polokwane 0700. Tel: 015 293 6000/12. Fax: 015 293 6211.
Website: http/www.limpopo.gov.za

The heartland of Southern Africa – Development is about people!

ANNEXURE B2: PERMISSION LETTER OF (DoH) MPUMALANGA

health
MPUMALANGA PROVINCE
REPUBLIC OF SOUTH AFRICA

MPUMALANGA
THE PLACE OF THE RISING SUN

No.3, Government Boulevard, Riverside Park, Ext. 2, Mbombela, 1200, Mpumalanga Province
Private Bag X11285, Mbombela, 1200, Mpumalanga Province
Tel I: +27 (13) 766 3429, Fax: +27 (13) 766 3458

Litiko Letemphilo | Departement van Gesondheid | UmNyango WezeMaphilo

1. **Name & contact no. of Applicant**	**Dr Lufuno Makhado**
2. **Title of Study: EPILEPSY INTERVENTION PROGRAMMES IN RURAL COMMUNITIES OF LIMPOPO AND MPUMALANGA PROVINCES**	
3. **Aim and population target:** **AIMs:** **PHASE 1 NEEDS ASSESSMENT** 1. To identify attitudes and cultural practices, related to epilepsy and its influence on caring for affected individuals among rural communities in Limpopo and Mpumalanga Province, South Africa 2. To explore the experiences of people living with epilepsy in the rural communities of in Limpopo and Mpumalanga Province, South Africa 3. To explore the experiences of people (parents, guardians and community health workers) caring for people living with epilepsy in the rural communities of Limpopo and Mpumalanga Province, South Africa 4. To explore the perception of community members regarding epilepsy among rural communities in Limpopo and Mpumalanga Province, South Africa 5. To determine the level of knowledge and awareness related to epilepsy among rural communities in Limpopo and Mpumalanga, South Africa **PHASE 2 PROGRAM AND INTERVENTION DEVELOPMENT** 6. To develop a community-based epilepsy awareness program in challenged and vulnerable communities of Limpopo and Mpumalanga Province 7. To develop an epileptic culturally congruent care intervention for people living with epilepsy program in challenged and vulnerable communities in Limpopo and Mpumalanga Province, South Africa 8. To develop primary and secondary school epilepsy life skills guideline for in Limpopo and Mpumalanga Provinces. 9. To pilot the epilepsy intervention programme in the rural communities of Limpopo and Mpumalanga Provinces 10. To conduct an evaluation of the epilepsy intervention programme (i.e. the process, effectiveness and impact) **The target populations:** • People living with epilepsy • Community members, family members of PLWE • Health care providers • Traditional health practitioners	
4. **Period to undertake the study**	**From: August 2020 to: December 2023**
5. Resources Required from Facility/Sub-district/Community	

Please note that this letter is not an approval to undertake a study, but a support letter from identified facility/district.
i.e. the CEO/District Manager acknowledges to have been consulted on the study

ANNEXURE C: PERMISSION LETTER TO THE ROYAL COUNCIL

Po box 3879

Thohoyandou

0950

02 February 2021

To whom it may concern

My name is Munyadziwa Muimeleli, of student No: 15002498. I am a registered student at University of Venda enrolled for Master of Public Health. I am here by requesting permission to conduct a quantitative research study titled, "***Knowledge, attitudes and awareness of community members regarding Epilepsy in selected villages of Limpopo and Mpumalanga Provinces, South Africa***". I am interested to conduct a study involving community members. I wish to visit your community and collect data from community members to assess their knowledge, attitudes and awareness regarding Epilepsy. Data will be collected by means of a questionnaire that will last for about 15-20 minutes. All covid 19 rules and regulations will be followed to ensure the health safety of the community members. The data collected will help us and others plan better strategies for future.

Your approval will be highly appreciated.

Yours Truly

Munyadziwa M

Email Address : muimeleli.mm@gmail.com

Phone No: 0646534949

ANNEXURE D: PERMISSION LETTER TO THE TRADITIONAL LEADERS

Po box 3879

Thohoyandou

0950

02 February 2021

To whom it may concern

My name is Munyadziwa Muimeleli, of student No: 15002498. I am a registered student at University of Venda enrolled for Master of Public Health. I am here by requesting permission to conduct a quantitative research study titled, "***Knowledge, attitudes and awareness of community members regarding Epilepsy in selected villages of Limpopo and Mpumalanga Provinces, South Africa***". I am interested to conduct a study involving community members. I wish to visit your community and collect data from community members to assess their knowledge, attitudes and awareness regarding Epilepsy. Data will be collected by means of a questionnaire that will last for about 15-20 minutes. All covid 19 rules and regulations will be followed to ensure the health safety of the community members. The data collected will help us and others plan better strategies for future. The data collected will help us and others plan better strategies for future.

Approval from the communities traditional leaders will be highly appreciated.

Yours Truly

Munyadziwa M

Email Address : muimeleli.mm@gmail.com

Phone No: 0646534949

ANNEXURE E: UNIVEN INFORMATION SHEET AND INFORMED CONSENT FORM

RESEARCH ETHICS COMMITTEE

UNIVEN Informed Consent

LETTER OF INFORMATION

Title of the Research Study: Epilepsy: Knowledge, attitudes and awareness of community members regarding Epilepsy in selected villages of Limpopo Province, South Africa.

Principal Investigator/s/ researcher : Miss Munyadziwa Muimeleli
Co-Investigator/s/supervisor/s : (Mabunda JT, PhD and Mashau NS, PhD)

Brief Introduction and Purpose of the Study: I am Munyadziwa Muimeleli, a Master of Public Health student in the School of Health Science at University of Venda. As part of my curriculum I will be conducting a research project titled: "***Knowledge, attitudes and awareness of community members -regarding Epilepsy in selected villages of Limpopo and Mpumalanga Province, South Africa***". The aim of the study is to determine community knowledge, attitude and awareness regarding Epilepsy at selected villages (Mtititi and Malavuwe) of Limpopo provinces.

Outline of the Procedures: The proposed study will employ quantitative approach in nature using descriptive, cross sectional design. The study will be conducted in Limpopo and Mpumalanga provinces. The selected villages are: Mtititi and Malavuwe. The selected communities were selected purposively and stratified random sampling will be used to stratify the communities. Participants will be selected randomly until the sample size is reached. The target group are community members residing in the selected area. The research questionnaire will take about 10 to 15 minutes to fully complete it.

Risks or Discomforts to the Participant: There are no risks for participating in this study and if any risk can occur that the participant can detect, the matter will be taken into consideration.

Benefits: There are no anticipated direct benefits for participating in the study. The findings of the study may bring value to the health care providers, the community members and health system as a whole. The findings may also be used by health care providers who are providing care to PLWE. The study findings may benefit the community members of the selected villages to make informed decisions when caring for PLWE.

Reason/s why the Participant May Be Withdrawn from the Study: Participation in the research study in voluntary. The participant is not forced to participate. Participants will be

informed of the voluntary participation and right to withdraw without any penalty. Participants can withdraw at any time that they want.

Remuneration **:** There will be no remuneration for input.

Costs of the Study **:** In this study there participants will not pay any certain amount of money.

Confidentiality **:** The information from the study will be used for the study

purposes only and will not be accessed by any third party that is not involved. Findings of the study will not be linked to any participants.

Research-related Injury There will be no harm/injury that may occur to participants during the study. The researcher does not anticipate any research related injury and there is no funding for any injury

.

Persons to Contact in the Event of Any Problems or Queries:

(Supervisor and details) Please contact the researcher Miss Munyadziwa.M (064 653 4949.), my supervisor Dr Mabunda J (082 842 6328) or cosupervisor Dr Mashau N (082 458 4689). You can also contact he University Research Ethics Committee Secretariat on 015 962 9058. Complaints can be reported to the Director: Research and Innovation, Prof GE Ekosse on 015 962 8313 or Georges Ivo.Ekosse@univen.ac.za

General:

Potential participants must be assured that participation is voluntary and the approximate number of participants to be included should be disclosed. A copy of the information letter should be issued to participants. The information letter and consent form must be translated and provided in the primary spoken language of the research population

ANNEXURE F: UNIVERSITY CONSENT FORM

Statement of Agreement to Participate in the Research Study:

- I hereby confirm that I have been informed by the researcher, (Munyadziwa Muimeleli), about the nature, conduct, benefits and risks of this study - Research Ethics Clearance Number: _,
- I have also received, read and understood the above written information (Participant Letter of Information) regarding the study.
- I am aware that the results of the study, including personal details regarding my sex, age, date of birth, initials and diagnosis will be anonymously processed into a study report.
- In view of the requirements of research, I agree that the data collected during this study can be processed in a computerized system by the researcher.
- I may, at any stage, without prejudice, withdraw my consent and participation in the study.
- I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.
- I understand that significant new findings developed during this research which may relate to my participation will be made available to me.

Management risk for Covid-19

- All participants should be sanitized before taking the questionnaire and pen
- Participants will be eligible for participation only if they wear a mask
- Participants must maintain social distancing.

Full Name of Participant	Date	Time	Signature
I, ...	**.....**	**.....**	**.....**

(Munyadziwa Muimeleli) herewith confirm that the above participant has been fully

Informed about the nature, conduct and risks of the above study.

Full Name of Researcher :Munyadziwa Muimeleli

Date……. Signature……

Full Name of Witness (If applicable)……

Date ……. Signature……..

ANNEXURE G: RESEARCH QUESTIONNAIRE

Questionnaire Instructions: Place a cross (**X**) in the box next to the answer of your choice.

Section A: Socio-demographic Factors

Characteristics of the Participants

1. Gender**:**

Female	1
Male	2
Other	3

If other, please specify……..

2. What is your ethnic group?

Northern Sotho (Pedi)	1
Swati	2
Ndebele	3
Venda	4
Tsonga	5
Afrikaans	6
Zulu	7
SeSotho	8
Coloured	9
Indian	10
Other	11

If other, please specify……..

3. Level of Education:

No education	1
Primary education	2
Secondary education	3
Tertiary education	4

4. Employment status:

Unemployed	1
Employed	2
self employed	3

1. Religion:

Christianity	1
Traditional	2
Others	3

If other, please specify.....

Section B: Knowledge

Instruction: for each of the questions, cross your response that best characterizes how you feel about the following statements. Where **1 = YES**, **2 = NO and 3 = DO NOT KNOW**

	Y =1	**N =2**	**DKN =3**
2. Epilepsy is a contagious disease?	1	2	3
3. Epilepsy is a brain chronic disease that cannot be cured or controlled.	1	2	3
4. Epilepsy can affect people of all races, age and socioeconomic conditions.	1	2	3
5. People living with Epilepsy have difficulties in learning.	1	2	3
6. Epileptic seizure occurs when there is abnormal electric discharge in the brain	1	2	3
7. Brain injury causes Epilepsy	1	2	3
8. Epilepsy is genetic	1	2	3
9. Epilepsy is caused by malnutrition	1	2	3
10. Epilepsy is a curse from God	1	2	3
11. Epilepsy is caused by witchcraft	1	2	3
12. Epilepsy is when you are demon-possessed	1	2	3

Section C: Attitude

Please indicate with a cross your best view. It can either be Strongly agree (SA), Agree (A), Disagree(D), Strongly Disagree (SD)

	SA	**A**	**D**	**SD**

	1	2	3	4
1. People living with Epilepsy cannot be allowed to drive	1	2	3	4
2. People living with Epilepsy cannot be employed in any job	1	2	3	4
3. People living with Epilepsy will never be allowed to marry	1	2	3	4
4. I would be afraid to be alone with person living with Epilepsy	1	2	3	4
5. People living with Epilepsy cannot have children	1	2	3	4
6. Epilepsy can be cured with traditional medicines	1	2	3	4
7. I can allow my son/daughter to marry a person living with Epilepsy	1	2	3	4
8. I would be nervous to be near a person living with Epilepsy because he/she might have a seizure	1	2	3	4
9. Epilepsy is a shame in the community	1	2	3	4
10. If there is a person living with Epilepsy I can allow a community health worker to visit my family	1	2	3	4

Section D: Awareness

	YES	NO
1. Have you heard about Epilepsy or read about it?	**1**	**2**
2. Have you ever come across a PLWE having at attack or seizure?	**1**	**2**
3. Do you have access to Epilepsy information?	**1**	**2**
Total :		

TSHIVENDA QUESTIONNAIRE

Nomboro ya mutevhewe wa mbudziso _____

Fhethu _____

Datumu ___/___/_____

Tshifhinga _____

Hedzi mbudziso ndi tshipida tsha thoduluso dzo teaho u wanulusa ndivho na u tsivhudza vhathu nga ha tshifakhole, u itela program ya tsivhudzo nga ha tshifakhole. Ri a livhuwa vho nanga u dzhenelela, zwidodombedzwa zwavho zwi thonifheaho zwi do thusa u bveledza muloro wa heyi thoduluso

KHAVHA TOVHEDZELE:

Hedzi mbudziso dzo katela phara nna na masiatari mararu, a vha zwiite mafhungo uri vhanazwo zwothe.

Ri humbela vha fhindule mbudziso dzothe nga u fulufhedzea vha swae ngau shumisa (X) kha zwidzanga zwi re nga tsini kana vha dadzisele vhupfiwa havho kha zwi thoma arali zwi khou todea.

PHARA A: ZWIDODOMBEDZA NGA HA MUDZHENELELI

1. Mbeu yavho ndi ifhio

Mufumakadzi	1
Munna	2
Zwinwe vho?	3

2. Ndi tshifhio tshigwada tshavho tsha lushaka

Suthu saseNyakatfo (Pedi)	1
Swati	2
Ndebele	3
Venda	4
Tsonga	5
Afrikaans	6
Zulu	7
SeSotho	8
Coloured	9
Indian	10
Tshinwe vho	11

Arali hu lushaka lunwevho, ri humbela vha taluse……..

3. Vho pfumbudzea u swika ngafhi kha sia lau guda

Thongo funzea	1
Kha ngudo dza primary	2
Kha ngudo dza sekondari husina matiriki	3
Kha ngudo dza sekondari na matiriki	4
Kha ngudo dza univesithi	5

4. Tshiimo tshavho tshau tholiwa kana u shuma tshihani?

   Arali hu vhunwevho, ri humbela vha taluse……

Thi shumi	1
Ndi to di shuma	2
Ndo to tholiwa	3

5. Vhurereri havho ndi vhufhio?

Vha Mukereki	1
Vhurereli ha tshirema	2
Islam	3
Hindu	4
Vhunwe vho?	5

Arali vhoto tholiwa, ri humbela vha taluse lushaka lwa mushumo wavho……

PHARA B: NDIVHO NGAHA TSHIFAKHOLE NA ZWIVHANGI ZWODI IMISELAHO

Dza Q15-Q27 Sumbedzani nga Ee (E), Hai (N), kana thidivhi (TDV)

	(E) =1	(N) =2	(TDV) =3
1. Tshifakhole ndi vhulwadze ha phirela.vhu no fhirela	1	2	3
2. Tshifakhole ndi vhulwadze ha muhumbulo vhu ne a vhu koni u alafhea kana u langea	1	2	3
3. Tshifakhole tshi a kwama vhathu vha tshaka dzothe, minwaha nanga ndila dzo fhambananaho dza khutshilele	1	2	3
4. Vhathu vha re na tshifakhole vha a kondelwa u guda	1	2	3
5. U vhaisala muhumbulo zwi nga vhanga tshifakhole	1	2	3
6. Tshifakhole ndi vhulwadze ha doledza nga u bebwa nga vha re naho	1	2	3
7. Tshifakhole ttshi vhangiwa nga u sa la zwiliwa zwa pfushi	1	2	3
8. Tshifakhole tshi vhagwa nga Mudzimu	1	2	3
9. Tshifakhole tshi vhangwa nga vhuloi	1	2	3
10. Tshifakhole ndi musi vho dzheniwa nga dimoni	1	2	3

PHARA C: KUVHONELE KWA ZWITHU

Dza Q28 – Q37 Sumbedzani vhupfiwa hanu nga Ndia tenda ndo di imisela (TNI), Ndia tenda (T), Ndia hanedza (H), kana Ndia hanedza ndo di imisela (HNI)

	(TNI) =1	(T) =2	(H) =3	(HNI) =4
1. Vhathu vhane vha khou tshila na tshifakhole a vho ngo tendelwa u reila goloi	1	2	3	4
2. Vhathu vhane vha khou tshila na tshifakhole a vha tholiwi	1	2	3	4
3. Vhathu vhane vha khou tshila na tshifakhole a vho ngo tendelwa u mala/maliwa	1	2	3	4
4. Ndi nga ofha u sala ndi ndothe na muthu a re na tshifakhole	1	2	3	4
5. Vhathu vhane vha khou tshila na tshifakhole a vha koni uvha na vhana	1	2	3	4
6. Tshifakhole tshi nga fhola nga dzilafho la tshirema	1	2	3	4
7. Ndi nga tendela nwana wanga a tshi maliwa nga muthu a re na tshifakhole	1	2	3	4

8. Ndi nga ofha u vha tsini na muthu a re na tshifakhole ndi tshi shavha uri angawa 1 2 3 4

9. Tshifakhole tshi a shonisa shangoni la hashu 1 2 3 4

	YES	NO
1. No no vhona mutsiko wa tshifakhole	**1**	**2**
2. Ni na khonani kana shaka a re na tshifakhole?	**1**	**2**
3. No/Vhono no thusa muthu o tsikwaho nga tshifakhole	**1**	**2**
Total :		

TSONGA QUESTIONNAIRE

Nomboro ya nongonoko wa swivutiso_____

Muganga/xitandi _____

Siku ___/____/_____

Nkarhi _____

Nongonoko lowu wa swivutiso i xiphemu xa ndzavisiso ku kambela xiyimo xa vutivi na ku lemuka loku vanhu va nga nakona hi switshetshela ku endla nongonoko wo lemukisa vanhu hi vuvabyi lebyi. Ha swi tlangela ku va u hlawule ku va xiphemu, rungula ra wena ra nkoka ri ta hi pfuna ku fikelela xikongomelo xa phurojeke leyi.

SWILETELO:

Nongonoko lowu wa swivutiso wu na swiyenge swa mune (4) matluka manharhu (3) vona leswaku u na wona hinkwawo.

Hi kombela u hlamula swivutiso hinkwaswo hi ku tshembeka u tirhisa xihambano (X) ebokisini kumbe ku tata xivandla lexi pfulekeke loko swi fanela

Xiyenge A: Vuxokoxoko bya loyi a hlamulaka (Kombisa hi √)

1. Rimbewu**:**

Waxisati	1
Waxinuna	2
Swinwana	3

Loko u hlawule swinwana, Hi kombela u boxa……..

2. Ririmi **:**

Xipedi 1

Xiswati 2

Xindevele 3

Xivenda 4

Xitsonga	5
Xibunu	6
Xizulu	7
Xisuthu	8
Xibusumani	9
Xikula	10
Swinwana	11

Loko u hlawule swinwana, Hi kombela u boxa……..

3. Dyondzo leyi u yi fikeleleke:

Ani dyondzangi	1
Ya xikolo xa le hansi	2
Ya sekondari ni pase giredi ya 12	3
Dyondzo ya le henhla	4

4. Vukhongeri:

Loko u hlawule swinwana, Hi kombela u boxa……..

Xikreste	1
Ndhavuko/xintu	2
Swinwana	3

5. Xiyimo xa ntirho:

A ni tirhi	1
Ndza tirha	2
Ndza ti tirha	3

6. Hi rihi vito leri tolovelekeke emugangeni wa ka nwina ra switshetshela ……..

XIYENGE B: VUTIVI HI SWITSHETSHELA KUMBE VUVABYI BYA KU WA NA LESWI BYI VANGAKA HI KU YA HI WENA

Ka swivutiso 15 ku ya ka 27 hlamula hi INA (Y), kumbe **E-E (N)** kumbe **A NI TIVI (DKN)**

		(Y)	(N)	(DKN)
		1	**2**	**3**
1.	Switshetshela i vuvabyi byo tlulela	1	2	3
2.	Switshetshela I vuvabyi lebyi nga tshungulekiki kumbe ku lawuleka	1	2	3
3.	Switshetshela swi khoma unwana na unwana ku nga khathariseki rixaka, malimbe rixaka, malembe kumbe xiyimo hi swa timali	1	2	3
4.	Vanhu lava hanyaka na switshetshela va tikeriwa exikolweni	1	2	3
5.	Ku vaviseka byongo swi nga vanga switshetshela	1	2	3
6.	Switshetshela swi nga va kona hi xitekela	1	2	3
7.	Switshetshela swi nga vangiwa hi madyelo yo biha	1	2	3
8.	Switshetshela i ndzhukano wo huma ka Xikwembu	1	2	3
9.	Switshetshela swi vangiwa hi vuloyi	1	2	3
10.	Switshetshela I ku va na mademona	1	2	3

XIYENGE C: LANGUTELO

Ka swivutiso 28 ku ya ka 37 hlamula hi Ndzi pfumela swinene (SA) kumbe **Ndza pfumela** (**A**) **kumbe Ndza Ala (D) kumbe Ndzi ala Swinene (SD)**

		SA	A	D	SD
		1	**2**	**3**	**4**
1.	Vanhu lava hanyaka na switshetshela a va pfumeleriwi ku rheyila	1	2	3	4
2.	Vanhu lava hanyaka na switshetshela va nge thoriwi ka ntirho hambi wu ri wihi	1	2	3	4
3.	Vanhu lava hanyaka na switshetshela a va pfumeleriwi ku nghenela vukati	1	2	3	4
4.	Ndzi nga chava ku va na munhu wa switshetshela ndzi ri ndzexe	1	2	3	4
5.	Switshetshela swi nga tshungriwa swi hola hi xintu	1	2	3	4
6.	Vanhu lava hanyaka na Switshetshela a va pfumeleriwi ku nghenela vukati	1	2	3	4

7.	Ndzi nge pfumeleli nwana wa mina a teka/tekiwa hi munhu loyi a hanyaka na switshetshela	1	2	3	4
8.	Ndzi nga chava ku va kusuhi na munhu loyi a hanyaka na switshetshela ku a nga tshuka a ve na xitshetshela	1	2	3	4
9.	Switshetshela I tingana emugangeni	1	2	3	4
10.	Loko ku ri na munhu la hanyaka na switshetshela ni nga pfumelela mutirhi va swa rihanyo (CHW) ku endzela kaya ka mina	1	2	3	4

XIYENGE D: LESWI HI SWI ENDLAKA MAYELANA NA KU LANGUTANA NA SWITSHETSHELA (VUVABYI BYA KU WA)

	YES	NO
1. U na munghana kumbe xaka leri hanyaka na switshetshela	**2**	**2**
2. U na munghana kumbe xaka leri hanyaka na switshetshela	**2**	**2**
3. tshama u pfuna munhu loyi anga na xitshetshela	**2**	**2**
4. Xana u tshame u nyikela mpfuno eka munhu la hanyaka na switshetshela	**1**	**2**
Total :		

SWATI QUESTIONNAIRE

IMIBUTO YEKUCOCA LWATI LWEMALUNGA EMPHAKATSI

Inombolo yemibuto _____
Lidolobhana _____
Lusuku ___/___/_____
Sikhatsi _____

Lencwadzi yemibuto iyincenye yelucwaningo loluhlose kuhlola lizinga lelwati nekuchwashisa banftu labanalo esifeni sekuwa sekwenta luhlelo lekuchwashisa ngesifo sekuwa. Siyabonga ngekukhetsa kubamba lichaza, imininingwane yakho lebalulekile itosita ekufezeni inhloso yale phrojekthi

IMIYALO:

Luhlu lwemibuto lakhiwe tincenye letine nemakhasi lama-3, ucinisekise kutsi unako konkhe loku.

Uyacelwa kutsi uphendvule yonkhe imibuto ngebuhlakani usebenisa siphambano (X) ebhokisini noma ufake imininingwane emgceni lonamachashati uma kunesidzingo.

SICEPHU A: LWATI NGETIHLANGANISA NEBANTFU

1. Bulili**:**

Owesifazane	1
Lomdvuna	2
Lokunye	3

Uma kungekho njalo, sicela usho ……..

2. Buhlanga**:**

Suthu saseNyakatfo (Pedi)	1
Swati	2
Ndebele	3
Venda	4
Tsonga	5
Afrikaans	6
Zulu	7
SeSotho	8
Coloured	9
Indian	10
Labanye	11

3. Lizinga Lwemfundvo:

Kute imfundvo lehlelekile	1
Imfundvo yemabanga laphansi	2
Temfundvo yesibili lengenalo liBanga la-12 Matikuletjeni	3
Temfundvo yesibili neliBanga le-12 Matikuletjeni	4
Imfundvo lephakeme	5

4. Inkholo:

Uma kungekho njalo, sicela usho.....

BuKhristu	1
Lisiko	2
Lokunye	3

5. Umsebenti:

Awusebenti	1
Uyasebenta	2
Uyatisebenta	3

6. Yini ligama lesifo sekuwa lelijwayelekile emphakatsini wangakini

_____

SICEPHU B: LWATI NGESIFO SEKUWA KANYE NEKUVISISA IMBANGELA

Kwe Q13-Q25 Khombisa Yebo (Y) noma Cha (N) noma Awati (DKN)

		Yebo (Y) -1	Cha (N)-2	Awati (DKN) -3
1.	Sifo sekuwa sifo lesitsatselanako	1	2	3
2.	Sifo sekuwa sifo lesihlasela bucopho asilapheki noba asilawuleki	1	2	3
3.	Sifo sekuwa sifo lesingahlasela tonkhe tinhlanga budzala kanye nesimo senhlalo	1	2	3
4.	Bantfu labaphila nesifo sekuwa banebumatima ekufundzeni	1	2	3
5.	Kucanjwa kwesifo sekuwa kwenteka lapho kuba nekucubuka kwagesi lokungakajwayeleki ebucosheni	1	2	3
6.	Simila sebucopho singabanga sifo sekuwa	1	2	3
7.	Kulimala kwebucopho kungabanga sifo sekuwa	1	2	3
8.	Sifo sekuwa sijeziso lesibuya kuNkulunkulu	1	2	3
9.	Sifo sekuwa sibangelwa butsakatsi	1	2	3
10.	Siso sekuwa daleka uma ungenwe madimoni	1	2	3

SICEPHU C: SIVIVINYO

Kwe-Q26 - Q30 Khombisa kubuka kwakho njenge Shembe locinile (SA), Vuma (A), Phikisana (DA), Ngekuphikisana lokukhulu (SD)

		(SA)	(A)	(DA)	(SD)
1.	Bantfu labaphila nesifo sekuwa abakavumeleki kutsi bashayele	1	2	3	4
2.	Bantfu labaphila nesifo sekuwa abacashwa kunoma ngumuphi umsebenti	1	2	3	4
3.	Bantfu labaphila nesifo sekuwa angeke bavumeleke kutsi bashade	1	2	3	4
4.	Ngingasaba kuba ngedvwa nemuntfu lophila nesifo sekuwa	1	2	3	4
5.	Bantfu labaphila nesifo sekuwa angeke babe nebantfwana	1	2	3	4
6.	Sifo sekuwa angeke silapheke ngemutsi wesitfu	1	2	3	4
7.	Ngingayivumela indvodzane yami noma indvodzakati yami kutsi ishade nemuntfu lophila nesifo sekuwa	1	2	3	4
8.	Ngisatfuka kuba dvute nemutfu lophila nesifo sekuwa ngoba angahle aculeke	1	2	3	4
9.	Sifo sekuwa siluhlazo emphakatsini	1	2	3	4
10.	Uma kunemuntfu lophila nesifo sekuwa ngingabavumela labasebenta ngetekuphepha emphakatsini kutsi bavakashele umndeni wami	1	2	3	4

SICEPHU D: SIVIVINYO

	YES	NO
1. Uke wakubona kuculeka	1	**2**
2. Uke wenta inkondzo yebantfu labaphila nesifo sekuwa	1	**2**
3. Ubewati yini kutfola noma nguliphi lwati ngesifo sekuwa	**1**	**2**

Total :		

PEDI QUESTIONNAIRE

DIPOTŠIŠO TŠA GO KGOBOKETŠA TSEBO KA MALOKO A SETŠHABA

Nomoro ya dipotšišo _____

Motse _____

Letšatšikgwedi ___/___/_____

Nako _____

Dipotšišo tše ke karolo ye nngwe ya nyakišišo yeo e itokišitšego go lekolo maemo a tsebo le temogo yeo batho ba nago ka bolwetši bja go wa ka nepo ya go hlola lenaneo la boitemogelo bja bolwetši bja go wa. Ke leboga go kgatha tema ga gago, tsebo ya gago ye bohlokwa e tla thuša go fihlelela maikemišetšo a mošomo o.

DITAELO:

Dipotšišo tše di na le dikarolo tše nne le matlakala a mararo, netefatša gore o na le tšona ka moka.

O kgopelwa go araba dipotšišo ka moka ka botshepegi o šomiša sefapano (Š) ka mapokisaneng goba lokela tsebo go methalatšana ge go hlokagala**.**

KAROLO YA A: TSEBO YA DIPALOPALO TŠA BATHEKGI

1 Mengwaga **:** _____

2 Bong**:**

Mosadi	1
Monna	2
Ye nngwe	3

Ge nke go na le o mongwe, o kgopelwa go hlaloša ……

3. O wela go morafo ofe?

Northern Sotho (Pedi)	1
Swati	2
Ndebele	3
Venda	4
Tsonga	5
Afrikaans	6

Zulu	7
SeSotho	8
Coloured	9
Indian	10
Ye mengwe	11

Ge nke go na le ye mengwe, hlaloša ……

4. Maemo a godimo a thuto:

Agona thuto	1
Thuto ya praemari	2
Thuto ya sekontari	3
Thuto ya maemo a godimodimo	4

5. Bodumedi:

Ge nke go na le ye mengwe, hlaloša.....

Bokreste	1
Setšo	2
Tse dingwe	3

6. Maemo a mošomo:

Ga ke bereke	1
Kea bereka	2
Moipereki	3

7. Ke leina lefe la go tlwaelega la Bolwetši bja go wa setšhabeng sa geno……

KAROLO YA B: KNOWLEDGE ON BOLWETŠI BJA GO WA AND PERCEIVED CAUSES

Go POTŠIŠO15-POTŠIŠO27 Bontšha ka gore Ee or Aowa or A ke tsebe

	EE 1	**AOWA 2**	**A KE TSEBE 3**

1. Bolwetši bja go wa ke bolwetši bja go fetela?	1	2	3
2. Bolwetši bja go wa ke bolwetši bjo bo šoro bja monagano bowe bo sa alafegego goba go laolega.	1	2	3
3. Bolwetši bja go wa bo ka ama mehlobo ka moka ya batho, mengwaga le malapa a go bapana.	1	2	3
4. Batho ba go phela ka bolwetši bja go wa ba na le bothata bja go ithuta.	1	2	3
5. Ge o na le bolwetši bja monagano bo ka hlola gore o be le bolwetši bja go wa	1	2	3
6. Kgobalo ya monagano e ka hlola bolwetši bja go wa	1	2	3
7. Bolwetši bja go wa bo hlola ke phepompe	1	2	3
8. Bolwetši bja go wa ke kotlo go tšwa go Modimo	1	2	3
9. Bolwetši bja go wa bo hlola ke boloi	1	2	3
10. Bolwetši bja go wa ke ge o na le madimone	1	2	3

KAROLO YA C: KGOPOLO

Go POTŠIŠO28 – POTŠIŠO37 Bontšha mmono wa gago ka go Dumela kudu (DK), Dumela (D), Ganetša (G), Ganetša kudu (GK)

	DK	**D**	**G**	**GK**
	1	**2**	**3**	**4**
1. Batho ba go phela ka bolwetši bja go wa ba ka se dumelelwe go otlela	1	2	3	4
2. Batho ba go phela ka bolwetši bja go wa ba ka se thwale go mošomo o mongwe le o mongwe	1	2	3	4
3. Batho ba go phela ka bolwetši bja go wa ba ka se dumelelwe go nyala	1	2	3	4
4. Nka tšhoga go ba ke nnoši le motho wa go ba le bolwetši bja go wa	1	2	3	4
5. Batho ba go phela ka bolwetši bja go wa ba ka se be le bana	1	2	3	4
6. Bolwetši bja go wa bo ka alafšwa ka dihlare tša setšo	1	2	3	4
7. Nka dumelela morwa/morwedia wa ka a nyala motho wa go ba le bolwetši bja go wa	1	2	3	4
8. Nka se dudišege go ba hleng le motho wa go phela ka bolwetši bja go wa ka baka la gore a ka ba le go šišinyega	1	2	3	4
9. Bolwetši bja go wa ke mahlabišadihlong setšhabeng	1	2	3	4
10. Ge go na le motho wa go phela ka bolwetši bja go wa nka dumelela bathuši ba tša maphelo mo setšhabeng go tlo thuša	1	2	3	4

KAROLO YA D: DITLWAEDI

	YES	NO
1. O ile wa bona motho a hlasetšwe ke go šišinyega?	**1**	**2**
2. O na le mogwera goba motswala yo a phelago le bolwetši bja go wa?	**1**	**2**
3. O ile wa thuša motho wa go halselwa ke bolwetši nja go wa?	**1**	**2**
Total :		

Signature…… Date

ANNEXURE H: PROOF OF LANGUAGE EDITING

25/02/2022

Editing and Proofreading Report for Munyadziwa Muimeleli, (15002498)

This letter serves to confirm that I, Dr Nyete Liberty, Takudzwa, proofread and edited a Master of Public Health Mini-Dissertation by Munyadziwa Muimeleli (15002498) from the University of Venda, titled *Knowledge, attitudes and awareness of community members regarding epilepsy in two selected villages in Vhembe District of Limpopo Province, South Africa."*

I carefully read through the Dissertation, focusing on proofreading and editorial issues.
The recommended suggestions were highlighted.

Yours Sincerely

Lnyete.

Nyete Liberty, Takudzwa (PhD)
Berea College of Technology
Tel.: 0766815547
E-mail: lnyete@gmail.com

ANNEXURE I: TURN IT IN REPORT

KNOWLEDGE, ATTITUDES, AND AWARENESS OF COMMUNITY MEMBERS REGARDING EPILEPSY IN SELECTED VILLAGES OF LIMPOPO AND MPUMALANGA PROVINCE, SOUTH AFRICA

ORIGINALITY REPORT

14%	%	11%	6%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	Submitted to University of Venda Student Paper	1%
2	Abate Dargie Wubetu, Elyas Admasu Basha, Nigus Alemnew Engidaw. "Public Knowledge and Attitude towards Epilepsy and Its Associated Factors: Community-Based Cross-Sectional Study, Ethiopia, 2019", Journal of Environmental and Public Health, 2020 Publication	1%
3	O.P. Musekwa, L. Makhado, A. Maphula, J.T. Mabunda. "How Much Do We Know? Assessing Public Knowledge, Awareness, Impact, and Awareness Guidelines for Epilepsy: A Systematic Review", The Open Public Health Journal, 2020 Publication	1%
4	Elaine Howell. "Epilepsy stigma: Moving from a global problem to a global solution", Seizure, 2010 Publication	1%

ANNEXURE J: MANUSCRIPT UNDER REVIEW (The Open Nursing Journal)

Gmail Mumie munzz <muimeleli.mm@gmail.com>

Manuscript Reverted | BMS-TONURSJ-2022-21
2 messages

Editorial Office <admin@bentham.manuscriptpoint.com> Tue, 15 Feb, 18:40
Reply to: Editorial Office <isg@benthamauthorservices.com>
To: <muimeleli.mm@gmail.com>, <ntsieni.mashau@univen.ac.za>, <lufuno.makhado@univen.ac.za>, <jabu.mabunda@univen.ac.za>
Cc: <tonursj@benthamopen.net>, <ambreen@benthamopen.net>

Reference#: BMS-TONURSJ-2022-21

Submission Title: COMMUNITY MEMBERS' KNOWLEDGE AND ATTITUDES TOWARDS EPILEPSY IN A SUB-SAHARAN AFRICAN CONTEXT: A SYSTEMATIC REVIEW..

Dear Dr. Munyadziwa,

Thank you for submitting your manuscript for consideration in the journal "The Open Nursing Journal" . To facilitate your submission our Author Support Team has initially checked your manuscript and provided the following comments.

Please carefully go over these comments and try and resolve these urgently so that your manuscript may be published without any delays.

Once you have implemented the changes/ improvements, please upload the revised manuscript on the manuscript portal at https://bentham.manuscriptpoint.com.

The Manuscript Processing System (MPS) has assigned a Reference Number to your manuscript which should be referred to in all future correspondence. Please remember, once the manuscript is submitted for publication, it cannot be withdrawn. Also, please add complete authors' and co-authors' names, along with their correct Email IDs in the manuscript. If the manuscript is accepted, then the Publisher will not allow any change in the list of authors at a later stage.

When resubmitting a manuscript for further consideration, please ensure that all the suggested changes are incorporated in the manuscript and highlight or mark-up the changes made in the revised manuscript.

Editorial Comments:

Initial Scrutiny	
Content Verification	
Author verification	We have sent an email to Dr. Jabu Mabunda on provided email ID for approval of the co-author of the article, his response is awaited.
	Please provide the Graphical Abstract along with its caption.

ANNEXURE K: MANUSCRIPT UNDER REVIEW (Archives of Public Health)

Gmail Mumie munzz <muimeleli.mm@gmail.com>

1eb11be9-4bcb-426c-8c9e-b6c94c304343 Archives of Public Health: Amendment required
3 messages

Elesteria Elizabeth <elizabeth.elesteria@springernature.com> Thu, 24 Feb, 08:31
Reply to: Elesteria Elizabeth <elizabeth.elesteria@springernature.com>
To: <muimeleli.mm@gmail.com>
Cc: <lufuno.makhado@univen.ac.za>

Dear Dr. Munyadziwa,

Re: Knowledge, attitude and awareness of community members regarding epilepsy in selected villages of Limpopo and Mpumalanga province, South Africa

Our Initial Quality Check of your submission has now taken place. As a result, we need you to address the following points before your manuscript can progress any further:

Technical/Formatting Request:

• We notice that there are discrepancies in the author names given in the manuscript and the author names in submission system (Muimeleli Munyadziwa, Jabu Mabunda, Ntsieni Mashau, Lufuno Makhado). Could you please verify which is/are correct?
• We notice a discrepancy between the sequence of author names in submission system and in the Manuscript (Lufuno Makhado, Jabu Mabunda). Could you please check?
• The citation for the reference number 25 is missing in the Manuscript. Please check and verify
++

Your paper has been placed back in the menu of the submitting author. To access it, please use the following link, making sure you log in with the same email address you registered with:

https://submission.nature.com/submission/fbacd4a4-114a-46c7-96e1-ea8ce2925778

(Press/Click on the above link to be automatically sent to the web page.)

Please make the requested amendments carefully, before selecting the “Submit manuscript” button on the “Review” page. Do not change anything else in your manuscript.

Meanwhile, if you have any questions, please feel free to contact me.

Regards,
Beth

Elizabeth Elesteria
(She/Her/Hers)
JEO Assistant
Journals Editorial Office (JEO)

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