



Knowledge, attitude and practice towards epilepsy among secondary school students in Enugu, South East Nigeria

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ABSTRACT

Purpose: The purpose of this study was to determine the knowledge and attitude of secondary school students to epilepsy and its treatment that could pose as barriers in the treatment and care of epilepsy patients within the community.

Methods: This study was cross-sectional and descriptive in design using a self administered custom designed multiple choice questionnaire with sections on general information on epilepsy, awareness and perception of epilepsy, treatment of epilepsy/seizures and attitude towards people living with epilepsy.

Results: Out of 969 questionnaires analyzed, the majority of the students (87.6%) had heard of epilepsy as a disease. The commonest sources of information were the electronic media (36.4%) and family members (25.6%). More than half (59.4%) had witnessed a convulsion in the past and 8.9% had a family member with epilepsy. Jerking (50.6%) and loss of consciousness (47.4%) were identified as the commonest manifestations of epilepsy. Epilepsy was considered a psychiatric disorder by 51.9% and as an infectious disease by 40.6%. About 39.3% considered epilepsy to be due to spiritual causes, old age or poisoning/bad blood. A total of 63.1% regarded orthodox medicine and prayers as the best means to treat epilepsy, while 6.8% chose herbal remedies. Concerning first aid treatment, 50.6% agreed that an object should be inserted into the mouth, while 49.5% would call for medical help and 28.8% would remove the person from harm. On attitude, 64.9% would not keep a friend with epilepsy, 69.1% would not play with someone with epilepsy, 84.2% would not marry someone with epilepsy. 41.1% of the students said that people with epilepsy should neither marry while 42.2% say they should not have children. Only 39.1.5% had an overall positive attitude towards people living with epilepsy.

Conclusions: There is a persisting poor knowledge, attitude and practice of epilepsy among secondary school students in SE Nigeria. Efforts should be made to include basic facts about disorders with social consequences such as epilepsy in school health education curriculum.

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1. Introduction

Epilepsy is a common neurological disorder and the most prevalent neurologic disorder seen in a large neurological outpatient clinic in South East (SE) Nigeria.¹ The prevalence of epilepsy in Nigeria ranges from 5.3 to 37/10,000 population.^{2–5} This high prevalence reflects the incidence of several treatable conditions being complicated by brain damage which may latter result in epilepsy. Cultural and religious beliefs are important issues in Nigeria, especially in relation to chronic diseases and their

treatment. Culture influences the perceptions and attitude of the populace towards epilepsy which may vary between and within different ethnic populations groups. A recent study has shown that the opinion expressed by school children towards their peers with epilepsy may reflect that of their families.⁶ Few studies have addressed the problems of knowledge and attitude of epilepsy in South East Nigeria.⁷ There are persisting gaps in the understanding of epilepsy in SE Nigeria.

2. Aims and objectives

The major aim of this study was to determine the knowledge and attitude of secondary school students to epilepsy and its treatment that could pose as barriers in the treatment and care of

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epilepsy patients within the community so that they could constitute targets for educational interventions.

3. Methods

This study was cross-sectional and descriptive in design. The school system in Nigeria is divided into 4 sub groups. The primary (6 years), junior secondary (3 years), senior secondary (3 years) and tertiary schools (University). We selected a junior/senior secondary school (Command Day Secondary) in Enugu metropolis. The school was selected because of its central location and the large student population (about 2000 pupils at the time of the study). This study was part of epilepsy awareness campaign in 2010.

The aim was to recruit all the students attending the epilepsy awareness lecture held at the school hall. A meeting was first organized with the vice principal of the school and subsequently with the army commandant in charge of the school. Sensitization of the students was done a day before data collection. On the day of the study the investigators obtained an informed consent from the students who were willing to participate after explaining the aims and objectives. A custom designed multiple choice questionnaire with sections on general information about the students such as age and sex, general information on epilepsy, awareness and perception of epilepsy, treatment of epilepsy/seizures and attitude towards people living with epilepsy (PLWE). Questions on knowledge had 'YES' or 'NO' options and those on attitude had 4 option scale 'STRONGLY AGREE(SA), AGREE(A), DISAGREE(D), and STRONGLY DISAGREE(SD)'. For internal consistency of the instrument Kuder–Richardson Formula 20 (KR-20) was used. The reliability index (KR-20) was 0.672. The reliability of the attitude questions was determined using Cronbach Alpha formula with a reliability index of 0.825. Questionnaires were self administered with guidance from two of the investigators (EAB, AJU) and collected before the commencement on awareness lecture. All questionnaires were administered in simple English. Only questionnaires with the age and year of study correctly entered were eventually included in the study and analyzed. Blank or torn questionnaires were also excluded.

Data were assembled, tallied, put in frequency and analyzed. Four option scale was scored as follows: SA-4, A-3, D-2 and SD-1. Total scores on attitude were ranked and converted to percentages. Score above and below the median score were categorized as positive and negative attitude, respectively. Mean ages of the students were compared using *t*-test statistic at 0.05 level of significance.

4. Results

A total of 972 questionnaires were distributed and retrieved but 969 (99.7%) were analyzed based on the inclusion and exclusion criteria. There were 459 (47.4%) males and 510 (52.6%) females. Their ages ranged from 10 to 19 years with a mean age of 13.9 ± 1.87 years. There was no statistical difference between the ages of males and females (the mean age of males was 13.9 ± 1.87 and females 13.9 ± 1.87 , $p = 0.42$).

Majority of the students (87.6%) had heard of epilepsy as a disease. The commonest sources of information were the electronic media (36.4%) or family members (25.6%). Furthermore, most students got their information from a single source (73.8%). About 59.4% claimed that they had seen someone convulsing before but those who knew someone with epilepsy and who had family members with epilepsy were 32.9% and 8.9%, respectively (see Table 1). Jerking (50.6%) and loss of consciousness (47.4%) were recognized as the commonest manifestation of epilepsy. Few of the students (2.4%) knew that epilepsy may manifest as brief episodes of abnormal behavior (Table 1).

Table 1

Information about epilepsy and its clinical manifestation.

A. Information about epilepsy		
	Yes	No
	849 (87.6)	120 (12.4)
	Frequency	Percentage
I have heard of epilepsy before	849 (87.6)	120 (12.4)
<i>Source of information^a</i>		
Electronic media	353	36.4
Parents/family members	248	25.6
Medical staff	183	18.9
Friends	114	11.8
Books	100	10.3
Teachers	85	8.8
Internet	60	6.2
Do not remember	7	0.7
Never heard of epilepsy	120	12.4
<i>Number of sources of information</i>		
One	715	73.8
Two or more	134	13.8
Cannot remember	7	0.7
Never heard of epilepsy	120	12.4
B. Awareness and perception of epilepsy		
	Frequency	Percentage
I have relatives with epilepsy	87	8.9
I know someone with epilepsy	319	32.9
I seen convulsions before	576	59.4
I would like to have more information about epilepsy	877	90.5
C. Clinical manifestations of epilepsy^a		
Epilepsy may manifest as	Frequency	Percentage
1. Loss of Consciousness	459	47.4
2. Jerking of the body	490	50.6
3. Abnormal behavior	294	30.3
4. Urinating on oneself	93	9.3
5. Shouting (cry)	41	4.2
D. Causes of epilepsy		
Epilepsy is a type of	Frequency	Percentage
Psychiatric disorder	503	51.9
Infectious disease	393	40.6
Natural causes	440	45.4
Inherited disorder	218	22.5
Poisoning/bad blood	154	15.9
Spiritual causes	184	19
Old age	43	4.4
Others	10	1.0

^a Multiple responses possible.

Opinion about the causes of epilepsy is shown also in Table 1. Epilepsy was considered a psychiatric disorder by 51.9%, an infectious disease by 40.6% and other natural causes by 45.4%. A total of 39.3% considered epilepsy to be due to spiritual causes, old age or poisoning/bad blood.

On the question 'who is best to treat people living with epilepsy?', 63% considered that doctors (orthodox medicine) and prayers were the best to treat epilepsy and 6.8% believed that herbal (traditional) medicine alone to the best form of treatment (Table 2). On what to do during convulsions, 50.6% agreed that an object should be inserted into the mouth, 49.5% would call for medical help and 28.8% would remove the person from harm and 15.8% would pray or run away (9.1%) (Table 2).

On attitude, 64.9% would not keep a friend with epilepsy, 69.1% would not play with them, 84.2% would not marry them and 41.1% and 42.2% said the PLWE should not marry or have children. Overall, 39.1.5% and 60.9% had positive and negative attitude, respectively (Table 3).

5. Discussion

This study showed that majority of the students (87.6%) had a prior knowledge of epilepsy as a disease and this is similar to findings from previous studies.^{6,8–10} The reasons for this may be

Table 2
Treatment of epilepsy.

	Frequency	Percentage
Who do you think should treat epilepsy?^a		
Doctors [†] and prayers	610	63
Doctors [†]	200	20.6
Herbalists [‡]	66	6.8
I do not know	78	8
Doctors and Herbalists	8	0.8
All the above	6	0.6
Prayers (churches)	0	0
What will you do if you see someone convulsing?^a		
Put something into the mouth	490	50.6
Call a doctor or a nurse	480	49.5
Move the person away from harm	275	28.4
Start praying	137	14.1
Apply olive oil on the person	142	14.7
Do nothing	85	8.8
Run away	40	4.1

^a Multiple responses possible.[†] Orthodox medicine.[‡] Herbs and charms.**Table 3**
Attitude towards people living with epilepsy.

Attitude	Positive (agree)	Negative (disagree)
I would like to keep a friend with epilepsy	340 (35.1)	629 (64.9)
I would play with someone with epilepsy	299 (30.9)	670 (69.1)
People with epilepsy should marry	571 (58.9)	398 (41.1)
People with epilepsy should have children	560 (57.8)	409 (42.2)
I can marry someone with epilepsy	153 (15.8)	816 (84.2)
People with epilepsy should never drive	710 (73.2)	259 (26.7)
People with epilepsy should never drink alcohol	496 (51.2)	473 (48.8)

the growing availability of different mass media resources in the country as well as the increasing use of radio and newspapers for health awareness programs. Of importance also is the small but increasing role of internet plays in improving awareness about epilepsy. In Poland,¹⁰ 24% of students got their information from the internet, 89% from the electronic media, 20% from teachers and 30% from books/magazines. In this study, teachers and medical workers were the sources of information for a very small proportion of students. Given the role of teachers in shaping the knowledge base and belief of students in the adolescents and pre-adolescent phases of life, it will be desirable if they are considered a worthwhile resource for disseminating knowledge about epilepsy among their students. The desire of school teachers to participate in the care of children with epilepsy has been previously documented by Ojinnaka.⁷

Though most students claimed to have heard of epilepsy the quality of the information they received gives cause for concern since only 18.9% received such information from members of medical staff. The quality of medical information transmitted from the mass media is sometimes poor. Other studies also have shown that a small proportion of the population get their information about epilepsy from health workers.^{9–11} The pattern of information source in this study (most student got their information from one source) reveals a huge potential to be exploited by stakeholders considering the huge social burden of epilepsy.¹² Getting more people involved in epilepsy care will necessitate the incorporation of every available resource in demystifying epilepsy.

The study showed that approximately 4 out of 10 students either knew someone that had epilepsy or had relative that suffered epilepsy. This close contact and cultural values were expected to have influenced attitudes favorably leading to higher level of kindness, tolerance and sympathy towards individuals with epilepsy.^{13,14} However, the willingness to discontinue

friendship with epileptic students (64.9%) and the deduction that epileptic patients should neither marry (41.1%) nor have children (42.2%) cast doubt on the impact of contact with patients with epilepsy on attitudes among students.

The large proportion witnessing seizures in the past is surprising though it is similar from studies conducted elsewhere.^{6,8,9,13} Several reasons such as the episodic and dramatic nature of convulsion is likely to attract children. The high prevalence of febrile convulsion and epilepsy in the community may also contribute to this. We did not explore how these experiences came, however people may witness seizure through several media such as film and internet.

Many students correctly identified jerking of the body, loss of consciousness as clinical manifestations of epilepsy. This is not surprising because of the dramatic events associated with generalized tonic clonic seizures which are the most easily recognizable form of seizures. The findings in this study were similar to earlier studies.^{10,13–15}

Most of the students considered epilepsy as a psychiatric disorder or an infectious disease. In SE Nigeria, as in many countries, epilepsy is perceived as a manifestation of supernatural forces such as evil spirits.^{8,11,13–16} This leads to unacceptable responses towards people living with epilepsy. The opinion of these students thus may reflect that of their parents or their sources of information as previously reported.⁶ The necessity for educational interventions to bridge this gap cannot be over-emphasized. It is sorely needed in our setting where little or no health awareness programs are done in schools.⁷

The very poor knowledge of first aid treatment during seizure and the finding that the majority of the students endorsed the reliance of orthodox medical and traditional healing approaches to epilepsy management is a reflection of the supernatural causes alluded to above. The endorsement of pluralistic approaches in the management of this disorder is not an undesirable virtue as espoused by medical experts who seek to engage the integration of healing methods, however it may be an affirmation of misconceptions about epilepsy and has within it a negative help seeking implication hence the potential of further worsening the epilepsy treatment gap (some respondents may have endorsed the use of local remedies in the mistaken belief that its magical potency would stop the seizure). It is therefore, the responsibility of concerned clinicians to educate the patients their caregivers and the general public on the appropriate first response in the treatment of seizures.

The majority of the students indicated that they would like to have more information about epilepsy; suggesting that there exists a great opportunity to improve the knowledge gap of these students about the condition and hopefully the associated attitude.

This study demonstrated a –60.9% overall negative attitude of school children towards PLWE which might probably be a reflection of the failure of the school curriculum to provide a basic knowledge of common health problems that can affect the population. More worrisome is the proportion of students who did not agree that the PLWE should marry or have children. Misunderstanding and negative attitude contribute to the high level of stigma. Most of this rejection and discriminating attitudes towards individuals with epilepsy are concomitant to the public misunderstanding of epilepsy and its etiological constructs. Rowling¹⁷ had argued for the planning and implementation of school intervention programs that seek to promote the health and well being of the community through partnerships between the health sector and schools to make them (schools) foci of health promotion. In this way the school will become a setting through which appropriate health information and knowledge can be provided about various chronic diseases, and dangers of risk behaviors. It is gratifying that the majority of the student expressed

their desire to receive more information about epilepsy. Meeting up with this desire will help provide a major contribution to their empowerment and overall health promotion.

6. Conclusions

There is a persisting poor knowledge, attitude and practice of epilepsy among secondary school students in SE Nigeria. Efforts should be made to include basic facts about disorders with social consequences such as epilepsy in school health education curriculum. Further research is needed to determine the relationship between demographic characteristics like gender and age on attitudes towards epilepsy.

Declaration

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Conflict of interest statement

The authors have no conflict of interest.

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