Awareness, Attitude, and Understanding toward Epilepsy among Workers in a State Specialist Hospital in Maiduguri, Northeastern Nigeria

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Abstract

Background: Epilepsy is a common presentation at clinics in Psychiatric Hospitals, Teaching Hospitals, and general practice. In developing countries and Africa especially, awareness, attitude, and understanding are generally poor. People still believe in spirits as the cause of epilepsy.

Objectives: The objectives were to assess the awareness, attitude, and knowledge of Hospital workers in general practice concerning epilepsy.

Methodology: The respondents were workers of all cadres who were working at a State Specialist Hospital and the study used a survey method proposed by Caveness and Gallup, with modifications and adaptations on the self-administered questionnaire.

Results: One hundred and forty-four staffs of State Specialist Hospital completed the questionnaire containing items addressing demographics, awareness, attitude, and knowledge. Of these respondents, 89 were males and 55 were females. The mean age was 34.34 years. 96.5% heard of the disease, 77.8% knew someone with the disease, 64.6% will not object to their children playing with someone with epilepsy and 37.5% will not allow a relative to marry someone with epilepsy. Fifty-five percent (55%) of the respondents said; they will not employ such patients, and that patients with epilepsy should not be employed with others. Knowledge towards epilepsy was good, where 71.5% felt it was caused by a brain disorder.

Conclusion: We found out that awareness and knowledge of epilepsy among Hospital staff were generally good. However, the attitude of healthcare workers had reservations towards patients with epilepsy (PWE) either working for them or working with other people. This attitude arose from deeply ingrained cultural misconceptions acquired over time. Thus, there is a need for consistent hospital staff education, aimed at allaying fears, mistrust as well as to lessen the stigma towards epileptics.

Keywords: Attitude, awareness, epilepsy, hospital workers, understanding

Résumé

Contexte: L’épilepsie est une présentation courante dans les cliniques des hôpitaux psychiatriques, des hôpitaux d’enseignement et de la médecine générale. Dans les pays en développement et en Afrique en particulier, la sensibilisation, l’attitude et la compréhension sont généralement médiocres. Les gens croient toujours que les esprits sont la cause de l’épilepsie.

Objectifs: Les objectifs étaient d’évaluer la sensibilisation, l’attitude et les connaissances des employés de l’hôpital dans la pratique générale concernant l’épilepsie.

Méthodologie: Les répondants étaient des travailleurs de tous les cadres qui travaillaient à un hôpital spécialisé d’État et l’étude a utilisé une méthode d’enquête proposée par Caveness et Gallup, avec des modifications et des adaptations sur le questionnaire auto-administré.

Résultats: Cent quarante-quatre membres du personnel du State Specialist Hospital ont rempli le questionnaire contenant des éléments concernant la démographie, la sensibilisation, l’attitude et les connaissances. Parmi les répondants, 89 étaient des hommes et 55 étaient des femmes. L’âge moyen était de 34.34 ans. 96.5%...
ontentenduparler de la maladie, 77,8% connaissaientune personne atteinte de la maladie, 64,6% ne s’opposeraient pas à ce que leurs enfants jouent avec une personne épiléptique et 37,5% ne permettraient pas à un parent d’épouser une personne malade d’épilepsie. Cinquante-cinq pour cent (55%) des répondants ont dit; ils n’emploieront pas de tels patients et les patients épiléptiques ne devraient pas être employés avec d’autres. Les connaissances sur l’épilepsie étaient bonnes, où 71,5% estimaient qu’elles étaient causées par un trouble cérébral. Conclusion: Nous avons découvert que la sensibilisation et la connaissance de l’épilepsie parmi le personnel de l’hôpital était généralement bonne. Cependant, l’attitude des travailleurs de la santé avait des réserves envers les patients épiléptiques (PWE) travaillant pour eux ou travaillant avec d’autres personnes. Cette attitude découle des idées fausses culturelles et profondément enracinées acquises au fil du temps. Ainsi, il est nécessaire de dispenser une formation cohérente au personnel hospitalier, visant à apaiser les craintes et la méfiance ainsi qu’à réduire la stigmatisation envers les épiléptiques.

Mots-clés: sensibilisation, attitude, compréhension, épilepsie, personnel hospitalier

Introduction

Epilepsy is one of the most common neurological diseases, with prevalence rate varying from 2.8 to 19.5/1000 in the general population.1-3 It occupies a watershed ridge between the field of psychiatry and neurology. Epilepsy is still shrouded in misinformation and misbelief.4,5 Attitudes of the general public toward patients with epilepsy (PWE) are more devastating than the disorder itself.6 These devastating effects of the public attitudes do not only affect the patients but also their immediate family members and caregivers.7,8 Being one of the major noninfectious public health problems, there is a need for continuous medical care and associated support in areas of psychosocial difficulties that require careful planning to include such psychosocial programs related to epilepsy.9,10 PWE has been stigmatized and discriminated against for centuries.11-14 They have been treated as insane, evil, being possessed of evil spirits or as a contagious disease.15,14 Stigma has long been recognized as a major burden of PWE and their families.11,15-18 PWE living in Sub-Saharan Africa (SSA), where epilepsy rates far exceed that of developed countries, experience more stigma and discrimination than their counterparts in developed countries and other parts of the world.11,15,16,19,20 The combination of poverty, social role expectations, poor medical care, and traditional beliefs place significant limitations on the lives of PWE in SSA. Other factors, such as public attitude, prejudice, stigma, and discrimination are probably more devastating than the disease itself.15,21 Stigma and discrimination, which often result from an erroneous belief that PWE are helpless, more fragile and mentally retarded, are associated with far-reaching consequences of low self-esteem and self-fulfilling prophecies, self-blame, self-rejection, and dehumanization.22

Survey on public awareness, attitude, and knowledge towards epilepsy is useful in decreasing discrimination and stigmatization.24-26 In general, it is believed that measures put in place to improve knowledge about epilepsy in the general public should ameliorate prejudices.27

Identifying the basis for misunderstanding and misconception, which usually form the basis for stigma and discrimination, in our environment, will serve as a springboard to launch programs or campaigns specifically targeted towards addressing them.

The purpose of this study was to access the knowledge, awareness, and attitude toward PWE among the staff of a specialist hospital in Maiduguri and to determine the sociodemographic correlates of attitude toward PWE. In the practice of the authors’, knowledge of epilepsy is poor and there was stigmatization due to preconceived beliefs that it is caused by evil spirits, or it arose due to witchcraft, and that it is contagious, also that it can be spread through urine, saliva, and faeces, thus, it is transferable from one person to another through those routes. A vast majority of the population of developing countries like Nigeria live in the rural areas and lack access to western type hospitals because the few available are concentrated in the cities, as such individuals seeking help come to cities after trying several traditional healers, spiritualists, and other nonorthodox forms of treatment, and as such, there first contact outside the rural areas are likely to be the State hospitals. Therefore, the knowledge of the health-care workers will help dispels their belief as well as improves the quality of care for the patients. Maiduguri is the capital of Borno State in NorthEastern Nigeria (Former Capital of North-Eastern Nigeria), and lies within latitude 10N to 14N and longitude 11.30E to 14.45E at the verge of the south of the Sahara desert, with a population density of 60/km² according to 2006 provisional census figures. It has a population estimate of 4,171,104 million people with a landmass of 61,435 km².22

It is highly cosmopolitan, both Nigerians and foreigners are seen freely owing to its location and its strategic boundary to three countries by the entire Northern and Eastern borders of the State. These are Niger, Chad, and Cameroun. It has diverse socioeconomic, ethnic, educational, and cultural setup; thus, a better understanding of the dynamics of these factors as it relates to epilepsy would open up the opportunity for tailoring activities toward ameliorating the situation of PWE in our environment more adequately since their first contact with a hospital is usually the general hospital.

Materials and Methods

The study was conducted using self-administered questionnaires. Respondents were randomly selected using a simple random sampling technique from the study population, which consists of the staff of the various departments/units of the State Specialist Hospital Maiduguri. A total number of
180 respondents from different departments were recruited for the study. Staff with epilepsy or those who had relatives with epilepsy were excluded from the study to reduce bias, as they might have an insight into the responses.

The study applied the survey of Caveness and Gallup with minor modifications and adaptations.

The questionnaire was designed in line with those used for similar studies worldwide. It contains 14 questions of which 9 came from the Gallup Poll of public attitudes toward epilepsy, maintaining the knowledge attitude and perception format. Modifications and translation to Hausa language were done to cater to prevailing local factors. The questionnaire also contains a section for sociodemographic variables. Questions used to assess knowledge, awareness, and attitude with likely responses included: Some questions were designed so that responders could choose among “yes,” “no” or “I don’t know,” while others were allowed multiple answers. The questionnaire addresses three domains based on the questions [Appendix 1], 1–4 (awareness), 5–10 (attitude), and 11–14 (knowledge).

A respondent is not eligible to answer the rest of the questions if the response to question one (1) is no. A pilot study involving 10 respondents who did not form part of the main survey was done to ensure the understanding and acceptability of the study procedure. In the pilot study, the word “insanity” in Q18 did not give a true representation of epilepsy and was changed to mental illness. The analysis was performed using the Statistical Package for the Social Scientists (SPSS) software package version 16 (IBM, Illinois, Chicago, USA) and results presented using descriptive statistics: frequency tables, means, and standard deviation. A Chi-squared test was used to assess the association between variables, while the level of statistical significance was set at < 0.05.

**Results**

A total of 180 staff were recruited into the study and were given the questionnaires, of which 144 responded. The

### Table 1: Demographic characteristic of hospital workers

| Characteristics | n (%) |
|-----------------|-------|
| Age (years)     |       |
| 15-25           | 14 (16.7) |
| 26-35           | 54 (37.5) |
| 36-45           | 54 (37.5) |
| 46-65           | 11 (7.6) |
| >66             | 1 (0.7) |
| Sex             |       |
| Male            | 89 (61.8) |
| Female          | 55 (38.2) |
| Profession      |       |
| Doctor          | 19 (13.2) |
| Laboratory scientist | 10 (6.9) |
| Nurse           | 80 (55.6) |
| Pharmacist      | 3 (2.1) |
| Laboratory technician | 16 (11.1) |
| Medical records | 7 (4.9) |
| Administration  | 5 (3.5) |
| Pharmacist assistants | 4 (2.8) |
| Religion        |       |
| Islam           | 82 (56.9) |
| Christianity    | 62 (43.1) |
| Marital status  |       |
| Married         | 91 (63.2) |
| Single          | 50 (34.7) |
| Widowed         | 3 (2.1) |
| Ethnicity       |       |
| Bura/Babur      | 38 (26.4) |
| Kanuri          | 35 (24.3) |
| Fulani          | 8 (5.6) |
| Glavda          | 11 (7.6) |
| Marghi          | 14 (9.7) |
| Kibaku          | 7 (4.9) |
| Igbo            | 5 (3.5) |
| Others          | 26 (18.1) |

### Table 2: What do you think is the cause of epilepsy?

| Perceived cause         | Frequency (%) |
|-------------------------|---------------|
| Brain injury            | 36 (25.0)     |
| Inherited disease       | 32 (22.2)     |
| Mental disorder         | 23 (16.0)     |
| Brain infection         | 12 (8.3)      |
| Spiritual attack        | 10 (6.9)      |
| Unknown                 | 17 (11.8)     |
| Don’t know              | 8 (5.6)       |
| Others                  | 6 (4.2)       |
| Total                   | 144 (100.0)   |

**Figure 1:** Depicts a pictorial view of the awareness of epilepsy of the population studied
remaining thirty-six were not returned. The response rate was 80%.

Demographic characteristics of hospital workers [Table 1]. The knowledge of causation of epilepsy [Table 2], knowledge of manifestations of epilepsy [Table 3] and knowledge of available treatment options of epilepsy [Table 4] among healthcare workers are shown.

The marital status and profession of the health workers has a significant influence on the level of awareness on epilepsy [Table 5]. The levels of education, religion, and profession of the health workers have a significant influence on their attitudes towards people with epilepsy [Table 6]. Furthermore, the level of education of the health workers was the only singular significant influence on their knowledge of epilepsy [Table 7].

Figure 1 depicts awareness of epilepsy.

Figure 2 shows attitude toward epilepsy

When asked if people with epilepsy should have children, 88.2% thought they should, but 11.1% disagree for PWE to have children.

**Discussion**

Our study investigated the degree of awareness, attitude, and knowledge towards epilepsy in a random sample of staff of the State Specialist Hospital Maiduguri. Overall the group appeared generally well informed about the disease epilepsy. The hospital staffs studied are from different departments of the hospital (both clinical and nonclinical) and a cadre. They cover the major ethnic groups in the State and Nation at large, as well as the different faiths in the country. We believe that the knowledge of these hospital staff may, therefore, represent the beliefs in these cohorts. The high positive response rate of 96.5% for having heard of the disease is similar to that of Malaysian public study and other Asian studies, as well as of Montenegro.[30,31] Similarly, the study done in southern Nigeria by Ekeh BC et al. among medical students, involving the preclinical and clinical students in Uyo, found 230 of the 232 (99.12%) participants heard of epilepsy.[3] The high level of awareness could be because the study was done among hospital staff. 77.8% of the population studied knew at least someone with epilepsy, while 75.7% had seen a seizure before. This goes a long way in explaining the high level of awareness. However, Ekeh BC et al. found a lower percentage of 46.75% of the population studied that knew someone with epilepsy.

In this study, the anecdotal report of the belief that epilepsy arises due to spiritual attacks was echoed by the hospital staff. Interestingly, these are individuals working in the hospital setting for years and are daily exposed to clinical medicine, yet 6.9% of them adhered to the belief that epilepsy arises as a spiritual attack while another 11.8% were not sure whether sociocultural beliefs were causes of epilepsy or not. This gives a glimpse of the long-standing traditional African beliefs of the cause of epilepsy, despite scientific knowledge on epilepsy. Awaritefe wrote on epilepsy; the myth of a contagious disease, where the Bini called it owa (a disease of the heart), while others believe it was contagious and they would not eat, drink or sleep in the same room with an epileptic.[32] The attitude of the population studied was split, which contrasts the outcomes of a previous study in Hong Kong which illustrated that employed respondents with a medically-related occupation such as doctors, nurses, or pharmacists showed
more negative attitudes toward epilepsy.\textsuperscript{[33]} There was an acceptance of certain aspects while others were rejected, with 64.6% of the population studied stating they would not object to having their children play with someone who occasionally has a seizure and 61.8% would not object to having a relative marrying a person with a seizure. When it comes to employment, 51.4% would not employ a person with a seizure while 55.6% said that they should not be employed in the same job with other people. This is similar to the study by Jacoby \textit{et al.}\textsuperscript{[34]} where he found large percentages of the respondents expressing the view that people with epilepsy should not be allowed to work in a series of occupations. In contrast, the study by Kabir \textit{et al.}\textsuperscript{[35]} found out that several respondents would share a room, eat with or employ persons with epilepsy despite the existing misconceptions that epilepsy was transmissible by contact and as such, they should be isolated and avoided. This was further observed by Nyame and Biritwum in Ghana.\textsuperscript{[36]}

The probable reason why the hospital staff in this study were split concerning their attitude to PWE could be the fact that epilepsy patients working or being employed would take excuses from work, thus putting a lot of burden on other staff. A Study by Danesi\textsuperscript{[37]} discovered that the majority of medical personnel believed that PWE should not disclose their
disability to prospective employers. Similar observations were noted among the general population in Sri Lanka.[38] Convulsion or shaking was the most frequently mentioned perceived symptoms of epilepsy by 54.9% of the respondents, which is similar to the study by Kabir et al.[35] The majority of the respondents attribute epilepsy to brain disorder or disease of the brain, while 6.9% consider it to be spiritual and those who are not sure of the cause make up 17.4%.

Up to 85.4% preferred seeking medical attention as the method of treatment for epilepsy which is not surprising since the study was done in a hospital setting, while 3.5% will prefer to use herbal medicine and 2.1% will seek spiritual healing which is in contrast to the study by Kabir et al.[35] done in an urban community where 47% will rather seek spiritual healing, followed by orthodox and traditional medicine with 34% and 19%, respectively.

In general, knowledge and awareness of hospital staff can be considered to be good but their attitude in this study revealed a somewhat negative attitude toward PWE, especially when it comes to marriage, employing them or working with them in the same job which portrays similar attitudes toward epilepsy as being negative with negative predictors as reported by Vodopić S, Vujisić in the Montenegro study.[31] Ekeh BC et al. found that most participants were aware that the epileptics are capable of reproduction but the fear of possible hereditability of the disease is the major reason they do not want to marry PWE.[44]

The study by Ojinnaka[39] found that a paucity of knowledge of epilepsy resulted in a negative attitude among teachers while in this study the level of knowledge does not correspond to the attitude of the respondents.

This study, however, cannot represent the general awareness, attitude, and knowledge of all Hospital staff, nor can it be compared to many well-designed population surveys, but it gives us an insight into the likely situation on the ground.

**Limitations**

The explanatory power of the study was limited by its quantitative nature. The use of structured questions does not allow a detailed explanation of the reasons that the perceivers of negative attitude hold particularly about PWE.

**Conclusion**

Awareness and knowledge of epilepsy among hospital staff are generally good. However, the attitude of health-care workers has reservations toward PWE either working for them or working with other people. This attitude arose from deeply ingrained cultural misconceptions acquired over time. Thus, there is the need for consistent hospital staff education, aimed at allaying fears, mistrust, and to lessen the stigma towards epileptics.

Finally, there is a need to plan for a larger and more comprehensive survey of Hospital staffs regarding awareness, attitude and knowledge of epilepsy in Nigeria and future in-depth studies to explore the reasons behind the perceivers’ negative attitudes.

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Conflicts of interest

There are no conflicts of interest.

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APPENDIX 1

Q1 Have you ever heard or read about the disease called epilepsy, convulsive seizure or epileptic fits?
(a) Yes
(b) No;
Q2 If yes, the source of information
(a) Print media
(b) Electronic media
(c) Doctor
(d) Nurse
(e) Hospital staff
(f) Others (specify);
Q3 Do you know anybody that has epilepsy?
(a) Yes
(b) No;
Q4 Have you ever seen anyone who was having a seizure or attack?
(a) Yes
(b) No;
Q5 Would you object to having any of your children in school or at play associate with persons who sometimes have seizures?
(a) Yes
(b) No;
Q6 Would you object to having a close relative (child, sister or brother) of yours marry a person who sometimes has seizures?
(a) Yes
(b) No;
Q7 Would you employ someone with epilepsy?
(a) Yes
(b) No;
Q8 Do you in any way think that epilepsy is a form of mental illness?
(a) Yes
(b) No;
Q9 If yes,
(a) Severe type
(b) Moderate type
(c) Mild type
(d) Others (specify);
Q10 Do you think that in general, persons with epilepsy should be employed at the same job as other people?
(a) Yes
(b) No;
Q11 what do you think is the cause of epilepsy?
(a) Brain disorder
(b) Inherited disease
(c) Mental disorder
(d) Brain infection
(e) Spiritual attack
(f) Unknown
(g) Don’t know
(h) Others (specify);

Q12 what do you think is an epileptic attack?
(a) A convulsion or shaking
(b) A loss of consciousness
(c) An episode of behavioral change
(d) A period of memory disturbance
(e) Don’t know
(f) Others (specify);

Q13 Do you think persons with epilepsy should have children?
(a) Yes
(b) No;

Q14 what kind of treatment would you suggest if your relative or friend has epilepsy?
(a) Seek medical attention
(b) Use herbal medicine
(c) Seek spiritual solution
(d) Self-medication
(e) Need no treatment
(f) Epilepsy is not treatable
(g) Surgical treatment
(h) Others (specify).