

# Epilepsy care in nigeria factors influencing default nursing essay

[Health & Medicine](#), [Nursing](#)



## **Abstract**

Background: Epilepsy is a common cause of neurologic disability in developing countries where very few patients with the condition have organized regular follow up. This study was conducted to identify factors influencing default of adult epileptic patients in Ibadan. Methodology: This is a prospective study of subjects with epilepsy seen at the out-patient neurology clinic, University College Hospital, Ibadan Nigeria. A total of 147 patients with epilepsy were recruited consecutively. A standard questionnaire for obtaining information on their demographic characteristics, cost of transportation, estimated distance to the clinic, monthly clinic attendance and seizure frequency was initially applied to each patient who was assigned to be seen monthly for the next six months. Those that defaulted from any subsequent visit were identified and the questionnaire was applied to obtain the reason for default from them. Results: The reasons adduced for default were; - high cost of transportation and long journey to the clinic. Estimated distance to the clinic ( $p = 0.013$ ) and age below 40 years ( $p = 0.016$ ) were also identified to have significant influence on clinic attendance of epileptic patients in Ibadan. Conclusions: High cost of transportation, long journey to the clinic and age below 40 years were significantly associated with poor clinic attendance. Subsidising transportation and decentralising epilepsy care may improve clinic attendance and seizure control. Key words: Epilepsy-Care-Nigeria-Default.

## Introduction

Epilepsy is a common neurological disease and a major cause of mortality world-wide. It affects an estimated 0.5% of the world's population<sup>1</sup> and about 40 million of them live in developing countries. Traditional beliefs have influenced public attitude to epileptic patients resulting in some of them being ostracised, stigmatised and misunderstood<sup>2</sup>. Ultimately, epilepsy care in developing countries falls below expectations<sup>2</sup>. In these countries, epilepsy is widely under-recognised and underreported because of beliefs that the condition is caused by evil spirits, or a witch's curse<sup>2</sup>. Epilepsy is also often seen as an infectious disease that is transmissible by contact with the patient's saliva<sup>3</sup>. As a result of these factors, 80-90% of people with active epilepsy in developing countries do not receive adequate antiepileptic drugs<sup>4</sup>. Instead treatment with traditional medicine is often practiced. This practice is also influenced by the advice of relatives and neighbours<sup>5</sup>. However in South Asian communities, traditional medicine is used as an adjuvant to orthodox medicine rather than as substitute<sup>6</sup>. Thus, when some of these patients were introduced to orthodox therapy, they continued to utilize traditional medicine, thus their clinic attendance was observed to be poor<sup>7</sup>. Patients with epilepsy in primary care are treated if they attend clinic. They are also counselled on drug and clinic compliance, but are commonly not followed up if they fail to attend<sup>8</sup>, since there are no established home visitation programs. Some studies showed that few epileptics had organised regular follow up<sup>9</sup> and that many patients with severe epilepsy had received no primary care consultations in the previous year<sup>10</sup>. The reasons for clinic default are not known in most developing countries. This study is aimed at

elucidating the major factors influencing clinic default of adult patients with epilepsy in a tertiary hospital in Nigeria, a developing country.

## **SUBJECTS AND METHODS**

We conducted a prospective study of adult (> 16 years) patients with epilepsy seen at the neurology clinic of the University College Hospital Ibadan, Nigeria. Epilepsy was defined operationally as two or more non-febrile seizures unrelated to acute metabolic disorders, alcohol or drugs withdrawal. Details of the seizures were obtained from the patients and an eye witness (usually the spouse or any other family member). Eligible subjects were enrolled consecutively from May 2008 to March 2009. We excluded: - patients with inconclusive diagnosis or who did not give consent. We regarded those who missed any of their monthly clinic appointment as defaulters. Poor compliance was measured as a discrete but continuous period of drug abstinence or failure to take prescribed dosage appropriately<sup>14</sup>. We used neither pill counting method as drugs were not supplied by us. There was no facility to determine serum drug levels. We recruited 150 patients out of which 3 dropped out of the study. Ethical clearance was obtained from University of Ibadan/University College Hospital Ibadan Ethical Committee.

### **Study Protocol**

At the end of each enrolment, the patient was assigned to be seen monthly for the subsequent six months. Data was collected using a questionnaire which included: - demographic data, cost of transportation, estimated distance from the clinic and monthly drug compliance and clinic attendance

were obtained from each patient. The second part of the questionnaire was structured to find out the reasons for clinic default from those patients who defaulted. Responses were obtained by direct questioning of the patients with epilepsy and/ or their parents/relatives. The motive of the questioning was clearly explained to the patients and local languages were used sometimes through an interpreter for those who did not understand English language. Each interview took approximately 10-20 minutes and any unclear responses were cross-checked carefully. The reasons for default were established from their subsequent visits and each subject was allowed to give only one most important reason for default. At the end of the six months follow up, 14 patients were lost to follow up. These patients/relatives were contacted through telephone and invited for follow up. They were informed that continued participation was voluntary and refusal to participate would in no way affect their health-care. Nine patients were able to turn up on two separate clinics and the reasons for default were subsequently obtained. Out of the remaining five, two patients were traced to their homes. The remaining three were not included in the data analysis; - one patient had moved to an unspecified area within Ibadan, the second patient had an incorrect address and the third patient lived outside Ibadan.

### **Statistical analysis**

Analysis was conducted using statistical package for social sciences (SPSS) version 16. 0. 1. Categorical data were summarised as frequencies and percentages. Continuous data were described as mean-value  $\pm$  standard deviation. Association was tested using the chi-square test and by

calculating the odds ratio with 95% confidence interval. A p-value less than 0.05 was considered statistically significant.

## **RESULTS**

### **Characteristics of the study subjects**

The 147 subjects studied comprised 79 male (53.7%) and 68 female patients (46.3%) with a male to female ratio of 1.2:1. Their ages ranged between 16-88 years with a mean of  $33.41 \pm 16.21$  years. 46.3% of the patients were young adults with age range 20-39 years. Twenty-eight patients (19.0%) completed primary school education, 80 (54.4%) completed secondary school, 35 (23.8%) patients completed tertiary education while four of them were illiterate. One hundred and twenty patients (81.6%) were resident in Ibadan and the rest came from nearby villages, towns and states. The median monthly income was 17,500 naira (116.66 US Dollar), with most of them receiving less than 5,000 naira (33.33 US dollars) monthly. Most of the subjects (63.2%) belonged to the low income group. Unemployed school children (students) predominated and accounted for 36.7% (figure 1).

### **Pattern and reasons for default.**

Eighty-six patients (58.5%) defaulted. This comprised seventy-four patients (86.0%) who missed one clinic appointment during the six months follow up, ten patients who missed two appointments while 2 patients missed more than two appointments. The pattern of monthly clinic default by patients is shown (Figure 2). The cost of transportation (21.8%) and long journey to the clinic (16.3%) were the major reasons for defaulting (Table 1).

## Fig. 1 Distribution of patients by Occupation

## Fig2. Pattern of clinic attendance

Baseline represents the first time of contact

## Table1. Reasons for default

### REASONS

### Number of responses(n= 147)

### % of total (n= 147)

1. Cost of transportation to the clinic3221. 82. Long journey to the clinic2416. 33. Long clinic hours1812. 24. Forgetfulness of clinic appointment5. Frequent appointments per year6. I was busy at school17171211. 611. 68. 27. I was busy at work place117. 58. Feeling of well being9. Advice from relatives to stop coming to the clinic835. 42. 010. Felt it could be cured by alternative means32. 011. Unfriendly attitudes of medical staffs21. 4147 100Age-below 40 years was significantly associated with defaulted (table 2, Chi<sup>2</sup>= 9. 76, odds ratio= 2. 45, p value = 0. 016). Those that were less educated (61. 6%) tended to default more than those with tertiary education (48. 6%), (Chi<sup>2</sup> = 1. 87, odd ratio= 1. 70, p value = 0. 17). However, this did not reach significance. Similarly, there was no significant difference in the clinic attendance among various occupations studied, (Chi<sup>2</sup> = 7. 30, p value = 0. 40). Majority of the patients were within the low income group (63. 3%). Individuals within the low (56. 9%) andmedium (63. 0%) income groups defaulted more than those in the high income group (50. 0%), Chi<sup>2</sup>= 0. 72, odds ratio = 0. 84, p value= 0. 70. Albeit this did not affect their clinic attendance significantly. The mean

estimated distance to the clinic was  $15.5 \pm 18.9$  km. There was a significant difference between defaulters and non defaulters in their estimated distance to the clinic. Those who travelled a shorter distance ( $< 10$  km) to the clinic attended the clinic more (52.9% vs. 47.1%) than those who travelled from a further distance. Similarly, those who travelled a longer distance ( $> 10$  km) defaulted more (74.2% vs. 25.8%) with  $\text{Chi}^2 = 14.41$ , odds ratio = 3.23,  $p$  value = 0.013. More patients (73.6%) defaulted when the cost of transport was greater than 200 naira (1.33 USD) than when the cost was less than 200 naira (52.3%),  $\text{Chi}^2 = 9.42$  odds ratio = 2.93,  $p$  value = 0.048, table 2.

## **Table 2. Clinic default by age group, educational status, estimated distance and cost of transportation of patients**

DefaultYes\*No\*TOTAL\*Chi2, P value, OR

### **Age group(years)**

$< 40$  66(65.3)35(34.7)101(100)9.76, 0.016  $> 40$  20(43.5)26(56.

5)46(100)2.45

### **Educational status**

Poorly educated 69(61.6)43(38.4)112(100)1.87, 0.17 Tertiary

education 17(48.6)18(51.4)35(100)1.70

### **Estimated distance(km)**

$< 10$  40(47.1)45(52.9)85(100)14.41, 0.013  $> 10$  46(74.2)16(25.8)62(100)3.

23



## **Cost of transportation(naira)**

<20057(52. 3)52(47. 7)109(100)9. 42, 0. 048> 20027(76. 3)9(23. 7)38(100)2. 93

## **Income(naira)**

Low(<10, 000: 00)53(56. 9)40(43. 1)93(100)0. 72, 0. 70Medium(10, 001: 00-100, 000: 00)29(63. 0)17(37. 0)46(100)0. 84High(> 100, 001: 00)4(50)4(50)8(100)

## **DISCUSSION**

Epilepsy is a very common neurologic disease in the developing countries<sup>1</sup>. Information on the factors influencing default is thus necessary to ensure a holistic approach to the management of the affected individuals. This study showed that eighty-six patients (58. 5%) defaulted from the clinic. This rate is similar to reports by Iyun<sup>11</sup>, and Adamolekun<sup>12</sup>, lower than the findings of Izuora<sup>13</sup>, and higher than the rates found by Elechi<sup>14</sup>. These discrepancies may be explained by the different operational definitions of default, periods of study and study populations (whether hospital or community based study). The major reasons for default were cost of transportation to the clinic (21. 8%) and long journey to the clinic (16. 3%). Elechi found a similar rate of 22. 2% with cost of transportation as the main reason for default. This is not surprising because, more than 50% of participants from our study earned below 25, 000 naira (166. 67 USD) per month with a modal monthly income of 5, 000 naira. The mean cost of transportation per clinic was 205. 78±215. 77 naira (1. 37 USD) and may be too high for many of them to afford on a regular basis. Moreover, we observed that more patients defaulted when the

cost of transportation exceeded 200 naira (76.3%) than when the cost was less than 200 naira (52.3%). Incessant petrol shortages were also responsible for hike in the cost of transportation in our country during the period of study. About two-thirds of defaulters were young adults (< 40 years). This may be due to commitments in school and at the work-place; - (-farming, trading and apprenticeship). This group also constitutes the active working class for which the need to meet up with economic demands may also have contributed. An apprentice may not likely be allowed regularly to attend clinic by his trainer. In Ethiopia<sup>7</sup>, where rural health centers were run by nurses and health officers, epilepsyclinics were decentralized and nearer to patients` homes. Despite this, the most common reason given for default from follow-up was difficulty in travelling to the health centre because of long journey. The mean time for a return journey was > 10 h and it was not surprising that a proportion of patients were not prepared to make such a long journey regularly<sup>7</sup>. This is similar to the findings in this study with long journey to the clinic as the second most important reason for defaulting. This obviously will be difficult for many patients who may want to walk to the clinic. Those who travelled shorter distances (<10km) to the clinic attended the clinic more (52.9% vs. 47.1%) regularly. Conclusions: High cost of transportation, long journey to the clinic and age below 40 were associated with poor clinic attendance. Improved health education with structured regular wide spread care at the community level may reduce default from follow up. Epilepsy Nurse Specialist should be trained to do out lying clinics. Also moving work place closer to out lying clinics could help, furthermore,

subsidizing transportation may improve clinic attendance. However, these interventions need to be tested in future studies.