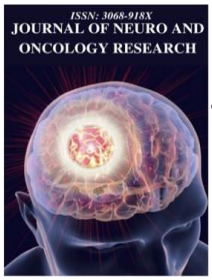

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Research Article

Profile of Patients with Epilepsy Seen at Aro Primary Care Mental Health Programme for Ogun State, Nigeria

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Abstract

Objective: A remarkable proportion of patients seen at the Aro Primary Care mental health programme setting also suffer from epilepsy. Failure to treat epilepsy may affect the quality of health care to the patients. The study was designed to assess the clinical and socio-demographic profile of patients with epilepsy seen at Aro primary care mental health programme for ogun state

Method: We conducted a retrospective review of records of all epilepsy patients who were completely entered into Aro primary care mental health register. Data was analyzed using the Statistical Package for Social Sciences (SPSS) version 21.0. Descriptive statistics such as frequency, mean, standard deviation and percentages were used to describe socio-demographic characteristics of the patients.

Results: Nine hundred and seventy-seven patients (977) with complete entries into the register were analyzed (from November 2011 - November 2019). There were 498 (51%) males. The mean (SD) age of the patients was 40.1(13.6) years. A majority of the patients was unemployed (39%), 56.2% were of lower educational status and 63.8% were not married. All the patients had convulsive type of epilepsy and were placed on either carbamazepine or phenobarbitone with average doses of 472.5(37.6) mg and 60.2(0.8) mg respectively. About 70% of the participants had no record any further episode of seizure at the sixth month of treatment.

Conclusion: The Aro Primary Care Mental Health Programme manages a large and socioeconomically vulnerable cohort of patients with diverse neuropsychiatric conditions including convulsive epilepsy who respond well to antiepileptic medications in the short term. These findings reinforce the importance and feasibility of integrating epilepsy care into primary-care mental-health services, while highlighting the need for improved diagnostic capacity, long-term follow-up and social interventions to address the broader determinants of health for people living with epilepsy.

Keywords: Epilepsy; Patients Profile; Treatment; Primary Care Settings; Ogun State; Nigeria

Introduction

Estimate has it that about 20 million Nigerians suffer some form of mental disorder, while less than 10% receive any form of

treatment and less than 1% receive specialist care. The Nigerian Health Ministry adopted mental health as the ninth component of primary health care in 1989, to address mental, neurological and substance use disorders but this is yet to be integrated fully into primary health care services [1]. Epilepsy is a long-term, non-communicable neurological disorder affecting approximately 50 million individuals globally. It is marked by recurrent seizures short episodes of involuntary movements that can involve a specific part of the body (partial seizures) or the entire body (generalized seizures) and may occasionally be associated with loss of consciousness and loss of control over bowel or bladder functions [2].

Epilepsy represents a substantial portion of the global disease burden, impacting approximately 50 million individuals worldwide [2,3]. The estimated prevalence of active epilepsy in the general population referring to ongoing seizures or the necessity for treatment is between 4 and 10 per 1,000 individuals at any given time [2,3].

Worldwide, approximately five million individuals are diagnosed with epilepsy annually4. In high-income countries, the annual diagnosis rate of epilepsy is estimated to be 49 per 100,000 people [4]. In low- and middle-income countries, the annual prevalence of epilepsy diagnosis can reach as high as 1,098 per 100,000 individuals [4]. This is probably attributable to the greater prevalence of endemic diseases such as malaria and neurocysticercosis, as well as higher rates of road traffic accidents and birth-related injuries. Differences in healthcare infrastructure, the availability of preventive health programs and accessible medical care also play significant roles. Nearly 80% of individuals with epilepsy reside in low- and middle-income countries [5].

Integrating mental health services into primary care is the most viable way of ensuring that people receive the mental health care they need. People can access mental health services close to their homes, thus keeping families together and maintaining their daily activities and also avoid indirect costs associated with seeking specialist care in distant locations. In addition, intervening at primary care level helps to minimise stigma and discrimination [1].

Ogun State is one of the 36 states in Nigeria with a population of about 4 million. The Neuropsychiatric Hospital, Aro, was stirred by the theme of the 2009 World Mental Day theme 'Mental Health in Primary Care: Enhancing Treatment and Promoting Mental Health'. The hospital decided to embark on a primary care mental health service pilot project in collaboration with Abeokuta North Local Government on 10 October 2009. The project was a stepping stone for a state-wide primary care mental health programme which was rolled out in 2011 across the four socio-political zones of Ogun state, Nigeria to address five priority conditions which are: Psychosis, epilepsy, depression, Substance use disorders and anxiety disorders and Other Significant Emotional Complaints (OSEC) [6].

Methodology

Study Centre

The study was carried out in all the 40 Primary Health Care (PHC) centers that were designated for mental health services in the 20 Local Governments of Ogun State.

Study Design

This was a retrospective review of records of all epilepsy patients recorded in Aro Primary Health Care Register for an eight (8) year period from November, 2011 to November, 2019. The record was kept in Aro Primary Care Mental Health Care Unit of the Federal Neuropsychiatric Hospital Aro, Abeokuta.

Sample Size and Sampling Technique

In the Aro Primary Health Care Register, 2220 caseload was registered, 984 were diagnosed with epilepsy. 7 patients had incomplete entries in some of the required domains in the Register, hence they were excluded. Consequently, a total of 977(44.0%) cases with complete entries were analyzed.

Data Collection

Data was collected using a semi-structured proforma containing the following sections: Socio-demographic variables, Clinical diagnoses and Physical co-morbidity. The diagnoses were made according to criteria that were contained in the epilepsy module of the mental health Gap Action Programme-Intervention Guide that was adapted for training PHC workers at primary health care settings in Ogun state, Nigeria [6].

Data Analysis

The proforma was sorted out, cross-checked and coded serially. Data was analyzed using the Statistical Package for Social Sciences (SPSS) version 21.0. Descriptive statistics such as frequency, mean, standard deviation and percentages were used to describe socio-demographic characteristics of the patients.

Ethical Statement

Ethical approval was obtained from Ethical Committee of Federal Neuropsychiatric Hospital Aro, Abeokuta, Ogun State (HREC PR004/19) for the main study. Permission for the study was obtained from Ogun State Local Government Service Commission (LGC.844/44).

Results

The results are presented in Table 1 below Out of the 977 patients, 498 (51%) were males. The mean (SD) age of the patients was 40.7 (13.6) years. The mean age for males (41.9 years) was greater than that of females (39.3 years). Majority of the patients were unemployed (59%), while 63.8% were not married. Educational distribution revealed that (56.2%) of the patients had primary education and below. While only (15.8%) patients had university education. Majority of the patients (37.2%) were unemployed labour occupational status.

All the patients had the convulsive type of Epilepsy. Out of the 977 patients, 657(67.2%) were on carbamazepine while the others were on phenobarbitone. The average dose of medication was 472.5 (36.7) mg for Carbamazepine and 60.2(0.8) mg for Phenobarbitone. 68% of the patients had not experienced any fit after 6months of commencement of medication.

Variable	Frequency (N=977)	Percentages (%)
Age Mean (SD)	**40.7(13.6)**	
Age groups		
<20 Years	54	5.6
20 -40years	538	55.1
41-60 Years	294	30.0
>60years	91	9.3
Sex		
Male	498	51
Female	479	49
Tribe		
Yoruba	842	86.2
Ibo	62	6.3
Hausa	5	0.5
Others	68	7.0
Religion		
Christian	591	60.5
Islam	384	39.3
Others	2	0.2
Education		
No Formal Education	92	9.4
Primary	549	56.2
Secondary	182	18.6
University	154	15.8
Marital Status		
Single(Never Married)	623	63.8
Married	241	24.6

Separated /Divorced/Widowed	113	11.6
Employment Status		
Employed	224	22.9
Retired	176	18.0
Unemployed	577	59.1
Type of Epilepsy		
Convulsive Type	977	100
Medications Used		
Carbamazepine Mean (SD) Dosage	**472.5(37.6) mg**	
Phenobarbitone Mean (SD) Dosage	**60.2(0.8) mg**	

Table 1: Socio-demographic variables of patients with epilepsy N= 977.

Discussion

In this retrospective review of 977 patients with epilepsy registered at the Aro Primary Care Mental Health Programme in Ogun State (2011-2019), we found a near-equal sex distribution (51% male), a mean age of ~40 years, high unemployment (59%), low educational attainment (56.2% with primary or below) and that the cohort comprised exclusively convulsive epilepsies treated mainly with carbamazepine or phenobarbitone; about 68-70% were seizure-free in the first 6 months of therapy. Generalized convulsive epilepsy predominates in Nigeria and recent findings from Nigerian data report that generalized tonic-clonic seizures are the most common seizure type in hospital-based and community studies [7]. This is consistent with the findings in our register where convulsive epilepsies were the most common. Carbamazepine remains a commonly used first-line anti-epileptic drug in Nigerian practice; older Nigerian reports and more recent local studies have documented frequent carbamazepine monotherapy use [7]. The large treatment gap for seizure disorder in resource-limited settings is well documented: in a lot of low-income countries a substantial proportion (Approximately 75%) of individuals diagnosed with epilepsy do not receive appropriate treatment and availability of antiepileptic medications in government-owned facilities is limited [5,8]. Reviews of global and LMIC epilepsy care also highlight persistent diagnostic and therapeutic gaps that disproportionately affect low-resource and rural populations [5,9]. Several factors are likely to explain our findings. First, convulsive seizures are more obvious to patients, families and primary-care workers and thus are captured in primary-care registers; non-convulsive or focal seizures are more likely to be missed in settings with limited diagnostic tools such as EEG or neuroimaging [2,8]. Second, the socioeconomic profile (low education, high unemployment, unmarried status) of our cohort reflects the bidirectional association between epilepsy and low social class: epilepsy can worsen employability and social inclusion, while poverty and low education limit access to care and medication adherence [3,5]. The relatively high proportion of patients seizure-free at 6 months in our cohort suggests that, even within a primary-care mental-health programme, reasonable short-term control is achievable when antiepileptic medications are available and used [7]. This finding supports the feasibility and potential effectiveness of providing epilepsy treatment at the primary-care level with appropriate training and supervision.

Strength and Limitation of the Study

Strengths of this study include a large sample size (n = 977) and real-world data drawn from an established primary-care mental-health register, offering pragmatic insights into epilepsy care at the community level.

Limitations include the retrospective design and reliance on register entries (which may omit etiological data, comorbidities, detailed adherence measures and diagnostic investigations), probable under-ascertainment of non-convulsive/focal epilepsies without routine EEG/neuroimaging and assessment of outcomes only up to 6 months (long-term control, adherence, adverse effects and quality of life were not evaluated).

Conclusion

The Aro Primary Care Mental Health Programme manages a large and socioeconomically vulnerable cohort of patients with diverse neuropsychiatric conditions including convulsive epilepsy who respond well to antiepileptic medications in the short term. These findings reinforce the importance and feasibility of incorporating epilepsy management into primary-care mental-health services, while highlighting the need for improved diagnostic capacity, long-term follow-up and social interventions to address the broader determinants of health for people living with epilepsy.

Conflict of Interest
The authors declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

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Data Availability Statement
Not applicable.

Ethical Statement
The project did not meet the definition of human subject research under the purview of the IRB according to federal regulations and therefore, was exempt.

Informed Consent Statement
Informed consent was taken for this study.

Authors' Contributions
All authors contributed equally to this paper.

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