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2 **DEMOGRAPHIC AND CLINICAL PROFILE OF PATIENTS RECEIVING**  
3 **ELECTROCONVULSIVE THERAPY AT Federal Neuropsychiatric**  
4 **Hospital Yaba in Lagos, Nigeria.**

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19 **ABSTRACT**  
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**Aims:** To obtain sociodemographic and clinical profile of patients receiving Electroconvulsive therapy in a Nigerian psychiatric hospital.

**Study design.** A retrospective study.

**Place and duration.** The study was carried out at the Federal Neuropsychiatric Hospital Yaba, Lagos, Nigeria over a period of 3 months.

**Methodology:** An extensive review of the hospital records of patients receiving the modified form of electroconvulsive therapy for the first time over a period of eight years was done. The demographic information, clinical diagnosis and indication for electroconvulsive therapy were retrieved and analysis was done using SPSS 19.

**Results:** There were a total of 222 cases, ranging from 45 in 2000 to 21 in 2007. Mean age was  $31.7 \pm 9.65$ . Male: female ratio was 1:2. Almost 60% of them were single and unemployed. Clinical diagnosis using ICD 10 ranged from schizophrenia (44.8%), severe depression (27.8%), bipolar disorder (15.5%) to puerperal psychosis (8.2%). Indications for electroconvulsive therapy included psychosis (41.6%), severe depressive episode (25.8%), catatonia (23.7%) and manic episode (7.4%).

**Conclusion:** This study has shown that the use of ECT has declined in the facility over the study periods. Also, females were twice as likely to receive electroconvulsive therapy

compared to males and schizophrenia still remains the most common diagnosis among the patients.

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24 *Keywords: Depression, Electroconvulsive therapy, Schizophrenia, Catatonia, Psychosis*

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## 27 **1. INTRODUCTION**

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29 Electroconvulsive therapy (ECT) is one of the physical therapeutic processes in psychiatry  
30 which involves the passage of an electrical stimulus to the brain so as to induce a central  
31 seizure with the aim of providing improvement in a patient's mental state. From a global  
32 perspective, it is estimated that at least 1,000,000 people receive electroconvulsive therapy  
33 (ECT) annually [1].The major indications for ECT are major depression, catatonia,  
34 schizophrenia and acute mania and bipolar disorder [2.3.4]. It is also been used in the  
35 treatment of some medical conditions such as refractory Parkinson's disease, particularly  
36 with "on-off" syndrome (e.g., severe, unpredictable motor fluctuations), neuroleptic malignant  
37 syndrome, temporal lobe epilepsy and intractable seizure disorders [3,5,6]. According to  
38 Sackeim et al, ECT is also considered a first-line treatment when medical or psychiatric  
39 factors require a rapid and robust clinical response, when ECT poses less risk to a patient  
40 than medication (e.g., during pregnancy or in elderly patients), when there is a clear history  
41 of medication resistance or a history of favourable response to ECT, or when the patient  
42 prefers ECT to medication [7]. Similarly, ECT has been shown to have a profound short-term  
43 benefit in suicidal patients.

44 There is however a decline in the use of ECT worldwide and various reasons were deduced  
45 for this decline [9,10,11]. For instance, Nancy et al proposed that the decline in the use of  
46 ECT in the United States of America was due to organized and vocal anti-ECT activity that  
47 is not countered by a public education campaign; continued distortions in the media;  
48 restrictive reimbursement schedules, which may hinder patients from obtaining or completing  
49 courses of ECT; lack of availability, particularly for the poor and uninsured (public facilities  
50 have traditionally been unwilling, from a policy standpoint, to bear the stigma or the cost of  
51 providing ECT and. only approximately 8% of psychiatrists in the United States offer ECT as  
52 a treatment); poor regard for the treatment; psychiatrists' unwillingness to prescribe ECT due  
53 to concern that the recommendation will not be well received or because they have outdated  
54 information about the treatment[12].

55 Similarly, other authors attributed the decline to unfavourable public perception and  
56 professional attitude; publication of more restrictive guidelines on the use of ECT; availability  
57 of a greater variety of safe alternative antipsychotics and antidepressants; patient resistance  
58 and a reduction in in-patient bed numbers[12.13.14].

59 In spite of these reservations, ECT still remains in use globally especially in the modified  
60 form. Studies have reported rates of between 0.4% and 1.7% among discharged in -patients  
61 in the united states and 0.8% to 15.0% in United Kingdom[15,16]. There are however limited  
62 studies done on ECT in Nigeria and Africa as a whole. The main objective of this study was  
63 to obtain sociodemographic and clinical profile of patients receiving ECT in a Nigerian  
64 psychiatric hospital.  
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66 **2. MATERIAL AND METHODS**

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68 The study was carried out at the Federal Neuropsychiatric Hospital Yaba, Lagos, Nigeria.  
69 The hospital was established in 1907 and as a capacity for over 530 patients. The hospital  
70 has numerous consultant psychiatrists and is also one of the largest facilities for managing  
71 mental disorders in Sub-Saharan Africa.

72 Permission to conduct the study was granted by the Ethical committee of the Hospital.. The  
73 hospital records of patients who received of ECT at the hospital from January 1<sup>st</sup> of 2000 to  
74 December 31<sup>st</sup> of 2007 were reviewed for demographic information, clinical Diagnosis and  
75 indication for ECT use. The patients received the modified form of ECT with bilateral  
76 electrode placement. Only patients who were administered ECT for the first time during the  
77 period were recruited. Analysis was done using SPSS 19.

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80 **3. RESULTS AND DISCUSSION**

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82 There were a total of 222 new cases between 2000 and 2007. The highest number of cases  
83 (45) was recorded in the year 2000 and this accounted for 20.3% of the total number of  
84 patients who received ECT for the whole 8years. The number however decreased over time  
85 to 21 (9.5%) by 2007. The mean age of the patients was 31.7 ± 9.65. A high number of the  
86 patients were females (66.0%), single (58.5%), while 58.8% of the patients were  
87 unemployed.(Table 1) The clinical diagnosis using ICD 10 of the patients ranged from  
88 schizophrenia (44.8%), severe depression (27.8%), bipolar disorder (15.5%) to puerperal  
89 psychosis (8.2%). Indications for ECT included psychosis (41.6%), severe depressive  
90 episode (25.8%), catatonia ( 23.7%) and manic episode (7.4%).

91 Comparing the first four years of the study (2000-2003) with the later four years (2004-  
92 2007), the clinical diagnosis of the patients showed that there was a reduction in the  
93 percentage of those with schizophrenia from 47.2% to 44.2%. This is however in contrast to  
94 those with depression and mental and behavioural disorder in puerperium in which there  
95 was an increase in the number of patients from 26.8% to 32.8% (depression) and from 7.1%  
96 to 11.5% for postpartum disorders. These differences were statistically significant (chi-  
97 square=128.4, df=3, p=0.000).

98 Depression as an indication for ECT increased from 22.8% between 2000-2003 to 33.9%  
99 between 2004-2007. There was however a decline in the proportion of patients who were  
100 administered ECT due to catatonia from 24.4% to 22.0%.

101 This female gender preponderance among the ECT recipients is not unexpected as several  
102 studies have also reported that women are more likely to receive ECT than men [17,18]. The  
103 high rate of unemployment reported in the study may be due to the disabling nature of the  
104 illnesses most especially schizophrenia which makes it difficult for the patients to be gainfully  
105 employed especially in an economically disadvantaged country like Nigeria.

106 The decline in the use of ECT as a treatment option for psychiatric disorders as reported in  
107 this study appears to be a global issue as this decline has also been reported in other  
108 studies [9,10]. The decline in this environment may be explained by the advent of atypical  
109 antipsychotics and selective serotonin reuptake inhibitors antidepressants (SSRIs) most  
110 especially the generic forms. When these medications (the branded forms) were first  
111 introduced in this environment in the late 1990s, they were not within the reach of most

112 people due to their high cost and since there was no effective health insurance scheme, it  
 113 meant that only a few people could afford them. Following the introduction of cheaper  
 114 generic forms some years later, the use of these medications became widespread. This view  
 115 is consistent with an earlier study which reported that availability of a greater variety of safe  
 116 alternative antidepressants may be one of the factors responsible for the decline in ECT use  
 117 [14].

118 The high proportion of patients with a diagnosis of schizophrenia as reported in this study is  
 119 consistent with some studies from this environment and other parts of the world but in  
 120 contrast to some other studies [17,19,20,21,22]. The increasing proportion of patients with  
 121 depression receiving ECT in contrast to those with schizophrenia may not be unconnected  
 122 with better response achieved with such patients. Another study had also reported that major  
 123 depression is the diagnosis for which ECT is now most frequently recommended in the  
 124 United States and other western nations[12].

125 The use of ECT in schizophrenia is now shrouded in a lot of controversy such that the  
 126 Royal college of psychiatrists and the American Psychiatric Association issued guidelines  
 127 discouraging its use[3,23]. These guidelines stated that ECT could be used if the  
 128 schizophrenia is of the catatonic subtype or if the symptoms are of an acute onset or in  
 129 situations where there has been a previous response to ECT. They however did not  
 130 recommend its use in patients with type 2 schizophrenia. Other authors however reported  
 131 the effectiveness of ECT in patients with schizophrenia especially when combined with  
 132 antipsychotics[24-27].  
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135 **Table1. sociodemographic characteristics of the subjects.**  
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| Variable                       | Frequency | Percentage (%) |
|--------------------------------|-----------|----------------|
| <b>Sex</b>                     |           |                |
| Male                           | 75        | 33.8%          |
| Female                         | 147       | 66.2%          |
| <b>Marital status</b>          |           |                |
| Single                         | 130       | 58.6%          |
| Married                        | 48        | 21.6%          |
| Separated/divorced/<br>Widowed | 44        | 19.8%          |
| <b>Employment status</b>       |           |                |
| Employed                       | 92        | 41.4%          |
| Unemployed                     | 130       | 58.6%          |
| <b>Educational status</b>      |           |                |
| None                           | 5         | 2.3%           |
| Primary                        | 15        | 6.7%           |
| Secondary                      | 123       | 55.4%          |
| Tertiary                       | 79        | 35.6%          |

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#### **4. CONCLUSION**

This study shows that number of patients receiving ECT declined overtime as shown in the results. The first year of study accounting for 20.3% of total cases while last year accounted for 9.5% of case. . It also shows that females were twice as likely to receive ECT compared to males. Though, Schizophrenia remains the most common diagnosis, there is however an increasing proportion of patients with depression receiving ECT in this facility in contrast to patients with schizophrenia.

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#### **COMPETING INTERESTS**

NONE

#### **AUTHORS' CONTRIBUTIONS**

All authors contributed to the conceptualisation, data collection and final writing of the article. Data analysis was done by Dr Dada M.U and Dr Okewole A.O.

#### **ETHICAL APPROVAL**

Approval for the study was obtained from the Ethical Committee of the Federal Neuropsychiatric Hospital Yaba, Lagos, Nigeria

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**ABBREVIATIONS**

ECT- ELECTROCONVULSIVE THERAPY