

## PSYCHOSOCIAL ADJUSTMENT TO EPILEPSY AMONG NIGERIANS

B. O. Olley, H. O. Osinowo

*Department of Psychology, Faculty of the Social Sciences, University of Ibadan, Ibadan.*

### ABSTRACT

The study examined psychosocial aspects of 264 clinically diagnosed adults with epilepsy using the Washington psychosocial seizure inventory. The sample was drawn from both the Neuro-psychiatric Hospital, Aro Abeokuta and the University College Hospital Neurology Clinic over a period of four months, January 1998 - April 1998. Using their demographic characteristics as comparison criteria, results indicated that "poorly seizure controlled epileptics" reported more adjustment difficulties in all the five domains of adjustment compared with the moderately and good seizure controlled epileptics. The complex partial seizure type reported more adjustment difficulties in Vocational Adjustment compared with the primary generalized and partial secondary generalized respectively. Unemployed epileptic group reported more emotional, vocational, and financial adjustment difficulties than the employed epileptic group. Male epileptics reported higher interpersonal and financial adjustment difficulties than the female epileptics.

Results were discussed within the context of existing literature of psychosocial adjustment of epileptics particularly in Nigeria.

### INTRODUCTION

Research into epilepsy tends to be largely focused on neurobiological issues, but over the years a body of empirical research findings has developed that indicates that seizure disorders are often associated with a variety of psychological and social difficulties<sup>1-4</sup>. Social and psychological effect of epilepsy is basically disabling and could be more handicapping than the seizures themselves<sup>5</sup>. Two models in research literature have been propounded to explain the increased psychosocial problems in individuals with epilepsy. The first assumes that non-medical problems are almost inevitable and that their severity co-varied directly with the severity of the medical condition. The second asserts that disabling effects are mediated by other individual and social characteristics especially by a person's, perception of himself or herself and his or her condition. Where research has been done, most have utilized the first model exclusively<sup>6,7</sup>. The second more recently developed model suggests a more fruitful line of investigation from the point of view of a more complete understanding of the experience of epilepsy. In particular, it seems potentially useful for understanding the considerable variation in social and seizure-related handicaps among individuals with epilepsy. It is this second model that has guided the conceptualization of the present study. Although there is a body of knowledge on psychosocial aspects of epilepsy (as stated above) many of these studies with the exception of Dodril et al<sup>2</sup> have studied psychosocial aspects of epilepsy with measures such as the Minnesota Multiphasic Personality Inventory (MMPI). The MMPI has been considered inadequate for evaluating social and psychological problems among individuals with epilepsy. The Washington Psychosocial Seizure Inventory (WPSI)<sup>8</sup> is one

instrument developed to control for this anomaly and it has received wide application<sup>9-11</sup>. It has however not received any application among individual patients with epilepsy in any developing African country despite reported high prevalence of epilepsy in these countries<sup>12-13</sup>. Studies evaluating social and psychologic problems among epileptics in Nigeria are particularly in dearth concerning systematic evaluation of the problems. Research over the years has basically been interested in documenting the psychiatric aspect of epilepsy using clinical evaluation and assessment techniques that are of the traditional psychiatric diagnostic formulations<sup>15,16</sup>. Others are reviewed case reports with inferences on social and psychological difficulties. With one exception<sup>17</sup> studies deliberated towards assessing psychosocial problems in epilepsy have been limited essentially to descriptive correlates of demographic variables of the illness<sup>18-20</sup>. They lack systematic and objective assessment of the problem areas, and the ability of such studies to consider a large domain of psychological and social variables with underlying theoretical framework are essentially lacking. The present study document the WPSI profiles across groups of patients who were on follow-up management at the Neurology Clinic of both the Neuropsychiatric Hospital, Aro and the University Teaching Hospital, Ibadan over a 4-month period. Both are tertiary facilities based in Nigeria.

### METHODS

#### Subjects:

The subjects were screened from patients who were on follow-up management at the clinics of two psychiatric facilities in Nigeria, the Neuro-psychiatric Hospital, Aro and the University College Hospital, Ibadan. A total of 264 subjects were interviewed over a 4-month period during counselling sessions at each of the

\*Correspondence: B. O. Olley

clinic days. This sample size was based on sampled size calculation for a cross-sectional survey and on the 37% prevalence of psychiatric morbidity found in a previous survey among individual patients with epilepsy studied in one of the same setting as the present study<sup>15</sup>.

Five criteria for inclusion were: (a) subjects must have been clinically diagnosed with epilepsy using a combination of clinical and EEG considerations by either a consultant Neurologist or a consultant Neuro-psychiatrist, (b) subjects must be within the age range of 21 - 65 years, (c) there should be no evidence of either clinically diagnosable mental sub-normality or other neurological disorders, (d) subjects must have the ability to speak either English or Yoruba, which are the commonly spoken languages in the study area, (e) subjects must have been on follow-up at the clinic for at least a period of three months prior to interview. This latter criterion is necessary so as to guarantee all vital investigations prior to clinical diagnosis.

## MEASURES AND INSTRUMENTS

### Washington Psychosocial Seizure Inventory:

The Washington Psychosocial Seizure Inventory (WPSI)<sup>8</sup> constitute the measure used in this study. It is a complete inventory with 7 clinical scales, which permits for a comprehensive, systematic and objective assessment of psychological and social problems among adult epileptics. It contains 132 items listed among seven sub scales and incorporating 3 validity scales namely the Lie, Rare items and No Blank scales.

Out of its seven clinical scales, five scales namely the emotional adjustment scale, vocational adjustment scale, financial status scale, interpersonal adjustment scale, the adjustment to seizures scale and the lie scale were modified and incorporated for use in this study. The modification is the consequence of a pre-testing exercise of the original WPSI version described in the procedure of the study.

### Adjustment To Seizures Scale:

This scale of the WPSI consists of 15 items, which inquire into any resentment about having epilepsy, feelings of self-worth, any embarrassment about the diagnosis and/or seizures, and feelings of acceptability by others.

### Vocational Adjustment Scale:

This scale of the WPSI consists of 13 items which assess any interference because of epilepsy, ability to obtain a job, interference with his/her degree of satisfaction with current vocational situation, and need for vocational counselling services.

### Interpersonal Adjustment Scale:

This scale of the WPSI consists of 21 items which assess ability to relate effectively to others, comfort in social situations, ability to meet others, existence of close personal friends and having a sufficient number of social contacts.

### Financial Adjustment Scale:

This scale consisted 7 items, which assess significant

financial problems and associated worries.

### Emotional Adjustment Scale:

This scale consists of 30 items, which measures emotional difficulties, inability to think clearly, over sensitivity, poor self-image, and generalized dissatisfaction with life.

## PROCEDURE

The procedure for this study involved two stages, the first stage being the pre-testing and validation of the Washington Psychosocial Seizure Inventory (WPSI) for use among the epileptic patients and the second stage being the collection of psychosocial profile of a sample of patients using the modified and cross-validated version of the WPSI.

### Stage 1:

High level of illiteracy particularly among chronically ill Nigerian patient has limited the use of self-report method of data collection. In this regard, a pre-testing exercise with the original version of the WPSI was conducted in a group meeting among consecutive sample of 10 (5 men and 5 women) individuals with epilepsy on follow-up at the neurology clinic of the Neuro-Psychiatric Hospital, Aro Abeokuta. During these two days meeting, patients were first encouraged to talk about what they considered and perceived to be stigmatizing about their illness, some aspects of management and how these have affected their daily functioning. After these free expressions, specific item by item on the WPSI were read out for discussions. Responses by the patients showed that a wide range of opinions and beliefs was expressed, which is not limited to the original Yes/No response format of the WPSI. The modification therefore involved changing the original Yes/No response format to a 5 point Likert format of certainly, somehow, don't know, rarely and not at all and assigning a score of 0, 1, 2, 3, and 4 to the rating respectively with a reverse scoring pattern where applicable. The scoring was done in such a manner that highest numbers consistently indicated greater psychosocial difficulties. A pre-testing of the modified version was carried out among a sample of 71 individual patients with epilepsy who were on follow-up at the Neurology clinic of the Neuro-Psychiatric Hospital Aro Abeokuta.

Results of the pre-testing revealed a good inter-correlation among the issues measured at  $p < .01$  and  $0.001$  respectively, (Table 2) thus establishing construct validity<sup>21</sup>. Cronbach in "1949" writes that the study of separate types of items involving correlation is a way of establishing construct validity. The Lie Scale expectedly did not correlate with all the scales except the emotional adjustment scale. The internal consistency of each of the scales were established through the item-total correlational technique, the correlations ranged from + 0.43 to + 0.79. Due to the length of the WPSI and in order to reduce the number of items, WPSI was factor analyzed using principal component analysis with varimax rotation and 5 factors, which accounted for 62.7% of the total variance was obtained. Items with factor loading of 0.4 and above were selected to form the final modified WPSI psychosocial measures used for this study, this brought the total number of items on the scale to 35. Concurrent validity was obtained by correlating WPSI scale with Awaritefe psychological

index (API)<sup>22</sup>, a fifty-one item general psychiatric symptoms and emotional instability questionnaire; the coefficients obtained were: .34, .24, .25, .14 and .22  $p < 0.05$  respectively.

Comparison of the WPSI scales with the Beck's Depression Inventory (23) also established the divergent construct validity of the scale producing a significant low to moderate correlation between each of the scales with Beck's  $r = .25, .30, .13, .14$  and  $.19; p < 0.05$  respectively. The 35 items, which emanated from the cross-validation procedure, were translated into Yoruba, a major language spoken in the study area. The translation was derived by the iterative back-translation method.

### Stage 2:

Data for this study was accomplished in the second stage. After the initial contact with the management of the two health facilities used as the study setting, permission was granted to create an Ad-hoc Epilepsy Counseling Clinic which lasted through the duration of the study. The clinic collaborated with the consultant in charge of patient on follow-up treatment for the purpose of screening, assessing and counseling for the study.

All case-notes of consecutive patients who had clinic appointments on a particular clinic day were pre-screened as per the inclusion criteria. Informed consent was obtained after explaining the purpose of the study and confidentiality assured during the clinic attendance. No patient withheld consent. Interviews were carried out while subjects were waiting to see the doctors or immediately following the appointment. The interviews were conducted in Yoruba or English depending on the patient's proficiency.

In order to ensure consistency, the screening and assessment

of the patients was carried out by one of the researchers (OBO).

A consultant Neurologist who was blind to the subject's assessment status classified seizure type. An inter-judge reliability was determined using the classification of a consultant Neuro-psychiatrist on 78 of the subjects. Classification by classification agreement was determined using Kappa. This was generally very good, ranging from .62 for a few to 1 for most. The consultant neurologist determined seizure control based on the operational criteria in Table 7.

Current frequency of seizures, age at onset of seizure and the duration of epilepsy were determined through the review of patients' case-notes and patient self-report. This procedure was repeated during every clinic day at the two health facilities used for the study until the desired numbers of subjects were seen.

### RESULTS

A cross-sectional comparison of the WPSI profile among the 264 adult epileptics in the two facilities was done using their socio demographic characteristics as criterion variables. Their mean scores across the WPSI subscales were compared across groups using analysis of variance and the student independent t-test.

Table 2 presents the results for the level of seizure control and subscales of the WPSI. The poorly controlled seizure group performed significantly less well on all the subscale measures. Table 3 presents the results of the seizure type classification. Statistically significant difference was only observed on one of the subscales (vocational adjustment,  $F = 2.07, p < .05$ ). All other subscales could not reach statistically significant level. Table 4

Table 1: Clinical Characteristics of 264 Adult Nigeria Epileptics

SEX	Male	154	(64.8%)	M/F = 1.44:1
	Female	110	(35.2%)	
MEANAGE (YRS)		32.6 (S.D. = 10.2) Range = 21 - 60 yrs		
MEANAGE AT ONSET (YRS)		20.4 (S.D. = 10.9) Range = 2 - 34 yrs		
SEIZURE TYPE	Primarily Generalized	117	(44.3%)	
	Partial Secondary Generalized	111	(42.0%)	
	Complex partial Seizure	36	(14.7%)	
DURATION OF ILLNESS (YRS)		14 (S.D. = 9.2)		Range = 7 - 23 yrs
YEARS OF EDUCATION (MEAN)		7.2 (S.D. = 5.0)		Range = 0-14 yrs
AGE AT ONSET OF SEIZURE (MEAN)		20.4(S.D.=10.9)		Range = 2 - 37 yrs
EMPLOYMENT STATUS	Employed	98 (37.1%)		
	Unemployed	166 (62.9%)		
MEDICATION STATUS	Carbamazepine only	40	(15.2%)	
	Phenobarbitone only	126	(47.7%)	
	Phenytoin only	24	(9.1%)	
	Phenobarbitone/Carbamazepine/Phenytoin in combination	52	(19.7%)	
	Anticonvulsants/Neuroleptics	22	(8.3%)	

**Table 2: Analysis Of Variance of the WPSI Sub-Scales and the Level of Seizure Control**

SCALE	SEIZURE CONTROL			F
	Poor N=115	Moderate N=80	Good N=69	
Emotional Adjustment	34(SD14.2)	28(SD13.2)	2(SD13.3)	28.6**
Interpersonal Adjustment	42(SD16.3)	30(SD15.4)	26(SD12.4)	17.4**
Vocational Adjustment	31(SD17.4)	21(SD14.06)	19(10.4)	11.5**
Adjustment to Seizures	39(SD18.4)	24(SD15.07)	20(10.5)	13.4**
Financial Adjustment	19(SD9.3)	12(SD4.5)	9(5.06)	5.5**

**Legend \*\*\* Indicates P < .001**  
**Mean and SD in parentheses.**

**Table 3: Analysis Of Variance of the WPSI Sub-Scales Across Seizure Types**

SCALE	SEIZURE TYPE			F
	Primary Generalized N= 117	Partial Secondary Generalized N = 111	Complex Partial Seizure N = 36	
Emotional Adjustment	60.40(12.92)	60.20(11.35)	56.71(10.92)	1.20
Interpersonal Adjustment	43.67(12.19)	42.11(13.18)	44.04(14.04)	.36
Vocational Adjustment	35.44(10.94)	30.14(11.93)	40.04(9.06)	2.07*
Adjustment to Seizures	30.15(9.16)	39.45(8.47)	31.61(10.24)	1.80
Financial Adjustment	19.42(8.59)	17.54(7.53)	17.28(6.45)	.96

**Mean and SD in Parentheses.**  
**Legend\* indicates P < .05**

**Table 4: Correlation Matrix Showing Correlation Between Sub-Scales Of The Modified WPSI (N = 264)**

	Lie	Emotional Adjustment	Financial Adjustment	Interpersonal Adjustment	Vocational Adjustment	Adjustment to Seizure
Lie	1.0	.29	.26	.20	.11	.07
Emotional Adjustment		1.0	.44**	.64**	.50**	.52*
Financial Adjustment			1.0	.43**	.36**	.17*
Interpersonal Adjustment				1.0	.54**	.44**
Vocational Adjustment					1.0	.48**
Adjustment to seizures						1.0

**Note: \*\* 1 – tailed significance at .001**  
**\* 1 – tailed significance at .01**

showed the intercorrelation among the sub-scales and a substantial statistically significant correlation existed among all the scales. Table 5 presents the results for the employed and unemployed groups on the WPSI subscales. The employed group had significantly adjustment on the Emotional;  $t = 5.49, p < .05$ , vocational;  $t = 4.25$  and Financial;  $t = 6.03$  compared to the unemployed group. All other subscales like the intra- personal

adjustment and the adjustment to seizures could not reach high levels of statistical confidence.

Table 6 presents the gender differences across the WPSI subscales. Results indicated that the male epileptics consistently showed higher psychosocial difficulties than the female epileptic on Inter-personal ( $t = 3.20$  df, 262  $p < .001$ ) and Financial ( $t = 3.56$ ; df 262,  $p < .001$ ) adjustments respectively. Male epileptics also

**Table 5: Differences between Employed and Unemployed Individual Adults with Epilepsy across the WPSI Sub Scales**

SCALE	UNEMPLOYED	EMPLOYED	t (df = 262)
Emotional Adjustment	32.39(9.63)	21.40(10.69)	5.49**
Interpersonal Adjustment	20.29(13.57)	17.33(12.06)	1.19
Vocational Adjustment	39.40(12.41)	20.11(7.05)	4.25**
Adjustment to Seizures	33.41(13.71)	32.11(10.81)	.54
Financial Adjustment	26.15(4.59)	16.30(6.47)	6.03**

*Mean and SD in Parentheses. Legend \*\* P < . 001*

**Table 6: Results showing Significant t = difference between Gender of WPSI Sub-Scales**

SCALE	MALE	FEMALE	t(df=262)
Emotional Adjustment	36.23(10.5)	34.22(11.2)	1.67
Interpersonal Adjustment	23.29(9.5)	18.56(5.6)	3.20**
Vocational Adjustment	31.34(9.8)	30.76(7.9)	.95
Adjustment to Seizures	34.78(14.9)	33.6(12.6)	.89
Financial Adjustment	24.45(9.7)	20.8(6.5)	3.56**

*Mean and SD in Parentheses*

*Legend \*\* P < .001*

showed less adjustment on all other subscales but these could not reach statistical significance.

## DISCUSSION

The focus of this study has been on an examination of psychosocial adjustment among a sample of Nigerian individuals with epilepsy. Previous researches in Nigeria have been limited in the use of restricted measures of psychosocial problems. The present study improving on earlier research covers a broad range of aspects of psychological and social problems. Perhaps the most remarkable finding of this study is the discriminating value of the WPSI across sections of Nigerian adults with epilepsy and a profile comparable with what obtains in European studies. The study's findings themselves confirm the results of several previous investigations that have revealed that psychosocial problems are often associated with epilepsy<sup>1,2,4 & 9</sup>.

Highly significant differences between groups of epilepsy patients differing in seizure type, control of seizure, gender, and employment status were obtained across a range of psychosocial measures using the WPSI, despite the existence of factors, which could be expected to minimize differences between these groups. The sample studied most probably represents a restricted and selective range of persons with epilepsy, with many being more chronic and more problematic in terms of diagnosis and treatment than what could have been obtained in the larger population of persons with epilepsy. This although did not invalidate the findings of this study but necessitate a degree of caution when interpreting the results.

In this study, psychosocial adjustment scores were examined

in relation to employment status of patients with epilepsy with the hope of determining patterns of conceptual and practical significance for vocational and rehabilitation efforts. The unemployed group was significantly more maladjusted on most psychosocial measures than the employed group. Employment is viewed as a very important factor in psychosocial adjustment<sup>2</sup>; the result of this study support such reported contention. Suggestive evidence also exists which indicates that lack of seizure control exerts some influence on psychosocial functions. The effect is more likely to be observed on measures of emotional and interpersonal variables<sup>3</sup>. Clearly, the effect has not been found to be major, and our results certainly do not implicate these variables as the cause of this dysfunction among our sample. The present results do, however, accentuate the importance of monitoring on the psychosocial functioning, which in turn appears to affect seizure control.

As the present study and those cited above indicated, the difficulties in psychosocial domain in epilepsy are quite generalized, event though the areas of relative strength and weakness are likely to be different for individual patients. The ultimate goal in future research is to determine empirically the pattern and relative importance of several big-psychosocial variables necessary for effective functioning in various aspects of the lives of individual patients with epilepsy.

Although the present study clearly implicate adequacy of psychosocial functions in patients with epilepsy, it is clear that other factors (i.e. intelligence, stigma) may also be important in the pattern of psychosocial functioning in epilepsy. Keeping in mind these numerous potentially important factors, future research

**Table 7: Classification of Seizure Control**

ORADE	DESCRIPTION
Good	O - Severe Seizures*/year O - 5 Moderate seizures***/year O - 8 Mild seizures****/year
Fair	O - 1 Severe seizures/month O - 4 Moderate seizures/month O - 8 Mild seizures/month
Poor	> 2 Severe seizures/month > 4 Moderate seizures/month > 8 Mild seizures/month

\* *Severe seizure - Generalized tonic tonic (including partial evolving into generalized tonic clonic*

\*\* *Moderate seizure - Complex partial seizures; generalized tonic or generalized clonic only.*

\*\*\* *Mild seizure - Simple partial seizures, 'generalized absence; myoclonic; atonic*

should also systematically isolate the contribution of each. Such findings would continue to increase our understanding of this complex and important problem and would have obvious implications for the direction of vocational and rehabilitation efforts.

The present results, as well as those reported by other contemporary researchers in Nigeria have strong implications for the rehabilitation of patients with epilepsy. In clinical practice, psychosocial rehabilitation of patients with epilepsy involves effecting an appropriate psychological support program. In advanced countries where psychosocial support package exists, individuals with epilepsy have less psychological distress and adjust fairly adequately to their seizure problems. In Nigeria however, there is no psychosocial support in place to help the patients adjust better. Introduction of formal psychosocial treatment package into the Nigerian mental health care system would help to alleviate the psychological distress and financial helplessness associated with epilepsy in Nigeria.

8520/

**ACKNOWLEDGEMENT**

This research was sponsored by grants from the Board of Trustees for Endowment Fund for the Promotion of Research in Mental Health and Neuro-Sciences in Nigeria.

Seizure classifications and diagnosis were conducted by Dr. Adebowale T.O. (Psychiatrist) and Dr. Oluwole O.S.A. (Neurologist).

**REFERENCES**

1. **Trostle JA, Hauser WA, Sharbrough.** Psychologic and Social adjustment to epilepsy in Rochester, Minnesota. *Neurology* 1989; 39: 633-637.

2. **Dodrill CB, Breyer DN, Diamond MB, Dubinsky BL, Geary BB.** Psychosocial problems among adults with epilepsy, *Epilepsia* 1984; 25:168-175.

3. **Hermann BP, Whiteman S.** Behavioral and personality correlates of epilepsy: a review, methodological critique, and conceptual model. *Psycho Bull* 1984; 95 (3): 451-97.

4. **Thompson PJ, Oxley J.** Socio-economic accompaniments of severe epilepsy. *Epilepsia* 1988; 29 (suppl 1): S9-18.

5. **Brimacombe M.** The Stigma of Epilepsy. New Society 1985; May 9:202-3.

6. **Bell M.** Some social problems of adults with epilepsy. In: British Epilepsy Association, ed. *Epilepsy*. Berkshire: British Epilepsy Association, 1979; 93-8.

7. **George V.C.** Adjustment of epileptics as compared to non-epileptic controls. *Indian J. Clin Psychol* 1981; 8: 119-23.

8. **Dodrill CB, Batzel LW, Queisser HR, Temkin N.R.** An objective method for the assessment of psychological and social problems among epileptics. *Epilepsia*, (1990). 21:123-135.

9. **Collins JA.** Psychosocial Well-being and Epilepsy: An Empirical Study. *Epilepsia*, 1990, 31(4): 418-426.

10. **Cofief R, Kessner-Austin J.** Psychosocial adjustment of adults with epilepsy. *Patient Education and Counseling*, 1984; 6:125-30.

11. **Helgeson DC, Mittan R, Tan SY, Chayasirisobhon S.** Sepulveda Epilepsy Education: The Efficacy of a Psychoeducational Treatment Program in Treating Medical and Psychosocial Aspects of Epilepsy. *Epilepsia*, 1990, 31(1), 75-82.

12. **Dada TO.** Epilepsy in Lagos, Nigeria. *African Journal of medical sciences*, 1970, 1: 76-84.

13. **Oshuntokun BO, Schoenberg BS, Nottidge V, Adeuja AOG, Kale O.** Research protocol for measuring the prevalence of neurological disorders in developing countries: results of a pilot study in Nigeria. *Neuroepidemiology*, 1982. 11: 143-149.

14. **Oshuntokun BO, Adeuja AOG, Nottidge VA, Bademosi O.** Prevalence of the Epilepsies in Nigerian Africans: A community-based study. *Epilepsia*, 1987; 28: 272-279.

15. **Gureje O.** Interictal Psychopathology in epilepsy: Prevalence and pattern in a Nigerian clinic. *British Journal of Psychiatry*, 1991; 158: 700-705.

16. **Odejide AO, Bademosi O.** Some psychiatric aspects of epilepsy; a prospective study of epilepsy attending the University Hospital, Ibadan, Nigeria. *African Journal of Psychiatry*, 1976; 3: 365-371.

17. **Awaritefe A.** Psychosocial aspects of Epilepsy. *Nigerian. Journal of clinical Psychology*, 1985; 4(1& 2).

18. **Danesi MA.** Patients Perspectives on epilepsy in a developing Country. *Epilepsia*, 1984; 25: 184-190.

19. **Danesi MA.** Epilepsy in Adolescent School Children in a

developing Country: A clinical and social analysis. *International Journal of Adolescent Medicine and health*, 1988; 4(2): 99–111.

20. **Danesi MA, Odusote KA, Robert OO, Adu EO.** Social Problems of Adolescent and Adult epileptics in a developing country, as seen in Lagos, Nigeria. *Epilepsia*, 1981; 22: 689–96.
21. **Cronbach L.** *Essentials of Psychological Testing* (3<sup>rd</sup> edn). 1970 New York Harper and Row.
22. **Awaritefe A.** A standardized Instrument for the assessment of psychological distress. Benin Nigeria: 1990 Victory Tutorial Press.
23. **Beck AT, Ward CH, Mendelson M et al.** An inventory for measuring depression. *Arch Gen Psychiatry* 1961; 4: 561–568.