

# Clinical and Demographic Profile of Patients Using a Liaison-Psychiatry Service in a General Hospital Setting in Abeokuta, Nigeria

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## Abstract

**Objective:** A significant proportion of patients seen at the general hospital setting for physical illnesses also suffer from psychiatric disorders. Failure to treat these underlying psychiatric disorders may affect the quality of health care given to such patients. This study was designed to assess the clinical and socio-demographic profile of patients using a consultation liaison- psychiatry service at Sacred Heart Hospital, a general hospital setting in Abeokuta. **Method:** We conducted a retrospective review of records of all new referral patients who were entered into Aro liaison-psychiatry register for a two year period (January 2009 to December 2010 inclusive). Descriptive statistics was used to report the socio-demographic characteristics of the patients. Chi-square statistics was used to assess association between categorical variables and Independent student- t-test to compare the difference in the means of quantitative variables. P-values of significance were set at  $p \leq 0.05$ . **Results:** Two hundred and ninety eight patients with complete entries into the register were analyzed. There were 129 (43.3%) males. The mean (SD) age of the patients was 40.6 (15.8) years. A majority of the patients was unemployed (52.7%), and 40.6% were of lower educational status. The proportion of patients who were of unskilled labour was 44.0% and 38.9% were not married. A broad spectrum of psychiatric disorders was represented with depression (23.8%) being the commonest. Among the physical co-morbidities, neurological and cardiovascular conditions were the most reported (28.8%). **Conclusion:** An adult population with wide spectrum of clinical diagnoses were referred to the consultation liaison psychiatry service during the period under review. There is need for a more integrated, comprehensive and holistic medical care in our health facilities. Future research on the dynamics of this consultation liaison psychiatry service is highly indicated.

**Keywords:** Liaison-psychiatry; Socio-demographics; Clinical diagnoses; Co-morbidities; General practice

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## Introduction

A significant proportion of patients seen in the general hospital setting with physical illnesses suffer from one form of psychiatric disorder or the other.<sup>1,2</sup> Consultation-liaison (C-L) psychiatry is a sub-specialty of mental health care services which involves a close collaboration between psychiatrists and non psychiatric clinicians or other health workers in the management of general hospital patients with secondary psychiatric disorders or psychosocial complications.

In Africa, 15-25% of psychiatric disorders are attributable to physical illnesses. The commonest being infection and infestations, with acute organic brain syndrome followed by depression. These are the commonest psychiatric complications encountered in Liaison-Psychiatry in Africa.<sup>1</sup>

In a Nigerian study the prevalence of psychiatric disorder among patients seen at the primary care level was 21.3%.<sup>3</sup> Depressive neurosis (51.7%) and anxiety neurosis (36.3%) were the most common disorders. This finding is close to the 27% prevalence of psychiatric disorder obtained among patients referred at primary care level in Spain with depression and anxiety neurosis being the commonest diagnoses.<sup>4</sup> Socio-demographic variables found to be associated with psychiatric co-morbidity at the primary care level, were being a widow, separated, or divorced, low educational background, older group and females.<sup>3,5</sup> Studies of patients seen at liaison-psychiatry services were found to be predominantly young adult, female, unemployed, those with lower educational status and unmarried.<sup>3,6-8</sup>

Whilst psychiatric disorders constitute about a third of new cases seen by doctors in general practice, less than 15 percent of these cases are detected by doctors<sup>3,9</sup>, hence lower referral rates of the cases to Psychiatrists.<sup>10-12</sup> Among patients with psychiatric problems, about a quarter consults their doctors primarily for a coexisting physical illness.<sup>13</sup> Many psychiatric cases therefore go undetected in general practice either because the patients present primarily with a co-existing physical illness or because they present with

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physical manifestations of the psychiatric problems. Failure to detect and treat the underlying psychiatric disorder may have far reaching consequences not only on the general health of the patient but also on the utilization of health care resources.

In recognition of the fact that about 33% of cases seen by doctors in general practice had psychiatric disorders, the management of Neuropsychiatric Hospital, Aro, Nigeria entered into a bilateral consultation-liaison agreement with Sacred Heart Hospital (a general hospital setting) in June, 2005 with the aim of establishing consultation- liaison psychiatric services and conduction of relevant research in mental health and neurosciences. This collaboration is a form of public private partnership programme currently propagated by the Nigerian Government to fast track development and render effective service delivery in all sectors of the economy, in this case health. It's a novel medical practice model which brings psychiatric services to patients in the General Hospital setting.

Since the initiation of this service, no reviews have been undertaken. Currently the World Health Organization (WHO) and the World Organization of Family Doctors (WONCA) are seeking integration of mental health into primary health care and the abolition of the dichotomy between physical and mental health as a step to holistic health services delivery.<sup>14</sup>

This study was therefore designed to assess the socio-demographic and clinical profiles of patients using the consultation- liaison psychiatry service in a general hospital setting.

## Methods

### Site

The study was carried out in one of Nigeria's oldest and foremost general hospitals – the Sacred Heart Hospital in Lantoro, Abeokuta. The hospital is a catholic mission hospital established in 1895 and since then has been functioning as a major general hospital centre servicing Abeokuta and its environs. The hospital has the status of a general hospital with regards to its functions as a service and academic health institution. The services cover the major fields of medicine with postgraduate residency training in family medicine. The general practitioners in the hospital sieved out cases suspected to have mental illness and referred them to the consultation-liaison psychiatry unit of Aro psychiatric hospital located in the Lantoro wing of the hospital which shared the same boundary with Lantoro Sacred Heart Hospital, Abeokuta.

### Design

This was a descriptive retrospective review of records of all new patients recorded in the Aro consultation - liaison psychiatric register for a two (2) year period from January, 2009 to December, 2010 inclusive. The record is kept in Aro hospital within the consultation - liaison psychiatric unit. Proper and adequate documentation in the register commenced from January, 2009.

### Sample size and sampling technique

In the Aro consultation-liaison psychiatry register, 306 patients were registered. Eight patients had incomplete entries in some of the required domains in the register and were hence excluded from the study. A total of 298 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 psychiatric diagnoses were made according to ICD-10 diagnostic criteria.<sup>15</sup>

### Data analysis

The proforma was cross-checked and coded serially. Data entering, cleaning and analysis were done using the statistical package for social sciences (SPSS) version 17.<sup>16</sup> Descriptive statistics were used to describe socio-demographic characteristics of the patients. Frequency tables and cross tabulations of relevant socio-demographic, psychiatric and physical conditions' variables, were drawn up. Chi-square test was used to assess association between categorical variables and Independent student-t-test was used to compare the difference in the means of quantitative variables. P- values of significance was set at  $p \leq 0.05$ .

### Ethics

Confidentiality of data was assured and approval for the study was obtained from the Ethical Committee of Neuropsychiatric Hospital, Aro before embarking on the study.

## Results

Of the 298 patients, 129 (43.3%) were males. The mean (SD) age of the patients was 40.6 (15.8) years. The tribe distribution as shown in Table 1 revealed that they were mainly Yorubas (68.8%) from the South Western geopolitical zone of the country. The majority of the patients were unemployed (52.7%), while 38.9% were single. Educational distribution revealed that 121 (40.6%) of the patients had primary education and below, while only 16 (5.4%) patients had university level education. The majority of the patients (44.0%) were in the unskilled labour with regards to their occupational status.

The distribution of psychiatric diagnoses among patients as shown in Table 2 revealed that depression was the commonest (23.8%) diagnosis followed by schizophrenia and related psychotic disorders (20.5%). Neurotic and stress related disorders such as anxiety disorders (10.1%), somatoform disorders (5.2%), sleep disorders (2.7%) and sexual disorders (0.7%) were represented. Childhood psychiatric disorders accounted for 1% of the cases. There were 8 (2.7%) cases of dementia and 24 (8.0%) had acute organic brain syndrome. Epilepsy was diagnosed in 14.1% of the patients. Substance use disorder was present in 1.0% of the cases while 4.7% of the cases had puerperal psychiatric illness.

The significant associations found in this study as shown in Table 4 revealed that unemployed patients (52.7%) were significantly ( $\chi^2=29.905$ ,  $P<0.001$ ) more likely to have psychiatric morbidity compared to those that were employed (39.3%). Unskilled labour (44.0%) was significantly ( $\chi^2=26.652$ ,  $P=0.01$ ) more likely to have psychiatric morbidity compared to highly skilled labour (4.0%). Patients who had secondary school education and below (61.4%) were statistically more likely ( $\chi^2=49.307$ ,  $P=0.01$ ) to have psychiatric co-morbidity than patients with tertiary education (39.6%). Out of the 298 cases, 181 (60.7%) were managed as out-patients while 117 (39.3%) were managed as in-patients. Of the cases seen, 57 (19.1%) reported a previous episode of psychiatric illness while 240 (80.5%) presented with the first episode of mental illness.

**Table 1: Socio-demographic Characteristics of the patients by Gender Distribution (N=298)**

Characteristics	Males (%) N=129(43.3)	Females (%) N=169(56.7)	Total (%) N=298(100)
<b>Tribe</b>			
Yoruba	73 (56.6)	132 (78.1)	205 (68.8)
Ibo	18 (14.0)	15 (8.9)	33 (11.1)
Hausa	11 (8.5)	10 (5.9)	21 (7.0)
Others	27 (20.9)	12 (13.1)	39 (13.1)
<b>Geopolitical zone</b>			
South-West	17 (55.0)	128 (75.7)	199 (66.8)
South-South	19 (14.7)	7 (4.1)	26 (8.7)
South-East	17 (13.2)	15 (8.9)	32 (10.7)
North-West	4 (3.1)	2 (1.2)	6 (2.0)
North-East	3 (2.3)	5 (3.0)	8 (2.7)
North Central	12 (9.3)	8 (4.7)	20 (6.7)
Foreigners	3 (2.3)	4 (2.4)	7 (2.3)
<b>Employment Status</b>			
Employed	54 (41.9)	63 (37.3)	117 (39.3)
Retired	11 (8.5)	13 (7.7)	24 (8.1)
Unemployed	64 (49.6)	93 (55.0)	157 (52.7)
<b>Religion</b>			
Christianity	95 (73.6)	100 (59.2)	195 (65.4)
Islam	33 (25.6)	66 (39.1)	99 (33.2)
Traditional	1 (0.8)	3 (1.8)	4 (1.3)
<b>Marital Status</b>			
Single	66 (51.2)	50 (29.6)	116 (38.9)
Married	57 (44.2)	104 (61.5)	161 (54.0)
Divorced	5 (3.9)	10 (5.9)	15 (5.0)
Widowed	1 (0.8)	5 (3.0)	6 (2.0)
<b>Education level</b>			
No formal	16 (12.4)	46 (27.2)	62 (20.8)
Primary School	21 (16.3)	38 (22.5)	59 (19.8)
Secondary School	33 (25.6)	29 (17.2)	62 (20.8)
Post Secondary	48 (37.2)	51 (30.2)	99 (33.2)
University	11 (8.5)	5 (3.0)	16 (5.4)
<b>Occupational Status</b>			
Highly skilled I	10 (7.8)	2 (1.2)	12 (4.0)
Highly Skilled II	36 (27.9)	29 (17.2)	65 (21.8)
Semi Skilled	42 (32.6)	48 (28.4)	90 (30.2)
Unskilled	41 (31.8)	90 (53.3)	131 (44.0)

Co-morbid physical conditions as shown in Table 3 revealed that they were present in 110 patients (36.9%). These comprised neurological conditions like stroke and encephalopathy (14.4%), cardiovascular conditions like hypertension, cardiac failure and cardiomyopathy (14.4%), diabetes mellitus (4.4%), HIV infection (2.3%), gastrointestinal conditions namely: peptic ulcer disease, (2.3%), cancer (0.7%), sickle cell anaemia (1.0%), tuberculosis (1.3%), infestation/infection (1.7%) and fractures (1.0%).

## Discussion

In our study, most of the patients were adult in the age bracket of 18 to 45 years, a finding similar to those of Aghanwa et al. with the majority of patients referred to a teaching hospital for consultation - liaison services being in the age range 18 to 45 years.<sup>6</sup> More females (56.7%) were represented

**Table 2: Psychiatric Diagnosis (N=298)**

Diagnosis	Frequency	Percent(%)
Depressive Illness	71	23.8
Schizophrenia & Other Psychotic disorders	61	20.5
Epilepsy	42	14.1
Anxiety disorder	30	10.1
Acute organic brain syndrome	24	8.0
Somatoform disorder	15	5.0
Puerperal psychiatric illness	14	4.7
Bipolar affective disorder	10	3.4
Sleep disorder	8	2.7
Dementia	8	2.7
Adjustment disorders	6	2.0
Childhood Psychiatric disorder	3	1.0
Substance use disorders	3	1.0
Sexual disorder	2	0.7
Personality disorders	1	0.3

**Table 3: Co-morbid Physical Conditions (N=298)**

Physical Condition	Frequency	Percent (%)
Cardiovascular diseases	43	14.4
Neurological diseases	43	14.4
Diabetes Mellitus	13	4.4
HIV Infection	7	2.3
GIT diseases	7	2.3
Infections/Infestation	5	1.7
Respiratory diseases	4	1.3
Trauma & Fractures	3	1.0
Haematological disorders	3	1.0
Cancers	2	0.7

**Table 4: Factors Associated with Psychiatric Morbidity**

Characteristic	Number with Psychiatric Morbidity (%)	X <sup>2</sup>	P - Value
<b>Employment</b>			
Unemployed	157 (52.7)	29.905	<0.001
Employed	117 (39.3)	49.307	
<b>Educational Level</b>			
≤ Secondary Education	173 (61.4)	26.652	0.01
Tertiary Education	115 (38.6)		
<b>Occupational Status</b>			
Highly Skilled	12 (4.0)		0.01
Unskilled	131 (44.1)		

in the referral sample. This finding is also similar to that of Aghanwa et al. who obtained a preponderance of females among patients referred to a primary care facility in Ilorin, Nigeria.<sup>3</sup> This could be a reflection of the commonest diagnoses being depression and anxiety disorders as these are more prevalent amongst females.<sup>17-19</sup> The tribe distribution showed that most of the patients were Yorubas. The hospital is located in Abeokuta, Ogun state and has other states with predominant Yoruba in the south-western geopolitical zone of Nigeria as its catchment areas. The study revealed that majority (52.7%) were unemployed which is similar to Vanessa et al. study where 55% of patients seen in consultation-liaison service at a tertiary care teaching hospital in Sao Paulo, Brazil were unemployed.<sup>7</sup>

Psychiatric disorders may result in functional impairment in the sufferer with a decline in occupational activities. The educational distribution showed that 40.6% had less than primary school education. This finding is similar to the low educational background reported by Abiodun amongst psychiatric patients referred in a primary care centre in Ilorin, Nigeria.<sup>6</sup> This lower educational status could be a reflection of the impact of the illness in the sufferers who might eventually drop out of school because of their inability to cope with academic requirements.

Patients that suffer from psychiatric illness suffer discrimination and tend to be kept at social distance in terms of marriage, employment and accommodation.<sup>8</sup> Hence, the finding that the majority (44%) of the patients were in the unskilled labour status and about 40% were single, would appear congruent.

There was a wide spectrum of psychiatric disorders among the patients. The most frequent diagnosis was depression (23.8%), followed by schizophrenia and related psychotic disorders (20.5%). Acute organic brain syndrome accounted for 8% of the diagnoses. This finding is similar to those of Carr who found that depression (33%) was the predominant psychiatric diagnosis among patients referred for consultation services in a general hospital in Australia.<sup>20</sup> Similarly, Clarke and Smith found a similar spectrum of psychiatric disorders with depression (55%), organic brain disorder (35%) and adjustment disorders being the commonest.<sup>21</sup> However, these findings were at variance with some other studies that found organic brain syndromes and somatoform disorder as the commonest diagnoses among patients referred for consultation – liaison service.<sup>1,22,23</sup>

The sizeable number of patients referred with a wide spectrum of psychiatric diagnoses could be a response to the on-going health education and public mental health enlightenment campaign programmes in the electronic media embarked upon by the Neuropsychiatric Hospital Aro, Abeokuta. It is also worth noting that about 80% of the patients presented with a first episode of mental illness and that 63.1% were purely with psychiatric illness without physical co-morbidity. Mental illness is highly stigmatized and presenting in a general setting that has psychiatric services could attract fewer stigmas.

The prevalence of 36.9% of patients with medical conditions is similar to the prevalence rate of 33.3% reported by Bridges and Goldberg<sup>9</sup> and lower than 51% prevalence reported in Kuwait among psychiatric patients in a hospital setting.<sup>24</sup> The finding of the highest psychiatric co-morbidity with cardiovascular and Neurological diseases gave credence to the previous studies that showed that these conditions were common in Nigeria.<sup>25-27</sup> Medical co-morbidity in psychiatric patients have been shown to increase the number of hospital admissions and the length of hospital stay with the consequent increase in the overall cost of treatment.<sup>28</sup>

### Limitations

This study being a retrospective one was faced with some challenges that should be acknowledged. Some patients had incomplete information entered into the liaison register and they were eventually excluded from the study. The cases referred were those suspected to have mental illness by the general practitioners in the hospital. It was therefore possible that some lucid psychiatric cases would

have been missed based on the limited capacity of these professionals to detect the not-so-overt forms of mental disorders.

### Conclusion

The liaison-psychiatry service has become a well known service in this general hospital setting. An adult population with wide spectrum of clinical diagnoses similar to profiles of patients in other consultation-liaison psychiatry services in the country was referred to the consultation-liaison psychiatry service during the period under review. There is need for a more integrated, comprehensive and holistic medical care in our health facilities. Future research on the dynamics and econometrics of this consultation-liaison psychiatry service is highly indicated.

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