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Socio-Demographic Profile and Co-Morbid Disorders amongst Mood Disorder Patients in North-Eastern Nigeria

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ABSTRACT

Mood disorders are among the most burdensome disorders with chronic relapsing course commonly diagnosed in a psychiatric hospital setting. The aim of the study was to evaluate the socio-demographic profile, the diagnostic characteristics of mood disorder patients and the prevalence of medical and psychiatric co-morbidity among its sufferers. Two thousand six hundred and eleven case notes of patients with mood disorder seen as in and out patients at the Federal Neuropsychiatric hospital Maiduguri from September 2011 to September 2014 were selected for data collection. The diagnoses were made according to ICD-10 criteria. The socio-demographic profile, diagnostic characteristics, psychiatric and physical concurrent diagnoses were obtained from the case notes as documented in the case files. About 60% of patients with mood disorder were females. The depressive subtype accounted for about 76% cases while bipolar accounted for 21% cases of mood disorder. 68% of cases were recorded to have concurrent conditions which could be either psychiatric or medical conditions. Substance use disorder was the major psychiatric co-morbidity while chronic infections and hypertension were the most common medical co-morbidities in mood disorder patients. Thus, it is evident that mental healthcare professionals should be trained to look out for and appropriately seek for ways to handle co-morbid conditions apart from the primary diagnosis in order to address the health care needs of their patients.

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INTRODUCTION

Mood disorders constitute one of the world's greatest public health problems that are associated with significant impairments in social or occupational functioning[5] and reduction in productivity and longitivity[31]. The percentage of total Burden of disease morbidity according to world health organizations (WHO) Disability Adjusted life years (DALYS) to mood disorders amongst Africans are 1.5% for unipolar major depression and 0.4% for Bipolar affective disorder[33]. In the Nigerian context; mental illness is still highly stigmatised, symptoms of mental health disorders are highly somatised and culturally acclaimed aetiology of the disorder delay the need to seek prompt and early intervention by the sufferers and care givers[8]. Mental health services are grossly under-resourced and there are many barriers to health care for the mentally ill[15,16], barriers include lack of accessibility, acceptability and availability of services, stigma, lack of awareness, perceptions that treatment may not be effective, cultural beliefs, and language problems[10,29] and some are presented in physical form or given spiritual interpretation of the feelings[6]. Thus, avoid modern medicine and patronize spiritual healers and herbalist at onset of mental ill health. Moreover, failure and delays in treatment seeking for mental disorders are greater and more pervasive in developing countries, contributing to high levels of unmet need. The mental health survey reported that in Nigeria the lifetime prevalence of any mood disorder and major depressive disorders are 4.1% and 3.3% respectively[8]. A study in the northern part of Nigeria revealed that mood disorder accounts for 26% of patients with a psychiatric clinic and depression was the most prevalent subtype of mood disorder (54.5%)[19]. Studies have shown that in some communities in Nigeria 11% of those with a mood disorder had received some treatment[8].

The presence of co-morbid conditions often changes the clinical manifestation of the mood disorder and probably worsens its response to treatment as well as prognosis. Substance use disorders are commoner among mood disorder patient because one may increase the risk of the other. The use of substance as self-medication to alleviate the symptoms of mood disorder is plausible explanation for their co-occurrence, but after sometimes the converse tend to happen, unmasking the mood disorder. The kindling explanation for co-morbidity, holds that in vulnerable individuals, an underlying neurobiological tendency to sensitization may promote both substance use and mood disorders[26].

A Study has shown that apart from drug use, anxiety disorder has high prevalence in bipolar subjects with odd ratio greater for bipolar higher than for unipolar depression (2.38 Vs 0.50)[25]. Although major depressive disorder is also associated with elevated rates of most of these axis I disorders, epidemiologic studies comparing the psychiatric comorbidity of the depressive and bipolar disorders have often found higher rates of substance use[25,10], panic[2], and obsessive-compulsive[3] disorders in bipolar patients than in depressive patients. Cardiovascular disease, type 2 diabetes mellitus, and other endocrine disorders tend to occur more often in patients with bipolar disorder than in the general population[12,18]. Individuals with bipolar disorder posses a substantial burden of general medical comorbidity, hypertension as most prevalent co-morbid condition with 35%, hyperlipidemia 23% and diabetes mellitus 17%[11].

Objectives:

To assess socio-demographic profile, diagnostic characteristics, and co-morbid conditions of mood disorders.

MATERIALS AND METHODOLOGY

This was a hospital-based retrospective study, which utilized clinical case notes of patients attending in and outpatient clinics at the federal neuropsychiatric hospital Maiduguri from 1st September 2011 to 31 st August 2014. The permission to carry out the study was obtained from the hospital research and ethical committee, verbal consent from patients for their information to be used for the study was also obtained. Parental consent was obtained for patients less than 16 years of age and patients who refused for their information to be used, were not required to explain withholding consent.

The hospital is located in Maiduguri metropolis. It is the only tertiary referral psychiatric institution in the North-Eastern Sub-region of Nigeria providing services to a population of about 25 million[20].

Inclusion criteria:

The patients whose case notes were recruited into the study met the following inclusion criteria: primary diagnosis of unipolar depression or mania, bipolar affective disorder according to ICD-10 diagnostic criteria.

Exclusion criteria:

Clinical case note with missing or insufficient information was excluded from the study.

Statistical analysis:

The data was entered using statistical package for social science (SPSS) version 20.

Descriptive statistics were applied.

RESULTS

At the end of the study, the data of 2611 cases were selected out of 2651 yielding 98% with complete analyzable data. The data of 40 were not analysed due to refuse to give consent (n=9), and whose data are incomplete because of missing information (n=31). Male consists 1041 (38.9%), female 1570 (60.1%). Participants of age 15 and below consisted of 2.1% of the cases. 919 (35.1%) participants lie within the age group of 25-34 and form the age group with highest percentage. Among the participants, 1689 (64.7%) were married and divorced or widowed were 120 (6.5%). Employment status shows that 1960 (75.1%) were employed while 651 (24.9%) were unemployed. The findings are presented in Table 1 below.

Table 1. Socio-Demographic Characteristics

		N	%
Gender			
a.	Male	1041	38.9
b.	Female	1570	60.1
Age			
a.	<15	56	2.1
b.	15 – 24	631	24.2
c.	25 – 34	919	35.1
d.	35 - 44	496	19.0
e.	45 – 54	294	11.3
f.	55 – 64	128	4.9
g.	65 and older	84	3.2
Marital Status			
a.	Single	701	26.9
b.	Married	1689	64.7
c.	Separated/Divorced/Widow	120	6.5

Education		
a. No Education	122	4.2
b. Quranic	1819	62.0
c. Primary	158	6.4
d. Secondary	400	15.3
e. Above Secondary	302	12.8
Employment		
a. Employed	1960	75.1
b. Unemployed	651	24.9

Diagnostic characteristics of participant in the study

More than 2/3 of participant (76.3%) were diagnosed with unipolar depressive disorder while 21.1% were bipolar. Participants with Manic episode 68 (2.6%) subtype were the lowest, while recurrent depression subtype which accounted for 757 (29%) was the highest as showed in Table 2.

Table 2. Diagnostic entities of mood disorders recorded in patients.

Diagnostic Entities	**Frequency (N)**	**Percentage (%)**	**Broad Classification**
Manic episode	68	2.6	UNIPOLAR MANIA
Mild depressive episode	292	11.2	UNIPOLAR DEPRESSION
Moderate depressive episode	416	15.9	
Severe depressive episode	127	4.9	
Mixed Anxiety Depression	399	15.3	
Recurrent Depression	757	29	
Bipolar Manic Episode	238	9.1	BIPOLAR
Bipolar Depressive Episode	221	8.5	
Bipolar Mixed Episode	92	3.5	

Co-morbid diagnosis in mood disorder

Substance use 394 (15%) were the most common co-morbid disorders diagnosed in mood disorder patients then followed by personality disorders 269 (10%). While chronic infection 157

(6.0%), followed by hypertension 155 (5.9%) were the top ranking medical co-morbid conditions among the mood disorder patients as shown in Table 3 and Figure 1 below.

Table 3. Co-morbid Diagnosis in mood disorder Patients

Medical Disorders	Frequency	Percentage %
Hypertension	155	5.9
Diabetes mellitus	71	2.7
Cerebrovascular disease	64	2.5
Chronic infections (HIV&TB)	157	6.0
Epilepsy	80	3.0
Migraine	108	4.1
Others[1]	87	3.4
Total	722	27.6
Psychiatric Disorders		
Substance use Disorders	394	15.0
Personality Disorders	269	10.3
Anxiety Disorders	185	7.1
Others[2]	138	5.3
Total	986	37.7
Multi-comorbid disorders	57	2.1
Non co-morbid disorders	850	32.6

Note: Others[1] is for medically diagnosed co-occurring conditions with frequency of ≤ 10: chronic Osteoarthritis, sickle cell disease, recurrent malaria, chronic renal diseases, chronic liver disease infertility, congenital deafness, Otitis media, lymphoma. While Others[2] is for psychiatric co-occurring conditions with frequency of ≤ 10: Attention deficit hyperactivity disorder, Persistent delusional disorder, conduct disorder, sleep disorders, erectile dysfunction, tic disorder, enuresis Trichotillomania. Stammering, koro variant of culture bound syndrome, dissociative convulsion somatization disorder.

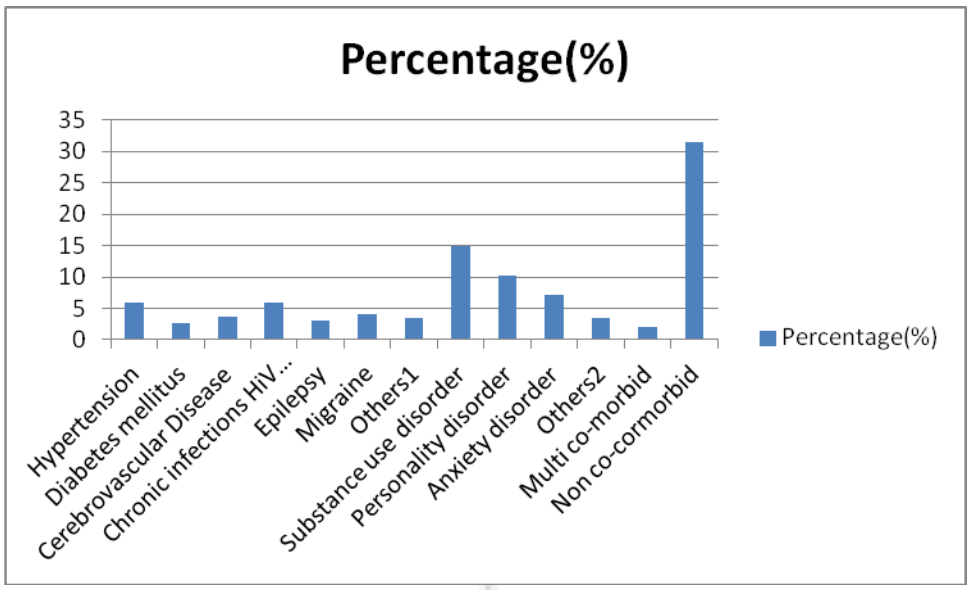

Figure 1: Graphical illustration of rates of co-morbid conditions in mood disorder patients

Major subtypes of mood disorders with broadly classified co-morbid conditions

Results show remarkable difference in rates of comorbid psychiatric disorder between unipolar depression 36.2% and bipolar 43%. It also revealed that rate of non co-morbidity among unipolar depressed participants 32.8% is higher than in the bipolar 28.2% as shown Table 4 and Figure 2.

Table 4. Major subtypes of mood disorders with broadly classified Co-morbid Disorders

MOOD DISORDER	CO-MORBID DISORDER		PERCENTAGE (%)
Unipolar Mania N= 68	Medical	17	25.0
	Psychiatric	29	42.7
	Multicomorbid	2	2.9
	Non comorbid	20	29.4
Unipolar Depression N= 1991	Medical	591	29.7
	Psychiatric	720	36.2
	Multi-comorbid	39	2.0
	Non comorbid	641	32.1

Bipolar N=552	Medical	144	26.1
	Psychiatric	237	43.0
	Multi-comorbid	15	2.7
	Non comorbid	156	28.2

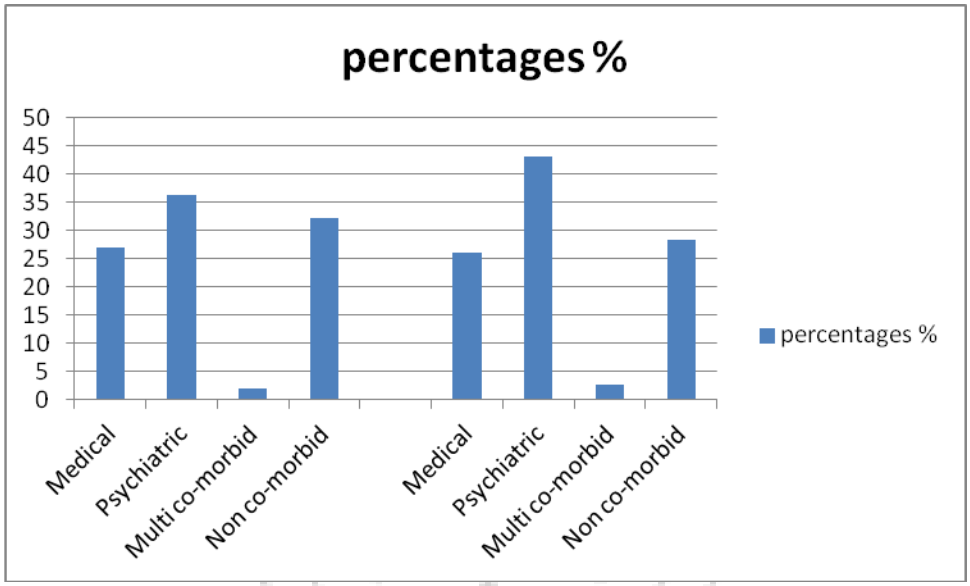

Figure 2. Graphical illustration of broadly classified co-morbid conditions in patients with Unipolar depression and Bipolar disorder

DISCUSSION

The socio-demographical attributes of the participants indicated that 1041 (38.9%) were males while 1570 (60.1%) were female. This shows that most of those that reported to the facility with mood disorders were females. Our findings of 60.1% show that there is higher representation of females than males; this is in agreement with the findings of a similar study in north central Nigeria that reported 62.1% of females in their study[23]. This is similar to what is obtainable globally indicating that there is high prevalence of mood disorders in females than males[7, 26].

Most of the participants (64.7%) in our study were married. This is contrary to the findings of the southeastern Nigeria study that found 24.5% of married participants[19]. This is due to the cultural differences; in the northern part of the country where the culture and religion encourage early marriage than the southern part of the country. Our finding shows high rate of employment 75.1% among the participants, this finding disagrees with the study from the north central which

reported low level of employment rate among their participants (39.3%). The high rate of employment reported in this present study is as a result of the operational definition of employment. Individuals that are into peasant farming, petty trading, artisan and other forms of low-income earning activities were considered employed.

Education attainment in the North-Eastern part of the country is considered to be low compared with other regions in the country. Even though the number of enrolments into formal education is still very low, 34.5% had formal education while 62.0% had Quranic and 4.2%, had not any kind of education of all. This finding disagrees with the study from the north central which reported high level of educational attainment among their participants; formal education (secondary and tertiary) 36.5%, with 9.0% having Quranic education[23]. The high level of Quranic education in our study is due to inability of the government to effectively in-cooperate Quranic education with conventional educational system in the Northeastern part of the country.

The depression subtypes account for 76.3% which makes it the most common of the mood disorders, this finding is consistent with a study reported in the North-central Nigeria. However, this study does not support the findings in the study conducted in 1982 in Southwestern part of Nigeria in which manic course is commoner in Bipolar than depressive among patients presenting to the hospital[17]. The growing awareness and expansion of Psychiatric services over the years in the country may have resulted into the change in pattern of presentation to the hospital

A community-based study in northern Nigeria found a prevalence of recent multiple drug use of 47.4%[1]. The finding is higher than 14.9% found in our study; this could be as a result of the fact that our study was restricted to mood disorder patients seen at a hospital which might not give the true picture of what is unfolding at the community level.

In this study, co-morbidity was found to occur in 67.9% of mood disorder patients but bipolar patients seem to suffer more than depressed patients. The finding shows hypertension 7.9%, diabetes 3.4%, 7.1%, and epilepsy 3.0%. Our findings regarding medical co-morbidity were in line with the findings of a hospital-based study in Kamataka south-western region of India which reported 5% for hypertension in patients with psychiatric disorders[4]. Even though the value obtained in our study for diabetes (3.4%) was lower than their value 9%, the main distinction

here was that, whereas the index study was restricted to mood disorder patients, the Kamataka study included patients with psychiatric disorders in general. We also found 3.0% rate for epilepsy among mood disorder patients which is similar to the result obtained in United Kingdom based study which reported 3% as rate for epilepsy among bipolar disorder patients[14].

CONCLUSION

Thus, our study concluded that 60% of patients diagnosed with mood disorders that presented for treatment at the hospital are females and Unipolar depression is the commonest subtype of mood disorder that present to the hospital for treatment. About 68% of patients with mood disorders were also found to have co-occurring conditions. It is therefore important for the healthcare team to skillfully identify and manage co-occurring conditions in mood disorder patients.

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