

BIPOLAR DISORDER IN ENUGU, SOUTH EAST NIGERIA: Demographic and diagnostic characteristics of patients

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SUMMARY

Background and objectives: Bipolar disorder is a severe mental disorder that has been widely studied in developed countries. Very few studies of this disorder exist in developing countries. The objective of this study was to describe the demographic and diagnostic characteristics of bipolar patients in Enugu, South East Nigeria.

Subjects and method: The design of the study was cross-sectional. The study was carried out in Federal Neuropsychiatric Hospital Enugu (FNPHE) and in a Private Psychiatrist's Office (PPO) in Enugu, South East Nigeria. 94 patients were recruited to take part in the study. 49 patients were included from the FNPHE and 45 patients from the PPO. The two groups of patients differed only in terms of mood at study entry. Patients were included in the study if they had been diagnosed bipolar, if they were attending the FNPHE as outpatients, inpatients or were receiving emergency treatment or if they were attending the PPO for follow-up and if they had given their consent to participate in the study. The patients responded to a structured questionnaire used to elicit demographic and diagnostic characteristics. This questionnaire was administered by one of the authors (EJ). Each patient was also interviewed with the Mini International Neuropsychiatric Interview (MINI) for Bipolar Disorder Studies version 5.0.0. This MINI assessment was done by (MO). All the data were collected in a specially prepared data collection form. The demographic factors reported on included gender, age, marital status, level of education and employment status. The reported diagnostic and illness characteristics included age at onset of illness, mood at study entry and mood at onset of illness. The data were analyzed using SPSS version 11.5. Frequencies were run on demographic characteristics while means and standard deviations were calculated for continuous variables. The study was approved by the Research Ethics Committee of the FNPHE.

Results: The majority of the sample (68.1%) met the criteria for bipolar I disorder. The mean age of patients was 33.17 (SD = 11.87) years and mean duration of bipolar illness was 9.6 (SD = 8.9) years. Among the 94 patients, 58.8% were males. The mean age at onset of illness for the whole group was 22.9 (SD = 8.3) years.

Conclusion: The current report is probably the first on bipolar disorder in this part of Africa. It will serve as an impetus to conduct more research on the topic especially since some important findings are similar to what had been recorded from both developed and developing countries.

Key words: bipolar disorder - South East Nigeria - demographic

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Introduction

Studies of clinical samples have provided information on the nature, demographic and clinical features of many psychiatric disorders. Since the work of Kraepelin, more studies of clinical subjects have come out of Western countries (Suppes et al. 2001, Raymont et al. 2003, Kogan et al. 2004, Mantere et al. 2004) helping to elucidate the many characteristics of bipolar disorders. These studies have thrown enough light on the nature of bipolar I and bipolar II disorders. Research efforts directed at understanding the nature of bipolar spectrum disorders have yielded fruits.

Bipolar disorder is a severe mental illness characterized by chronicity, multiple recurrent episodes, heterogeneity and significant impairment in family, social and occupational functioning (Dunner & Fieve 1974, Fawcett et al. 1987, Keller et al. 1986, Coryell et al. 1995, Maj et al. 1989). Bipolar disorder is the eighth greatest cause of disability in the world (Murray & Lopez 1996). There is an appreciable risk of substance abuse (Thase & Salloun 2000) and suicide (Koukoupoulos et al. 1980, Baldesserani et al. 2001). Patients presenting with frank mania, are most of the time correctly diagnosed by

psychiatrists. But other forms of presentations constitute a problem for most practitioners. For example, it has been shown that patients initially diagnosed as having recurrent depression, were later found to be suffering from conditions within the broader spectrum of bipolar disorder (Angst & Sellaro 2000, Goldberg 2001). Besides, there are reports of misdiagnosis of bipolar illness as schizophrenia especially among minority mentally ill in the United Kingdom (Kirov & Murray 1999) and the United States of America (Mukherjee et al. 1983, Strakowski et al. 1996). There are also studies showing that many patients had been receiving treatment for a long time before receiving a bipolar diagnosis (Lish et al. 1994). Many reports of demographic and clinical characteristics of bipolar disorder exist in western psychiatric literature (Raymont et al. 2003, Mantere et al. 2004). In Nigeria, Makanjuola was able to show that the presentation of mania among Nigerian patients was the same as in the West and he also showed higher prevalence of unipolar mania among the Yorubas of Nigeria (Makanjuola 1982, 1985). A community study of demographic and clinical characteristics of bipolar I disorder was carried out in Butajira, Ethiopia (Negash et al. 2005).

Given the complexity of bipolar disorder, there is a need for more studies of the disorder in developing countries, especially in areas where nothing has been done on the subject. The present paper reports on demographic and diagnostic characteristics of bipolar patients seen in Enugu, South East Nigeria.

Subjects and Methods

The study was carried out at the Federal Neuro-psychiatric Hospital Enugu (FNPHE). The FNPHE is located in Enugu Metropolis. The hospital started as a unit in the Enugu General Hospital in the 1960s. In the 1970s, the hospital was located in a private hospital in Enugu until the 1980s when the hospital moved to its present site which used to be a secondary school. The hospital was funded and run by State Governments until 1996 when it was taken over by the Federal Government of Nigeria. More recently, the hospital has witnessed a lot of changes in infrastructure and staffing. There are more buildings. A modern laboratory has also been equipped. The number of resident doctors has increased from only two in 1999 to twenty in 2010. The hospital also employs psychiatric nurses and clinical psychologists, social workers and consultant psychiatrists. The hospital works in close collaboration with the Department of Psychological Medicine in the nearby University of Nigeria Teaching Hospital (UNTH). The consultant psychiatrists and resident doctors from the UNTH also offer services in the FNPHE and this is so because facilities are lacking in the UNTH for inpatient care of psychiatric patients.

The FNPHE is the only relatively well equipped and well staffed psychiatric hospital in South East Nigeria with a population of about 17 million people (National Population Commission, 2006). The hospital receives patients from all parts of the South East and contiguous states of Nigeria. The patients are first seen in the crisis intervention unit from where they are either admitted into the wards or treated as outpatients. The hospital offers emergency services, inpatient and outpatient services and psychosocial services. There is a drug unit and a forensic unit. There is at the moment no long stay ward but some patients who are too disturbed to be managed in the community remain for a long time in the hospital wards.

The study design was cross-sectional.

The patients recruited into this study met the following inclusion criteria. 1. They have received a diagnosis of mania, manic depressive psychosis or bipolar affective disorder. 2. They were attending the FNPHE as either emergency, inpatients or outpatients 3. They have given their verbal consent to participate in the study. The only patients excluded from the study were those who refused to participate or those who were too disturbed to respond to questions. The patients responded to a Structured Questionnaire which collected information on demographic characteristics and selected diagnostic characteristics. Furthermore, all the patients were assessed with Mini International Neuropsychiatric

Interview (MINI) for Bipolar Disorder Studies English Version 5.0.0 (Sheehan D, Janavs J, Baker R et. al, 2006). The aim of the assessment was to confirm or reject the diagnosis of bipolar disorder. All the patients who met DSM-IV-TR criteria for bipolar I or bipolar II disorder were included in the study.

Patients were recruited from FNPHE, private psychiatrist's office in Enugu. 49 patients were recruited from the FNPHE, while the rest of 45 patients were recruited from the private psychiatrist's office. The two groups did not differ in terms of age and sex distribution but they differed in terms of mood at study entry and mood at onset of illness.

Statistical analyses were performed using Statistical Package for Social Sciences (SPSS) version 11.5. Frequencies were run on demographic characteristics (table 1). Means and standard deviations were computed for continuous variables (table 3).

Approval for this study was given by the Research Ethics Committee of the FNPHE.

Table 1. Demographic characteristics

	N	%
GENDER		
Male	55	58.8
Female	39	41.5
AGE RANGE		
< 15	2	2.2
15-24	17	18.1
25-34	41	43.6
35-44	17	18.1
45-54	9	9.6
55-64	3	3.2
65 and older	3	3.2
MARITAL STATUS		
Married	23	24.5
Single	67	71.3
Separated/divorced/widowed	4	4.3
EDUCATION		
No education	1	1.1
< secondary	13	13.8
Secondary	32	34.0
Above secondary	46	48.9
EMPLOYMENT		
Employed	34	36.2
Unemployed	40	42.6

Results

Demographic Characteristics

A total of 94 patients were recruited into the study. 49 patients were recruited from the FNPHE and 45 were recruited from the private psychiatrist's office. There were 55 (58.8%) males and 39 (41.5%) females. Their ages ranged from 12 to 74. The mean age was 33.17 (SD=11.87) years. 2 patients were aged less than 15 years and 17 (18.1%) fell into the age group 15-24. More than one in every three patients 41 (43.6%) fell into the 25-34 age group and the age group of 35-44 had

Table 2. Diagnostic characteristics

	N	%
BIPOLAR TYPE		
Bipolar I	64	68.1
Bipolar II	11	11.3
Mixed	2	2.1
Missing	17	17.5
FIRST MOOD EPISODE		
Elevated	63	67.0
Depressed	20	21.3
Mixed	4	4.3
Missing	16	17.0
MOOD AT STUDY ENTRY		
Euthymic	43	45.7
Elevated	28	29.8
Depressed	16	17.0
Mixed	4	4.3
Missing	3	3.2

17 (18.1%) patients. The 45-54 age brackets had 9 (9.6%). The older age groups of 55-64 and 65 and older had three patients each.

The majority of the patients, 67 (71.3%) were single. Only a negligible number (4) of the patients were widowed, separated or divorced. About one in four, 23 (24.5%) of the patients were married.

Only one patient was found to be without any education. 13 (13.8%) had less than secondary education; 32 (34%) had secondary education while almost half, 46 (48.9%) of the patients had education

above the secondary level. A total of 82.9% of the patients had education at the secondary level and above.

Employment status showed 40 (42.6%) as unemployed while 34 (36.2%). There were 20 missing values for employment (see table 1).

Diagnostic Characteristics

Age at onset of illness

The mean age at onset of bipolar disorder for the two groups of patients was 22.9 (SD = 8.3) years (see table 3).

Bipolar Type

As many as 17 patients did not have their bipolar type indicated. Of the remaining 77 patients nearly two thirds met the DSM-IV-TR criteria for bipolar I disorder while only 11.17% met the criteria for bipolar II (see table 2).

First Mood Episode:

At the onset of their illness, 63 (67%) had elevated mood; 20 (21.3%) had depressed mood and 5 (5.3%) had mixed mood (see table 2).

Mood state at study entry

At the time of recruitment to this study, 28 (29.8%) of the patients had elevated mood, 16 (17%) were depressed while 4 (4.3%) had mixed mood. Nearly half, 43 (45.7%) of the patients were euthymic at study entry (see table 2).

Table 3. Other illness characteristics

	N	MEAN	SD
Age at onset	89	22.9	8.3
Duration of illness	89	9.6	8.9
No. of episodes since onset	88	4.4	4.1
No. of episodes of (hypo)mania	85	3.3	2.9
No. of episodes of depression	87	1.7	2.7
Duration of illness before psychotropic Drug prescription	43	2.0	3.0
Duration of illness before hospital Admission	46	2.5	3.5
Duration of illness before diagnosis Of bipolar disorder	75	3.4	4.0

N = no of patients; SD = standard deviation no of patients

Other illness characteristics

Other illness characteristics which were recorded include duration of illness, number of episodes of illness in one year, number of episodes of illness since onset, number of episodes of mania since onset, number of episodes of depression since onset of illness, duration of illness before hospital admission, duration of illness before psychotropic drug prescription and duration of illness before the diagnosis of bipolar disorder (see table 3).

Discussion

The present report, to the best of the authors' knowledge, is the first to come out of the South East of Nigeria. Our findings on demographic characteristics are broadly similar to findings from large scale studies that have been carried out in the developed countries (Suppes et al. 2001, Kogan et al, 2004). The finding of a mean age of 33.17 years for our sample differs from a mean age above 40 years reported by many studies from developed countries. In the same vein, our sample has

fewer women than those reported from Western studies where females outnumber males. However, this is similar to findings from Nigeria and Ethiopia. It would appear that in Africa, men outnumber women in clinical settings. It is possible that there are more men in the general population (National Population Census, 2006) or that more attention is paid to men when they are ill. The majority of our patients are single. This is probably a result of the young age of the patients. It is also possible that as a result of the early onset of the illness many of the patients became unable to get married especially given the fact that mental illness carries a lot of stigma. It is also important to note that a similar finding was made by Makanjuola in his study of mania about 30 years ago. It is also possible that the patients available for studies are younger patients whose illness duration is relatively short and have therefore, not dropped out of treatment. In Nigeria, there is a high dropout rate among psychiatric patients. This may be because families are unable to persevere with the orthodox method of Western medicine. Most of them with longer illness duration may have dropped out to try native doctors or prayer or other type of healers and may not be available during the kind of study we have conducted. Our finding that more than 80% of the patients had secondary and above secondary education is also similar to findings in some large scale clinical studies of bipolar disorder. It is worthy of note that only one patient in the population of study was found to have no education. This is definitely different from the finding in Ethiopia where a good percentage of the subjects did not have any education whatsoever. However, this is not surprising given that the South East of Nigeria has a high literacy level. The fact that in spite of this high literacy level, most patients with bipolar disorder remain unemployed has also been shown by studies from developed countries. But in the Nigerian context, it will be erroneous to ascribe this high level of unemployment to psychiatric illness alone because unemployment level is high even among those who are mentally healthy. It is obvious that socioeconomic situation will affect not only employment but also other aspects of the patients behaviour both in health and disease.

One such factor that can be affected by socioeconomic circumstances is help seeking among patients with bipolar disorder. In this study, nearly all the patients sought some form of help at the onset of their illness. While 51.3% sought help in the orthodox psychiatric services, about 36% sought help from herbalists, native doctors and prayer houses. This is somewhat contrary to the finding in Nigeria that most patients with mental disorders do not seek any form of help whatsoever (Gureje et al. 2006). But it must be noted that the finding was made in a nationwide community study which is by far more representative than this study in which only patients presenting themselves for treatment have been examined. Besides, in the South East of Nigeria, most patients pay for their

treatment. The National Health Insurance Scheme in the country covers, for now, mainly those who are employed. There are other factors that can affect help seeking in the orthodox psychiatric setting such as stigma, accessibility and poverty and belief in the supernatural aetiology of mental illness. Studies in developing countries (Razali & Najib 2000, Omar Salem 2009) have confirmed the effects of some of these factors on help seeking by psychiatric patients. And some of these factors also affect the way patients with severe disturbances of behaviour are mistreated.

One such mistreatment visited on patients with bipolar disorder is physical abuse during the period of behaviour disturbance. About half of the patients in this study were subjected to physical abuse in the form of beating, being put in chains or being manacled. In addition some were locked up in rooms, yet others may have even been sent to the prison asylum.

Some diagnostic and illness characteristics have been selected for report in this study. The age of onset reported in our study is less than that observed in large clinical studies of bipolar patients in developed countries. It is very likely that this is the result of including very young patients in our sample. For example in our sample, two of the patients are aged less than 15 years. Most of the studies from developed countries did not include patients less than 18 years of age. Besides, our sample included only patients who have sought treatment on their own either because they have the resources to enable them to obtain orthodox psychiatric treatment or because they are aware of existing facilities for mental health services or both. But it is important to note that the mean age of onset in our sample which is 22.9 years is the same as that of the Stanley Foundation Bipolar Network (SFBN), a large scale clinical study of bipolar patients

One finding that is different from those in developed countries is that our patients seem to have had more manic episodes. While nearly 70% of our sample reported elevation of mood as their first mood episode, and about 20% gave depression as their first mood episode, the corresponding figures in the STEP-BD and SFBN were 26.1% and 19% respectively for elevated mood and 52% each for depression. This finding is important because it tends to support an earlier finding among the Yorubas of Nigeria (Makanjuola 1985) that mania is much more frequent than depression. However, it must be noted that the duration of illness among our sample (9.6 years) is relatively shorter than that (24 years) of the above-mentioned example. There is however, the possibility that in the culture where this study is being reported, people may not regard depression as an illness and for this reason, patients will not remember to mention depression as an episode of illness or that they may tend to remember it as an episode of physical illness and would have treated it as such. Again, most of our patients may not go to hospital at the time of depression, but when the serious

disturbance of behaviour which characterizes mania strikes, they are forced to seek help, if not in the orthodox mental health services, then in the traditional healing institutions or in prayer houses. So, those episodes of illness that forced them to take some action are not easily forgotten. On the other hand, at study entry, 45.7% of our patients were euthymic. This is comparable to 48.9% euthymic patients reported in the STEP-BD. But when we look at those presenting with depression or mania at study entry, the differences are once again quite glaring. About 30% of our patients had elevation of mood at study entry while only about half of that number was depressed. It can be seen that the reverse is the case in the STEP-BD report where about 25% were depressed at study entry and only about 6% had elevated mood. We can adduce similar arguments as above to explain these differences but it does not appear to be as simple as that. There are not many studies of this subject in developing countries as has been pointed out. So, it would be rather hasty to draw any conclusions at this level. The important point for now is that in many reports from developed countries, there appear to be more depression than mania while the opposite is the case in the few reports emanating from developing countries.

The overall prevalence of bipolar I among our sample is comparable to the prevalence in STEP-BD, but differs from the prevalence in the SFBN. The prevalence of bipolar I in the Jorvi Bipolar Study (Mantere et al. 2004) differs from our own and from both STEP-BD and SFBN showing that methodological differences are important.

Limitations of the study

The methodology of this study is similar to those of STEP-BD and SFBN but lacks the rigour of these large scale studies. The reasons are quite obvious to us. The workers in developing countries do not have the resources, both human and material, to mount such elegant and sophisticated studies. This, of course does not stop people from making the necessary efforts. We cannot claim that our sample is representative of all bipolar patients in South East Nigeria. In most developing countries (Omar Salem, 2009), psychiatric patients do not readily go to the psychiatric hospital as the first choice. Many will consult with traditional healers and prayer houses before coming to see a psychiatrist. It is also very likely that few of the patients and their families persevere for more than a few years before leaving the orthodox psychiatric care for another kind of treatment. Our sample therefore, is made up of a few patients who at this point in time are receiving treatment for bipolar disorder. In addition, we recruited only patients who have already been diagnosed as bipolar ignoring the fact that the possibility of misdiagnosis which has been reported elsewhere may also be with us in our practice. There are also many missing values for some of the characteristics we assessed.

Conclusion

In conclusion, our study has fulfilled its aim of reporting the characteristics of bipolar patients in a distinct geographical area for the first time. Our findings are generally similar to those from developed countries and developing countries. There are a few important differences. The challenge is to recruit a more representative sample and carry out further studies to enable us clarify some of the observed differences.

References

1. Angst J, Sellaro R: *Historical Perspectives and natural history of bipolar disorder*. *Biol Psychiatry* 2000; 48: 445-457.
2. Baldessarini, Tondo L, Hennen J.: *Treating the suicidal patient with bipolar disorder: Reducing suicide risk with lithium*. *Ann N Y Acad Sci* 2001; 932: 24-38.
3. Coryell W, Endicott J, Maser JD, Keller MB, Leon AC, Akiskal HS: *Long-term stability of polarity distinctions in the affective disorders*. *Am J Psychiatry* 1995; 152:385-390.
4. Dunner D, Fieve R: *Clinical factors in lithium carbonate prophylactic failure*. *Arch Gen Psychiatry*1974; 30: 229-233.
5. Fawcett J, Scheffner W, Clark D, Hedeker D, Gibbons R, Coryell W: *Clinical predictors of suicide in patients with major affective disorders: A controlled prospective study*. *Am J Psychiatry* 1987; 144:35-40.
6. Goldberg J: *Spontaneous depression versus biphasic cycling*. *Am J Psychiatry* 2001; 158: 325-326.
7. Gureje O, Lasebikan VO, Lola Kola, Makanjuola VA: *Lifetime and 12-month prevalence of mental disorders in the Nigerian Survey of Mental Health and Well-Being*. *Brit. J Psychiat*. 2006; 188: 465-471.
8. Keller MB, Lavori PW, Coryell W, Andreasen NC, Endicott J, Clayton PJ et.al: *Differential outcome of pure manic, mixed/cycling, and pure depressive episodes in patients with bipolar illness*. *JAMA* 1986; 255: 3138-3142.
9. Kirov G, Murray RM. *Ethnic differences in the presentation of bipolar affective disorder*. *European Psychiatry* 1999; 14: 199-204.
10. Kogan JN, Otto MW, Bauer MS, Dennehy EB, Miklowitz DJ, Zhang H-W et al. *Demographic and diagnostic characteristics of the first 1000 patients enrolled in the Systematic Treatment Enhancement Program for Bipolar Disorder (STEP-BD)*. *Bipolar Disorders* 2004; 6: 460-469.
11. Koukoupulos A, Reginaldi D, Laddomada P, Floris G, Serra G, Tondo L. *Course of the manic-depressive cycle and changes caused by treatments*. *Pharmacopsychiatry* 1980; 13: 156-167.
12. Lish JD, Dime-Meenan S, Whybrow PC, Price RA, Hirschfeld RMA: *The National Depressive and Manic-depressive Association (DMDA) survey of bipolar members*. *J Affect Disord*1994; 31: 281-294.
13. Maj M, Pirozzi R, Starace F: *Previous pattern of course of the illness as predictor of response to lithium prophylaxis in bipolar patients*.*J Affect Disord* 1989; 17: 237-241.
14. Makanjuola ROA: *Manic Disorder in Nigerians*. *Brit. J. Psychiat*. 1982; 141: 459-463.

15. Makanjuola ROA: Recurrent Unipolar Manic Disorder in the Yoruba Nigerian: Further Evidence. *British Journal of Psychiatry* 1985; 147: 434-437.
16. Mantere O, Suominen K, Leppamaki S, Valtonen H, Arvilommi P, Isometsa E: The clinical characteristics of DSM-IV bipolar I and II disorders: baseline findings from the Jorvi Bipolar Study (JoBS). *Bipolar Disorders* 2004; 6: 395-405.
17. Mukherjee S, Shukla S, Woodle J, Rosen AM, Olarte S. Misdiagnosis of schizophrenia in bipolar patients: a multiethnic comparison. *Am J Psychiatry* 1983; 140: 1571-1574.
18. Murray C, Lopez A: Evidence-based health policy-lessons from the Global Burden of Disease Study. *Science* 1996; 274: 740-743.
19. National Population Commission, Abuja. 2006.
20. Negash A, Alem A, Kabede D, Deyessa N, Shibre T, Kulgren G: Prevalence and clinical characteristics of bipolar I disorder in Butajira, Ethiopia: A community based study. *Journal of Affective Disorders* 2005; 87: 193-201.
21. Mohamed Omar Salem: Help Seeking Behaviour of Patients Attending the Psychiatric Service in a Sample of United Arab Emirates Population. *Int. J Soc Psychiatry* 2009; 55: 141-148.
22. Razali SM, Najib MAM: Help Seeking Pathways Among Malay Psychiatric Patients. *Int. J Soc Psychiatry* 2000; 46: 281-289.
23. Raymont V, Bettany D, Frangou S: The Maudsley bipolar disorder project Clinical characteristics of bipolar disorder I in a Catchment area treatment sample *European Psychiatry* 2003; 18: 13-17.
24. Sheehan D et. al. The Mini International Neuropsychiatric Interview for Bipolar Disorder Studies English Version 5.0.0, 2006.
25. Strakowski SM, McElroy SL, Keck PE Jr, West SA: Racial influence on diagnosis in psychotic mania. *J Affect Disord* 1996; 39: 157-162.
26. Suppes T, Leverich GS, Keck PE Jr, Nolen WA, Denicoff KD, Altshuler LL et. al: The Stanley Foundation Bipolar Treatment Outcome Network II. Demographics and illness characteristics of the first 261 patients. *J Affect Disord* 2001; 67: 45-59.
27. Thase M, Salloun I: Impact of substance abuse on the course and treatment of bipolar disorder *Bipolar Disord* 2000; 2:269-280.

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