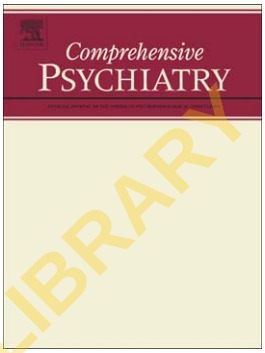

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PII: S0010-440X(16)30363-7
DOI: doi: 10.1016/j.comppsych.2016.10.009
Reference: YCOMP 51758

To appear in: *Comprehensive Psychiatry*

Please cite this article as: Esan Oluyomi, Osunbote Christopher, Oladele Oluremi, Fakunle Sina, Ehindero Christopher, Fountoulakis Konstantinos N, Bipolar I Disorder in Remission Vs. Schizophrenia in Remission: Is there a difference in Burden?, *Comprehensive Psychiatry* (2016), doi: 10.1016/j.comppsych.2016.10.009

Bipolar I Disorder in Remission Vs Schizophrenia in Remission: Is there a difference in Burden?.

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Abstract

Introduction

Bipolar disorder (BD) is considered to have a better outcome in comparison to schizophrenia. However, recent data dispute this notion. The current study aimed to compare the burden of patients with BD type I (BD-I) in remission with similar patients with schizophrenia (SZ) in remission.

Material and Methods

Patients with schizophrenia (n=75) and BD-I (n=54) aged 18-64 years were included in the study. The diagnosis was made with the SCID-I/P. Patients were assessed for sociodemographic variables, stigma, quality of life, disability, suicidality and current symptomatology. The statistical analysis included Analysis of Covariance (ANCOVA) and chi-square test.

Results

ANCOVA with age at onset as a covariate and marital status and diagnosis as grouping variables returned no significant difference.

Discussion

The results of the current study suggest that when in remission, BD-I patients do not differ from patients with schizophrenia with regards to stigma, quality of life, disability level and suicidality. Also, when in remission, they do not differ regarding the severity of their psychopathology.

Introduction

Bipolar disorder (BD) is believed to have a better overall course and prognosis in comparison to schizophrenia (SZ), thus, for many, it is not considered to be a health priority (1, 2). However, recent data suggest that it imposes a high burden on the patient, the family and on the society. Also, it is often underdiagnosed or misdiagnosed (3).

Bipolar disorder is often recurrent and has deleterious effects that go well beyond the acute clinical presentation. The management of the disorder is often complex, with an unsatisfactory outcome (4, 5). Contrary to certain misconceptions, many patients with bipolar disorder seem to have residual symptoms during remission. Consequently, the burden is not limited to the episodes (6). Existing studies may have underestimated the disease burden in bipolar disorder because of methodological issues (2, 7). The proper quantification of this burden is essential, since it depends, at least partly, on the socioeconomic and cultural environment.

Several studies have attempted to highlight the burden of bipolar disorder by comparing its burden with that of schizophrenia. Many of such studies have compared bipolar disorder with schizophrenia using patients at various phases of the illness. Consequently, such studies have come to different conclusions. While some studies found bipolar disorder to have a lower burden, others found the reverse, yet others found no difference (8-12). Also, while the literature on the physical, psychological, psychosocial and economic burden of schizophrenia is abundant; fewer studies have focused on similar parameters in bipolar disorder. The data coming from sub-Saharan African countries are scarce with most of the data on bipolar disorder coming from the US and Europe (1). Furthermore, in the Global Burden of Disease Study 2010, mental and substance use disorders accounted for 7.4% of all Disability-Adjusted Life Years (DALYs) worldwide. In the same report, schizophrenia accounted for 7.4% of DALYs caused by mental and substance use disorders while bipolar disorder accounted for 7.0% (13). DALYs in Africa have been estimated to be at least two times higher than in any other region in the world (14). It would be beneficial to have information on bipolar disorder, from data obtained locally from sub-Saharan Africa, to ascertain the burden of this disorder.

The current study aimed to compare the burden of bipolar disorder type I (BD-I) patients in remission with similar patients with schizophrenia in remission, from Nigeria. The hypothesis was that the burden of illness in both disorders, when patients are in remission, would be similar along the multiple dimensions of the burden that would be explored. These dimensions included the perceived stigma, suicidality, quality of life (QoL) and overall disability

Material and Methods

Study design: The BAS (Bipolar-Schizophrenia) study was a cross-sectional comparison of 100 patients on treatment for Bipolar I disorder with 113 patients on treatment for schizophrenia.

Study setting: The study was carried out at the University College Hospital, Ibadan and the General Hospital, Adeoyo, Ibadan, between 15 October 2014 and 23 October 2015. These are the only government hospitals with dedicated psychiatric services within Ibadan city, the capital of Oyo state, South West Nigeria. Apart from serving Ibadan, the two hospitals also receive referrals from other parts of South West Nigeria.

Study population

All consecutive patients (inpatients or outpatients) during recruitment that met the DSM-IV criteria for BD-1 or schizophrenia, aged 18-64 years and consented to participate in the study were recruited into the BAS study. Patients were excluded if they had a diagnosis of intellectual disability, neurological disorder, or a significant physical health problem that could interfere with cognitive function. We thus recruited 113 patients with schizophrenia and 100 patients with BD-I into the BAS study.

In the current study, only subjects who met the standard remission criteria for Schizophrenia or BD-I (described below) were included in the study. Of the total number recruited into the BAS study, 75 patients with schizophrenia (32 males and 43 females) and 54 with BD-I (22 males and 32 females) met these inclusion criteria and were thus included in the current study.

Remission criteria

Remission was defined for patients with schizophrenia according to the Remission in Schizophrenia Working Group criteria (15). This definition demanded that the P1, P2, P3, N1, N4, N6, G5 and G9 items of the PANSS (16) must have a score of ≤3 points (indicating a mild severity of symptoms). Due to the cross-sectional nature of our study, clinical remission was assessed, taking only the severity criterion into consideration (The 6-month duration criterion was not taken into consideration). For BD-I patients a YMRS score (17) of ≤ 5 and a clinical decision for the absence of depression were used to define remission for patients with bipolar disorder (18, 19).

Data collection

Before the study began, two research assistants were trained by O.E. for six weeks on the research instruments to be administered. Participants were interviewed over one to three sessions. The two research assistants extracted sociodemographic data and some clinical data. OE, AF and OO administered the Structured Clinical Interview for DSM-IV disorders-Patient Version (SCID-I/P).

The data collected included sociodemographic and clinical information, psychosocial measures on needs, social support, and stigma. The sociodemographic information collected included the age at onset of illness, gender, the number of years of completed education, work status (paid employment, non-paid-employment, student,

retired, unemployed), the marital status (single or never married, married or cohabiting, divorced or separated or widowed).
Other measures such as alcohol and drug use, neurological soft signs, sexual experience, caregiver burden, which were not addressed in the current study were also obtained.

Study instruments

1. The Positive and Negative Syndrome Scale (PANSS) was used to assess the severity of schizophrenia (16).
2. The Young Mania Rating Scale (YMRS) was used to assess the severity of mania in bipolar patients (17).
3. The Global Assessment of Functioning (GAF) Scale, is a 100-point scale that assesses both functioning and general psychopathology (20)
4. The Discrimination and Stigma Scale (DISC-12) was used to estimate stigma. DISC-12 measures the degree of stigma and discrimination experienced based on having a mental health problem, since the onset of illness. It has a 4-point Likert scale (not at all; a little; moderately; a lot). It evaluates experiences of discrimination across 21 life domains (21).
5. The Self-Rating Version of the Suicide Assessment Scale (SUAS-S), is a 20-item self-report rating scale. It measures a patient's attitude towards suicide, suicide-related behaviours and suicidal ideation, during the previous seven days. Each item is scored on a Likert scale of 0–4 resulting in a scale sum score with a range of 0–80 (22-24).
6. The WHO Quality of life-BREF was applied to assess the quality of life of the participants. This is a 26-item instrument self-administered, multidimensional scale. It assesses physical, psychological, social, and environmental aspects of QoL (25).
7. World Health Organization Disability Assessment Schedule 2.0 (WHO-DAS) 12-item version was administered to assess disability. The analysis in the current study used the overall weighted score after combining all the domains scores. Each item is rated on a 5-point Likert scale from 1 to 5 yielding a total score ranging from 12 to 60, with higher scores indicating greater disability. Obtained disability scores were converted to a 0 - 100 scale. Higher scores indicate more severe disability (26).

Data analysis

The variables were classified into two groups. The first one included gender, marital status, age, age at onset of illness, the number of years of completed education, work status and GAF score. These variables were considered to act as confounders. The rest of the variables (DISC-12, SUAS-S, WHO-QoL BREF, WHO-DAS, PANSS and YMRS and their subscales) were the focus of analysis concerning differences between groups (i.e., bipolar disorder and schizophrenia). Chi-square test was used to assess differences concerning categorical confounders (gender and marital status) and t-test to investigate differences regarding continuous confounding variables (age, the age at onset of illness, the number of years of completed education, work status and GAF score).
Analysis of Covariance (ANCOVA) between the two diagnostic groups was used to investigate a possible difference concerning the research variables assessed.
Subsequently, any categorical variable that was found to differ between groups was used as an additional grouping variable, while any one of the continuous

sociodemographic variables that differed, was used as a covariate. The Scheffe test was used as the post-hoc test. All statistical analyses were conducted using IBM SPSS Statistics for Windows (27). A p-value <0.05 was considered to show statistical significance.

Ethics statement

Permission to conduct the study was obtained from, Oyo State Research Ethical Review Committee (ref AD 13/479/688). The study was conducted according to the principles expressed in the Declaration of Helsinki.

Results

The sociodemographic and clinical characteristics of the sample as well as the psychometric scales scores are presented in Table 1.

The testing of the possible confounding variables revealed that the two diagnostic groups were similar with respect to age (p=0.484), the number of years of completed education (p=0.455), work status and GAF score (p=0.812), but differed in terms of age at onset, with BD-I patients manifesting the disease at an earlier age in comparison to patients with schizophrenia (24.98±7.46 vs. 28.48±8.76; p=0.02). Therefore, they were similar across a number of possible confounding variables.

Also, the two groups did not differ in terms of gender (chi-square=0.02, df=1; p=0.826) but they did differ in terms of marital status (chi-square=0.11, df=1; p=0.013). Of the BD-I patients, 29 (53.7%) were married or living with somebody and 25 (46.3%) were single, separated or widowed. The respective figures for schizophrenia were 24 (32.0%) and 51 (68.0%).

According to the above, the age at onset of illness and marital status could act as confounding variables, denoting both a more severe form of the disorder and a longer duration of illness (since age was similar in the two groups).

As described in the data analysis section, the research variables were tested with analysis of covariance (ANCOVA). Because marital status differed between groups, it was used as an additional grouping variable while the age at onset (which also differed between groups) was used as a continuous covariate. The ANCOVA returned no significant results for diagnosis (p=0.742), marital status (p=0.108) or the interaction of diagnosis by marital status (p=0.503), and there was no confounding effect of age at onset (p=0.305). These results suggest that there was no difference between groups regarding any of the research variables.

Discussion

The results of the current study suggest that when they achieve remission, bipolar disorder patients do not differ from patients with schizophrenia regarding their experience of stigma, quality of life, disability level or suicidality after controlling for confounding variables. Also, when in remission, they do not differ concerning the severity of their psychopathology. Overall, these results suggest that bipolar disorder patients and patients with schizophrenia suffer from a comparable overall level of burden in these domains. It should be noted that whether the remission rates between these two patients groups are similar or differ, is a different question and was not addressed in the current study.

Stigma

According to the results of the current study, there were no differences in the experience of stigma between bipolar disorder and schizophrenia concerning being treated unfairly because of mental health problems. There was also no difference between the groups with respect to stopping oneself from doing things as a result of how others might respond to them because of mental health problems. Also, there was no difference with regards to overcoming stigma and discrimination attributable to mental health problems and being treated more positively because of mental health problems. These results are in keeping with previous reports suggesting a similar burden of stigma between bipolar disorder and schizophrenia patient populations (28-30). People with mental illness are commonly stigmatized as a result of features such as their appearance, illness-related behaviours, having contravened certain social norms, the characteristics of treatment of mental illness, socioeconomic status of people with mental illness and due to the negative depiction of mental illness by the media, (31-33). Our results are not surprising because the two disorders share many of the above stigmatising features. A specific cultural element of the current study concerns the view held by the Yorubas (the local people in the area where the study took place) towards mental illness. With regards to the concepts of the nature and aetiology of mental disorders, two main groups of mental disorders are recognised, "asinwin" (psychotic disorders) and "ode ori". Further subclassification is based on perceived aetiology, such as evil spirits, etc. (34). Based on this indigenous/cultural classification, both bipolar disorder and schizophrenia are viewed in the same way, and attract the same level of stigma. It is noteworthy that in spite of the predominance of affective elements in their disorder, bipolar disorder patients do not perceive stigma in a different way from patients with schizophrenia. This is unexpected since it has been shown that high internalised/self-stigma is independently predicted by low self-esteem and high hopelessness, while inflated self-esteem is expected to help in coping with stigma (35).

Suicide

Several existing studies on suicide suggest that bipolar disorder has a higher suicide risk than schizophrenia (9, 36, 37). Our results contradict these findings by showing no difference between the two diagnostic groups. However, it is important to note that completed suicide is different from suicidality. The difference between the current study and other studies with similar methodology probably lies in the type of the study sample; Unlike in the current study where only remitted patients were included, such studies were based on very sick patients such as patients being evaluated at the Emergency Department (9, 36, 37).

Quality of life

We noted no difference between bipolar disorder and schizophrenia regarding QoL in all of the domains of QoL assessed. This finding supports previous reports (12, 38, 39) suggesting comparable QoL between euthymic bipolar disorder patients and remitted patients with schizophrenia.

In contrast to our study, a report showed a higher subjective QoL in bipolar disorder patients in clinical remission compared to schizophrenia patients in clinical remission. In the study, clinical remission was assessed with the Clinical Global Impression – Severity (CGI-S) scale while quality of life was assessed with (Quality of Life Enjoyment and Satisfaction Questionnaire (40). The difference in the methods of assessment/ measurement limits the comparability of this study with our study and may have been responsible for the observed difference.

Disability

The results of the current study are in contrast to previous reports that patients with schizophrenia suffer from more severe disability compared to bipolar disorder patients. This might have resulted from the effects of unremitted subjects in such study populations (41-43). Many of such studies, compared "stable patients with a diagnosis of bipolar disorder with stable patients with a diagnosis of schizophrenia. Logically, a severely ill schizophrenia patient with a plethora of negative symptoms would naturally appear stable compared to an equally ill patient with bipolar disorder. The effect is that very sick but "stable" patients with schizophrenia who have predominantly negative symptoms are compared to stable sick patients with bipolar disorder. What the current study suggests is that when standardised remission criteria are achieved, the difference between patient groups is minimal. Whether similar proportions of patients with schizophrenia achieve remission in comparison to bipolar disorder, is nevertheless a different question.

Strengths and Limitations

A major strength of the current study is that we compared bipolar disorder with schizophrenia using patients at similar phases of their illness .i.e. patients in remission. Another strength was the efforts we made to address potential sources of bias as well confounders.

Some limitations exist regarding this study. First due to the cross-sectional nature of the study, we did not include the time dimension of the remission criteria.

Second, the power of the study to detect a difference was reduced by the relatively small study sample.

Conclusion

In conclusion, the results of this study suggest that bipolar disorder patients in remission largely have a comparable level of burden with schizophrenia patients in remission. This finding challenges the common assumption that patients with schizophrenia suffer from a higher level of burden compared to bipolar disorder patients. From a policy perspective, this implies the need for more psychiatric support, research, and resources devoted to alleviating the sufferings of patients with bipolar disorder, and this should be at a similar level to what patients with schizophrenia currently enjoy.

Conflict of interest

KNF has received grants and served as consultant, advisor or CME speaker for the following entities: AstraZeneca, Bristol-Myers Squibb, Eli Lilly, Ferrer, Gedeon Richter, Janssen, Lundbeck, Otsuka, Pfizer, the Pfizer Foundation, Sanofi-Aventis, Servier, Shire, and others

Table 1: Means and standard deviations of variables assessed

	Bipolar disorder N=54		Schizophrenia N=75	
	Mean	**Std.Dev.**	**Mean**	**Std.Dev.**
Age (Current age)	39.31	9.98	38.04	10.33
Age at onset of illness*	24.98	7.46	28.48	8.76
Education (years)	11.98	3.71	11.49	3.60
GAF				
GAF	67.04	12.68	66.38	17.02
DISC-12				
Unfair treatment	0.19	0.27	0.26	0.34
Stopping self	0.61	0.75	0.55	0.69
Overcoming stigma	1.02	1.07	0.70	0.95
Positive treatment	1.65	1.23	0.77	1.09
SUAS-S				
Affect	2.28	2.36	3.09	3.82
Bodily States	1.38	1.79	1.88	2.40
Control and coping	1.23	1.25	2.28	3.07
Emotional reactivity	1.85	2.12	2.20	2.44
Suicidal thoughts and behaviour	0.13	0.52	0.39	1.33
SUAS-S total score	6.85	5.81	9.84	11.00
WHO-QoL BREF				
Physical	14.72	1.55	14.64	2,25
Psychological	15.35	1.23	14.76	2,43
Social relationships	13.55	3.22	12.44	3.85
Environment	14.80	1.67	13.67	2.73
WHO-DAS				
WHO-DAS 100	6.44	11.54	7.10	11.77
PANSS				
PANSS-P	8.98	2.75	9.88	2.67
PANSS-N	9.00	3.02	10.93	3.63
PANSS-GP	19.52	5.35	20.47	4.67
PANSS total score	37.50	9.59	41.28	8.73
YMRS				
YMRS total score	0.57	1.16	1.35	2.62

N.B

*There was no statistically significant difference between the two groups except the age at onset (P=0.02).

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