A comparative study of psychiatric morbidity and associated factors in carers of patients with schizophrenia and bipolar affective disorder in Nigeria

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Abstract

Background

Schizophrenia and bipolar affective disorder are two major, long-term psychiatric disorders, often associated with considerable functional impairment. Unlike in the West, where paid informal caregivers take up the role of looking after patients with chronic illnesses, the family of the mentally ill in sub-Saharan Africa are actively involved in rendering care to their psychiatrically ill relatives. The objective of this study was to study the psychiatric morbidity in carers of patients with schizophrenia and bipolar affective disorder in Nigeria.

Methods

This was a cross-sectional study conducted in a tertiary hospital in the Southwest geo-political zone of Nigeria. Carers of patients with schizophrenia and bipolar affective disorder were included in the study. Data was gathered on patient level of functioning, as well as carer burden and carer psychological morbidity.

Results

The overall prevalence rate of psychiatric morbidity among the caregivers was 28.6%. There was no statistically significant difference in the socio-demographics, psychiatric morbidity, caregiver burden and patients' functioning when the two carer groups were compared. The presence of burden in caregivers and severe impairment in patients' functioning were significantly associated with psychiatric morbidity in caregivers of patients with schizophrenia, but not with caregivers of bipolar patients.

Conclusions

Providing care to patients with illnesses such as schizophrenia and bipolar affective disorder is often demanding, and may be associated with significant strain, leading to psychological distress and morbidity among caregivers.

Keywords: carers, family, schizophrenia, bipolar affective disorder, Nigeria

SL J Psychiatry 2017; 8(2): 14-19

Background

The shift towards community care for patients with mental illnesses has resulted in transferring the responsibility for the day-to-day care of patients to their family members (1). The World Health Organization in 1998 estimated that between forty to ninety percent of patients with schizophrenia and other major mental illnesses live with their families (2). The situation may perhaps be worse in developing countries where relatives of patients with chronic illnesses are often involved in the day-to-day care of these persons (3). Unlike in the Western countries where paid informal caregivers take up the role of looking after patients with chronic illnesses, the family of mentally ill in sub-Saharan Africa are actively involved in rendering care to their ill relatives.

The role of these family caregivers include supervision of patient's use of medications, assistance with activities of daily living, emotional support to patients and financial support. Family member caregivers therefore have significant demands placed on their personal, financial and social resources, which may increase the risk of anxiety and depression. Studies have consistently reported significant anxiety and/or depressive symptoms among caregivers of patients with chronic mental illnesses (4,5). Furthermore, these illnesses are usually associated with some degree of disability in patients, which further contributes to psychiatric morbidity among their caregivers (5,6).

A study by Molyneaux et al., amongst caregivers, found that behavioural problems and limitation in patients'

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functioning were risk factors for psychiatric morbidity among caregiver relatives of patients with major psychiatric illnesses (7). In Nigeria, a similar relationship between caregiver psychiatric morbidity and patients' level of functioning has been reported. Okewole et al. reported the prevalence of psychiatric morbidity among Nigerian caregivers of children and adolescents with psychiatric disorders to be 39.4% (8). They also found that high level of subjective burden, low level of patient functioning, high degree of patient impairment, and low level of patient education was associated with psychological distress among carers.

Most studies conducted in Nigeria on caregiver burden have been among relatives of patients with schizophrenia, with a dearth of literature on relatives of patients with bipolar affective disorder (9-13).

The need to compare the impact of two major mental disorders, schizophrenia and bipolar affective disorder (BAD), on caregivers arose from research reports in the last few years, which suggests that BAD is an equally disabling illness as schizophrenia (14). It is expected that the outcome of this study will add to the existing literature on caregiver psychiatric morbidity, the relationship between psychological distress and burden of care among caregivers, and patients' level of functioning.

Methods

Study design and location

This cross-sectional study was conducted in a tertiary hospital in the Southwest geo-political zone of Nigeria. The location of this hospital makes it accessible to patients referred from hospitals within and from outside the Southwest region of the country.

Participants

Adult caregivers who have been living with and have been directly involved in caring for the adult patients with bipolar affective disorder or schizophrenia, who had been followed up at the clinic for at least one year, were considered eligible for inclusion in this study. For the purpose of this study, a caregiver was defined as the person who was most involved with the everyday care of the patient, and who was most likely to respond to requests by the patient for assistance, including emotional or financial support. Caregivers who were not able to communicate in the English language or who had an active medical and/or psychiatric illness were excluded from the study. Caregivers with already diagnosed psychiatric illness were excluded to minimize confounding factors which could influence study results. Caregivers of consecutive out-patients attending the psychiatry clinic were recruited for this study between March 2011 and October 2012. Informed consent was obtained prior to recruitment.

The patients were diagnosed to have above diagnoses by a consultant psychiatrist using the 10th edition of the International Classification of Diseases (ICD-10). Patients with ICD-10 diagnoses of schizophrenia or bipolar affective disorder thereafter participated in a further interview, using the Mini International Neuropsychiatry Inventory (MINI) version 5.0, for confirmation of the diagnosis (15).

Ethical approval for the study was obtained from the Ethics and Research Committee of Obafemi Awolowo University Teaching Hospitals Complex, Ile-Ife, Osun state, Nigeria.

Outcomes of interest and tools used

Socio-demographic details of the caregivers and patients, as well as information pertaining to patient's illness was gathered using a specially designed self-administered questionnaire given to the caregiver, and from the clinical records of the patients.

Patients' functional impairment was assessed using the Social and Occupational Functioning Assessment Scale (SOFAS). This scale is derived from the Global Assessment of Functioning Scale, to assess an individual's level of social and occupational functioning not directly influenced by the overall severity of psychiatric symptoms (16,17). It also considers the effects of the individual's general medical condition in the evaluation of social and occupational functioning. The SOFAS rates functioning from a range of 1 to 100, and higher scores indicate superior functioning. Whenever information is considered to be inadequate, a score of 0 is allocated to the patient.

The General Health Questionnaire (GHQ-12) was used to detect caregiver's psychiatric morbidity. The GHQ-12 is a well recognized, validated instrument for detection of psychiatric morbidity in general medical settings and in clinical and community settings in Nigeria (19). The bimodal scoring style was used in this study.

The caregiver's burden was assessed using the Zarit Burden Interview (ZBI). This 22-item questionnaire asks caregivers to indicate how often they experienced various thoughts or feelings on a 5 point scale ranging from 0 (never) to 4 (nearly always). The test-retest reliability and face validity of ZBI has been established, and the instrument is widely used in Nigeria (20).

Statistical analysis

Analysis was done using the Statistical Package for Social Sciences (SPSS) software version 17. Most variables were grouped and results were calculated as frequencies. The GHQ-12 scores were grouped into cases or non-cases using a cut-off score of 3, and prevalence of psychiatric morbidity calculated as percentages. The

level of burden was dichotomized into little or no burden, and mild to severe burden using a cut off of 20 on the ZBI. Functional impairment was categorised into 2 levels using the midpoint score of 50 as the cut-off; scores above 50 were categorised as mild/moderate, and scores equal or below 50 as severe. Comparison between schizophrenia and bipolar affective disorder was done using chi square. Level of statistical significance was set at $p < 0.05$.

Results

The study included 200 carers of patients with schizophrenia, and 67 carers of patients with bipolar affective disorder. There was no statistically significant difference in the socio-demographics, psychiatric morbidity, caregiver burden and patients' functioning when the two carer groups were compared (Table 1).

Socio-demographic characteristics	Schizophrenia (n=200)	Bipolar affective disorder (n=67)	χ^2	df	pvalue
Sex			0.784	1	0.376
Male	110	41			
Female	90	26			
Age group			0.148	1	0.701
< 40	37	11			
>=40	163	56			
Marital status			2.457	2	0.239
Single	20	4			
Married	159	59			
Divorced/separated/widowed	21	4			
Religion			1.412	1	0.235
Christianity	152	46			
Others (Islam, traditional)	48	21			
Employment status			0.516	1	0.472
Employed	166	53			
Unemployed	34	14			
Income			0.211	1	0.646
<\$100	98	35			
>=\$100	102	32			
Relationship with patient			6.685	4	0.154
Spouse	44	20			
Parent	109	26			
Child	20	6			
Siblings	15	7			
Others	12	8			
Age at onset of illness of patient (years)			3.023	3	0.388
<20	36	10			
20 - 29	79	33			
30 - 39	46	10			
≤40	39	14			
Psychiatric morbidity*			0.449	1	0.503
None	140 (70.0%)	50 (74.6%)			
Case	59 (29.5%)	17 (25.4%)			
Level of Burden			2.600	1	0.107
Little or no burden	79 (39.5%)	34 (50.7%)			
Mild-Severe	121 (60.5%)	33 (49.3%)			
SOFAS (of patients)			0.789	1	0.374
Mild/moderate	113 (56.5%)	42 (62.7%)			
Severe	87 (43.5%)	25 (37.3%)			

*Missing data

Table 2. Comparison of functional impairment of patients with schizophrenia and bipolar affective disorder, and caregiver burden

Characteristics	Variables	Schizophrenia				Bipolar affective disorder			
		GHQ			Significance	GHQ			Significance
		None cases* (n=140)	Cases** (n=59)	Total (n=199)		None-cases* (n=50)	Cases** (n=17)	Total (n=67)	
SOFAS	Mild/mod.	86(61.4%)	26(44.1%)	112(56.3%)	$\chi^2=5.08$	30(60.0%)	12(70.6%)	42(62.7%)	$\chi^2=0.61$
	Severe	54(38.6%)	33(55.9%)	87(43.7%)	$p=0.02$	20(40.0%)	5(29.4%)	25(37.3%)	$p=0.44$
Burden	No burden	67(47.9%)	11(18.6%)	78(39.2%)	$\chi^2=14.86$	27(54.0%)	7(41.2%)	34(50.7%)	$\chi^2=0.84$
	Burden	73(52.1%)	48(81.4%)	121(60.8%)	$p=0.00$	23(46.0%)	10(58.8%)	33(49.3%)	$p=0.36$

*None cases – carers with no psychiatric morbidity, **Cases – carers with psychiatric morbidity

The overall prevalence rate of psychiatric morbidity among the caregivers was 28.6%. This study found that persons caring for patients with schizophrenia had higher psychological morbidity (29.6%) than those caring for bipolar patients (25.4%), although the difference between the two groups was not statistically significant ($\chi^2=0.449$, $p=0.503$). The presence of burden in caregivers (60.5% vs. 49.3% respectively) and severe impairment in functioning of patients (43.5% vs. 37.3% respectively) were consistently higher in schizophrenia compared to the bipolar disorder group, although again this difference was not significant.

The presence of burden in caregivers ($\chi^2=14.86$, $p=0.00$) and severe impairment in patients' functioning ($\chi^2=5.08$, $p=0.02$) were significantly associated with psychiatric morbidity in caregivers of patients with schizophrenia, but not with caregivers of bipolar patients (Table 2).

Discussion

This study revealed a high prevalence of psychological morbidity in caregivers of patients with schizophrenia and bipolar affective disorder, which is comparable to those reported in previous studies (21, 22). Both these illnesses are chronic in nature and the patients usually require ongoing assistance, which may lead to caregiver frustration and burn out. Psychological distress in these caregivers may result in poor quality of care for their relatives with resultant poor prognosis in the patients' outcome. Therefore caregivers should be screened for psychiatric morbidity and treated whenever necessary.

A significant association between high burden scores and psychiatric morbidity among the caregivers of schizophrenia patients is in agreement with previous findings (22, 23). The association between burden and psychiatric morbidity is not surprising because of shared similarity in concept. Caregiver burden refers to the totality of the experience of caring for an ill relative, as

well as the capacity to cope with and adjust to prevailing circumstances, which may include certain features also measured by psychiatric morbidity. However, this may not explain the non-association reported among caregivers of bipolar disorder patients which may need further studies to explore the disparity in findings.

The significant relationship between patient's level of functioning and psychiatric morbidity among caregivers of those with schizophrenia is similar to findings from previous studies (8,21). Less severe functional impairment in patients and more periods of relatively normal functioning in patients with bipolar affective disorder when compared to schizophrenia may explain higher psychiatric morbidity among caregivers of the latter illness.

This study does not shed light on whether caregiver burden predisposes them to develop psychiatric morbidity or vice versa. Longitudinal studies in this area will help to determine the causality between burden and psychiatric morbidity. The present observation indicates that individuals who care for patients with major mental disorders, especially schizophrenia, would benefit from a well formulated mental health promotion program to take care of their own mental health needs.

Limitations

The GHQ-12 is a screening instrument for general psychiatric illness of a neurotic nature; therefore, specific diagnostic entities could not be made among caregivers. A second stage structured clinical interview would be suggested for future studies, to delineate specific mental disorders.

The study design was cross-sectional and thus no causal conclusion can be drawn from the findings. A longitudinal study would have been more appropriate. However this study, unlike most other studies in Nigeria,

covered and compared two groups of major mental disorders. The fact that the number of carers of patients of bipolar affective disorder was considerably less than the number of schizophrenia carers, may also have influenced the findings.

Conclusions

The findings of this study suggest that informal caregivers of patients with schizophrenia and bipolar affective disorder, may develop psychiatric morbidity in the course of their caregiving role. Providing care to relatives with chronic illnesses such as schizophrenia or bipolar affective disorder is demanding, and is associated with significant strain that may lead to psychological distress and morbidity among caregivers. Hence, efforts should be made by clinicians to identify such caregivers and to provide adequate support and timely treatment interventions.

Conflicts of interest

None declared

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