



Psychological distress in Nigerian patients with heart failure

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Summary

Background: Heart failure is commonly associated with psychological symptoms. These symptoms are often neglected, underdiagnosed or inadequately treated and therefore impact negatively on the recovery of and quality of life of these patients. This study aimed at determining the frequency of psychological distress (anxiety and/or depression) and its correlates in Nigerian patients with heart failure.

Methods: The subjects comprised one hundred (100) confirmed heart failure patients in steady state. They were recruited consecutively from the cardiology outpatient clinics of two tertiary hospitals in Nigeria.

A self administered questionnaire was used to collect sociodemographic and clinical data. Psychological distress was assessed using a psychometric questionnaire – the Hospital Anxiety and Depression Scale (HADS) and the severity of heart failure was assessed according to the New York Heart Association criteria (NYHA).

Results: Anxiety was found in 16% of the patients, depression in 13% and 39% had anxiety co-morbidly presenting with depression. Psychological distress was more common in younger patients (less than 50 years) ($p < 0.05$). No significant association was found between psychological distress and gender, marital status, aetiology of heart failure, duration of illness and NYHA functional class ($p > 0.05$).

Conclusion: Anxiety and depression have been found to be common in heart failure patients in Nigeria and affects more of the younger patients.

More attention should be focused on psychological co-morbidity in heart failure in order to improve clinical outcome.

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Introduction

Psychological distress which may manifest as anxiety and or depression is common in heart failure patients [1]. Heart failure is the end stage of many cardiovascular diseases and is a major cause of morbidity and mortality [2]. Present estimates suggest that it accounts for approximately 5% of all hospital ward admissions and is expected to increase over the years. Despite therapeutic advances in the pharmacological management of heart failure, the 1 year mortality rate in patients with advanced heart failure still approaches 40%. Most, including those with less severe disease often experience a considerably impaired quality of life [3]. Given the high morbidity and mortality associated with heart failure, it is not surprising that patients typically report psychological distress arising from reduced social functioning and diminished quality of life.

The prevalence of depression in patients with heart failure has been reported as ranging from 15% to 36% [4,5]. This is higher than the life-time prevalence of major depression in the general population of 13%. A study in Nigerian heart failure patients reported a prevalence of major depressive disorders of 27.5% [6]. On the other hand, anxiety has been found in 29–45% of patients with heart failure [7,8]. In many settings, especially in developing countries, psychological co-morbidity in patients with heart failure is often neglected despite their association with adverse clinical outcomes [9,10]. They are usually under-diagnosed or inadequately treated. The resultant failure to address these psychological symptoms often leads to poor recovery and a compromised quality of life.

Presently attention is usually focused on the management of somatic symptoms in heart failure patients in Nigeria. With the prevailing economic downturn, psychological problems in the form of anxiety and depression in patients with heart failure are expected to increase.

Anxiety and depression are closely interrelated and indicate different manifestations of psychological distress and may have different effects on cardiac disease. Recent research [11] has shown that joint contributions of negative effects relate more strongly to cardiovascular outcomes than specific effects alone.

This study was therefore aimed at determining the frequency of occurrence of psychological distress in Nigerian patients with heart failure as well as identifying the possible predictive factors in the environment.

Subjects and methods

One hundred consecutive patients with heart failure were recruited from the cardiology clinics of the University of Calabar and University of Uyo Teaching Hospitals in Nigeria. The two centres serve as referral centres. Recruitment was done over a 6-month period. Subjects were approached to participate as they came for their routine follow up.

All subjects had been diagnosed with heart failure and were being treated by consultant cardiologists. Cardiac diagnoses had been made after clinical examination, chest radiography, electrocardiography and echocardiography. None of the patients had ever been on antidepressants and/or hypnotics/benzodiazepines during the course of their treatment for heart failure.

Socio-demographic and clinical data were obtained using a semi-structured questionnaire. These included age of patient, gender, marital status, occupation, duration of heart failure, aetiology of heart failure and number of admissions in the preceding 12 months. They were self administered except for patients who were unable to read the questionnaire in which case the authors assisted by reading and interpreting for the patient.

A psychometric questionnaire, the Hospital Anxiety and Depression Scale (HADS) [12] was also administered to all the patients. This instrument has been validated for use as a screening tool in non-psychiatric settings [13,14]. It is designed to measure anxiety and depression. Each of the two sub-scales consists of seven items. All 14 items in the HADS scale are rated on a four point scale ranging from the absence of symptoms or presence of a positive feature scoring zero (0) to a maximal symptomatology or absence of positive features which scores three. Possible scores range from 0 to 21. Patients with a HADS score of eight and above were considered as having anxiety and or depression. Psychological distress was defined as an elevated score on either the anxiety or depression subscale, or both.

The severity of heart failure was assessed according to the New York Heart Association (NYHA) criteria [15] which is a four point scale. This scale grades the functional impairment of patients with heart failure. The classification is based on symptoms of dyspnoea resulting from performing ordinary and less than ordinary activity. The grading is in ascending order of increased functional impairment. At the time of recruitment all the subjects were stable and in NYHA functional class II, III

and IV and did not have an acute exacerbation of symptoms.

Statistical analysis

The Statistical Package for the Social Sciences (SPSS – Windows Version 11.0) was used for statistical analysis. Results are presented as group frequencies and percentages.

Chi-square test was used to analyse the differences between categorical variables. Multiple regression analysis was used to determine the predictors of psychological distress. $P < 0.05$ was fixed as the level of statistical significance.

Ethical considerations

Informed consent was obtained from all subjects and the study conformed to the ethical guidelines

on human research of the 1975 Declaration of Helsinki as modified in 2004.

Results

Socio-demographic and clinical characteristics

As shown in Table 1, a total of 100 subjects with heart failure, aged 20 years and above were recruited and comprised 55 (55%) males and 45 (45%) females. Furthermore 67 (67%) of the subjects were aged 50 years and above. Most of the patients 98 (98%) were in New York Heart Association (NYHA) functional status class III and above. The majority (79%) of subjects were married.

The causes of heart failure were as follows: Hypertension 47%, Dilated Cardiomyopathy 28% and Rheumatic heart disease 21%. Others were

Table 1 Sociodemographic and clinical characteristics of subjects.

Variables	Total <i>n</i> = 100	Psychological Distress		Chi ²	df	<i>p</i> value
		Present <i>n</i> = 68 No (%)	Absent <i>n</i> = 32 No (%)			
<i>Age</i>						
20–29	9	8 (88.9)	1 (11.1)	4.645	3	0.20
30–39	4	3 (75.0)	1 (25.1)			
40–49	20	16 (80.0)	4 (20.0)			
50 and above	67	41 (61.2)	26 (38.8)			
<i>Sex</i>						
Male	55	37 (67.3)	18 (37.2)	0.30	1	0.863
Female	45	31 (68.9)	14 (31.1)			
<i>Aetiology of heart failure</i>						
Hypertension	47	31 (66.0)	16 (34.0)	6.695	5	0.244
Dilated Cardiomyopathy	28	17 (60.7)	11 (39.3)			
Rheumatic heart disease	21	18 (85.7)	3 (14.3)			
Cor Pulmonale	2	1 (50.0)	1 (50.0)			
Ischemic Heart Disease	1	1 (100)	0 (0)			
Endomyocardial fibrosis	1	0 (0)	1 (100)			
<i>Functional status (NYHA)</i>						
II	2	1 (50.0)	1 (50.0)	0.950	2	0.622
III	4	2 (50.0)	2 (50.0)			
IV	94	65 (69.1)	29 (30.9)			
<i>Duration of illness</i>						
Less than 1 year	25	15 (60.0)	10 (40.0)	3.903	3	0.272
1–2 years	34	26 (76.5)	8 (23.5)			
3–5 years	29	21 (72.4)	8 (27.6)			
More than 5 years	12	6 (50.0)	6 (50.0)			
<i>Marital status</i>						
Single	7	5 (71.4)	2 (28.6)	1.804	3	0.614
Married	79	52 (65.8)	27 (34.2)			
Separated	2	1 (50.0)	1 (50.0)			
Divorced	12	10 (83.3)	2 (16.7)			

Cor pulmonale 2%, Ischemic Heart Disease (IHD) and Endomyocardial fibrosis (EMF) 1% each.

Prevalence of psychological distress and correlates

Among the subjects, 16% presented with anxiety, 13% with depression and 39% with a combination of anxiety and depression. There was a male preponderance but this association was not statistically significant, ($p > 0.05$). The aetiology of the heart failure, NYHA functional class, duration of illness and marital status did not show a significant association with psychological distress on non-parametric testing ($p > 0.05$).

Predictors of psychological distress

As shown in Table 2, all variables were subjected to a multiple regression analysis to determine independent predictors of psychological distress. Only the age of subjects emerged as a predictive variable ($p < 0.05$). Younger heart failure patients were found to have more psychological distress than older ones.

Discussion

This is one of the few studies to look at psychological distress in black African patients with heart failure. The only other study had examined major depressive illness [4].

The prevalence of anxiety and/or depression of 13–39% in our heart failure patients was similar to the 13–42% reported in black Hispanic minorities, African Americans and Caucasians [16,17]. This shows that the magnitude of psychological distress in Nigerian patients with heart failure is comparable to that reported in other parts of the world. This is despite the fact that they present

late owing to poverty and lack of access to medical care. Most of our patients were in NYHA functional class IV, which is often associated with a higher level of psychological distress. NYHA functional status was found not to be significantly associated with psychological distress in this study, contrary to findings from earlier studies that had demonstrated a significant association [18,19]. This may be explained by differences in study designs and variations in the psychometric instruments used.

Psychological distress was found to be more common in younger subjects. This is consistent with findings from previous studies [6,17]. However, many studies have also reported that it is more common in the elderly [1,5] and is attributable to the fact that older subjects are lonelier with diminished health and strength. This results in reduced physical ability to continue their daily activities, usual role and social functioning. Disturbance of these functions results in psychological feelings of low self worth, helplessness, anger and lack of ambition. For the younger patients with heart failure, the finding may be explained by the fact that coping with the physical and emotional limitations caused by heart failure is more difficult for them to accept. There may also be more reporting of symptoms by younger patients as they may perceive that their heart failure interferes with their functional capabilities and expectations.

Lack of social support is an important predictor of psychological distress. Only a few studies have looked at the social relationships of patients with heart failure [20–22]. It is of interest to note that even though the majority of our subjects were married, psychological distress was still common. This may be explained by the fact that heart failure being a chronic ailment, puts a lot of emotional, physical and financial strain on the spouse and the rest of the family due to an increased demand for care. There may therefore be a breakdown of the marital bond and necessary support may no longer be enjoyed. Indeed, in Nigeria and other African countries, some couples may stay together only to satisfy religious and cultural norms. Absence of emotional support is therefore a strong independent predictor of fatal cardiac outcome among patients with heart failure [6]. Being married may enhance compliance and improve response and NYHA functional status. By so doing it reduces disability and psychological distress. The converse is expected when such social support is lacking.

This study has some limitations. The sample size could have been larger but in our milieu most heart failure patients do not avail themselves of regular check ups owing to social and economic

Table 2 Regression analysis to determine predictors of psychological distress in patients with heart failure.

Variables	Beta	t	p-value
Gender of patients	-.071	-.662	.509
Age of patients	-.257	-2.398	.018*
Duration of illness	-.045	-.448	.655
NYHA functional class	0.134	1.322	.189
Marital status	.183	1.704	.095
Aetiology of heart failure	.038	.374	.189

* Significant.

constraints. Second, objective data on left ventricular function (ejection fraction) were not used as they were not available for most of the patients.

The HADS questionnaire does not allow for a diagnostic interview thus only self reported psychological symptoms were elicited.

In conclusion, this study has shown that psychological distress is common in heart failure patients in Nigeria and more in younger patients. The present paucity of studies relating psychological factors to the aetiology and management of heart failure however suggests that psychological factors are neglected in this condition. In view of the increasing prevalence of heart failure in developing countries, further research is needed to develop standardized procedures for their assessment and for the treatment of psychological factors in heart failure. This is expected to improve the establishment of a diagnosis and to enhance appropriate treatment of anxiety and/or depression, which should lead to better clinical outcomes and prognosis.

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