Functional disability as a measure of severity in depressive disorders

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Abstract

Background: Good level of functioning is an asset that individuals have used to create wealth and perform social activities. Depressive disorders, no matter how mild, have a negative toll on how individuals perform or enjoy such social or economic endowments. The study was aimed at determining the relationship between severity of depression and global functioning.

Methods: The cross-sectional study included 100 depressed adult outpatients. A variety of measures including the Mini International Neuropsychiatric Interview (MINI) was used to diagnose depression while the Hamilton Rating Scale for Depression (HRSD) and Global Assessment of Functioning (GAF) scale were used to rate the severity of depression and measure the degree of functioning respectively.

Results: Forty-two percent of the study participants were still depressed. Out of this number, 47.6% were in remission, 40.5% had mild symptoms while 7.1% and 4.8% had moderate and severe depressive symptoms respectively. Majority (93.1%) of those who had achieved full remission exhibited superior functioning compared to those who were still experiencing one symptom or the other. A statistically significant association ($p<0.001$) was found between severity of depression and level of functioning.

Conclusion: Severe depression is associated with poor functioning among patients. Functional improvement should therefore be one of the targets of treatment by physicians.

Key words: *Functioning; Severity; Depressive disorders*

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Introduction

The term functional capacity refers to the capability of performing tasks and activities that people find necessary or desirable in their lives. Limitations in functional capacity (social, occupational and cognitive) cause problems in everyday living.

Depression is a significant contributor to poor functional capacity and the global burden of disease and affects people in all communities across the world[1]. A World Mental Health Survey conducted in 17 countries by the World Health Organization (WHO) found that on average, about 1 in 20 people reported having an episode of depression in the previous year[1]. Major depression is a treatable cause of pain, suffering, disability and death, yet primary care clinicians detect major depression in only one-third to one-half of their patients[2,3]. Depressive disorders confer a great burden on social, economic as well as clinical levels, thus, making it a substantial public health challenge. It affects 6-17% of the general population[4]

Earlier studies have revealed that depressive disorders are associated with significant decrease in social functioning and Quality of Life (QOL)[5-9]

A recent study showed a relationship between the severity of depressive symptoms and work function with even minor levels of depressive symptoms impacting negatively on functioning[10]. Residual symptoms such as cognitive impairment or social dysfunction can continue to reduce performance causing significant distress[1]. Depression has been linked with increased absenteeism from work place as well as decreased productivity even if the patient is able to go to work[12]. Job loss or decreased productivity due to the illness impacts negatively on the patient and the patient's partner and family leading to family instability and conflicts as some of these patients may be accused of acting to avoid working or sometimes described as 'simply lazy'[11].

Another area of great concern is sexual intercourse which often suffers as a result of the associated decrease libido with the healthy partner forced to endure throughout the duration of the illness[13].

This study hope to create awareness on the debilitating effect of depression and thus, the study outcome will serves as a an important tool for prompt intervention to mitigate its burden. Dearth of similar studies conducted in this environment will therefore make this study an invaluable source of information for future referral by researchers in similar field.

The aim of this study was to determine the relationship between severity of depression and functioning.

The study also seek to determine the impact of treating depressive disorders on the level of functioning

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Materials and Methods

The study is a cross sectional descriptive study of 100 consecutively recruited adult patients on antidepressant treatment for major depressive disorder for at least 6 months at the psychiatry outpatient clinic of the Jos University Teaching Hospital, Jos, Plateau State, Nigeria. The sample size was calculated using the formula: $N = Z^2xP(1-P)/d^2$ N = Sample size; Z =confidence level (1.96); P =expected prevalence (6.0%)[4] and d=allowable error (0.05)

Putting the above values into the formula yielded a sample size of 77 which was added up to 100 to increase the statistical power of the outcome.

Ethical clearance was obtained from the Human Research Ethics Committee of the Jos University Teaching Hospital and consent was given by the participants after the purpose and procedure of the study was explained to them. Data was then collected using the questionnaires below.

Sociodemographic data –This was obtained using a questionnaire designed by the authors. The questionnaire was used to obtain information on sex, age, occupation, religion, education and marital status.

Assessment of depression –Depression was assessed using the Mini International Neuropsychiatric Interview (MINI) instrument[14]. The instrument is a structured interview designed for major axis I psychiatric disorders in DSM-IV and ICD-10. It has been widely used across different cultures including Nigeria[15].

Assessment of severity of depression –The severity of symptoms was measured using the Hamilton Rating Scale for Depression[16]. This instrument is a 21 question multiple choice questionnaire that can be used to rate the severity of depression in patients. It rates the severity of symptoms in depression, such as, low mood, insomnia, agitation, anxiety and weight loss. Each question has between 3 and 5 possible responses. The clinician chooses the possible response to each question by interviewing the patient and by observing the patient's symptoms. The first 17 questions contribute to the total score. Questions 18 to 21 are recorded to give further information about the depression (such as, the presence of diurnal variation or paranoid symptoms), but are not part of the scale. This instrument has been used in Nigeria in previous studies[17,18].

Assessment of functioning –All respondents were then assessed for functional limitations with the Global Assessment of Functioning (GAF) Scale[19]. The GAF Scale is an observer-rated single rating on a 100-point scale from 1 (least healthy person) to 100 (the healthiest person), where 100 indicates the absence of pathology and a positive mental health. For the purpose of this study, this instrument was re-classified into the following scores: (Minimal functioning=1-30; Moderate functioning=31-70; and Superior functioning=71-100). Several researchers have used this instrument in Nigeria[20,21].

Data was analyzed using the Statistical Package for Social Sciences (SPSS) version 19.0. Results were presented using simple descriptive statistics. Between groups comparison was undertaken using chi-square. Spearman's Rho was used to determine directional measures between severity of depression and functioning.

Results

The sociodemographic profile of the study participants is as represented in Table 1.

Table 1: sociodemographic characteristics of participants

Characteristics	Frequency	Percentage
Gender:		
Male	36	36.0
Female	64	64.0
Age group:		
<20years	3	3.0
20-29	22	22.0
30-39	29	29.0
40-49	23	23.0
≥50	23	23.0
Employment status:		
Yes	32	32.0
No	68	68.0
Occupation:		
Skilled	10	14.7
Semi-skilled	33	48.5
Unskilled	25	36.8
Education:		
None	21	21.0
Primary	19	19.0
Secondary	40	40.0
Tertiary	20	20.0
Marital status:		
Single	47	47.0
Married	40	40.0
Separated	6	6.0
Widowed	7	7.0
Religion:		
Christianity	76	76.0
Islam	24	24.0
Depressed (MINI):		
Yes	42	42.0
No	58	5
Severity of Depression:		
Normal	20	47.6
Mild	17	40.5
Moderate	3	7.1
Severe	2	4.8

There was a predominance of females (64.0%) compared to their male respondents. The mean age of the respondents was 39 years while the median age was 38.5 years, showing that majority are of young population. The age range was 64 years. Most of the studied respondents (68.8%) were involved in one form of occupation or the other. However, majority (48.5%) of those employed were within the semi-skilled category while the skilled and unskilled made up 14.7% and 36.8% respectively. Secondary education (40.0%) was the most attained level of education. Almost equal percentages had no education (21.0%), primary (19.0%) and tertiary education (20.0%). With respect to marital status, singles constituted 47.0% while 40.0% were married. Those separated were 6.0% and widows 7.0%. Christian respondents had more representation (76.0%) relative to Muslims (24.0%).

The Results obtained using the MINI showed that 42.0% of the participants were still depressed while 58.0% had achieved remission. Among the participants, 47.6% was in remission, hence, had a normal score on the HRSD. Forty and a half percent were still having mild symptoms and 7.1% moderate symptoms. Those with severe symptoms made up the remaining 4.8%.

Table 2: Relationship between treatment response in depressive disorders and Global Assessment of Functioning (GAF)

GAF Scores	Subjects who are still depressed	Subjects who have achieved remission	P
Minimal functioning (1-30)	7(16.7%)	0(0.0%)	0.0001
Moderate functioning (31-70)	30(71.4%)	4(6.9%)	
Superior functioning (71-100)	5(11.9%)	54(93.1%)	
Total	42(100.0%)	58(100.0%)	

GAF =Global Assessment of Functioning

Table 2 displayed the functional outcome for those with ongoing depressive symptoms in comparison with those who have achieved remission. Majority (93.1%) of those who have achieved remission displayed superior level of functioning. (P<0.0001).

Discussion

In the present study, the relationship between social functioning and severity of depression was investigated in a population of psychiatric outpatients suffering from depressive disorders.

The result of the study revealed a scenario where females predominated. This is to be expected as several previous studies[22-24] have demonstrated that more women presents with depressive disorders compared to their male counterparts. A report by the WHO also concurred with our findings. The report revealed that while depression is the leading cause of disability for both males and females, the burden of depression is 50% higher for females than males in both high-income and low- and middle-income countries[25]. Compared to men who seek help for emotional problems less frequently, women are also more likely to visit hospitals for care when depressed. Men, on the hand resort to maladaptive means like use of substances to cope with the illness. Most of them thus, present with substance use related disorders instead of depression[26,27].

We examined the relationship between severity of depression and functional capacity. The reciprocity of the statistical relationship between depressive disorders and global functioning was supported by this study. As was reported, severity of depressive symptoms was a significant predictor of global functioning. The complex and often reciprocal nature of this relationship is consistent with those of other researchers. Simon et al in their study on social and economic burden of mood disorders noted that "abundant evidence demonstrates a strong cross-sectional association between depression and decrements in self-reported quality of life and functional status"[9]. Similarly, the result obtained by Beck[10], showed a significant linear, monotonic relationship between depression, symptom severity and productivity loss: with every 1-point increase in PHQ-9 score, patients experienced an additional mean productivity loss of 1.65% (P <0.001). Our study concurs with other reports from similar studies[8,11], demonstrating a decrement in global functioning in depressive disorders.

Impaired functioning among those who were still suffering from depressive disorders was also demonstrated in this study. Using Spearman's rank correlation, this study was able to demonstrate a significant association (P<0.001) between severity of depressive symptoms and functional ability. This can be explained by the fact that functional capacity (social, occupational and cognitive) is negatively influenced by depressive symptoms (such as low mood, low energy, social withdrawal, loss of interest in pleasurable activities, poor concentration, general slowness etc). Functional decline associated with depressive severity has also been demonstrated by previous studies[1,6,12,28]. De Jong[5], (using the Groningen Social Behavior Questionnaire-100 =GSBQ-100) reported a similar outcome where a population of depressed patients experienced a wide range of problems concerning all aspects of social functioning. The study also showed that the numbers of problems were significantly higher compared with healthy controls. Almost all scales of the GSBQ-100 negatively correlated with GAF score. In general, participants with problems related to depressive disorders scored low for social functioning than those without such problems

Limitation of the Study

We note some of the limitations of the evidence included in this study that affect the strength of conclusions and generalizability of findings.

The study assessed functioning in depression as a whole. It did not consider global functioning of the various forms of depressive disorders for the purpose of comparison. Future studies should therefore consider assessing functional levels before all the depressive types.

A control group of normal population should have added to the study if it was used to compare functioning between those who were depressed but have achieved remission.

There was an absence of evidence from high-quality studies of this nature in Nigeria and the generalisabilty of the findings is limited by the over-representation of studies from other countries.

Conclusion

Our study revealed that treating depression leads to improvement in global functioning which is an important requirement for the fulfillment of social, occupational and cognitive roles. Depression demonstrated its capacity to interfere with these roles by disrupting the functional ability of its sufferers. Prompt diagnosis and adequate treatment of depressive disorders is therefore necessary to restore and maintain functional capacity to enable the patient lead an independent life and contribute to the development of his/her community.

Conflict of Interest

None to declare

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