

ORIGINAL ARTICLE

Utilization of health care services by depressed patients attending the general out-patients department of the Jos University Teaching Hospital, Jos, Nigeria

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Abstract

Background: Depression is a common psychiatric disorder in primary health care throughout the world with increasing incidence and prevalence. It is often under-treated and under-diagnosed. Consequently, several studies have revealed that patients with depression are high utilizers of medical services.

Objectives: The study was aimed at determining the frequency of consultation and the utilization of investigative procedures by the depressed and non-depressed patients in the last 12 months.

Materials and Methods: This was a cross-sectional descriptive study among 200 consecutive patients attending the General Out-Patient Department of the Jos University Teaching Hospital between November 2006 and March 2007. A semi-structured questionnaire was used to collect socio-demographic data and health services utilization indices. Structured Clinical Interview for DSM-IV axis-1 Disorders (SCID) was used for diagnosis of depression.

Results: The study found that 51(25.5%) of the respondents met DSM-IV criteria for the diagnosis of major depression while 149 (74.5%) did not. Depressed patients significantly had more number of consultations with their doctors ($P=0.000$), had consulted more number of hospitals ($P=0.000$), stayed longer on admission ($P=0.000$) and had consumed more types of medicine ($P=0.005$) in the last 12 months compared with the non-depressed. The depressed patients also had significantly higher mean of different types of investigations compared with non-depressed; urinalysis (1.69 vs 0.55, $P=0.000$), chest X-ray (0.57 vs 0.21, $P=0.000$) and Widal test (1.92 vs 0.39, $P=0.000$). Others are HIV screening (0.39vs0.11, $P=0.000$) urine mcs (0.94 vs 0.18, $P=0.000$), stool mcs (1.24 vs 0.20, $P=0.000$).

Conclusion: The study demonstrated that patients who suffer from depression are higher utilizers of health care resources compared with the non-depressed. Therefore, it is recommended that general practitioners and other health workers need to be better equipped to deal with the diagnosis and management of depression.

Key words: Utilization, health care resources, depression

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Introduction

Depression plays the biggest role in terms of impact on people's health and quality of life. It accounts for more than 10% of all DALYS (disability-adjusted life years) particularly in the productive and active age groups (15–44 years) and it was the single leading cause of disease burden in the world

in 1990 in high-, low-, and middle-income countries.^[1] Furthermore, this figure is projected to rise to 15% by the year 2020.^[1]

Failure to recognize and adequately treat depression will

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lead to chronicity and deterioration of the depression, psychiatric complications, such as substance abuse, suicide attempts, and decline in physical health and recurrent visit to general practitioners. This leads to enormous utilization of healthcare resources and overstretches the few existing facilities.^[2,3]

With the introduction of National Health Insurance Scheme (NHIS) by the Federal Government of Nigeria in the year 2005 and the rising cost of medical expenses, patients and doctors alike are facing a stringent demand to account for each procedure performed and each visit made. While the whole population is affected, it can be predicted that the impact will be significant on that segment of the population whose high utilization of medical care services is highly inconsistent with their physical health status. This is made worse by the fact that at least 70% of Nigerians live below the national poverty line in spite of rich natural resources.^[4]

Some studies have revealed that medical care utilization rates decrease substantially when patients begin treatment for mental illness.^[5-7] This phenomenon known as the “offset effect” also suggests the importance of accurate diagnosis and adequate treatment.

Therefore, motivation to initiate medical healthcare visit must be examined in terms of mental health status as well as physical health status to track down patients with depression early enough to avoid patients suffering, chronicity, and complications and overutilization of healthcare resources.

Several studies have been carried out in the USA and Europe on utilization of healthcare resources by depressed patients but none has been carried out in Nigeria. Consequently, this study was conducted to determine health services utilization by depressed patients attending the general outpatient department of Jos University Teaching Hospital (JUTH), Jos. The objective was to determine the frequency of consultation and utilization of investigative procedures by the depressed and nondepressed patients attending the GOPD of JUTH in the last 12 months.

Materials and Methods

The study was carried out at the General Out-Patient Department (GOPD), JUTH, Jos. Jos is the capital city of Plateau state. It has an estimated population of 822,873 as at 2006 (Plateau State Ministry of Information, 2007). Jos University Teaching Hospital is located at the center of the north central region of Nigeria. It offers both specialist and primary care services to in- and outpatients.

Ethical approval was sought and obtained from the ethical committee of JUTH. Permission was also obtained

from the Department of Family Medicine before the commencement of the study. The study population consisted of patients attending the GOPD of JUTH from November 2006 to March 2007. Inclusion criteria include all patients attending the general out-patient department from 16 years of age and above and those who consented to participate.

Excluded were patients who abuse alcohol or drugs, patients with past history of psychiatric illness other than depression, patients with altered sensorium and those who failed to give consent.

Patients were recruited consecutively on clinic days and those who satisfied the inclusion criteria were administered SCID by a trained psychiatrist and a proforma designed by the researchers was used for assessment of sociodemographic factors and health utilization indices. The data were analyzed using SPSS 15.0 statistical package for windows. Simple descriptive statistics were used and a *P* value of <0.05 was considered significant.

Results

The study found that 51 (25.5%) of the respondents met the diagnosis of major depression according to DSM – IV criteria while 149 (74.5%) did not.

Table 1 shows the association between the utilization of healthcare resources by the depressed and nondepressed respondents.

In this table all the depressed patients had consulted a doctor in the last 12 months but only 30 (20%) of the nondepressed had consulted. The percentage of the depressed respondents gradually increased while that of the nondepressed decreased as the frequency of consultations increased. The depressed patients significantly had more number of consultations compared to the nondepressed ($\chi^2=44.0621$, $df=3$, $P=0.000$). Similarly, depressed patients significantly consulted more number of hospitals than the nondepressed ($\chi^2=34.518$, $df=3$, $P=0.000$).

The table also showed that the depressed patients had significantly higher duration of admission than the nondepressed patients ($\chi^2=10.583$, $df=2$, $P=0.000$). Higher proportion 6 (11.5%) of the depressed subjects versus 9 (6.0%) of the nondepressed respondents consumed between 5 and 8 different types of medicine at the time of study. The depressed significantly consumed more types of medicine compared to the nondepressed ($\chi^2=10.657$, $df=2$, $P=0.005$).

Table 2 shows the comparison between depressed and nondepressed respondents by the frequency of investigations.

Table 1: Association between the utilization of healthcare resources by the depressed and nondepressed patients

Frequency of consultation of doctors	Depressed n=51 (%)	Nondepressed n=149 (%)	Total 200 (%)	Statistics
None	0 (0.0)	30 (20.1)	30 (15.0)	$\chi^2=44.061$, df=3 P=0.000
<2	5 (9.8)	53 (35.6)	58 (29.0)	
3-4	13 (25.5)	37 (24.8)	50 (25.0)	
>5	33 (64.7)	29 (19.5)	62 (31.0)	
Total	51(100)	149 (100)	200 (100)	
Frequency of hospitals consulted				
1	15 (29.4)	91 (61.1)	106 (53.0)	$\chi^2=34.518$ df=3 P=0.000
2	16 (31.4)	48 (32.2)	64 (32.0)	
3	16 (31.4)	9 (6.0)	25 (12.5)	
>4	4 (7.8)	1 (0.7)	5 (2.5)	
Total	51 (100)	149 (100)	200 (100)	
Duration of admission in days				
0-14	49 (96.1)	145 (97.3)	194 (97.0)	$\chi^2=10.583$ df=2 P=0.005
>15	2 (3.9)	4 (2.7)	6 (3.0)	
Total	51 (100)	149 (100)	200 (100)	
Frequency of different types of medicines currently consumed				
0-2	25 (49.0)	110 (73.8)	135 (67.5)	$\chi^2=10.657$ df=2 P=0.005
3-4	20 (39.2)	30 (20.1)	50 (25.0)	
5-8	6 (11.8)	9 (6.0)	15 (7.5)	
Total	51 (100)	149 (100)	200 (100)	

The depressed patients significantly had a higher mean of different types of investigations compared to the nondepressed.

Discussion

The study showed that 51 (25.5%) of the 200 patients met the DSM-IV diagnostic criteria for major depressive disorder. Having a diagnosis of depression was significantly associated with higher utilization of healthcare services. Depressed patients significantly had more frequent consultations with their doctors. This is consistent with a study carried out in nationwide primary care facilities in Italy. It was found that 27.7% of the patients with current depression were frequent attendees at primary care facilities compared with 12.8% of nondepressed patients.^[8,9]

This study revealed that depressed patients had significantly higher frequency of clinical investigations compared to the nondepressed. This concurs with the study done in the USA by Luber *et al.*^[10] who found depressed patients to have higher test rates.

Furthermore, this study showed that depressed patients significantly consulted more number of hospitals and significantly had higher rates of multiple drug use in the last 12 months compared with the nondepressed.

Table 2: Comparison between depressed and nondepressed respondents by the frequency of investigations

Investigations	Diagnosis	N	Mean	S.D.	T	Df	P
Urinalysis	Depressed	51	1.69	1.068	7.430	198	0.000
	Nondepressed	149	0.55	0.896			
	Total	200					
Chest X-ray	Depressed	51	0.57	0.700	3.732	198	0.000
	Nondepressed	149	0.21	0.540			
	Total	200					
Widal test	Depressed	51	1.92	1.508	9.020	198	0.000
	Nondepressed	149	0.39	0.836			
	Total	200					
HIV screening	Depressed	51	0.39	0.493	4.632	198	0.000
	Nondepressed	149	0.11	0.332			
	Total	200					
Urine mcs	Depressed	51	0.94	1.287	5.552	198	0.000
	Nondepressed	149	0.18	0.627			
	Total	200					
Stool mcs	Depressed	51	1.24	1.290	8.017	198	0.000
	Nondepressed	149	0.20	0.532			
	Total	200					

These findings may be attributable to several factors that may act either alone or in combination. Among these factors is the fact that depression is chronic or subject to frequent relapses.^[11] Several investigations have revealed that depressed patients present with a higher incidence of nonspecific medical complaints which are usually misdiagnosed and mistreated at the primary health care level.^[12] Additionally, it has been found that depressed patients are more likely to attribute their problems to somatic rather than emotional origin.^[13] These factors coupled with the high level of stigma attached to mental illness in our environment^[14] could lead to denial of symptoms. So, patients with depression are most frequently misdiagnosed and mistreated^[12] with resultant increase in utilization of the various facets of the healthcare services.^[15] Some evidence suggests that symptoms of psychological morbidity interact with physical symptoms leading to high rates of medical health care utilization.^[16]

This study is in consonance with other studies which reported longer duration of hospitalization among depressed patients.^[10] This might be because depression has been found to be associated with increased medical morbidity and may cause delays in disease recovery. Hence, patients might stay longer when hospitalized. All these would ultimately raise the overall cost of health care.

Conclusion

This study in-part corroborates earlier observations that patients with depression are high utilizers of health resources. Therefore, clinicians in nonpsychiatric settings,

general practitioners and primary health workers need to be better equipped to diagnose, and manage depression to prevent overutilization of healthcare resources and patients' suffering.

Limitation

The study is hospital based and the sample size is small. Therefore the results may not be generalizable to the general population.

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