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EC PSYCHOLOGY AND PSYCHIATRY
Research Article

Psychiatric Morbidity and Depression among Patients Attending the General Out Patient Department of a Tertiary Hospital in Nigeria

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Received: December 28, 2018; **Published:** January 29, 2019

Abstract

Objective: The study was designed to determine the psychiatric morbidity and depression among patients attending the general out-patient department of a tertiary hospital in Nigeria.

Materials and Methods: Consenting patients, recruited by systematic sampling procedure between July, 2016 and October, 2016 were enlisted in the study. The GHQ, BDI, Hamilton Depression Rating scale, SCAN and a socio-demographic questionnaire were administered to the subjects.

Results: 428 out of 430 subjects who enlisted in the study was analyzed. The prevalence rate of psychiatric morbidity in this study is 33.6% while that of depression in the cohort is 25.7%, mild (14.5%), moderate (9.3%) and severe (1.9%). Earning an average income of less than N30,000 per month was associated with developing depression ($X^2 = 11.435$, df = 2, $P < 0.05$).

Conclusions: Psychiatric morbidity, especially depression is prevalent and has enormous consequences for our society. The need for prompt identification of cases and adequate treatment cannot be overemphasized.

Keywords: *Depression; Psychiatric Morbidity; Prevalence; Patient*

Introduction

A good percentage of patients who attend primary care clinics also suffer from a myriad of psychological disorders but unfortunately, many are misdiagnosed or undetected and hence such patients are often inadequately treated. It was Michael Shepherd who first demonstrated the extent and magnitude of minor psychiatric disorders in primary and general practice [1]. Several researchers have reported that physicians in primary care settings fail to diagnose and treat 50 - 70% of patients suffering from common mental disorders [2,3]. The significant co-morbidity of psychiatric and medical conditions in primary care patients contributes to the diagnostic dilemma often encountered by primary care physicians. As Kessler., *et al.* pointed out, primary care patients with mental disorders are more likely to have diagnosis of the digestive and genitor-urinary systems [4]. It is also common knowledge that a greater proportion of our patient population attends primary care clinics more than specialist centres, hence underscoring the need for prompt recognition, adequate treatment or prompt referral to qualified psychiatrics as the case may be, by the attending primary care physicians.

Depression has been ranked among the top five leading causes of years of life lived with disability (YLD) [5]. It remains highly prevalent in primary care settings and has been linked to a wide variety of psychosocial variables [6].

Several studies have reported wild variations of prevalence rates of psychiatric morbidities among out patients ranging from 5 - 64% [7-14]. However most of the studies were carried out among out patients in several specialty areas. The paucity of such studies in the primary care settings in the Niger Delta region of Nigeria gave impetus to this study. It is hoped that a clear understanding of the degree of psychiatric morbidity and depression among patients in primary care in our environment will assist health care policy makers, care providers and physicians in addressing this unmet need in the health care sector.

Materials and Methods

This prospective cross sectional study was conducted at the general out -patient clinic of the Madonna University Teaching Hospital (MUTH), Elele over a four month period, from July 2016 - October 2016.

Instruments:

For this study, the instruments employed are as follows:

(1) The General Health Questionnaire (GHQ - 12).
(2) Beck's Depression Inventory (BDI).
(3) Hamilton Depression Rating Scale (HAM-D).
(4) Schedule for Clinical Assessment in neuropsychiatry (SCAN), interview schedule, version 2.1.
(5) Sociodemographic Questionnaire.

The General Health Questionnaire (GHQ - 12) developed by Goldberg is used to screen for psychiatric morbidity clinically and in large scale surveys and it has been validated for use in our environment [15]. A cut of point of 3 is considered adequate.

The Beck's Depression inventory (BDI) is a 21 item self report inventory [16]. It is a common instrument used for screening depression. The BDI has been positively correlated with the Hamilton Depression Rating Scale (HAM-D) with a Pearson Coefficient (δ) of 0.71. The instrument has a high test-retest reliability (γ = 0.93) and a high internal consistency (δ = 0.91) [17]. It has been revalidated for use in Nigeria and a score of 18 and above has been shown to be indicative of Depressive disorder [18].

The Hamilton Depression (HAM-D) Rating scale, the most widely used clinician - administered depression assessment scale is a veritable instrument for indicating depression and over time provides a valuable guide to progress [19]. HAM-D score of 0-7 reflects a state of clinical remission. 10 - 13 is equivalent to mild depression, 14 - 17 moderate and a score of more than 17, severe depression.

A socio-demographic questionnaire was administered to each subject. The Schedule for Clinical Assessment in Neuropsychiatry (SCAN) version 2.1 is an excellent instrument for diagnosing psychiatric disorders based on the ICD 10 diagnostic criteria [20].

Procedure

The study took place in two phases. First, the BDI and GHQ were administered to 430 patients enlisted in the study. However 428 were finally analyzed because two subjects didn't complete the study. One hundred and fifty four met the criteria for the second stage viz: a score of 18 and above on the BDI. The SCAN and HAM-D were administered to this second category of subjects; to diagnose and rate for severity of the depression respectively. The sample was drawn by systematic random sampling method from all patients who attended the general outpatient clinic within the study period. Every third eligible patient who consented to the study was selected.

Sample size estimation

Sample size was calculated using the formula $N = Z^2 pq / E^2$ [21]
Where N = Minimum sample size
Z = 1.96 (Standard normal deviation for 95% confidence interval level)
P = Proportion of population with condition studied (49.8%)[6]
Q = Complementary probability (100-P) = 100 - 49.8 = 50.2
E = Precision required (tolerable sampling error) = 5%

$$\therefore N = \frac{1.96^2 \times 49.8 \times 50.2}{5^2} = 384.15$$

Giving an attrition rate of 10% = 38 patients.
The total sample is 384 + 38 = 422.
The sample size was rounded off to 430.

Before the commencement of the study, approval of the ethical committee of the Madonna University Teaching Hospital (MUTH), Elele was sought and informed consent obtained from the subjects to the involved in the research. The data was analyzed using the statistical package for social sciences (SPSS) at 5% level of significance and 95% confidence interval.

Results

Out of 430 subjects who were enlisted into the study, 428 completed it and were therefore analyzed. Of this lot, one hundred and forty four (144) subjects (33.6%) scored 3 or more on the GHQ (See table 1). Hence the prevalence of psychiatric morbidity in this study is 33.6%. One hundred and twenty three (123) scored 18 or more on the BDI; corresponding to 25.7% of the population studied.

	BDI Score < 18	BDI Score > 18	Total
GHQ Score < 3	245	39	284
GHQ Score > 3	60	84	144
Total	305	123	428

Table 1: *Distribution of BDI and GHQ scores in the study population.*

Therefore, 123 subjects met the criteria for the second stage and hence had the SCAN questionnaire administered to them to make a definitive diagnosis of depression. One hundred and ten (110) were diagnosed with depression. The HAM-D was used to rate them for the severity of their depression.

Table 2 shows the distribution of the severity of depression among the subjects. 7.3% of the depressed subjects were diagnosed to be suffering from severe depression (corresponding to a prevalence rate of 1.9%). 36.4% of the depressed cohort had a diagnosis of moderate depression (a prevalence rate of 9.3%). 66.4% of the depressed were diagnosed with mild depression corresponding to a prevalence rate of 14.5%.

	n / %	Prevalence %
Mild Depression	62 (56.4)	14.5
Moderate Depression	40 (36.4)	9.3
Severe Depression	8 (7.3)	1.9

Table 2: *Distribution of the severity of depression among the subjects based on HAM-D scores. N = 428.*

Table 3 shows the distribution of subjects with Depression according to various socio-demographic variables. The prevalence of depression was highest among those in age groups 31 - 40 years (29.9%) and 21 - 30 years (24.1%). However, the differences in the prevalence rates of depression among the age groups were not statistically significant ($X^2 = 10.913$, df = 7, $p > 0.05$). Similarly, the prevalence of depression was higher among females (27.4%) more than males (22.8%). Other groups that have the highest rates of depression include the married (28.0%), African Traditional Religion worshipers (26.1%), orthodox protestants (35.4%), those with secondary education (34.8%) and skilled traders (32.3%). However, the differences in the prevalence rates of depression of these subgroups and other groups in most socio-demographic categories are not statistically significant. However, those earning an average monthly income of less than N30,000 had the highest rate of depression (32.8%) and the difference in rate of depression between this group and those earning more than this is statistically significant ($X^2 = 11.435$, df = 2, $p < 0.05$).

Variable (age in years)	With depression n (%)	Without depression n (%)	Total	X^2	df	P value
11 - 20	7 (18.9)	30 (81.1)	37	10.913	7	0.142
21 - 30	48 (24.1)	151 (75.9)	199			
31 - 40	44 (29.9)	103 (70.1)	147			
41 - 50	8 (34.8)	15 (65.2)	23			
51 - 60	0 (0.0)	12 (100)	12			
61 - 70	2 (25.0)	6 (75.0)	8			
> 70	1 (50.0)	1 (50.0)	2			
Variable (Gender)	**With depression n (%)**	**Without depression n (%)**	**Total**	**X^2**	**df**	**P value**
Male	37 (22.8)	125 (77.2)	162	1.090	1	0.296
Female	73 (27.4)	193 (72.6)	266			
Variable (Marital Status)	**With depression n (%)**	**Without depression n (%)**	**Total**	**X^2**	**df**	**P value**
Single	85 (25.2)	252 (74.8)	337	1.825	3	0.609
Married	23 (28.0)	59 (72.0)	82			
Divorced/Separated	1 (25.0)	3 (75.0)	4			
Widowed	1 (20.0)	4 (80.0)	5			
Variable (Religion)	**With depression n (%)**	**Without depression n (%)**	**Total**	**X^2**	**df**	**P value**
Christian	105 (25.7)	303 (74.3)	408	2.455	2	0.293
Islam	4 (23.5)	13 (76.5)	17			
African Traditional Religion	1 (33.3)	2 (66.7)	3			
Variable (Christian) Denomination	**With depression n (%)**	**Without depression n (%)**	**Total**	**X^2**	**df**	**P value**
Roman Catholic	52 (27.5)	137 (72.5)	189	4.458	3	0.216
Pentecostal	38 (23.1)	126 (76.8)	164			
Orthodox Protestant	14 (30.4)	32 (69.6)	46			
Others	1 (11.1)	8 (88.9)	9			
Variable (Education)	**With depression n (%)**	**Without depression n (%)**	**Total**	**X^2**	**df**	**P value**
None	2 (22.2)	7 (77.8)	9	5.940	3	0.115
Primary	3 (20.0)	12 (80.0)	15			
Secondary	32 (34.8)	60 (65.2)	92			
Tertiary	73 (23.4)	239 (76.6)	312			
Variable (Employment)	**With depression n (%)**	**Without depression n (%)**	**Total**	**X^2**	**df**	**P value**
Student	28 (29.2)	68 (70.8)	96	3.152	5	0.677
Farmer	2 (16.7)	10 (83.3)	12			
Semi-skilled	4 (17.4)	19 (82.6)	23			
Skilled/Trader	10 (32.3)	21 (67.7)	31			
Professional	8 (20.5)	31 (79.5)	39			
Unemployed	58 (25.6)	169 (74.4)	227			
Variable (Average Monthly Income in Naira)	**With depression n (%)**	**Without depression n (%)**	**Total**	**X^2**	**df**	**P value**
< 30,000	101 (32.8)	207 (67.2)	308	11.435	2	0.024*
30,000 - 100,000	8 (8.7)	84 (91.3)	92			
> 100,000	1 (3.6)	28 (96.4)	28			

Table 3: *Association between sociodemographic variables and depression N = 428.*

*Note: * = Significant.*

Discussion

The prevalence of psychiatric morbidity recorded in this study is 33.6%. This is similar to the Madrid study carried out by Reneses., *et al.* in which a prevalence rate of psychiatric morbidity of 31.3% was recorded [8]. However, other studies have recorded lower figures [9-11]. Yet others have reported much higher figures of between 60 - 65% [13,14]. These later studies were carried out in specialist areas such as neurological and internal medical out patients.

The rate of depression among the out-patients recorded in this study is 25.7%. This is in consonance with some studies done elsewhere [8,22,23]. A higher rate was reported by a study by Sallihu., *et al.* in Northern Nigeria in which 49.8% was recorded. Methodological differences can account for the varying figures. Furthermore this study was carried out in Northern Nigeria. This region is bedeviled with a high spate of poverty and insecurity exemplified by multiple suicide bombings which have negatively impacted on the socio-economic lives of the people living in the area. Infant and maternal mortality remain higher in this region compared with the Niger Delta region of Nigeria where our study was done.

The prevalence of depression was highest among the age group 31 - 40 years (29.9%) and 21 - 30 years (24.1%), even though the differences in the prevalence rates of depression among the age groups were not statistically significant. This is in agreement with the opinion of Rohrbaugh., *et al.* and Blanch flower., *et al.* who reported that depression is commoner in the younger than older patients and that there is a bimodal distribution of onset [24,25]. 70% of adults have their onset before 35years and 25%, after the age of 35years [24].

The prevalence of depression was higher in females (27.4%) compared to males (22.8%). This is in consonance with most studies that identified clear gender differences in the prevalence rate for depression; however, while Bebbington., *et al.* reported a prevalence rate for depression in women up to twice that of men, the difference in the rate of depression in both males and females in this study is not statistically significant. The reason for this gender difference is unclear [27]. Other groups found to have the highest rates of depression include the married (28.0%), those with secondary education (34.8%), African Traditional religion worshippers (33.3%) and skilled workers/traders (32.3%). Nevertheless, no significant statistical difference was found in the different rates of depression among the various subgroups. Furthermore results from previous studies on the relationship between these socio-demographic variables and depression are conflicting [30,31].

While some studies reported an association of depression and employment status [28], others found no association [29]. Even though there is no association found between depression and employment status in this study, those earning an average monthly income of less than N 30,000 per month had the highest rate of depression (32.8%) and the difference between the rate for this group and those earning higher amounts is statistically significant. It is important to note that all the unemployed subjects are part of the subgroup that earns less than N 30,000 per month.

In this study, the prevalence of severe depression was found to be 1.9%. This is lower than the 5.4% recorded by Jo S., *et al* [22]. Moderate depression and mild depression were found to have prevalence rates of 9.3% and 14.5% from our study. Adequate referral system in place in the hospital where this study was conducted could be responsible for the prompt referral of severe cases of depressive patients who came to the hospital to the Neuropsychiatric clinic also domiciled in the hospital. This can explain the low rate of major depressive disorder obtained in the cohort studied.

Conclusion

In view of the strategic importance of the primary care clinics in health care delivery, as the point of first contact before referral to specialist clinics, the need for doctors working in these clinics to beef up their knowledge and skills to identify patients with psychiatric morbidity is imperative. This is important since it is known that prompt and adequate management of disorders translate to more favourable outcomes in the long term.

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Volume 8 Issue 2 February 2019