Prevalence of Psychiatric morbidities in two tertiary health institutions North west Nigeria: Assessing the relation to demographic variables.

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Abstract

Background: *Mental illnesses constitute a significant fraction of the global burden of diseases. Currently evaluated at 11.5% and an expected burden of 15% by 2020, it accounts for 40% of the leading health conditions contributing to the disability adjusted life years (DALYS). Worldwide, 340 million people suffer from mental illnesses, the majority living in the developing world. The aim of this study therefore was to assess the prevalence and socio-demographic distribution of psychiatric disorders in the psychiatric outpatient department of two tertiary health institutions in Nigeria.*

Method: *This was a descriptive cross-sectional study. All patients attending the psychiatric outpatient clinic of the two hospitals from January to June 2014, diagnosed with psychiatric disorders according to the diagnostic and statistical manual of mental disorders (DSM-5) were included in the study. The sample size was determined using single population proportion formula and 250 respondents were selected using systematic random sampling. Data was collected manually through proformas and analyzed using SPSS version 20.*

Result: *The prevalent age group of persons with psychiatric disorders from this study was 21-30 years constituting 35.1% of respondents at FNPHK and 36% at UDUTH. In the rural hospital 57.3% of respondents diagnosed with psychiatric disorders were men while in the urban hospital 64% were women. Depression (38% and 25.5%) was the prevalent diagnosis. The leading primary psychiatric diagnosis in both institutions was comparable - depression, generalized seizure and schizophrenia.*

Conclusion: *The prevalence of depression and schizophrenia is well documented in this study. The educational and geographic distribution of respondents suggests that high socio-economic status does not translate into less predisposal to psychiatric disorders. Policy makers and*

concerned government officials should enact and enforce laws that will help minimize associated social problems.

Keywords: Psychiatric morbidities, Demographic variables, Disability adjusted life years, Psychiatric outpatients, Mental health policy

Introduction

Psychiatric disorders form an important public health priority.[1] According to the World Health Organization (WHO), mental illnesses account for 11.5% of the global burden of disease – a figure projected to increase to 15% by 2020.[2] And of the top ten health conditions contributing to the disability adjusted life years (DALYS), four are psychiatric disorders.[3] Worldwide, 340 million people suffer from mental illnesses with majority living in the developing world.[1] With a population of 180 million and less than 100 psychiatrists in Nigeria, the ratio of psychiatrists to population is 1:1 800 000.[4] This is nowhere comparable to Europe's 1:1000.[5] The prevalence of mental illness in Nigeria is 20%,[6] despite this, there is a considerable neglect of mental health issues and 70% of the populace lack access to modern mental health services. Thus, integration of mental health into Primary Health Care (PHC) was recommended by WHO which led to the Federal Ministry of Health in Nigeria adding mental health as the 9th component of PHC[7].

Although mental health is a formidable public health challenge in Nigeria, with almost 55 years as an independent nation, the country is yet to have a functional mental health policy. The burden of psychiatric illness in Nigeria, coupled with the skewed ratio of psychiatrists to the population narrows the gap between the world from a social context and the world from the perspective of those who are mentally ill. Psychiatric disorders have multifactorial aetiology including: predisposition and vulnerability at brain biochemical level, experience with acute life events or chronic stressful life circumstances, brain structural alteration due to disease processes, exogenous or environmental factors and purely psychosocial.[8] These disorders include neurological and psychological disorders such as: psychotic, mood, anxiety, eating, cognitive, sleeping, personality disorders and substance abuse.[9]

The abuse of drugs cuts across different social classes, adolescents and young adults in and out of school constitute the high-risk group for substance use partly because of easy availability of these substances. Youths especially males predominate in the drug abuse scene with a known involvement of more females in the last two decades.[10] With mental health symptoms causing distress to the individual and potentially placing the public in danger, it is clear why prevention and ideal treatment is essential. Reducing the burden of mental illness entails: primary prevention to decrease the number of new cases of a disorder, secondary prevention to tackle disease early and lower the rate of established case and tertiary prevention to decrease the amount of disability associated with established disorders. The evaluation of psychiatric disorders in population-based surveys is vital for mental health advocacy, prevention and long-term care. The aim of this study was to assess the prevalence and socio-demographic distribution of psychiatric disorders and related comorbidities in two tertiary health institutions in Nigeria with a view to enhance strategies for promotion, prevention, management, treatment and rehabilitation of people with mental disorders.

Methodology

The study was carried out in Sokoto, a cosmopolitan state North west Nigeria with high socio-economic disparity, at the psychiatric outpatient department of Usmanu Danfodiyo University Teaching Hospital (UDUTH) & Federal Neuro-psychiatry Hospital (FNPHK). It was a descriptive cross-sectional study carried out as a prospective assessment from January 2014 – June 2014. All patients attending the psychiatric outpatient clinic of the hospitals from January 2014 to June 2014, diagnosed with psychiatric disorders according to the diagnostic and statistical manual of mental disorders (DSM-5) were included in the study. All psychiatric in-patients were excluded from this study. Sample size for the study was calculated using the formula for descriptive study for populations less than 10,000.[11]

Sample size $N = (z^2 Pq)/d^2$

- ⊙ z=the SD set at 1.96 which corresponds to the 95% confidence level:
- ⊙ p= prevalence rate which is 0.1
- ⊙ q= 1-p
- ⊙ d= permissible error / degree of accuracy required, 0.04

$N = [1.96^2 \text{ x } 0.1 \text{ x } (1-0.1)] / 0.04^2 = 250$

This was divided into a corresponding ratio which was a function of the average number of patients Psychiatrists see daily in both hospitals. In UDUTH, psychiatrists consult an average of 20 patients daily and 80 in FNPHK. A systematic random sampling technique was used in selecting participants.

Thus, 20:80 = 1:4

A total of 250 data were collected as;

1 / 5 x 250 = 50 (from UDUTH) and 4 / 5 x 250 = 200 (from FNPHK).

Data collection was manual, the study evaluated primary and secondary data as parameters entailing socio-demographics, clinical history & diagnosis and comorbidities were assessed and recorded. The secondary data was entered into a pre-designed proforma while the primary data was obtained from alternate consulting rooms through patient / patient's relative interaction. The data obtained was entered into excel spreadsheets and analyzed using IBM SPSS version 20.0. It was then subjected to analysis to evaluate the descriptive statistics of the demographic distribution and incidence of psychiatric diagnosis in both health institutions alongside the mean and mode.

Result

In all, a total of 250 participants were deployed for the study which makes the response rate 100%.

Socio-demographic characteristics of the respondents

The age range of participants diagnosed with psychiatric disorders in FNPHK according to the diagnostic and statistical manual of mental disorders (DSM-5) was 3-80years, with the mode and mean ages being 25 and 29.5years respectively. 77.3% of those with these disorders were

low income earners, predominantly males 85.4% of which 30.6% are peasant farmers with little or no formal education. Where as in UDUTH the age range was 15-58years, the mode and mean ages being 30 and 32years respectively. 66% of them were urban dwellers and of these, 64% were women who are housewives with varying degrees of formal education. Other demographic statistics of respondents are shown (Table 1).

Table 1: Socio-demographic distribution of psychiatric disorders in the respondent

AGE	FNPHK%	UDUTH%	GENDER	FNPHK%	UDUTH%	OCCUPATION	FNPHK%	UDUTH%	ADDRESS	FNPHK%	UDUTH%
0-10	5.3		Male	57.3	36.0	House wife	26.6	64.0	Rural	77.3	34.0
11-20	26.1	8.0	Female	42.7	64.0	Under care	16.8	6.0	Urban	22.7	66.0
21-30	35.1	36.0	Total	100	100	Farmer	30.6	20.0	Total	100	100.0
31-40	17	34.0				student	8.1	10.0			
41-50	6.9	14.0				Business man	14.5				
51-60	4.8	8.0				Civil servant	2.3				
61-70	3.2					Teacher	1.2				
71-80	1.1					Total	100	100			
81-90	0.5										
Total	100	100									

Clinical characteristics of the respondents

The prevalent primary psychiatric diagnosis among the respondents in FNPHK were depression (25.5%), generalized seizure (22.5%) and schizophrenia (21.5%). A similar trend was recorded in UDUTH, the distribution being depression (38%), schizophrenia and other psychosis at 12% each. Other psychiatric conditions recorded are shown (Table 2). 22% of respondents in UDUTH had other comorbidities such as lumber spondylosis and microbial

infection at 2.4% each while in FNPHK only 4% of the total respondents had comorbidities. The diversity of comorbidities was documented (Table 3).

Table 2: Incidence of primary psychiatric diagnosis in the institutions

Primary Diagnosis		FNPHK Frequency (%)	UDUTH Frequency (%)
	Missing	5 (2.5)	3 (6)
	Attention deficit hyperactivity disorder	2(1.0)	-
	Anxiety	-	2 (4)
	Bipolar disorder	6(3.0)	4(8)
	Brain syndrome	3(1.5)	-
	Complex seizure	4(2.0)	-
	Dementia	1(0.5)	-
	Depression	51(25.5)	19 (38)
	Extra pyramidal side effect	-	1 (2)
	General seizure	45(22.5)	-
	Hemiplegia	1(0.5)	-
	Mania	3(1.5)	-
	Mood disorder	1(0.5)	1 (2)
	Panic disorder	-	2(4)
	Retardation	-	2(4)
	Psychosis	-	6(12)
	Schizophrenia	43(21.5)	6(12)
	Other seizures	23(11.5)	2 (4)
	Somatoform disorder	2(1.0)	-
	Substance abuse	10(5.0)	2 (4)
	Total	**200(100)**	**50 (100)**

Table 3: Comorbidities in psychiatric patients in both institutions

Co-morbidity	UDUTH Frequency (%)	FNPHK Frequency (%)
Nil	39 (78.0)	192 (96)
Conjunctivitis	1 (2.0)	-
Diarrhea, Malaria	2 (4.0)	-
Ear Infection	2 (4.0)	-
Hypertension, Blurred vision	1 (2.0)	-
Hypertension, Parotid swelling	2 (4.0)	-
Dysmenorrhea	1 (2.0)	-
Lumber Spondylosis	2 (4.0)	-
Fever	-	2 (1.0)
Hypertension	-	5 (2.5)
Stroke	-	1 (0.5)
Total	**50 (100)**	**200 (100)**

Discussion

In Nigeria there are still strong beliefs in magico-religious origins of human ailments, especially mental disorders[12] and mental health issues often come last on the list of priorities for policy-makers[13]. Since the first line of care for the mentally ill constitutes the most important stage of the psychiatric pathway to care[14], efforts are needed towards changing the perceptions of patients regarding the cause of their ailments, to encourage early presentation to psychiatric hospitals and prompt treatment.

Socio – demographic profile of study participants

The prevalent age group of respondents was 21-30 years constituting 35.1% of respondents in FNPHK and 36% in UDUTH. This age distribution showed that young and reproductive citizens constituted the highest percentage of the population afflicted with mental disorders and this was similar to findings in Nepal but does not conform with studies conducted in Canada.[15] This may be because the younger generation constitute a higher proportion of Nigeria's population and are keener about their health issues. The finding of increased psychotropic medication use among women is well-known in pharmacoepidemiology.[16] 64% of female respondents was recorded in UDUTH and this dominance was synonymous to studies in Australia at 51%. While no gender difference was recorded in Finland,[17] FNPHK had 57.3% male respondents on psychotropics.

In FNPHK, Psychiatric disorders were more common in the rural areas 77.3%, majority being farmers 30.6%, with little or no western education. Whereas in UDUTH, these disorders were more common in urban dwellers 66%, with 61.7% of them having varying extent of western education. Possible reason for this could be the geographical location of both hospitals (FNPHK rural and UDUTH urban area), economical cost profile of services in one hospital above the other and elites fear of probable stigmatization.

Distribution of psychiatric disorders

Distribution of mental illnesses in both institutions followed a closely related order. The burden being; depression (25.5%), generalized seizure (22.5%), schizophrenia (21.5%) in FNPHK and depression (38%), schizophrenia (12%), and other psychosis (12%) in UDUTH. This agrees with reports from the world bank which states that 22% of Nigerians suffer from clinical depression.[18] This is a true reflection of the commonly prescribed psychotropics reported in various studies in Nigeria which include carbamazepine (anti-convulsant & mood stabilizer), amitriptyline (tricyclic anti-depressant) and haloperidol (anti-psychotic). In a similar study in brazil, the prevalence was schizophrenia 30%, bipolar mood disorders 22%, depression 17.7% and anxiety disorders 16.8%.[19] Results show that the psychiatric comorbidity reached 22% in UDUTH, this may be because all specialties of medical services are rendered in this hospital while FNPHK offers strictly mental health services. From the findings in (table 3) above, it may be deduced that psychiatric disorders rarely degenerate into other non-psychiatric comorbidities as they basically affect the neurological system. Although from aetiological perspective this study doesn't shed light into the causal mechanisms, a similar study in Mexican adolescent population showed that social problems like inappropriate sexual behavior, and dropping out from school are socio-demographic correlates of mental illnesses in youth in developing world.[20]

Conclusion

The prevalence of depression and schizophrenia is well documented in this study. The educational and geographic distribution of respondents in this study suggests that high socio-economic status does not translate into less predisposal to psychiatric disorders. The youngest age of onset of psychiatric disorders in this study (3years) and the prevalent age group (21-30) shows that everyone is vulnerable and thus should be involved in containing the burden of mental illnesses. Policy makers and concerned government officials should enact and enforce laws that will help minimize associated social problems.

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