Original Article

**Pattern of Presentation and Diagnostic Profile of Patients
Attending a Mental Health Facility in North-Central
Nigeria**

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ABSTRACT

Despite significant advances in the diagnoses and treatment of mental illnesses, it remains shrouded in mystery, myth and superstition particularly in sub-Saharan Africa. This is often reflected in delayed presentations, frequent relapse and non-treatment, with dire consequences on affected individuals, family and society. The aim of this study was to evaluate the pattern of presentation and diagnoses of psychiatric illness among attendees of a psychiatric facility in a tertiary hospital in North-Central Nigeria. This was a descriptive, explorative, cross-sectional study. A pro forma was designed to obtain information about patients' socio-demographic variables, diagnoses, duration of untreated illness, GAF Score and other clinical data, from case files, spanning over a three year period. A total of 720 case files were analyzed with 54% of the patients being male. Only 66(9.2%) comprised of children and adolescents with 83% making up the adult population and 7.5% being elderly (60 years and above). While 129 (17.9%) were employed (government and self), most (88%) of the patients reside within the state. Only 12.2% were clinically stable at 6 months follow-up assessment even though most (79.3%) of the patients had absconded at 6months follow-up. Mean duration of untreated illness was 117.5 weeks (SD±226.3) (approximately 2.3years) with Psychotic disorders predominating 355 (41.8%). Only 13.4% were diagnosed with depression and 0.6 % mental retardation. Mean GAF score at presentation was 43.23 (SD±14.87), a reflection of illness severity at presentation. Mental illness is a common occurrence, however majority of patients only present when symptoms become severe or when patients become disruptive. Mental disorders of childhood and old age are particularly underrepresented, underscoring the need for more public enlightenment programs that are geared towards detection, early presentation, treatment and stigma reduction.

Keywords: *Delayed presentation, Diagnostic pattern, Illness duration, Psychiatric disorders.*

INTRODUCTION

Mental disorders remain one of the major contributors to global morbidities and Disability Adjusted Life Years (DALYs). They are often rooted in mysteries and superstition resulting in patients seeking help from alternative traditional

healers and religious centers. The World Health Organization (WHO) estimates that more than 25 percent of individuals worldwide develop one or more mental disorders during their lifetime and this estimate has been supported by the World

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Mental Health Surveys (WMHS), in which all the continents were represented.¹

The WHO estimates that one of four families worldwide has at least one member suffering from a mental disorder. The objective and subjective burden related to caring for people with severe mental disorders (such as disruption of family relationships; constraints in social, leisure, and work activities; financial difficulties; negative effect on physical health; embarrassment in social situations; and the stress of coping with disturbing behaviors) has been reported to be substantial and significantly higher than caring for people with long-term physical diseases such as diabetes, heart, kidney, or lung diseases.¹

In the year 2000, the study on Global Burden of Disease (GBD) revealed that several psychiatric conditions including unipolar depression, bipolar affective disorders, and schizophrenia were among the top ten conditions accounting for the largest proportions of the total DALYs in the age group 15 to 44 years for both sexes among the 135 diseases or health conditions.² An interesting finding in the WHO-AIM report is that countries such as South Africa, Egypt, and Kenya had more psychiatrists per 100,000 population, higher proportion of psychiatric beds and better official attention giving to mental health issues compared to Nigeria,³ a reflection of the dismal priority given to mental health.

In Nigeria it is estimated that 1 in 8 individuals develop a mental disorder in their lifetime and is considered a very conservative estimate. Only 1 in 11 of those with severe illness were receiving any form of treatment with less than 1% receiving specialist care⁴ with majority of the specialists located in the southern part of the country and more concentrated in urban settings. An additional source of concern is the tortuous path taken by the mentally ill before reaching specialist care^{5,6} resulting in delayed presentation and treatment, and often iatrogenic harm by both traditional and other orthodox healers. A study of mental health setting is necessary to find out how much the above grisly statistics (based on community studies) is reflected in patients' presentation and diagnostic pattern. We then set out to assess the pattern of presentation and diagnostic profile of patients attending a tertiary psychiatric facility in North Central Nigeria.

MATERIALS AND METHODS

Study Location

The study was conducted at the Federal Medical Centre Makurdi, a tertiary health centre located in Benue state, North-Central Nigeria approximately 300km from the Federal Capital Territory, Abuja. The center is one of the two tertiary health institutions in the state capital. It receives referral from all the local government areas in the states as well as neighboring states including the Federal Capital Territory, Abuja. At the time of this study, the Psychiatry department of the Federal Medical Center had three Consultant Psychiatrists, two Senior Registrars and four Medical Officers. The department is adjoined by and works with the Psychology and Social Works Departments.

Study Design

This was a descriptive, explorative, cross-sectional study.

Instruments

A pro forma was designed to obtain information about patients' socio-demographic variables (such as age, sex, marital status, occupational status etc.), diagnoses, duration of untreated illness DUI (duration between onset of symptoms and onset of first orthodox treatment), drug history, Global Assessment of Function (GAF) score, and other clinical data, from case files of patients who presented to the psychiatric facility, spanning over a three year period (2012-2014).

Global Assessment of Functioning (GAF) Scale⁷

This is a 100 point rating scale used to report a clinician's judgment of a patient's level of social and occupational functioning as well as symptoms severity. It does not include impairment in functioning due to physical or environmental limitations. Clinical details from the patients' case files are used to arrive at the GAF score as assessed by the two consultant psychiatrists.

Inclusion/Exclusion Criteria

Case files with most of the vital information recorded were included in the study; files with major deficiencies such as age of patient, sex, diagnosis etc. were excluded from the study

Ethical Considerations

Ethical clearance was obtained from the Ethics and Scientific Committee of the Federal Medical Centre, Makurdi.

Diagnosis

The diagnosis of psychiatric disorders were based on fulfilling the diagnostic criteria in the WHO's Tenth Revision of the International Classification of Disease and Related Health Problems, (ICD-10)⁸.

Statistical Analysis

The data was analyzed using the version 20 of the Statistical Package for Social Sciences (SPSS). Relevant descriptive statistics were used for continuous and categorical variables and frequency distributions generated as appropriate. Test of normality for all continuous variables were assessed using the Kolmogorov-Smirnoff test. Non-parametric equivalents of corresponding relevant test statistic were employed which included the Mann-Whitney U test, Kruskal-Wallis test, and Spearman's correlation. All tests of statistics were carried out at 5% level of probability (except otherwise specified).

RESULTS

Socio-demographic Characteristics of the Participants

This is shown in Table 1. A total of 720 case files were included in the study. None of the case files had all the required information as reflected in the pro-forma. Only 66 (9.2%) were less than 18 years with majority (83.3%) falling between 18 and 60 years. The single constituted 47% with the male subjects making up 54.7%. Those with up to secondary school made up the majority while those with no formal education made up 9.2%. The Unemployed formed the majority (39.2%), with the self-employed being 10.3%. Only 5 (0.7%) of the subjects were receiving pension. Up to 41.5% reside in Makurdi the state capital with another (47.4%) residing in other parts of the state.

The mean total duration of untreated illness (DUI) was 117.5weeks (SD ± 226.3) (approximately 2.3years) and was longest for Intellectual Disability 967.2weeks (SD ± 311.13), Seizure disorders 269.70 weeks (SD ± 347.76) and Substance abuse 130.67 weeks (SD ± 180.77); and least for Anxiety disorders 26.222 weeks (SD ± 34.18).

Diagnostic Profile

Psychotic disorders predominated 355 (49.3%). Only 15.8% were diagnosed with depression while 5 (0.6%) had Intellectual Disability. The relationship between socio-demographic

characteristic of subjects with DUI was statistically significant for educational level $p=0.023$, and patients' diagnoses $p<0.001$. Mean GAF score at presentation was 43.23 (SD ± 14.87), a reflection of illness severity at presentation; and 76 (SD ± 14.95) at 6 months follow-up, a reflection of the positive effects of treatment.

Six months follow-up

Most of the patients 571(79.3%) had been lost to follow-up six months from first presentation, and 88(69.3%) of the 127 on follow-up were clinically stable. While less than half 40(31.5%) of those on follow-up were accompanied by a care giver, 34(29.1%) were poorly adherent to their medication. The relationship between socio-demographic variables and DUI, is statistically significant for educational status $p=0.023$, and patients' diagnoses $p<0.001$ but fails to reach statistical significance for patients' sex and occupational status.

Table 1. Socio-demographic Characteristics of Patients

Variables	Frequency	%
Age (years):		
<10	10	1.3
10-19	99	13.8
20-29	297	41.3
30-39	167	23.2
40-49	57	7.9
50-59	36	5.0
≥ 60	54	7.5
Total	720	100.0
Sex:		
Male	394	54.7
Female	326	45.3
Total	720	100.0
Marital Status:		
Single	344	47.8
Married	303	42.1
Divorced	7	1.0
Separated	7	1.0
Widowed	15	2.1
Missing	44	6.1
Total	720	100.0
Educational Level:		
None	66	9.2
Primary	79	11.0
Secondary	102	14.2
Tertiary	71	9.9
Missing	402	55.8
Total	720	100.0
Occupation		
Unemployed	282	39.2
Student	218	30.3
Self employed	146	20.3
Govt. employed	55	7.6
Pensioner	5	0.7
Missing	14	2.0
Total	720	100.0

Table 2: Relationship between Socio-demographic Variables and Diagnoses with Duration of Untreated Illness

Variables	Mean DU (weeks)	Statistics	
		SD; (95% CI)	Test Statistic; df; p-value
	117.46	±226.31 (209.53-242.84)	r = -0.045; p=0.233
Sex			
Male	117.47	±218.81 (95.69-139.25)	M-W = 62570.; df= 1 p=0.769
female	118.17	±235.83 (92.43-143.90)	
Education			
None	158.38	±246.54 (97.77-21898)	K-W = 9.556 df= 3 p=0.023*
Primary	144.83	±343.93 (67.29-222.38)	
Secondary	81.048	±153.96 (50.81-111.29)	
Tertiary	56.446	±103.20 (32.02-80.87)	
Occupation			
Unemployed	128.06	±252.03 (98.46-157.65)	K-W = 5.795 df=4 p=0.215
Student	104.48	±174.21 (81.12-127.85)	
Govt. Employed	70.22	±116.657 (38.68-101.76)	
Self Employed	117.46	±285.42 (51.34-183.59)	
Pensioner	47.80	±51.47 (-16.11-111.71)	
Diagnoses			
Psychotic Disorder	94.034	±187.64 (74.41-113.65)	K-W = 84.351 df=7 p<0.001*
Depression	79.553	±145.37 (52.58-106.53)	
BAD	58.535	±129.76 (26.38-90.69)	
Anxiety Disorder	26.222	±34.18 (-0.052-52.50)	
Substance Abuse	130.67	±180.77 (65.39-124.12)	
Dementia	56.364	±41.19 (41.76-70.97)	
Seizure Disorder	269.70	±347.76 (198.35-334.29)	
Intellectual Disability	967.20	±311.13 (580.88-1353.52)	

M-W: Mann-Whitney U Test

K-W: Kruskal-Wallis Test

DU: Duration of Untreated Illness; CI: Confidence Interval

df: Degree of freedom

*Statistical level of significant 0.05

** Statistical level of significant 0.01

Table 3: Relationship between Patients' Sex and Diagnostic/Symptom Profile

Variables	Sex			Statistics
	Male	Female	Total	
Psychotic Disorder	181	174	355	$\chi^2=3.79$; df=1; p=0.053
Depression	68	46	114	$\chi^2=1.390$; df=1; p=0.238
BAD	43	23	66	$\chi^2=3.260$; df=1; p=0.071
SUD	140	9	149	$\chi^2=115.643$; df=1; p<0.001**
Dementia	12	21	33	$\chi^2=4.646$; df=1; p=0.031*
Seizure Disorder	57	49	106	$\chi^2=0.035$; df=1; p=0.852
Violence	76	20	96	$\chi^2=27.766$; df=1; p<0.001**
Legal Issues	2	1	3	$\chi^2=1.809$; df=1; p=0.271

*Statistical level of significance = 0.05

**Statistical level of significance = 0.001

r=Spearman's rho

BAD: Bipolar Affective Disorder

SUD: Substance Use Disorder

Table 4: Relationship between Patients' Diagnostic profile and GAF Score

Variables	Mean GAF Score at		Statistics
	Presentation	6months	
Psychotic Disorders	40.11	74.39	r=0.329; p<0.001**
Depression	44.14	77.09	
Substance Use Disorders	41.41	78.59	
Dementia	37.29	66.65	
Seizure Disorders	39.00	71.40	
Intellectual Disability	55.60	85.73	

**Statistical level of significance = 0.001

Table 5 Characteristics of Patients at 6 Months Follow-up

Variables	6-Months Follow-up	
	Yes N*(%)	No N(%)
Stable	88(12.2)	35(4.9)
Caregiver	83(11.5)	40(5.6)
Drug Adherence	90(12.5)	34(4.7)
Absconded	571(79.3)	127(17.6)
Mean GAF Score	76.90	-

*N number of patients

DISCUSSION

Majority of the subjects were adults (18 – 60 years) 83.3%, with 9.2% being less than 18 years. Childhood mental disorders infrequently presents to the psychiatric clinic because behavioural disorders in children are usually seen as deviations in character, deviance or delinquency. Others have ascribed it to spiritual possessions. They are hence taken to prayer houses for “deliverance” or for traditional treatments. Studies have shown similar findings in the presentations of children and adolescents at mental health treatment centres.^{9,10} It is therefore not surprising in Table 3, that no childhood mental disorder like conduct disorder, hyperkinetic disorder and any of the pervasive developmental disorders was identified.

Notably, the risk factors for mental disorders in children and adolescents abound in Nigeria: with 54% households living on less than US\$1.90 (international poverty line 2015) per day, malnutrition in at least 20% of children (0-59 months), with 39% of pregnant women who did not attend antenatal care and only 38% deliveries supervised by skilled birth attendant; child labour and under-age marriage common,^{11,12} growing violence with internal displacement of persons. The effect of these can be quite daunting on a fragile and still developing brain/personality. It is more worrisome however that most countries lack policies in child and adolescent mental health and mental health in general for many developing countries. It is in growing recognition of this and also the finding that half of all mental illnesses begin by the age of 14, that the WHO themed the World mental Health Day for the year 2018 as “young people and mental health in a changing world”.¹³

Only 54 (7.5%) of the patients were 60 years and above. Mental disorders in old age also present less frequently. Subjects are brought for mental health care when they become obviously psychotic, disruptive or exhibit odd behaviours. “Mere” forgetfulness and some oddities in behavior are seen as a signs of old age, are usually tolerated and often do not attract clinical attention.¹⁴

People are living longer globally and the prevalence of chronic illnesses in old age especially dementia is expected to rise.¹⁵ Most people with dementia will not live in high-income countries, where dementia care might be achievable; nearly 70% of patients will dwell in low or middle income regions, where health systems will not be able to cope with their demands.¹⁶ This is particularly worrisome in Nigeria where majority of the elderly are without pension or other sources of income and are dependent on others, with lack of/poor social policies regarding our senior citizen.

The male: female ratio is almost 1(1.2). Gender is not a determinant of presentation to this mental health facility even though some mental illnesses have gender bias. This because most patient present when symptoms are already severe and unbearable/intolerable to the caregivers. It is noted in Table 3, that the gender difference seen in some community based studies⁴ and hospital based studies (none psychiatric settings)¹⁷ for different mental disorders are lost in this study and not statistically significant for most of the disorder (except for substance use disorders: $X^2=115.643$; $df=1$; $p<0.001$). Reasons advanced in these studies have included a tendency for male patients to be readily taken to the hospital so that they can quickly resume their socioeconomic roles as bread winners in the family and the low socioeconomic empowerment among the female cohort.¹⁷

The relationship between duration of untreated illness (DUI) (duration between onset of symptoms and onset of first orthodox treatment) and socio-demographic variable was statistically significant for level of education and psychiatric diagnosis (Table 2). Majority of the subjects have secondary school as their highest educational attainment and is reflected in the long DUI. Studies have shown that higher educational levels positively influence health seeking behavior and is a protective factor for some illnesses like dementia. Advanced education brings with it employment opportunities, better incomes and purchasing power, enhanced health seeking behavior and access to quality health care.¹⁸

The mean total duration of untreated illness (DUI) was 117.5 weeks (approximately 2.3years). Several studies have shown the winding route taken by the mentally ill before reaching specialist care.^{5,6} Reasons advanced included ignorance about the nature of mental illness, denial, financial difficulties, unavailable treatment facilities, few mental health specialist etc. Studies have also shown that the consequences of untreated mental illness can be grave, and includes physical, psychological and social consequences.¹⁹⁻²¹ This worrisome

picture has continued to persist in most developing countries despite growing evidence that many mental disorder have better outcome with early diagnosis and treatment.²² It is worsened by the fact that most low and middle income countries (LAMIC) have no/inadequate representation of mental health at the Primary Health Care (PHC) level despite repeated calls on governments to ensure this policy implementation²³ of integrating mental health into the PHCs.

Only 27.9 of the subjects were in any form of employment (government or self-employed), with just 5 (0.7%) being pensioners. This is worrisome taking into cognizance the economic demands of treating mental illness, and further supports the finding of delayed hospital presentation (Table 2) and a high number of patients (79.3%) being lost to follow-up at 6 months (Table 5) due to financial constraints.

CONCLUSION

Delayed presentation of mental illness as well as poor compliance and follow-up are common occurrences in many developing countries. Mental disorders of childhood and old age are particularly underrepresented and a cause for worry. Poverty, ignorance, illiteracy and stigma are major contributory factors. Significant gaps in available mental health services, expertise and facilities remain major concerns.

Limitation

Lots of missing data in the case files reflecting the need for a shift towards electronic data capturing and filing. No mechanisms in place to detect causes of lost to follow-up.

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Conflict of Interest

None declared.

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