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Pattern of Psychiatric Admission in a Nigerian Teaching Hospital: A 5-year Retrospective Study

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Abstract: In-patient care remains an important aspect in the care of mental and behavioural disorders. The study of the pattern of psychiatric in-patients is therefore pertinent to determine the possible associated socio-demographic or clinical factors for mental health planning. It is aimed at determining the pattern of in-patient admissions in the psychiatric unit of a Nigerian University Teaching Hospital over a 5-year period. It is a retrospective case file analysis of all patients admitted between May, 2000 and April, 2005 in the psychiatric ward of the University of Ilorin Teaching Hospital, Ilorin, Nigeria. Five hundred and two patients' records representing 63.6% of total admission were analysed, comprising of 242 (48.2%) males, 260 (51.8%) females and mean age ± SD of the patients was 30.46±10.28 years. Most (344 or 68.5%) of the in-patients were between the ages of 20 and 40 years age-group, majority (291 or 58.0%) of them were single and majority (215 or 42.8%) of them also were in low-income occupational group (i.e., group VI). Schizophrenia accounted for majority of the cases (276 or 55.0%) while psychosis in the puerperium was the least diagnosed disorder (10 or 2.0%). Psychiatric diagnosis was significantly associated with gender ($p = 0.000$) and marital status ($p = 0.019$).

Key words: Admission pattern, psychiatry, teaching hospital, socio-demographic, clinical factors, mental health

INTRODUCTION

Admission to hospital is reportedly the most expensive form of psychiatric treatment (Johnston and Zolese, 1999), however, in-patient admission still remains one of the treatment option of mental and behavioural disorders, especially those adjudged incapable of benefiting from immediate home or community care. According to Bobier and Warwick (Bobier and Warwick, 2005), psychiatric in-patient care is often indicated when a patient can no longer be managed safely at home or as an out-patient though it may be expensive, resource intensive and cause risk to hospital staff.

Consequent upon the psychiatric reforms and the emphasis on non-institutional methods of treating psychiatric disorders, attention has therefore shifted towards setting up of psychiatric units in general hospitals (Fisher *et al*., 1992). Findings on the diagnoses of admitted patients in such hospitals however vary. For instance, studies (Nowels, 1977; AbuMadini and Rahim, 2002) have reported that schizophrenia was the predominant diagnosis of patients admitted to mental health wards with affective disorders, adjustment disorders and other anxiety disorders being admitted to a lesser degree. Another study Thompson *et al*. (2004) also, found depression and anxiety as the most common reason for hospital admission while schizophrenia and related psychoses ranked next, followed by other diagnoses.

Other factors that have been reported to affect the pattern of admission include gender and ages of the patients. For instance, admission rates were reported to be higher for males than females (Thompson *et al*., 2004; Hutchinson *et al*., 2003). This gender difference in admission may indicate differences in severity or in presentation to psychiatric services and may have important implications for the preventative services (Hutchinson *et al*., 2003). Similarly, Saarento *et al*. (2000) has noted that compared to females, males were younger, more often unemployed, unmarried and lived alone or with parents and did not as often have an apartment of their own. This study also found that males were predominant among organic psychoses, personality disorders and dependencies, while females were predominant among neurotic disorders.

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In addition, while Hutchison *et al.* (2003) noted no differences in the age of admitted patients, Thompson *et al.* (2004) reported that admission rates peaked in those aged 25-44 years for males and 35-44 years for females.

The psychiatric unit of the University of Ilorin Teaching hospital is the only tertiary mental health care in Kwara state, north-central Nigeria. Despite the enormity of its services to the communities in its neighbourhood, studies on the pattern of psychiatric in-patients in the hospital appears very few or non-existent. It therefore, seems pertinent to look into this in order to provide possible baseline for future researches. In addition, analysis of the socio-demographic and clinical characteristics of psychiatric in-patients might cast some light on the nature, magnitude and distribution of these categories of patients towards evolving strategic service developments and planning.

MATERIALS AND METHODS

The study was conducted at University of Ilorin Teaching Hospital. The Hospital is a tertiary health centre that provides health services for Kwara State, one of the 36 States in Nigeria (located in the north-central region of the country) and also receives referrals from towns and villages in the neighbouring States. The psychiatric unit of the hospital has 20 in-patient beds (10 each for both genders). Adequate liaison services exist between the various clinical departments of the hospital (Gynaecology, Child health, Internal medicine, Surgery, Radiology and the Laboratory sciences).

A review of case notes of all patients admitted to the psychiatric ward of the hospital between May, 2000 and April, 2005 was carried out and information regarding socio-demographic characteristics (e.g., age, gender, diagnoses and occupational status) was recorded using a proforma designed by the authors. The patient's occupation was classified according to the system of Boroffka and Olatawura (Boroffka and Olatawura, 1976) as follows: Group I consist of professionals with University degrees (doctors, lawyers, teachers, scientists and high government officers). Group II consists of professionals without university degrees (teachers, administrators, higher clerical and supervisory personnel, large-scale farmers, entrepreneurs and armed forces officers). Group III consists of clerks, motor vehicle drivers, mechanics, tailors, butchers, soldiers, policemen and small-scale entrepreneurs. Group IV consists of cooks, barbers, domestic servants, gas station attendants, goldsmiths, palm-wine tapers and small-scale farmers. Group V includes laborers and petty traders. Group VI includes full-time housewives, unemployed educated youths and apprentices. This system of classification has been previously used in this hospital (Abiodun, 2006).

The cases were reassessed using the ICD-10 criteria based on the clinical features documented and clinical diagnoses reassigned where necessary. Data were analyzed using the Statistical Package for Social Sciences, SPSS 11 for window (SPSS Incorporation, 2001). Cross tabulation, frequency statistics and chi square test were used for relationship between variables and the level of statistical significance was set at 5%.

RESULTS

A total of 789 patients were admitted during the period in review but complete data were only available on 502 in-patients. These constituted 63.6% of the total in-patients, a proportion considered sufficient to give an overview of the total admissions during the study period. The mean age ± SD was 30.46±10.28 years with a range of 57.00 (13-70 years).

Majority (260 or 51.8%) of the in-patients were females, the mean age ± SD of male patients was 29.48±9.64 years while the mean age ± SD for the females was 31.38±10.77 years. Most (344 or 68.5%) of the in-patients were between the ages of 20 and 40 years age-group, majority (291 or 58.0%) were single. Majority (215 or 42.8%) of respondents were in the occupational

Table 1: Socio-demographic and clinical characteristics of the patients

Variables	N (%)
Gender	
Male	242 (48.2)
Female	260 (51.8)
Marital status	
Single	291 (58.0)
Married	210 (41.8)
Divorced	1 (0.2)
Occupation	
Group I	22 (4,4)
Group II	90 (17.9)
Group III	26 (5.2)
Group IV	18 (3.6)
Group V	121 (24.1)
Group VI	215 (42.8)
Pastor	2 (0.4)
Retired	8 (1.6)
Age group (year)	
<20	85 (16.9)
20-40	344 (68.5)
41-60	71 (14.2)
>60	2 (0.4)
Duration of admission (weeks)	
<2	218 (43.4)
2-10	240 (47.8)
11-20	29 (5.8)
>20	15 (3.0)
Diagnoses	
Schizophrenia	276 (55.0)
Affective disorder	54 (10.7)
Unclassified psychoses	115 (22.9)
Acute organic brain syndrome	18 (3.6)
Substance use disorders	16 (3.2)
Psychosis in puerperium	10 (2.0)
Others	13 (2.6)

Table 2: Psychiatric diagnoses Vs. Socio-demographic characteristics of the in-patients

	Diagnoses							
Variables	Schizophrenia N (%)	Affective disorders N (%)	Unclassified psychoses N (%)	Acute organic brain syndrome	Substance use disorders N (%)	Psychosis in puerperium N (%)	Others N (%)	Total
Gender*								
Males	125 (45.3)	30 (55.6)	54 (47.0)	9 (50.0)	16 (100.0)	0 (0.0)	8 (61.5)	242
Females	151 (54.7)	24 (44.4)	61 (53.0)	9 (50.0)	0 (0.0)	10 (100.0)	5 (38.5)	260
Occupational groups**								
Grp I	12 (4.3)	3 (5.6)	5 (4.3)	2 (11.1)	0 (0.0)	0 (0.0)	0 (0.0)	22
Grp II	55 (20.0)	9 (16.7)	21 (18.3)	2 (11.1)	3 (18.7)	0 (0.0)	0 (0.0)	90
Grp III	12 (4.3)	1 (1.9)	8 (7.0)	2 (11.1)	3 (18.7)	0 (0.0)	0 (0.0)	26
Grp IV	8 (2.9)	0 (0.0)	8 (7.0)	1 (5.6)	0 (0.0)	0 (0.0)	1 (7.7)	18
Grp V	63 (22.8)	18 (33.3)	26 (22.6)	4 (22.2)	1 (6.3)	5 (50.0)	4 (30.8)	121
Grp VI	119 (43.1)	20 (37.0)	47 (40.9)	7 (38.9)	9 (56.3)	5 (50.0)	8 (61.5)	215
Clergy	1 (0.3)	1 (1.9)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	2
Retired	6 (2.2)	2 (37.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	8
Marital status†								
Single	159 (57.6)	29 (53.7)	67 (58.3)	12 (66.7)	12 (75.0)	1 (10.0)	11 (84.6)	291
Married	117 (42.4)	24 (44.4)	48 (41.7)	6 (33.3)	4 (25.0)	9 (90.0)	2 (15.4)	210
Divorced	0 (0.0)	1 (1.9)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1
Age group (years)††								
<20	39 (14.1)	10 (18.5)	25 (21.7)	4 (22.2)	1 (6.3)	3 (30.0)	3 (23.1)	85
20-40	193 (70.0)	37 (68.5)	73 (63.5)	12 (66.7)	13 (81.2)	7 (70.0)	9 (69.2)	344
41-60	42 (15.2)	7 (13.0)	17 (14.8)	2 (11.1)	2 (12.5)	0 (0.0)	1 (7.7)	71
>60	2 (0.7)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	2
Duration of admission (weeks)†††								
<2	105 (38.0)	27 (50.0)	56 (48.6)	11 (61.1)	6 (37.5)	4 (40.0)	9 (69.2)	218
2-10	144 (52.2)	19 (35.2)	53 (46.1)	7 (38.9)	9 (56.2)	5 (50.0)	3 (23.1)	240
11-20	15 (5.4)	7 (13.0)	4 (3.5)	0 (0.0)	1 (6.3)	1 (10.0)	1 (7.7)	29
>20	12 (4.3)	1 (1.8)	2 (1.7)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	15
Total	276	54	115	18	16	10	13	502

*$\chi^2 = 29.63$, p = 0.000;**$\chi^2 = 45.22$, p = 0.34; †$\chi^2 = 2.29$, p = 0.02; ††$\chi^2 = 10.39$, p = 0.92; †††$\chi^2 = 23.36$, p = 0.18

group VI while the least (2 or 0.4%) were Clergymen. Psychiatric diagnosis of schizophrenia accounted for the majority (276 or 55.0%) of the cases while psychosis in the puerperium constituted the least diagnosis (10 or 2.0%). Majority (240 or 47.8%) of the inpatient stayed for a period between 2 and 10 weeks in admission Table 1.

Table 2 compares the clinical and socio-demographic variables and it indicates that there were significantly more females than males among the patients with schizophrenia and unclassified psychosis while the males predominated among those with affective disorders, substance use disorders and other diagnoses (delusional disorders, seizure, deliberate self harm and dementias) ($\chi^2 = 29.63$, p = 0.0000).

Although, not statistically significant, all the clinical diagnostic groups were more likely to be common among the lower occupational group VI ($\chi^2 = 45.22$, p = 0.34). In addition, significantly more of the in-patients were likely to be of single marital status, were also significantly more likely to predominate in all the diagnostic groups, except psychosis in the puerperium where 9 (90%) of the patients were married ($\chi^2 = 2.29$, p = 0.02) and the male in-patients were significantly younger than the female in-patients (F = 4.31, p = 0.0383).

Although not statistically significant, most of the in-patients in this study were more likely to be young, in the age-group below 40 years and Schizophrenia as well as other diagnoses appeared more likely in this age group ($\chi^2 = 10.39$, p = 0.92).

DISCUSSION

The observed finding of female dominance in this study was similar to a study in Finland (Saarento *et al*., 2000) that reported 46.7% use of psychiatric services by male as against 53.3% by females. Similar to this finding, the males were younger in their study. This was different from some other studies that reported higher use of psychiatric services by men. For example, Hirsch (1988) in a study that men are heavy users of psychiatric services more often than females. Similarly, the Epidemiological Catchments Area (ECA) survey Shiparo *et al.* (1984) reported that higher proportion of women made mental health visits, but in seeking help men were more likely to turn to the specialized sector than to the generalist while women used both sector equally. Possible explanation for this finding could be that women were more vulnerable to develop mental disorders, a view that was also supported by a study (Strebel *et al*., 2004) among cohorts in Cape Province, South Africa.

The observed finding of Schizophrenia in majority of the in-patients was perhaps due to the nature of the

illness. Schizophrenia has been regarded as a debilitating disorder hence, most relatives might not be able to condone the patients at home, a finding that was similar to a study in Saudi Arabia (Abu Madini and Rahim, 2002). It however, differed from that of Lay *et al.* (2006) where anxiety and depressive disorders were found to account for 35%; schizophrenia and related psychoses for only 26% and other diagnoses for 39%.

On the duration of admission, our finding showed that schizophrenia was associated with longer duration of hospital admission. This was similar to the observation of Lay *et al.* (2006) that schizophrenia and homelessness were risk factor for heavy use and longer time spent in a psychiatric hospital. This had been adduced to the fact that Schizophrenia is a more severe disorder demanding higher treatment efforts. The effects of schizophrenia and related psychoses on the duration of admission seemed to be universal and according to Thompson *et al.*(2004), psychotic illness was the main cause of prolonged admissions and also accounted for the highest number of mean total occupied bed-days in England.

The predominant observation of Schizophrenia among the female in-patients might be due to higher proportion of women in this study because schizophrenia like any other disorders has not been reported to be gender biased, because it has equal prevalence in both genders. This could also explain the finding of a modest increase in the number of women among those with unclassified psychoses.

All the patients admitted for substance use disorders were males, mainly in the age range 20-40 and mostly unmarried. Risk taking and drug experimentation have been reported as common among males (Abu Madini and Rahim, 2002; Adelekan *et al*., 2001). These perhaps, have resulted in substance use and its attendant problems.

The observed finding of occupational group VI constituting a large proportion of the patients' population was quite alarming especially in a country where extremely meagre resources are allocated for the treatment of mental disorders, perhaps less than 1% of the total health budget and usually not more than 3% of the gross domestic product (Gureje *et al.*, 2007). The implication of this is that the illnesses may further have a large impact on individuals, families and communities caring for such patients since there is presently no effective health insurance policy in Nigeria. Similarly, occupation group V (labourers and petty traders) formed the second largest occupational group among the in-patients. The financial burden on this group could be better imagined as only better than those of the occupational group VI.

The observed low reporting of dementias and other chronic organic brain disorders might be due to their low presentation in the psychiatric unit of this hospital. In this environment elderly people with memory problem with or without psychosis are often stigmatized against, hence families would rather keep such patients at home or take them to the internists or the general medical practitioners rather than to the psychiatrists (Uwakwe, 2000). Likewise, deliberate self-harm and suicide rarely get reported to psychiatrists due to ignorance and the stigma attached to such act. Such cases would perhaps have resorted to spiritual rather than seen a mental health practitioner or, better still, a general practitioner. These conditions are listed among others in the tables.

The limitation of this study was the fact that it was retrospective, hence, had the problem of some incomplete record. However, the study has the strength of being the only study of this nature at the psychiatric unit of this hospital and perhaps serves as a baseline for further studies.

CONCLUSION

In conclusion, schizophrenia is the most frequent diagnosis leading to admission in the psychiatric ward and was predominantly of female gender. Most of the patients were females, single, young and were more in the lowest occupational group categories. The identified low income, young age as well as the single marital status may have important implications on the care and prognosis of mental disorders in this community.

REFERENCES

Abiodun, O.A., 2006. Postnatal depression in primary care populations in Nigeria. General Hospital Psychiatr., 28: 133-136.

Abu Madini, M.S. and S.I. Rahim, 2002. Psychiatric admission in a general hospital. Patients profile and patterns of service utilization over a decade. Saudi Med. J., 23 (1): 44-50.

Adelekan, M.L., A.B. Makanjuola and R.J.E. Ndom *et al.*, 2001. 5-Yearly monitoring of trends of substance use among secondary school students in Ilorin, Nigeria, 1988-1998. West African J. Med., 20 (1): 28-36.

Bobier, C. and M. Warwick, 2005. Factors associated with readmissions to adolescent psychiatric care. Aust NZJ Psychiatr., 39: 600-606.

Boroffka, A. and M.O. Olatawura, 1976. Community psychiatry in Nigeria: The current status. Int. J. Soc. Psychiatr., 23: 1154- 1158.

Fisher, W.H., R.A. Dorwat and M. Schlesinger *et al.*, 1992. The role of general hospitals in the privatization of inpatient treatment for serious mental illness. Hospital Commun. Psychiatr., 43: 1114-1119.

Gureje, O., D. Chisholm and L. Kola *et al*., 2007. Cost-effectiveness of an essential mental health intervention package in Nigeria. World Psychiatr., 6: 42-48.

Hirsch, S.R., 1988. Psychiatric beds and resources: Factors influencing bed use and service planning. Report of a working party of the section for social and community Psychiatry of the Royal College of Psychiatrists. London: Gaskell.

Hutchinson, G., C. Ramcharan and K. Ghany, 2003. Gender and ethnicity in first admissions to a psychiatric unit in Trinidad. West Indian. Med. J., 52 (4): 300-303.

Johnston, P. and G. Zolese, 1999. Systematic review of the effectiveness of planned short hospital stays for mental health care. BMJ., 318: 1387-1390.

Lay, B., C. Lauber and W. Rossler, 2006. Prediction of in-patient use in first-admitted patients with psychosis. Eur. Psychiatr., 21: 401-409.

Nowels, A., 1977. A review of the medical records of adolescents psychotic inpatients in a general hospital. Hospital Commun. Psychiatr., 28 (12): 903-906.

Saarento, O., S. Räsänen and P. Nieminen *et al*., 2000. Sex differences in the contact rates and utilization of psychiatric services. A three-year follow-up study in northern Finland. Eur. Psychiatr., 15: 205-212.

SPSS Incorporation, 2001. Statistical Package for the Social Sciences-SPSS, Version 11. Chicago: SPSS Incorporation.

Shapiro, S., E.A. Skinner and L.G. Kessler *et al*., 1984. Utilizationf health and mental health services. Three epidemiologic catchment area sites. Arch. Gen. Psychiatr., 41: 971-978.

Strebel, A., M. Stacey and M. Msomi, 2004. Gender and psychiatric diagnosis: A profile of admission to mental hospitals in the Western Cape Province, South Africa. Arch. Women Mental Health, 2 (2): 75-81.

Thompson, A., M. Shaw, G. Harrison, J. Verne, D. Ho and D. Gunnell, 2004. Patterns of hospital admission for adult psychiatric illness in England: Analysis of Hospital Episode Statistics data. Br. J. Psychiatr., 185: 334-341.

Uwakwe, R., 2000. Psychiatric morbidity in elderly patients admitted to non-psychiatric wards in a General/ Teaching Hospital in Nigeria. Int. J. geriat. Psychiatr., 15: 346-354.