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A PROSPECTIVE ANALYSIS OF IN-PATIENT CONSULTATION-LIAISON PSYCHIATRY IN A NIGERIAN TEACHING HOSPITAL

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ABSTRACT

Objectives: To determine the pattern of psychiatric referrals over a six-month period categorise the psychiatric referrals into clinical syndromes and describe the nature of psychiatric intervention and outcome of such intervention on discharge and within the first three months after discharge.

Design: A descriptive prospective study.

Setting: University of Ilorin Teaching Hospital (UITH), Ilorin Nigeria.

Subjects: Forty seven inpatients (26 females and 21 males) referred to the psychiatric department from other specialist units of the hospital between May and October 2001.

Results: The mean (\pm SD) of patients was 33.9 ± 18 years. The highest rate of referral came from the internal medicine department. The most common psychiatric disorders referred were acute organic brain syndrome (32%) and neurological disorders (15%). Psychiatric interventions included medication in about two-thirds of the patients and counselling in about a quarter. Half of the discharged patients out rightly defaulted on their first outpatient clinic department appointment.

Conclusion: The study indicate the need for greater inter-departmental liaison learning and training activities, the need to emphasize training in organic psychiatry, as well as the need to establish community-based outreach services as a means of ensuring continuity of care for discharged patients.

INTRODUCTION

Consultation-liaison (C-L) psychiatry is defined as the area of psychiatric practice which involves consultation and collaboration with non-psychiatric physicians and other health workers in all types of medical care settings but especially in general hospital(1,2). Graeme(3) further defined C-L psychiatry as the discipline which addresses physical and psychiatric co-morbidity and somatisation in patients and liaison with those professionals who care for them. The sub-specialty involves all diagnostic, therapeutic research and teaching services that the psychiatrist perform in the general hospital and serves as a bridge between psychiatry and other specialties(4).

C-L psychiatry had a special role in the management of psychosomatic disorders. Physical symptoms can be conceptualised as a final common pathway through which emotional dysphasia, psychiatric disorders, socio-environmental stresses as well as organic disease are expressed(5). Engel(6) has pointed out the inadequacies of using the strictly biomedical model to conceptualise and manage medical problems. He therefore advocated for a holistic (biopsychosocial) approach to patient care.

This model of care requires that full and adequate collaboration exists between psychiatric and non-psychiatric physicians in the management of physically ill patients in general hospital units.

Much psychiatric co-morbidity probably still goes unnoticed by the attending physician. Referral seemed to be related mainly to severity of illness or previous history of psychiatric illness(7). Previous in patient referral studies have employed the retrospective(8,9) or prospective(10,11) design but only a few utilised standardised diagnostics instruments(11-13). There is thus a need for more systematic C-L psychiatry studies in this region, to facilitate a better understanding of its current status and identify possible areas for improving practice in the sub-specialty. The present study, which employed a prospective approach and standardised diagnostic and monitoring instruments, had the following objectives;

- (i). To determine the pattern of psychiatric referrals over a six-month period.
- (ii). To categorise the psychiatric referrals into clinical syndromes; and
- (iii). To describe the nature of psychiatric interventions and outcome of such intervention on discharge and within the first three months after discharge.

MATERIALS AND METHODS

Study Setting: The study was conducted at the University of Ilorin Teaching Hospital (UIITH), Ilorin, Kwara State. The catchment area of the hospital includes Kwara, Kogi and parts of Oyo, Osun, Ekiti, Ondo and Niger States. The in-patients facility of the hospital has a total of 447 beds, 300 on the general hospital wing and 147 on the maternity wing.

Subjects: This comprised all in-patients in the non-psychiatric wards of the hospital for whom consultation was sought over the six-month study period (May-October 2001).

Procedure: The permission of all the consultant psychiatrists in the Department of Behavioural Sciences to allow the use of patients referred to them for this study was sought and obtained. All resident doctors in the department were notified about the study. All referrals from non-psychiatric wards sent to the unit were first assessed by the doctors in the on-call firm. The latter promptly notified one of the authors (POA), who subsequently followed up and interviewed these patients referred to the department during the study to facilitate a monitoring of the intervention and post-discharge events. Post-discharge, the study sample was followed up at the out-patient clinic monthly for three months. Each referral letter was reviewed critically for essential information such as the list of symptoms the patients presented with, physical examination findings, mental state examination findings, list of investigation, urgency attached to the referral and other aspects of history such as socio-demographic data of admission and past psychiatric history. The patients case notes were reviewed for relevant information that have previously been obtained from the patients such as medical or surgical diagnosis, management instituted and other important information that may not be included in the referral letter.

A pro-forma questionnaire designed for this study was used to record all background information extracted on each patient. The areas covered on the pro-forma include socio-demographic data, referral pattern and communication process. Other areas include intervention by the referring team, intervention by the psychiatrist, final disposal of the patient and follow-up assessment of the patient. The occupational classification system of the International Labour Organisation (14) was used to classify the patients occupations. This classificatory system divides occupational into groups as expatiated in Table 1.

Psychiatric interviews were conducted on all inpatients for whom consult was sought using the Present State Examination (PSE) Schedule (15). The relatives of patients were also involved in the interview in most cases. Diagnoses were based on the 10th Edition of the International Classification of Disease (ICD-10) (16). Interventions initiated by the referring team as well as the psychiatric team were recorded.

The Brief Psychiatric Rating Scale (BPRS) (17) and the Global Assessment Function (GAF) (18) were used to determine the outcome of intervention. The BPRS provides a rapid and efficient evaluation of treatment response in both clinical drug trials and routine clinical setting. It consists of eighteen (original sixteen)- symptoms construct, each to be rated on seven-point severity scale. The ratings are coded zero to six for the seven point categories of severity ranging from "not present" to "extremely severe". Ratings were made based on patients' verbal reports and observations of patients during a brief interview lasting about twenty minutes. A total score (sum of rating on all eighteen constructs) was used to represent the total deviation from normality and to evaluate

total change during treatment. The GAF scale on the other hand, considers psychological, social and occupational functioning on a hypothetical continuum of mental health-illness. The GAF scale is a clinical-rated scale and measures psychological, social and occupational functions on a continuum from 1 (lowest) to 100 (highest). The scale is divided into 10 interval points. Each interval point on the scale is operationally defined and represents a level of global severity. The two highest interval range (81-100) are used for individuals without significantly psychopathology who also exhibits traits of a positive mental health. The next interval range, 71-80, applies to individuals in whom psychopathology is minimal or absent. The majority of patients in treatment will be rated between 1 and 70. In making a rating, the lowest interval that describes the patient's overall functioning was selected. The time period assessed is generally the week prior to evaluation. Both the BPRS and GAF were applied at the commencement of treatment, on discharge and monthly for three months post discharge. For patients who completed or dropped out of treatment before three months, outcome data were taken as that recorded at the last contact.

Data analysis: Data were analyzed using the Epi Info Version 6.0 computer package. Changes in symptomatology following treatment were tested for significance at 5% confidence level using the paired t-test.

RESULTS

Socio-demographic characteristics of patients (Table 1):

The mean age (\pm SD) of the 47 referred patients was 33.9 (\pm 18) years, with majority (66%) being in the age bracket of 11-50 years. More females 26(55.3%) were seen during the study period than males 21(44.7%). The occupation of the patients ranged from elementary occupation to legislator, senior officers and manager. With regard to the level of education, ten (21.3%) had primary education only and another ten (21.3%) had secondary school education. Nine (19.1%) had no education at all. Twenty four (51%) were Christians while 23 (49%) were Moslems. Twenty three (49%) of the patients were married, 20(43%) were single while another 8% were either separated or windowed.

PATTERN OF PSYCHIATRIC REFERRAL:

Source of referral: Two-thirds of the patients were referred from the department of internal medicine. Other seven (15%) were referred from surgery department, five (11%) from paediatrics and the least referral, four (9%) came from obstetrics and gynaecology department.

Reasons for consultation: The reason for referral in most cases was either the presence of psychiatric symptoms 27 (57%) or previous contact with the psychiatrist, eight (17%). Other reasons for consultation included disposition (i.e transfer to psychiatric ward for management, three (6.4%), deliberate self harm three (6.4%), assistance with diagnosis two (4.3%), and advice with management, psychosomatic illness and psychoactive substance use each accounted for one (2.1%). Another one (2.1%) was referred because referring team felt the patient would benefit from psychotherapy.

Psychiatric diagnosis: As shown in Table 2, the most common ICD- 10 diagnoses were acute organic brain syndrome 31.9%, schizophrenia 10.6%, deliberate self-harm 8.5% adjustment disorder 8.5% and paranoid psychosis 4.3%. There was no ICD-10 diagnosis made in eight (17%) of the patients who were mostly purely medical cases or cases where patient had emotional disturbance which were not severe enough to be classified as a psychiatric disorder.

INTERVENTION BY THE REFERRING TEAM: Referral letters were sent within the first day psychiatric symptoms were noticed in 28 (60%) of the patients. The mean length of days (+/-SD) before referral letters were sent after psychiatric symptoms were noticed was 3:9 (± 5.7) days.

Physical diagnosis made by the referring team: The broad classification of the most frequent physical diagnoses made by the referring team and the specific diagnoses under each of the broad classification were as follows:

(i). Infections (31.9%), typhoid enteritis 10.6%, tuberculosis 10.6%, viral encephalitis 3%, human immunodeficiency Virus (HIV) 4.3% and purperal sepsis 2.1%.

(ii). Neurological disorders (14.9%), seizure disorder, seasonal ataxic neuropathy, dementia cerebella lesion, quadriplegia, cavernous sinus thrombosis with right facial nerve palsy and spinal cord injury (each 2.1%).

(iii). Obstetric/Gynaecological disorders (10.6%), post-partum pre-eclamptic toxemia, post-partum eclampsia, antepartum haemorrhage secondary to placenta previa, septic abortion with uterine perforation and ruptured uterus (each 2.1%).

(iv). Cardiovascular disorders (8.5%), hypertension 2.1%, hypertensive stroke 4.3% and hypertensive heart failure 2.1%.

(v). Surgical conditions (6.4%), gangrenous intestinal volvulus, intestinal obstruction and necrotising fasciitis (each 2.1%).

(vi). Others (27.6%) trauma, antipsychotic overdose, accidental drug poisoning (each 2.1%), metabolic condition 8.5%, and there was no diagnosis in 12.8%.

Intervention by the psychiatric team: No laboratory investigation was ordered in 38 (81%) of the patients. In the remaining nine patients, the investigations ordered included computerised tomography (CT) scan in three (6.4%), biochemical investigations in two (4.3%), haematological investigation in two (4.3%); social investigation in one (2.1%) and full medical work up in one (2.1%).

Joint consultation/seminar or case conference on patients: Joint consultation was not held on any of the referred patients. Also, no seminar or case conference was organised to discuss any of the patients.

Psychiatric management instituted: A wide range of medication was used in 29 (62%) of the patients, including neuroleptics, amitriptyline, benzodiazepines and carbamazepine. Twelve (25%) of the patients, comprising cases of deliberate self harm, adjustment disorder and one "difficult" patient benefited from counselling sessions. Family therapy was organised for a 14-year old school girl, admitted for deliberate self-harm carried out as form of reaction to perceived maltreatment she received from her guardian.

Table 1

Social-demographic characteristic of patients (n=47)

Variable	No.	(%)
Age (years)		
>10	2	4.3
11-30	22	46.8
31-50	15	31.9
51-70	6	12.8
>70	2	4.3
Sex		
Female	26	55.3
Male	21	44.7
Occupational Group		
Legislators senior officer and managers	1	2.3
Professionals	3	7
Technicians and associate professionals	3	7
Clerks	1	2.3
Service workers and shop, market sales workers	7	16.3
Skilled agricultural and fishery workers	4	9.3
Craft and related trade workers	3	7
Elementary occupational (e.g agricultural and fishery labourers)	13	30.2
Others	8	18.6
Educational status		
Primary	10	21.3
Secondary	10	21.3

Tertiary	8	17
None	9	19.1
Others**	10	21.3
Religion		
Christianity	24	51.1
Muslim	23	48.9
Marital status		
Single	20	42.6
Married	23	48.9
Separated	2	4.3
Widowed	2	4.3

*= Children, students and apprentices, **= Adult education and Arabic education

Table 2

Psychiatric diagnosis based ICD-10

ICD-10 code	Diagnosis	No. (n=47)	(%)
F06	Acute organic brain syndrome	15	31.9
X61	Deliberate self harm*	4	8.5
F20	Schizophrenia	5	10.6
F32	Depressive episode	1	2.1
F43	Adjustment disorders	4	8.5
F22	Paranoid psychosis	2	4.3
F53	Psychosis in peripartum	2	4.3
F00	Dementia	2	4.3
F10	Alcohol withdrawal	2	4.3
F31	Bipolar affective disorder	1	2.1
F44	Dissociative fugue	1	2.1
	No diagnosis	8	17.0

* from chapter XX ICD-10

Final disposal of the patients and outcome of psychiatric intervention: Three (6%) were transferred to another specialty unit outside the hospital. Five (11%) patients were transferred to the psychiatric unit of the hospital for inpatient admission. Eight (17%) patients, majority of whom had acute organic brain syndrome or other psychiatric manifestations in addition to their physical illness were discharged against medical advices by their relatives for undisclosed reasons. Nine (19%) patients died on admission while still with the referring teams from various complications of their physical illnesses. Eight (17%) of the patients were discharged by the referring team without notifying the psychiatrist. Two (4.3%) did not need any psychiatric management and twelve (25.5%) were managed to the point they were considered mentally stable and were discharged to the outpatient clinic. Thus, the outcome of psychiatric intervention and follow-up assessment was based on the twelve patients who were managed in the other wards. The five patients transferred to the psychiatric ward were not included in this group because their management was no longer considered as being under the consultation-liaison service. Six (50%) of the twelve patients who were discharged to the outpatient clinic defaulted at their first follow-up clinic appointment. The GAF scores (+/-SD) for the twelve patients were as follows: pre-treatment, 56.7±18.6; discharge, 79.6±10.1. The BPRS

scores (+/-SD) for the twelve patients were as follows: pre-treatment, 15.8±8.2 and discharge from admission 8.3±7.5. The data on the outcome of intervention after discharge were not conclusive because only five out twelve patients who were discharged to the out-patient clinic concluded the three month follow-up assessment.

DISCUSSION

The finding in this study of acute organic brain syndrome being the most common psychiatric syndrome referred to psychiatric department is similar to those of other studies reported from developing countries(10,19). This finding further underscores the need to emphasise a thorough understanding of organic and neurological disorders in the training curriculum of physicians, as well a nurses who are most likely to be first to observe the symptoms and signs on the ward. The finding that eight (17%) of referred patients did not pick up an ICD-10 diagnoses could mean that through distress to physical illness is common, only in a minority of cases may these be severe enough to be classified as a psychiatric disorder.

The finding in this study of two-thirds of the referrals coming from the departments of internal medicine is comparable to the findings of previous authors (10). The finding is mainly related to the fact that infectious

disorders, which constitute the most common conditions encountered in the tropics, are managed by the internal physicians(10). Neurological disorders, which are usually complicated by neuropsychiatric features, are also within the domain of internal medicine(10). The increased exposure of resident doctors in the department of internal medicine to psychiatric as part of their residency training could also be a factor.

The finding of the lowest referral rate being from the obstetrics and gynaecology (O&G) department is rather surprising and did not probably reflect the true picture of the psychiatric co-morbidity among the population of patients seen by these specialists. Abiodun *et al* (12) found psychiatric morbidity of 35.2% in a gynaecology clinic in the same hospital, although this was an epidemiological rather than a clinical-referral study. However, a possible factor for the finding in this study could be the physical distance that separates the obstetrics and gynaecology department from the psychiatric department. The obstetrics and gynaecology department is located in the maternity wing of the hospital, which is about four kilometres away from the general wing of the hospital (where other departments, including psychiatric department, are located). Thus, referral to the psychiatrists by the gynaecologists is usually as a last resort and happens mostly when patients manifest florid and disruptive psychotic features. There is therefore a need to attach a consultation-liaison unit to the obstetrics and gynaecology department of the hospital.

The reasons for consultation were presence of psychiatric symptoms and previous contact with the psychiatrists in 57% and 17% of cases respectively. These findings were not surprising since the need to refer to a psychiatrist will be determined more or less by presence of symptoms. However, the finding underscores the need for attending physicians to ask a few screening questions with the aim of detecting some of the psychiatric co-morbidity even when such symptoms are not apparent.

It was found in this study that only three (6.4%) of the patients were referred for disposition (transfer to Psychiatric Department). This finding is in contrast to the observation by Aghanwa *et al* (10) that the main concern of the attending physician or surgeon in most cases when seeking psychiatric consultation-liaison services is the immediate transfer of the patient to the psychiatric ward.

This study revealed that no investigation was ordered for about four-fifths of the patients. The use of investigation techniques in consultation-liaison practice is known to assist in elucidation of factors of aetiological importance, confirmation of diagnosis, regulation of dosage of medication prediction of response to treatment and assessment of prognostic factors(20). The finding of this study therefore indicates that a large majority of referred patients did not receive the full benefits of available investigation procedures. A possible reason is that physicians practicing in most public hospitals in Nigeria, psychiatrists inclusive, have become rather prudent in ordering investigations, limiting such orders

to cases with clear and compelling indications. This is meant to save patients and relatives the costs of investigations, which they can hardly afford.

The finding of this study showed that the most frequently instituted management was medication in over three-fifths of the patients, counselling in about a quarter and family therapy in only one patient. It is important to note that of the patients in which medication was used, acute organic brain syndrome accounted for 32% while disorders such as schizophrenia, paranoid psychosis and affective disorders constituted the other indications. The frequent use of medication in patients referred to consultation-liaison units has previously been reported(21,22). The low use of counselling and family therapy in this study was due to the fact that the diagnostic spectrum of their disorders did not indicate the use of these treatment modalities.

This study revealed that joint consultations between the referring and psychiatric departments were not held on any patient. Also there was no seminar or case conference organised to discuss any of the patients throughout the study period. The role of consultation-liaison psychiatry was clearly outlined by Kaplan *et al*(4) as diagnostic, therapeutic, research and teaching services that the psychiatrist perform in the general hospital and services as a bridge between psychiatry and other specialties. The implication of the finding of this study is that non-psychiatrists in the hospital where the study was carried out were deprived of the full benefits of consultation-liaison services especially in the aspects of teaching and learning. This also means that patients might not have received the best from the service rendered both by the consultation-liaison unit and the managing team from lack of inter-departmental joint reviews of their cases. To improve on the current situation, the present authors would recommend that regular consultation-liaison education sessions be established in the hospital.

In this study, a total of 17% of patients either terminated their consultation or discharged themselves against medical advice. This figure is high when compared with Clarke *et al*(23) and Dunis *et al*(24) respectively. The reasons for this finding are not exactly known. However, one possible reason is that the patients perhaps preferred to seek traditional psychiatric help outside the hospital setting. Previous studies have shown that neuro-psychiatric patients in this environment do tend to patronise traditional mental practitioners (TMHPs), in keeping with the patients belief in the supernatural causation of their mental symptoms and illness(25,26). Thus, there is an urgent need for public enlightenment on the aetiology and treatment of psychiatric disorders. Equally important is the need to train primary health care workers to give mental health education to the communities they serve(26).

The figure of 17% obtained in this study for patients who were discharged without the psychiatrist being notified is relatively higher than the 7% and 6% reported by Clarke *et al*(23) and Dunsis *et al*(24) respectively.

The scope of this study did not allow for a further examination of the immediate reasons for this practice and this phenomenon deserves further investigation. Half of the twelve patients discharged in this study out rightly defaulted in their first outpatient clinic appointment, a finding comparable to that of Odejide *et al*(27). This same high dropout rate made it impossible to draw meaningful conclusion on the outcome of intervention three month post discharge. One possible reason for this high default rate is that patients that were free of psychiatric symptoms at discharge may choose not to attend follow-up clinic since their primary reason for coming to the hospital was not a psychiatric problem. Further, the fear of stigma might have driven the patients to seek further care outside the orthodox public hospital setting(28), perhaps with traditional mental health or private practitioners. One possible way of improving on this situation is establishing community-based and outreach services that would facilitate a better monitoring and follow-up of patients in their community.

In conclusion this study has identified several issues relating to consulting-liaison psychiatric practice in a Nigerian Teaching Hospital; albeit within the limitations imposed by small sample size; short duration of study; high default rate at follow-up and lack of community based services to facilitate follow-up. The source and pattern of referrals; as well as the spectrum of diagnostic categories referred have implications for improved training in neurology and organic psychiatry for all departments at undergraduate and postgraduate levels. The interventions offered by the psychiatric department; although comparable with practices elsewhere; could be further improved particularly in the areas of laboratory investigations. Further; the study identified lack of communication among referring and receiving departments and non-utilisation of the opportunities of lessons learned in each liaison case for inter-departmental learning and training. There is thus a need to establish a policy aimed at improving on the current situation in the hospital.

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