Psychotropic prescribing practice at University of Maiduguri Teaching Hospital

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Abstract

Background

The study of psychotropic prescribing habits of professional colleagues has become important because of the widespread and unrestricted use of these drugs and the adverse effects of their long-term use. Furthermore, the irrational use of benzodiazepines and prophylactic use of antiparkinsonian drugs is a common practice in psychiatric, teaching and general hospitals especially in developing countries. This study aims to assess the psychotropic prescribing practice of doctors in the University of Maiduguri Teaching Hospital.

Method

In this cross-sectional survey, a sample of seventy (70) postgraduate resident doctors from the University of Maiduguri Teaching Hospital (UMTH) were assessed using a modified version of the self-rated Kumar 12-item questionnaire and basic socio-demographic data were obtained for each doctor.

Results

The overall prescription rate of psychotropic drugs at the University of Maiduguri Teaching Hospital was 45.7%. This was slightly higher among doctors on the medical wards. In fact,

psychotropic prescribing of drugs defied diagnostic boundaries. Furthermore, benzodiazepine was the most commonly used drug,its use was unrestricted in all the departments of the hospital.

Conclusion

In conclusion, findings indicate the need to encourage a more rational use of psychotropic drugs by doctors. We suggest psychotropic drug education in our medical curricula at both the undergraduate and postgraduate.

Declaration of Interest

None

INTRODUCTION

Comorbidities between (physical) somatic and psychiatric disorders has been demonstrated by different authors [1, 2, 3, 4] and the associations between psychiatric disorders and physical conditions have been shown to lead to worse prognosis for both physical recovery and the Health-related Quality of life [4, 5, 6, 7]. Based on the pathways to care, significant proportions of patients with physical disorders who present with or develop comorbid mental ailment(s) are usually first attended to by other specialists and generalists collectively referred to as 'Primary Therapists' before referral to the mental health physician [8]. Robust evidence has also demonstrated that psychiatric and psychological problems are frequently unrecognized in a non-psychiatric setting. Where such comorbidities are recognized, the appropriate pharmacotherapeutic interventions are often not instituted or where the drugs are given, the rational prescription model is usually not adhered to [9, 10, 11, 12]. Furthermore, referral to psychiatrists and other mental health professionals is low [13, 14, 15, 16]. The probable reasons being that most of the patients are either more comfortable with the other doctors because of the stigmatization associated with mental health consultation in most sub-Saharan African countries or it is due to the difficulties associated with referrals because

most psychiatric units are located outside the General Hospital setting. This study aims at assessing the prescription pattern of psychotropic drugs by doctors at University of Maiduguri Teaching Hospital in Northeastern, Nigeria as a prototype non-psychiatric setting.

METHODS

This is a cross-sectional survey, in which a sample of seventy (70) postgraduate resident doctors from the University of Maiduguri Teaching Hospital (UMTH) were assessed using a modified version of the self-rated Kumar 12-item questionnaire [17] and basic socio-demographic data were obtained for each doctor. The questionnaire comprised of questions covering attitudes to psychiatry, assessment of psychological problems, referral to psychiatrists and treatment of psychological disorders.

Subjects provided informed consent and the study protocol conforms to the human subject guidelines of the Ethics and Research Board of the University of Maiduguri Teaching Hospital.

The data obtained was cleaned and subjected to descriptive statistical analysis; using the Statistical Package for Social Sciences (SPSS), version 11.0 software.

RESULTS

Gender, age and specialty of the respondents

Thirty-two out of the 70 postgraduate doctors participated in the study, giving response rate of 45.7%. Forty percent were studying Internal medicine, 25.0% Obstetrics and Gynaecology (O & G) and 18.8% surgery. However, greater percentage of respondents was males. The age distribution of the respondent, was most notably in those who were less than 40 years old, male: female ratio 2.56 and mean age of 32.0 ± 4.8 (Table 1).

Table 1: Gender, age and specialty of the respondents

Variable	Frequency (n)	%
Gender		
Male	23	**71.9**
Female	9	**28.1**
Total	32	**100.0**
Age		
20-29	8	**25**
30-39	23	**72**
40+	1	**3**
Total	32	**100.0**
Department		
Internal medicine	13	**40.6**
O & G	8	**25.0**
Surgery	6	**18.8**
GP	2	**6.3**
Ophthalmology	1	**3.1**
Paediatrics	1	**3.1**
Radiology	1	**3.1**
Total	**32**	**100.0**

Frequency and duration of prescribed individual psychotropic

Eighty percent of the respondents treated patients with psychological problems, 45.7% prescribed psychotropic medications and 92.2% referred patients to psychiatric services.

Benzodiazepine (BDZ) was the most commonly used drug. Chlorpromazine was prescribed either alone or in combination with haloperidol for symptoms of hallucination and restlessness. Benzodiazepine was used alone or in combination with chlorpromazine for agitation. Ninety days use of chlorpromazine for conversion disorder and 60 days benzodiazepine for depression were the extremes (Table 2).

Table 2: Frequency and duration of prescribed individual psychotropic

Drug	Psychiatric diagnosis/symptom	Freq.(n)	% Freq.(n)	Duration of treatment (days)
Benzodiazepine	Insomnia	2	6.06	**3-7**
Chlorpromazine	Agitation	3	9.09	**5-7**
Benzodiazepine + Chlorpromazine	Agitation	3	9.09	**5-7**
Benzodiazepine	Depression	10	30.30	**7-60**
Chlorpromazine	Aggressive behaviour	4	12.12	**7-14**
Chlorpromazine + Haloperidol	Hallucination	1	3.03	**7**
Chlorpromazine + Haloperidol	Restlessness	1	3.03	**7**
Chlorpromazine	Bipolar disorder	1	3.03	**14**
Chlorpromazine	Puerperal psychosis	1	3.03	**10**
Benzodiazepine	Atypical facial pain	1	3.03	**14**
Chlorpromazine	Conversion disorder	1	3.03	**90**
Benzodiazepine	Psychotic disorder	1	3.03	**14**
Benzodiazepine	Chronic anxiety	1	3.03	**1**
Chlorpromazine	Psychotic disorder	2	6.06	**While symptoms last**
Benzodiazepine	Various reasons	1	3.03	**Not specified**
Total		**33**	**100**	

Distribution of psychotropic drug prescriptions according to specialty

Although, chlorpromazine was used for psychotic disorders and psychotic symptoms, nevertheless, benzodiazepine was prescribed for neurotic disorders. However, chlorpromazine/benzodiazepine combination was used for agitation but chlorpromazine/haloperidol combination was used for restlessness and hallucination respectively, in the department of medicine while, benzodiazepine was prescribed in all the departments. Furthermore, benzodiazepine was used irrationally in depression and insomnia (Table 3).

Table 3: Distribution of psychotropic drug prescriptions according to department

Drug	Psychiatric Diagnosis symptom	Department
Benzodiazepine	Insomnia	Ophthalmology, O & G
Chlorpromazine +Benzodiazepine	Agitation	Medicine, Surgery
Benzodiazepine	Depression	Medicine, Surgery, Radiology, General Practice
Chlorpromazine	Aggressive behaviour	Medicine, Surgery, O & G
Chlorpromazine + Haloperidol	Hallucination Restlessness	Medicine
Chlorpromazine	Bipolar affective disorder Puerperal psychosis	O & G
Benzodiazepine	Atypical facial pain	Surgery (Maxillo-facial)
Chlorpromazine	Conversion disorder	Medicine
Benzodiazepine	Psychosomatic disorder (ns)	General Practice
Benzodiazepine	Chronic anxiety disorder	Medicine
Chlorpromazine	Psychotic disorder (ns)	Medicine
Benzodiazepine	Various reasons	Medicine

ns= not specified

DISCUSSION

In this cross-sectional study that investigated the pattern of prescription of psychotropic drugs among doctors in a tertiary health institution in Northeastern Nigeria, the response rate was 45.7%. The rate is low because of the difficulties associated with data collection in a setting where psychiatric and teaching hospital facilities are located separately. Moreso, consultation-liaison psychiatric services are virtually non-existent, thereby making contact between the investigator and the respondents very minimal and therefore, ultimately making the retrieval of the filled questionnaires difficult. Similar studies in Austria by Wancata J *et al.* [18] and in Paris by Isabelle G *et al.* [19] revealed higher response rates because of established consultation-liaison psychiatric services that are well integrated into their systems.

In terms of the respondent's usage of psychotropic, the thirty-two of them that returned their questionnaires have used one or more psychotropic medication(s) at the time of the study. The highest usage rate of 40% was among residents in Internal Medicine, followed by 25% and 18.8% for residents in Obstetric and Gynaecology and Surgery, respectively. The lowest prescription rate of psychotropic by the surgical residents is in consonance with the finding of Isabelle in Paris and the reason he adduced was inadequate consideration of psychiatric problems in the surgical wards [19]. While the reasons for higher prescription rate of psychotropic by the residents in Internal Medicine may be that medical patients are more prone to psychological disturbance because of the chronic nature of their ailments in most cases than surgical patients are, admitted for procedures that may not require prolonged hospitalization. Secondly, the residents in Internal Medicine may have a higher index of suspicion for mental disorders when compared to their counterparts in surgery and other specialties related to surgery because of their exposure to psychiatry in the process of postgraduate training. Similarly, emotional disturbances are higher in females, which may account for the relatively higher prescription rate of psychotropic for residents in Obstetrics

and Gynaecology than among the residents in Surgery. However, it is noteworthy that very high prescription rates of psychotropic particularly antidepressants and benzodiazepines have been reported among patients undergoing treatment for different cancers in surgical oncology units which were not reflected in this study [20]. This may account for the overall lower prescription rate of psychotropic by the residents in Surgery.

In terms of the individual classes of the psychotropic drugs, the benzodiazepines were the most commonly prescribed psychotropic with a prescription of about 48.2%. This is consistent with the findings of earlier studies, Famuyiwa *et al.* [21] in Southwestern Nigeria and Abiodun *et al.* [22]in a teaching hospital in Northern Nigeria. However, a recent study [23]on psychotropic drugs prescription in northern Nigeria, reported benzodiazepine prescription rate of 8%.An important observation is the fact that the prescription of benzodiazepines cuts across all specialties. Furthermore, the drug was prescribed for a wide variety of disorders including depression and atypical facial pain usually for long duration (up to 60 days) in some cases without regards to the attendant risk of developing tolerance and physical or psychological dependence. The polypharmacy rate (the combination of more than one psychotropic medication) of below one-fifth of the total prescription rate found in this study is higher than the rate reported by Adeponle *et al.* [23] in two regional psychiatric hospitals in northern Nigeriabut lower than the rate of polypharmacy in a teaching hospital in this region [22]**.** This may be attributed to the fact that the doctors who participated in the study tend to exhibit some restraints when it comes to the combination of multiple psychotropic and hence the low combination rate reflected in the study.

Another key finding in this study that is worth mentioning is that none of the respondents reported the use of antiparkinsonian drugs despite the relatively high rate of usage of conventional

antipsychotics of over 35%. A similar study conducted in a psychiatric setting in northern Nigeria [23] found a prescription rate of 62% for anticholinergics. It was used either to treat extrapyramidal side effects or co-administered with the neuroleptics. Our study was conducted in a non-psychiatric setting and the doctors may not be very conversant with the liberal prescription of this class of drugs. Moreso, the prescription dosage of the conventional antipsychotics may not be high enough as to cause extrapyramidal symptoms that may warrant treatment.

Some of the limitations identified in this study were: (1) Our study was primarily concerned with the prescribing practice of doctors in a teaching hospital and therefore, standardized diagnostic instruments were not used to make diagnosis of psychiatric disorders, hence the diagnoses used were essentially those of the doctors and not based on standardized psychiatric classificatory system. (2) The drug records of the patients were not cross-examined to ascertain the veracity of their claims. (3) The comorbid physical disorders the patients had were not indicated and would have been used to determine the degree of correlation between various somatic disorders and their comorbid mental conditions. (4) Finally, the response rate was very low and therefore, the results generated in the study could not be a true reflection of the psychotropic prescribing pattern of the practitioners in the institution. Therefore, the results of this study cannot be used solely to draw a general conclusion. Notwithstanding its limitations, this study does suggest unrestricted and irrational use of psychotropic drugs in the hospital.

In conclusion, there is the urgent need on the part of the practitioners to update their knowledge on rational psychotropic prescription practice and the need for the establishment of a viable Consultation-liaison psychiatric unit in the institution on the part of the management in order to

facilitate the cross-fertilization of ideas between the 'Primary Therapists' and the Mental Health Physicians.

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