

Prescribing Trends of Psychotropic Drug in a Psychiatry Out Patient Department in a Teaching Hospital in Dhaka, Bangladesh

Any OH¹, Sultana R², Mazumder MK³, Soniya F⁴, Akter M⁵, Khan N⁶ and Nahar L⁷

¹Department of Pharmacology & Therapeutics, Army Medical College, Jeshore, Bangladesh.

²Associate Professore, Department of Pharmacology & Therapeutics, Zainul Haque Sikder Women's Medical College, Dhaka, Bangladesh.

³Medical officer, Department of Anaesthesia, Analgesia and Intensive care unit, Bangabandhu Sheikh Mujib Medical University, Dhaka, Bangladesh.

⁴Associate Professore, Department of Biochemistry, Zainul Haque Sikder Women's Medical College, Dhaka, Bangladesh.

⁵Associate Professore, Department of Anatomy, Zainul Haque Sikder Women's Medical College, Dhaka, Bangladesh.

⁶Associate Professor, Department of Forensic Medicine, Zainul Haque Sikder Women's Medical College, Dhaka, Bangladesh.

⁷Associate Professor, Department of Anatomy, Zainul Haque Sikder Women's Medical College, Dhaka, Bangladesh.

*Correspondence:

Dr. Omma Hafsa Any, Associate Professor, Head of the Department of Pharmacology & Therapeutics, Army Medical College Jeshore, Bangladesh.

Received: 01 February 2019; Accepted: 23 February 2019

Citation: Any OH, Mazumder M, Sultana R, et al. Prescribing Trends of Psychotropic Drug in a Psychiatry Out Patient Department in a Teaching Hospital in Dhaka, Bangladesh. *Int J Psychiatr Res.* 2019; 2(1): 1-5.

ABSTRACT

A cross-sectional descriptive study was carried out among individuals attending the psychiatry out-patient department from 1st February 2010 to April 30th 2010 in Sir Salimullah Medical College and Mitford Hospital, Dhaka, Bangladesh to see the patterns of prescription and drug use in psychiatry out-patient department of teaching hospital in Dhaka, Bangladesh. A total 300 patients were included in this study. Simultaneously a total of 100 patients were interviewed by questionnaire to identify the educational and socio-economic status of the patient. The pharmacological classification of psychotropic drugs, clinical indication, average number of drugs per prescription, adverse effect, cost, generic or trade name; formulation, frequency and duration of therapy, special warning or instruction regarding possible side effect and percentage of additional (anticholinergic) drugs prescribed were noted. The antipsychotic drugs were prescribed 36% anxiolytics drugs were prescribed 15.43%, antidepressant drugs were prescribed 9.97%, Antimanic drugs were prescribed 16.39% and other drugs were prescribed 22.95%. The commonest clinical indication were schizophrenia and other psychotic disorder 40%, bipolar mood disorder 39%, depressive disorder 9.66%, anxiety disorder 2.66%, somatoform disorder 1.66%, OCD 02%, others 3.33%. The average number of drugs per prescription was 2.44 % drugs were prescribed by generic name. Use of oral psychotropic drugs 91.33% was frequent but injection use 8.33% was very low, additional (anticholinergic) drugs were prescribed 76% of prescription. Average cost of drugs per prescription was 181 taka. So, the study will help to understand the trends in prescribing psychotropic drugs and will provide guidelines for designing appropriate future intervention strategies in order to promote rational prescribing and improve the quality of health care.

Keywords

Psychiatric disorders, Health care, Drugs.

Background

Psychiatric disorders are common in patients at general practitioners. Psychotropic drugs are one important mode of treatment and prescribed frequently [1]. Today mental health and mental illness

are key public issues. A large number of people suffering from mental disorder. According to World Health Organization (WHO), at least 40 million people in the world suffer from mental disorder [2]. Bangladesh is a densely populated area where prevalence of psychiatric illness is not less than that of any other country in the world [3]. In Bangladesh, socio-political situation is insecure and unstable with poverty and vulnerability to natural disasters. These factors are related to psychiatric morbidity [4]. Socioeconomic determinant like poverty and lack of social support influence health. Low socioeconomic status is associated with a higher prevalence of overall morbidity, including psychiatric morbidity [5-7]. Marriage is positively associated with health and health behavior [8-10]. Mental illness is most neglected disease in Bangladesh, although a large number of people are suffering from different types of mental illness. Prescription pattern studies will identify problems before a drug is dispensed and will greatly improve patient care [11]. The majority of the psychiatric population needs long-term or even life-long therapy with psychotropics. However, these drugs often affect emotion and cognition where in significant clinical, legal, and psychological issues are being observed [12-13]. Hence, the objectives of the current study were to evaluate the prescription pattern of psychotropic medications and recent trends in psychotropic drugs in a tertiary health care hospital.

Material & Methods

Place and duration of the study

It was a cross-sectional, structured questionnaire survey, conducted in Sir Salimullah Medical College and Hospital, a tertiary care Hospital, Dhaka. The study was carried out over a 90 days period of February 1st 2010 to April 30th 2010. Before initiating the actual study, ethical clearance was obtained from the Ethical Review Committee of Sir Salimullah Medical College and Hospital, Dhaka and informed consent was taken from the participants of the Structured Questionnaire.

Procedure

The questionnaire survey was conducted among Psychiatry out-patient department in Sir Salimullah Medical College. The patients and their prescriptions were used as sources of data. A total 300 patients were included in this study. The collected data include sociodemographic details such as age, gender, occupation, employment and monthly income. The average number of drugs per prescription, most common diagnosis, most commonly prescribed psychotropic drugs, percentage of drug prescribed by trade name were also noted and percentage of an injection prescribed. The number of combination preparation and average cost of drug per prescription were also calculated. Patient related information after obtaining their verbal informed consent, they are interviewed using a questionnaire.

The information in the questionnaire was then used to complete a customized proforma. The recorded information was name, registration number, age, sex, marital status, educational and socioeconomic condition, whether any other drugs or treatment was taken by the patient for illness before coming to hospital and if yes, satisfaction under those advices or not.

Statistical analysis

Data was compiled, presented and appropriate statistical test was done in this study for drawing an appropriate conclusion. Statistical analysis was done with Microsoft Office Excel 2007. The data was expressed as percentage, mean and total number.

Results

A total of 732 individual drugs were prescribed for 300 patients, an average number of drugs 2.44. Out of 300 patients 142 (47.33%) were male and 158 (52.66%) were female (Table 1) and 108(36%).

Gender	Frequency	Percentage
Male	142	47.33
Female	158	52.66
Total	300	100

Table 1: Distribution of patient by gender (n=300).

Ninety eight of the 300 respondents (32.67%) were aged between the ages of 18 to 27 years (Table 2).

Age group	Numbers of patients
<18 years of age group	17 (5.67%)
18- 27 years of age group	98 (32.67%)
28-37 years of age group	87 (29.00%)
38-47 years of age group	64 (21.33%)
48 years and above	34 (11.33%)

Table 2: Age distribution of patients (n=300).

Seven of the 300 patient (2.33%) resided in an urban area while the rest were residing in villages. Most of the patients were illiterate (Table 3) and 175 (58.33%) were married. Hundred eight (36%) were housewife, the rest were engaged in other occupations.

Educational status	Frequency	Percentage
Illiterate	204	68.00
Below SSC	50	16.66
SSC	06	2.00
HSC	33	11.00
Graduate	03	1.00
Post graduate	04	1.30
Total	300	100

Table 3: Distribution the educational status of the patients (n=300).

Schizophrenia and other psychiatric disorder (40.0%) are most common among the patient attending the psychiatry OPD (Table 4).

Psychiatric Disorder	Frequency	Percentage
Schizophrenia and other disorder	120	40.0
Bipolar mood disorder	117	39.0
Depressive disorder	29	9.66
Anxiety disorder	08	2.66
Somatoform disorder	05	1.66

Mental retardation	05	1.66
Obsessive compulsive disorder	06	2.0
Others	10	3.33
Total	300	100

Table 4: Distribution of psychiatric disorder (n=300).

Most commonly prescribed psychotropic drugs was atypical antipsychotic drugs 258 (36.00%) (Table 5). Drugs were not prescribed by generic names and out of 300 prescriptions additional drug like anticholinergic drugs 228 (76%) were prescribed.

Drug class	Number of drug	Percentage
Antipsychotic	258	36.00
Anxiolytics	113	15.43
Antidepressant	73	09.97
Antimanic	120	16.39
Others	68	22.95
Total	732	100

Table 5: Distribution of psychotropic drugs (n=732).

Discussion

The study was carried out in psychiatry outpatient department in a teaching hospital in a Dhaka city named as Sir Sallimullah Medical College & Mitford Hospital. Sir Sallimullah Medical College & Mitford Hospital is a Government teaching and tertiary level of hospital in Bangladesh. The psychiatry outpatient departments are selected; both rural and urban populations of different classes with different socio-economic status come to these outpatient departments for their treatment purpose. They predominantly represent poor rural and urban population.

Schizophrenia and other psychiatric disorder (40%) were the most common complaints among the patient attending OPD. In a study, in Germany, the most common complaints are schizophrenic psychosis (50%) [14]. This rate is very similar to present study. In Nepal somatoform disorder (26%) were the most common complaints [15]. Only 8.33% of the drugs were prescribed by parenteral formulation, minimum use of injections is preferred and this reduces the risk of infection through parenteral route and cost incurred in therapy [1].

In this study 300 (100%) of the drug were prescribed by trade name and the percentages of drug prescribed by generic name is 0%, which is very much less than that reported in studies conducted in Cambodia 15 (99.8%), India 16 (73.4%) and Nepal (21.3%) [15]. However, information on patient diagnosis and severity of symptoms were not taken into account. In a study, 47.3% were and 52.7% patient were female. In another study the percentage of male patient was 48.1% and female patient was 51.9%, in this study female patient were prescribed more psychotropic drugs than male. This is very similar to the rate of present study. In study in Germany female was 54.0% [14] patient which is more or less similar to the present study.

In another study in Japan female was 52% patient [27]. This rate is very similar to present study rate and have showed that psychiatric illness is more common among female patient [28]. Majority of the patients attending the psychiatry OPD were below the age of 37 years; in a study in Nepal, Majority of the patients attending the psychiatry OPD were below the age of 36 years, [29] this rate is very similar to present study. In a study in Germany, the average age was 47 years [14]. This rate is dissimilar to present rate. Another finding was reported by maki et al. [22] and had reported that schizophrenia is commonly prevalent among the adolescence.

The most common reason for not prescribing generic name in Bangladesh may be tradition and low production of generic drugs in Bangladesh and currently, most of the pharmaceutical company's divertive drug promotion technique [14]. Increasing generic drugs prescribing could substantially reduce the cost of drugs for the patient, and the pharmacies [30]. On the other hand, prescribing patterns of out-patient departments of tertiary level hospitals are often copied by community practioners and health workers who contribute to misuse and over utilization of drugs. It also provides an insight into the nature of the health care delivery system. [16].

The role of the psychiatrist in ensuring compliance to the drug treatment cannot be over-emphasized. The capacity of the therapist to manage and control the treatment is an essential part of the therapeutic relationship between the doctor and patient [17]. The maximum number of patients received tabiz, koboz, panipora and exorcising of evil spirit by uttering charms and incantations before coming to hospital. These patients are influenced by the advices given by neighbor, relatives and friends. Most of the patients (97.8%) came from the rural areas like Babubazar, Chalkbazar, Keranygonj, Norshingdi, Comilla, Nowakhali; on the other hand 2.3% patient came from urban area as the second largest medical hospital, the percentage of other districts are not satisfactory. This may be due to the inconvenient location and communication of this tertiary care hospital. In the present study level of education was considered and it was found that 68% of patients were illiterate; 16.66% were below S.S.C, 2% were S.S.C, 11% were H.S.C, 1% was degree, 1.3% was postgraduate. In another study in Bangladesh [23], it was found that primary school (8.22%), secondary school (16.11%), SSC/HSC (66.6%) and graduate (19.0%) patients were attended with more or less similar percentage. The rate is dissimilar to present study, because the study was carried out in a private clinic in Dhaka city. In this study service holder (13.3%), laborer (7.0%), housewife (66.0%), business (5.66%), unemployed (14.0%), student (2.0%), farmer (10.3%) and others (11.66%) were also attended in the OPD. Study in Pakistan [24], housewife (28.0%) was the largest occupational group followed by unemployed (25%) skilled laborers (16%) and students (11%). This rate is dissimilar to present study.

It was observed that less educated, illiterate, house wife, unemployed and lower income group of patients generally attend psychiatry outpatient department. This finding is analogous to the outcome of study done in Sweden by Lessen et al. [24]. As

the data showed that utilization of psychotropic drugs was more among individuals with low income. Similarly, schizophrenia appears to have socioeconomic and racial dimension. It is the most commonly seen amongst the poor in the United States, England, Japan, Norway, Ireland and Iceland, but in the contest of India and possibly in Italy it is more frequently witnessed among the rich. The disease is also common among urban dwellers and blacks in the United States [25].

Patient of OPD were more satisfied with consultation; the patients who were not supplied with free medicines from the hospital and most of the patients who were not incapable of buying drugs said that they would try to procure drugs by getting loan from relatives and friends. This is because of unemployed and lower income group of patients attended the outpatient department in teaching hospital. Continuing medical education and the strengthening of cooperation between medical staff and pharmacists are needed. In addition, health and drug use education programs for the public, especially for the poor in rural and remote areas should be organized to enhance their knowledge of and awareness about health issues.

Currently maximum people are out of modern treatment facilities due to poor economic condition, prevailing superstition, stigma and mental patients and lack of education and knowledge about scientific method of treatment of mental illness [26]. This is a matter of concern and need to deal with by prescriber education, training campaigns are required to improve the therapeutic management of the patient and ensure better quality of life [20,26].

Conclusion

Overall prescribing patterns is satisfactory. The drug use pattern from the study largely conforms to the standard recommendations of WHO. In present study, it was observed that less educated, illiterate, house wife, unemployed and lower income group of patients generally attend psychiatry out-patient department. Schizophrenia and other psychiatry disorder are most common problem in this group. Poverty and lack of social support is the main problem in these areas. Appropriate educational intervention should be designed for rational prescribing to improve the quality of health care.

Authors' contributions

Any designed the questionnaire, analyzed the results and wrote the manuscript. Mazumder helped in designing the questionnaire, all author conducted the data analysis, interpreted the data and helped in writing the manuscript. Sultana have done the statistical analysis of the article. Soniya and Khan participated in the design of the study and helped in the statistical analysis.

Acknowledgment

I render my heartfelt gratefulness to Assistant Professor Dr. Shoebur Reza Chodhury and to all the out-patient of psychiatry department during the period of my data collection, who helped me directly or indirectly in this research.

References

1. Linden MY, Lecrubier C, Bellantuno, et al. Psychotropic drug prescription in primary care. *J of European psychiatry*.1966; 179.
2. Fahmida A, Wahab MA, Rahman MM. Pattern of psychiatry morbidity among the patients admitted in a private psychiatric clinic. *Bangladesh Journal of Medical Science*. 2009; 8: 1-2.
3. Firoz AHM, Karim ME, Alam MF, et al. Prevalence, Medical Care, Awareness Towards Mental Illness in Bangladesh. *J psychiatry*. 2006; 20; 9-36.
4. Banks J, Marmot M, Oldfield Z, et al. Disease and disadvantage in united states and in England *JAMA*. 2006; 295: 2037-2045.
5. Mackenbaej JP, Stirbu I, Roskam AJ, et al. the European Union Working Group on socioeconomic Inequalities. *Socioeconomic Inequalities in health in 22 European countries*. *N Engl J Med*. 2008; 358: 2468-2481.
6. Lorant V, Deliege D, Eaton W, et al. Socioeconomic Inequalities in depression: a meta –analysis. *Am J Epidemiol*. 2003; 157: 98-112.
7. Willium K. The transition to widowhood and the social regulation of health: consequences for health and health risk behavior. *J Gerontol B psycho Sei Med*. 2004; 59: S343-349
8. Umberson D. Gender, marital status and social control of health behavior. *Soc Sei Med*. 1992: 34: 907-917.
9. Iwashyna TJ, Cristakis NA. Marriage, widowhood and health-care use. *Soc Sei Med*. 2003: 57: 2037-2047.
10. Salman S, Ismail M, Awan NR, et al. Patterns of prescription writing in psychiatric clinics. *J Postgrad Med Inst*. 2013; 27: 290-296.
11. Jayanthi CR, Divyashree M, Sushma M. Adverse drug reactions in psychiatry outpatients: Clinical spectrum, causality and avoidability. *J Chem Pharm Res*. 2013; 5: 128-135.
12. Prueksaritanond S, Tubtimtes S, Pumkopol T, et al. Psychotropic drug prescribing in the family medicine out-patient clinic, Ramathibodi Hospital. *J Med Assoc Thai*. 2009; 92: 266-272.
13. Bernd R. Brüggenmann, Hermann Elgeti, and Mare Ziegenbein. Patterns og drug prescription in a psychiatry outpatient care unit. *German J Psychiatry* 2008; V.11: 1-6.
14. Shankar PR, Roy S. Patterns of Prescription and Drug use in a psychiatry out-patient department in a teaching hospital in Western Nepal. *Internal J Pharmacol*. 2002; 1:2.
15. Laporte JR. Towards a healthy use of Pharmaceuticals *Development Dialogue*. 1985; 2: 48-55.
16. Olivier MR. Psychological factors compliance and resistance to antidepressant treatment. *Encephala*. 1986; 12: 197-203.
17. Bernd R. Brüggenmann, Hermann Elgeti, and Mare Ziegenbein. Patterns og drug prescription in a psychiatry outpatient care unit. *German J Psychiatry*. 2008: 11: 1-6
18. Keohavong B, Syhakhng L, Sengaloundeth S, et al. *Pharmacoepidemiology and drug safety*. 2006; 15: 344-247.
19. Shankar PR, Roy S. Patterns of Prescription and Drug use in a psychiatry out-patient department in a teaching hospital in Western Nepal. *Internal J Pharmacol*. 2002; 1: 2.
20. Mant A, Lansbury G, Bridges-Webb C, Trends in psychotropic

-
- drug prescribing in Australia. *Med J Aust.* 1987; 146: 208-210.
21. Maki P, Veijola J, Jones PB, et al. Predictors of schizophrenia-a review. *Br Med Bull.* 2005; 73-74: 1-15.
 22. Ahmed S, Salamat S, Khan RAM, et al. Clinical Practice and Epidemiology in Mental Health. 2009; 5: 9
 23. Lesen E, Andersson K, Petzold M, et al. Socioeconomic determinants of Psychotropic drug utilization among elderly: a national population based cross sectional study. *BMC Publ Health.* 2010; 10: 118.
 24. Forter HD. The Geography of Schizophrenia: Possible Links with Selenium and Calcium Deficiencies, Inadequate Exposure to Sunlight and Industrialization. *J Orthomolecul Med.* 1988; 3: 135-140.
 25. Bret P, Bret MC, Queuille E. Prescribing patterns of antipsychotics in 13 French psychiatric hospitals. *Encephale.* 2009; 35: 129-138.
 26. Keohavong B, Syhakng L, Sengaloundeth S, et al. *Pharmacoepidemiology and drug safety.* 2006; 15: 344-247.
 27. Mant A, Lansbury G, Bridges-Webb C. Trends in psychotropic drug prescribing in Australia. *Med J Aust.* 1987; 146: 208-210.
 28. Mant A, Lansbury G, Bridges-Webb C, Trends in psychotropic drug prescribing in Australia. *Med J Aust.* 1987; 146: 208-210.
 29. Patick O Erah, GO Olumida, Augustine O Okhamafe. Prescribing practice in two health care facilities in warri, Southern Nigeria: A comparative study. *Topical Journal of Pharmaceutical Research.* 2003; 2: 175-182.