

# Prescribing trends of psychotropic drug in psychiatry out-patient department in a teaching hospital of Bangladesh

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**Abstract - Psychiatric illness has received considerable attention in recent years. Like other developing countries, a certain percentage of population in Bangladesh suffer from different psychiatric illness. psychotropic drugs are used as most common treatment modality for these patients. A cross-sectional descriptive study was carried out among individuals attending the psychiatry out-patient department in a tertiary care hospital in Bangladesh for 4 months period to observe the patterns of psychotropic drug utilization in psychiatry out-patient department. A total 300 prescriptions were included in this study and simultaneously those patients were interviewed by questionnaire to identify the educational and socio-economic status of the patient. Female, less educated, illiterate, house wife, and lower income group of patients generally attend psychiatry out-patient department. Schizophrenia other psychotic disorder (40%) found to be most common psychiatric illness encountered in OPD. The average number of psychotropic drug per prescription was 2.44. Antipsychotic drugs (36%) were the most frequently prescribed psychotropic agent. All medicines were prescribed by brand name. Regarding route of administration, 8.33% of medicines were prescribed in injectable formulation. Overall prescribing pattern was not satisfactory. Customized educational intervention package for prescriber might be helpful for rational prescribing in psychiatric illness.**

## BACKGROUND

Mental illnesses have been considered as major public health problem in last few decades. According to World Health Organization (WHO), it constitutes 13% of global burden of disease [1]. People with mental disorders have higher mortality rates as some physical illness like cancer, diabetes, HIV infection are associated with mental disorders [2-4]. Not only physical illness, mental disability also causes diverse social and economic impact ranging from social isolation to poverty [5-7]. Genetics, socioeconomic background, psychological trauma, marital problem all act as influencing factors for mental illness [8-9]. Low and middle income countries have higher burden of mental disorder than developed countries [10, 11]. There are two main popular treatments of psychiatric illness: pharmacotherapy and psychotherapy. Psychotropic drugs are playing central role as pharmacotherapy [12].

In Bangladesh, reported prevalence of mental illness varied from 6.5%- 31% in adults and among 13.5%-22.9% in children [13] and mental illness still considered as a social stigma. Only 0.44% of total health budgets spends on mental illness although presence of an established mental health policy [14]. 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 [15]. Patterns of prescribing and the choice of psychotropic medications vary in different settings [16]. The study of prescribing patterns evaluate therapeutic trends, for ensuring rational prescribing, hence, the objectives of the current study were to observe the prescription pattern of psychotropic medications in a tertiary health care center.

## MATERIAL &METHODS

### Place and duration of the study

It was a hospital-based cross-sectional, structured questionnaire survey, conducted in Sir Salimullah Medical College and Hospital, a tertiary care Hospital, Dhaka run by government. The study was carried out over a 90 days period of February 1<sup>st</sup> 2010 to April 30<sup>th</sup> 2010. Ethical clearance was obtained from the Ethical Review Committee of the studied institute, and informed consent was taken from the participants of the structured questionnaire survey.

### 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 socio-demographic details such as age, gender, occupation, employment and monthly income. The average number of drug per prescription, diagnosis, prescribed psychotropic drugs, percentage of drug prescribed by trade name, percentage of an injectable being prescribed, the number of combination preparation were noted. After obtaining verbal consent, patients were interviewed by using a questionnaire. The recorded information was name, registration number, age, sex, marital status, educational and socioeconomic condition.

### 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

Out of 300 patients 142 (47.33%) were male and 158 (52.66%) were female (Table 1)

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

Gender	Frequency	Percentage
Male	142	47.33
Female	158	52.66

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

Table II: Age distribution of patients (n=300)

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

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 III) and 175 (58.33%) were married. Hundred eight (36%) were housewives, the rests were engaged in different occupations.

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

Educational status	Frequency	Percentage
Illeterate	204	68.00
Below SSC	50	16.66
SSC	6	2.00
HSC	33	11.00
Graduate	03	1.00
Postgraduate	04	1.30

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

Table IV: Distribution of psychiatric disorder (n=300)

Psychiatric disorder	Frequency	Percentage
Schizophrenia and other disorder	120	40.00
Bipolar mood disorder	117	39.00
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	3.3

A total of 732 individual psychotropic drugs were prescribed in 300 prescriptions, an average number of psychotropic drugs in per prescription was 2.44. Most commonly prescribed psychotropic drugs was antipsychotic drugs 258 (36.00%) (Table V). Not a single drugs was prescribed by generic names, and out of 300 prescriptions additional drug like anticholinergic drugs 228 (76%) were prescribed.

Table V: Distribution of psychotropic drugs (n-732)

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

### DISCUSSION:

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

In this study, 52.66% of studied population was female, similar percentage of female patient attending psychiatry OPD was found in studies conducted in other countries [17, 18-20], but contrary to study conducted in India [21]. Majority of the patients attending the psychiatry OPD were below the age of 37 years, this finding corresponded with previous studies [20, 22] as schizophrenia is commonly prevalent among the adolescence [22], In the present study level of education was considered and it was found that majority of patients were illiterate but this finding did not correspond with a previous study conducted in Bangladesh [23] because that study was carried in a hospital of private setting. Most of the patient was housewives like study conducted in another developing country [24]. Most of the patients (97.8%) came from the rural areas like this may be due to the inconvenient communication of this tertiary care hospital with most of Dhaka city rather good communications with surrounding districts through naval route. 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 [25] as the data showed that utilization of psychotropic drugs were more among individuals with low income.

Schizophrenia was the most common complaints among the patient attending OPD like studies conducted in Germany and India[17, 26] but depression was the most common diagnosis in other studies [21, 27, 28]. Average number of psychotropic drug per prescription was 2.44, this kind of practice of polypharmacy was observed other studies [29-31] but lower than another study conducted in Bangladesh [31]. Antipsychotic drugs were highest prescribed like other studies [26, 31]. Only 8.33% of the drugs were prescribed by parenteral formulation which was lower than other studies [28, 31, 32]. Minimum use of injections is preferred and this reduces the risk of infection through parenteral route and cost incurred in therapy [33]. In this study (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 other countries [34,35] but similar to one study conducted in Bangladesh [31]. This kind of practice of prescribing by trade name may be due to the current healthcare delivery system of Bangladesh [36] as well as promotional activities conducted by pharmaceutical industries [37-39].

### CONCLUSION:

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. Overall prescribing pattern was not satisfactory, specially practice of polypharmacy and prescribing by trade name. Appropriate educational intervention directed to prescriber might be fruitful for rational prescribing.

### AUTHORS' CONTRIBUTIONS

Baqui designed the questionnaire, analyzed the results and wrote the manuscript. Any and Johora helped in designing the questionnaire, all authors conducted the data analysis, interpreted the data and helped in writing the manuscript. Hosne Ara Begum have done the statistical analysis of the article. Mazumder and Ali participated in the design of the study and helped in the statistical analysis.

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