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**Prescribing pattern of psychotropic drugs used in non-psychiatric patients among outpatient department of two teaching hospitals in Bangladesh**

## Prescribing pattern of psychotropic drugs used in non-psychiatric patients among outpatient department of two teaching hospitals in Bangladesh

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### Abstract

The objectives were to evaluate the prevalence, pattern and rational of psychotropic drugs prescribing by general physicians in two teaching hospitals in Bangladesh in non-psychiatric patient. 320 patients from Sir Salimullah Medical College Hospitals and 240 patients from Holy Family Red Crescent Medical College Hospitals who visited other than psychiatry ward, received psychotropic drugs between July 2012 to June 2013 were analyzed. The rate of psychotropic drugs prescribing was 8.3% and 11.2% in SSMC and HFRCMCH respectively which was found to increase with increasing age and female patient. Benzodiazepines were the most commonly prescribed drugs followed by antidepressant and psychotropic drugs. The psychotropic drugs use was found more in different physical disorder.

### Introduction

Psychotropic medication is prescribed when symptoms of mental or emotional illness are severe and interferes with normal functioning. Some psychotropic drugs are prescribed for medical and neurological disorders. Therefore, the physically ill populations are likely to receive psychotherapeutic drugs as part of their treatment. All drugs require careful monitoring and may necessitate some restrictions (Miller and Craig, 2002). The clinical indication and monitoring are needed to avoid the inappropriate use, potential serious side and life threatening effect (Prueksaritanond et al., 2009).

The extent of psychotropic drug consumption is an issue that gives rise to much public and professional concern. Overuse of anxiolytics drugs has been shown in several general population (Wessling et al., 1991). This tradition has association with dependence and withdrawal phenomenon.

Usage of these drugs varies with age, gender and

geographical location. However, these drugs are used unethically in many cases, with few diagnostic indications for their use and no information regarding their effect (Davidson et al., 1975). In some instances, anti anxiety agents and antipsychotic drugs were used as adjuncts for analgesic relief from severe pain. Psychotropic drugs are usually prescribed by a psychiatrist, a general physician, other physicians such as internists, family practitioners, gynecologists, and pediatricians also prescribe these drugs.

### Materials and Methods

This study was carried out in outpatient Department of the Surgery, Medicine and Gynecology in Sir Salimullah Medical Hospital (SSMC) and Holy Family Red Crescent Medical College Hospital (HFRCMC) in Dhaka city.

SSMC is a government teaching and tertiary level of hospital in Dhaka city. The patient attending the outdoor



was selected because both rural and urban population of different classes and socio-economic status daily come to these outpatient departments for their treatment purpose. On the other hand, HFRCMCH was selected because it is a private hospital and patient from middle class and upper class daily visit there for treatment purpose. Prescribing pattern of the outpatient departments of tertiary level hospitals are often copied by community practitioners and health workers who contribute to misuse and over-utilization of drugs. The study was carried out during the period of July 2012 to June 2013.

The information in the prescription was used to complete a customized pro-forma. Prescribing frequency and purpose of using drugs were analyzed.

## Results

Total number of 3,842 non-psychiatric patient visited in SSMC and 2,145 visited in HFRCMCH outdoor over 90 days period out of which 320 (8.3%) and 240 (11.2%) were treated with psychotropic drugs respectively. Table I shows 114 and 94 patients from 50-59 years age groups are mostly treated with these drugs. Psychotropic drug use were 60.3% in female and 39.7% in male in SSMC and 66.7% were female and 33.3% were male in HFRCMCH.

Benzodiazepines were the most commonly prescribed drugs followed by anti-depressant and anti-psychotic (Table II; data are expressed in number of cases). Lorazepam (60.9%) & (30.8%), alprazolam (24.4%) & (23.3%) and diazepam (16.9%) & (12.5%) were the top three benzodiazepines prescribed in patients of SSMC and HFRCMC, respectively. These drugs were mainly used in medicine outdoor in both hospital. Antipsychotic drugs were less commonly used. Primary indication for these drugs were insomnia (18.1% and 20%), postmenopausal syndrome (14.1% and 15.8%), hypertension (15% and 11.7%), anesthetic premedication (15% and 13.3%). Lorazepam, nortriptylline and diazepam were exclusively prescribed for this purpose.

Thirty five patients from SSMC and forty five patient from HFRCMC were prescribed By tri-cyclic anti-depressant. These pattern shows antidepressants were more prescribed in private hospital. No monoamine oxidase inhibitors were prescribed. The purposes of these drugs used were mainly migraine (9.4% and 15.8%), IBS (8.8% and 12.5%), osteoarthritis (8.8% ad 10.4%), myalgia (3.8% and 5%) and cancer (4.7% and 9.6%)(Table III). One patient got more than one psychotropic drugs some prescriptions. Thus, combination of lorazepam, diazepam and nortriptylline were most commonly prescribed medications.

## Discussion

In present study the percentage of psychotropic drug use in non-psychiatric patient in SSMC was 8.3% and in HFRCMCH was 11.2%. The prevalence of psychotropic drug use is higher in private hospital which is slightly higher than the average rate of prescription of general physicians internationally (Prueksaritanond et al., 2009 ; Linden et al., 1996). Variability in prevalence across countries might be due to cross-cultural differences in physical disorder, health complaints, health beliefs, care seeking behavior and response to diagnostic questions (WHO, 2008). Psychotropic prescriptions are prevalent in all age groups especially in 50-59 years age group. Generally, older people suffer from common health problem which have a association with mental disorders at rates that are similar to their younger, adult counterparts (Wolkovc et al., 2007; WHO, 2008).

This study also found that psychotropic drug use were more in female than male. This rate has similarity with other studies (Balter et al., 1974). There is a common trend that prescribing frequency is more common in female than male. In married women the presence of children under 14 years of age tends to be linked with unemployment, and that both these factors are directly related to the development of emotional disorder. The presence of this association limits a woman's ability to develop adequate role identity and good self-esteem. All this, will increase in women the chance of general hopelessness, from which mental illness will arise. In Spanish rural community found that higher use of psychotropic drugs among housewives than among those working outside the house (Vazquez et al., 1989). The greatly expanded use of intermediate acting benzodiazepine (lorazepam and alprazolam) and reduced use of short acting benzodiazepines were observed here. Interestingly, short acting agent (such as triazolam, oxazepam), long acting benzodiazepines (such as flurazepam and clonazepam) and non-benzodiazepines have not been prescribed in the present study. This may be due to differences in the physicians practice settings and method of surveys. The frequent use of long acting

Table I

### Age distribution of the study patients

Age (year)	SSMC (n=320)	HFRCMC (n=240)
<20	8	12
20-29	18	7
30-39	40	18
40-49	90	66
50-59	114	94
>60	50	43

Table II		
Distribution of types of psychotropic drugs used in the two medical colleges		
Drugs	SSMC (n=320)	HFRCMC (n=240)
<i>Benzodiazepine</i>		
Lorazepam	195	74
Alprazolam	78	56
Diazepam	54	30
Midazolam	28	17
Clorazepate	4	5
Temazepam	12	3
Nitrazepam	11	4
Bromazepam	5	6
<i>Barbiturate</i>		
Phenobarbitone	18	4
Amobarbital	2	3
<i>Newer sedative and hypotonic</i>		
Zolpidem	2	5
<i>TCA</i>		
Nortriptyline	35	45
Amitriptyline	10	11
Imipramine	8	4
<i>SSRI</i>		
Sertaline	2	12
Fluoxetine	18	20
Paroxetine	2	1
<i>Atypical antidepressant</i>		
Trazodone	3	8
Venlafaxine	1	5
<i>Antipsychotic</i>		
Perphenazine	6	16
Haloperidol	8	10
Chlorpromazine	2	6
<i>Atypical antipsychotic</i>		
Risperidon	3	2
Clozapine	2	1
Olanzapine	2	1
Some of the patients of both medical colleges were prescribed more than one drug		

benzodiazepines sometimes in combination with other psychotropic drugs may increase the risk of adverse reactions, particularly the elder patients (Solomon et al., 1979) and those with diminished kidney functions (Green Blatt et al., 1977). The combination of benzodiazepine with other hypnotics particularly the barbiturates suggests the presence of serious sleep disturbance, as well as increasing the risk of adverse reaction because these patients require close monitoring. Antidepressant and antipsychotics were

Table III		
Purpose of psychotropic drug use		
Drugs	SSMC (n=320)	HFRCMC (n=240)
Insomnia	58	48
Tension headache	28	18
Migraine	30	38
Hypertension	48	28
IBS	28	30
Diabetes mellitus	17	16
<i>Chronic pain</i>		
Osteoarthritis	28	25
Low back pain	18	12
Myalgia	12	12
PUD	18	16
Dyspepsia	15	14
Dyslipidemia	8	12
Chronic renal failure	25	12
Cancer patient	15	23
Anesthetic premedication	48	32
Postsurgical	32	37
Postmenopausal syndrome	45	38
Puerperal period	20	15
Seizure	13	28
Undiagnosed	24	43
In some patients of both the medical colleges, the cause of prescribing psychotropic drug was more than one		

used less frequently in general outdoor as compared to psychiatry outpatient clinic (Moore et al., 2002).

The indications for prescription of psychotropic drugs were not only for mental health problem but also for physical health problem. Mental health and physical health problem are interwoven (WHO, 2008). Mental health problems range from increased stress and worry about illness to disrupted family or work life. Mental disorders such as depression and anxiety frequently coexist with physical health problems such as hypertension, diabetes and dyspepsia (WHO, 2008; Jonas et al., 1997; Anderson et al., 2001; Jones et al., 2005). We observed a higher use of psychotropic drugs in surgical department which could be expected from the additional indication of anesthetic premedication and postsurgical management of patient there. These drugs were often prescribed for various somatic disorders and the rationale for prescribing these agents is often poorly documented. Among many health problem 7.3% and 17.9% showed considerable under diagnosis. The limitation of diagnosis may be due to inadequate knowledge and awareness. The more prescribing frequency was observed in private hospital probably due to more

economic solvent people visited there with lots of availability of drugs. Whereas in Government hospitals most of the drugs are delivered by authority and selective drug selection may comparatively reduce the use of psychotropic drugs there.

This study shows prescribing pattern was not similar between Government and private hospital. Present study suggests that psychotropic drugs are not only used in mental illness but also they have role on other medical illness. Their use with other medication accelerates the improvement of physical illness. But in some instances use of these drugs continues long-time without any cause.

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## Conclusion

A quarter of the patients received psychotropic drugs as well as long-term medication without diagnosis.

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## Conflict of Interest

Authors declare no conflict of interest

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